

# Co-creation, innovation and new service development: the case of the videogames industry.

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# ABSTRACT

The University of Manchester | Jedrzej Czarnota | Doctor of Philosophy (PhD)

*Co-creation, innovation and new service development: the case of the videogames industry.*

Submitted on the 25<sup>th</sup> of September, 2015.

Co-creation is a new approach to the development of videogames, films, television, music and other creative services. It is a manifestation of open innovation paradigm where the firm collaborates with customers in new service development (NSD) activities. Firm can either co-create with individual customers, or with customer communities. Customers may substantially contribute to ideation, design, production, testing, marketing or distribution of a new or existing service.

Customer networks, because of their intrinsic and extrinsic motivations, contribute to the development of services. They have a potential to innovate, as their ideas come from the outside of the organization and reflect their need-related knowledge. Via co-creation a firm can also learn about unarticulated or future customer needs, and what kind of service features they would pay the most for. Co-creation has also benefits for marketing. By inviting customers to participate in their activities, firms can capitalize on positive word of mouth and increased value ascribed to their services. They can also engage in new models of raising finance, i.e. crowdfunding.

We studied thirteen videogames firms in North America and in Western Europe. Our goal was to gain insight into their NSD activities when customers were also involved. We observed those studios' co-creation practices, tracked their communications with customers, and spoke to employees in all levels and functions of those firms. We also participated in various related events. We identified three ideal types of co-creation practice: structured, semi-structured, and loose, and ordered the firms into three cases according to these types.

We investigate the main factors that determine co-creation's practice in firms, as well as firms' ability co-create. This includes a firm's propensity for and style of co-creation. We identify four relevant co-creation competences which, together with funding arrangements and organizational culture, influence co-creation.

We find that co-creation can occur via formal, as well as informal channels. Informal co-creation takes place on the level of individual interactions between employees and customers (and is linked to hidden innovation), while formal relies on the strategic use of contests, volunteer programs, as well as other legally-regulated exchanges.

Firms can use co-creation in NSD to source ideas from the customers, as well as to enhance their marketing by redefining customer relationship. Still, co-creation also has a profound transformative effect on the organization itself.

We identify the sites within a firm that are affected by co-creation. Those sites go beyond just the content of the service, and include functions of the firm that normally are hidden from customers (back-end and service design functions). The new service development is also affected. Similarly, the way that firm interacts with its customers is transformed, too.

## DECLARATION

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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## LIST OF ABBREVIATIONS

BRG – Born Ready Games

DUI – doing, using, interacting

GDC – Game Developers Conference

KPI- key performance indicators

NPD – new product development

NSD – new service development

OE – Obsidian Entertainment

PR – public relations

SD – service dominant logic

UGC – user-generated content

USD – United States Dollars

WOM – word of mouth

WTP – willingness to pay

XE – inXile Entertainment

ZOS – Zenimax Online Studios

# PREFACE

The author has completed the following degrees:

- i. B.Sc. Biotechnology (Enterprise) with professional/industrial experience at University of Manchester, Faculty of Life Sciences (2006-2010).
- ii. M.Sc. Innovation Management and Entrepreneurship at University of Manchester, Faculty of Humanities, Manchester Business School (2010-2011).

The author has the following research experience:

- i. PhD student at Manchester Institute of Innovation Research, Manchester Business School (2012-2015). Research conducted for and presented in this thesis.
- ii. Research assistant (internship student) in Pierre-Fabre Dermocosmetique S.A., Toulouse, France (2008-2009). In the field of microbiology and genetics.
- iii. Research assistant (volunteer) at Operation Wallacea, South Africa (2008) In the field of conservation biology.

I have a deep passion for games (classical pen-and-paper in particular!). I come from Poland. My hobbies include reading (science fiction and fantasy novels most of all), travelling, skiing, playing tennis, sailing and going to the gym. I came to live in the UK nine years ago, and I have been here (with two one-year long breaks) ever since. I love my family (including my three younger brothers and one sister) and my dog.

My favourite books are *The Lord of the Rings*, *The Wizard of Earthsea*, *The Forever War*, *The Master and Margarita*, and *The Black Obelisk*. My favourite games are *Mass Effect*, *The Last of Us*, *World of Warcraft: TBC*, *Baldur's Gate series*, and *Civilization 5*.

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## DEDICATED TO / DEDYKACJA

*Kochanym rodzicom i dziadkom: mamie Basi i tacie Jarkowi,  
babci Zosi i dziadkowi Rysiowi, babci Irenie i dziadkowi Wackowi.*

# MOTTO

*Prepare for unforeseen consequences...*

- G-man to Alyx Vance,  
*Half-Life 2: Episode Two* (Valve Corporation, 2007)

# 1. INTRODUCTION

Co-creation is becoming a practice of high importance. It accompanies the changes in economy, in which networks that exist both within, and outside of organizations determine and generate value. In businesses we observe the merging of processes that traditionally used to be separate, or even secret: production and use, marketing and consumption, innovation and experience. Co-creation is the key to understanding modern creative industries – it is the practice at the core of this dynamic.

Co-creation is defined as a collaborative work between a consumer and a firm in an innovation practice, where a substantial component to the design, development, production, marketing or distribution of a new or existing service is contributed by a customer, or customer communities (more detailed, working definition is provided in Chapter 2; Roberts *et al.*, 2014; Banks, 2013). It is becoming a widespread phenomenon, which reflects wider societal and economic changes in participatory culture (Hartley, 2008; Bruns, 2008), as value is increasingly co-created by both the firm and the customer (Hartley *et al.*, 2012: 21). While this blurring of production and consumption practices is not a new phenomenon (Jenkins 2009), it has become more salient in the context of digital technologies (Graaf, 2009). This participatory turn in culture (OECD, 2007) is viewed as a logic that seems to favour new production-consumption configurations.

As co-creation can also occur in the business-to-business context (i.e. between two firms) it is important to note that throughout this thesis, whenever we refer to co-creation, we mean customer co-creation (i.e. between a firm and its customers; Weber, 2011; Sanders and Stappers, 2008).

Firms have begun to realize the commercial potential of engaging customers in service development (Edwards *et al.*, 2015). Co-creation's advantages are difficult to ignore, and firms that use it benefit greatly. Nevertheless, it is a practice characterized by high uncertainty (Sakao *et al.*, 2009; Lynn and Akgun, 1998; Knight, 1921), and for every firm mastering it, there are many others that fail spectacularly (Gebauer *et al.*, 2013; Banks, 2009).

There is little research concerning the impact of co-creation on the firm – and how the practices of organizations are affected by it. At the same time, there is a wealth of literature proposing taxonomies, typologies, and other classifications of co-creation, depending on the role of the firm, duration, frequency, actors involved, stage in service development, locus of control and many others (O'Hern and Rindfleisch, 2010; O'Hern et al., 2011; Hoyer et al., 2010; Piller and Ihl, 2009; Piller et al., 2011; Frow et al., 2011). Existing work focuses on the practice itself, while the firm is black boxed.

Co-creation, as it describes the dynamic of customer inputs to new service development, is a manifestation of the wider customer innovation phenomenon (Sundbo and Toivonen, 2011). In the light of scholarly works on customer innovation in technology-intensive industries (Füller et al., 2008; Baldwin et al., 2006; von Hippel, 2005; Franke and von Hippel, 2003; Luthje and Herstatt, 2004), there is a dearth of literature on how parallel practices occur in more experience-driven industries. With the associated rise in the importance of service-like dimensions of many products (Vargo and Lusch, 2004; 2008), and the role of customers in determining the value of these (Fisher and Smith, 2011; Grönroos, 2011; Echeverri and Skalen, 2011; Lusch and Vargo, 2006), it becomes important to study the customers' role in innovation in more experience-driven settings – such as the videogames industry. This also is one of the goals of this thesis.

Those settings are characterized by a large amount of continuous interaction between the firm and its customers (i.e. in service provision), as well as the existence of networks of customers, where the value-ascribing decisions take place (Hartley et al., 2013; Potts et al., 2008a, b) by mechanisms such as word of mouth (Gebauer et al., 2013). Some works on the customers' input to the design of aesthetic products and services exist already (Kohler et al., 2011a and b; Kohler et al., 2009; Füller and Matzler, 2007), but little attention is being paid to the firms themselves. To focus on the firm in the co-creation practice is therefore another major goal of this thesis.

The videogames industry forms a particularly interesting setting for a study of co-creation. Game development is a highly idiosyncratic process that cannot easily be compared to any other type of activity, including software development

(O'Donnell, 2012). The firms are secretive and reluctant to share information about their own practices and operations, either with their peers or with researchers (Nardi, 2010; O'Donnell, 2014; Boellstorff *et al.*, 2012). The videogames industry is also a young industry, in which production, innovation and marketing practices are still evolving in large leaps (Grantham and Kaplinsky, 2005). Many of the game developers are self-taught, and there are few higher education institutions that offer courses and degrees valued by industry practitioners.

In the videogames industry, socio-cultural effects of fandom and participation visibly overlap with market aspects of videogame development and marketing. Videogame customers actively shape their engagement with the service (Jäger *et al.*, 2010). Videogame firms traditionally have also been close to their customers (King and Borland 2014), and the games industry has always been characterized by the close collaboration of both the makers, as well as consumers of the games (Nardi, 2010). The clear distinction between videogame developers and customers has begun to emerge only in recent years, together with the spike in game production costs (Marchand and Hennig-Thurau, 2013; O'Donnell, 2012; Zackariasson and Wilson, 2012).

Furthermore, there are relatively scarce academic sources discussing the internal functioning of videogame firms (examples here include Malaby, 2009; O'Donnell, 2014; Graaf, 2012), and very few of these focus on business practices (Arakji and Lang, 2007; Grantham and Kaplinsky, 2005). The issues of access to firms are among the biggest obstacles to researching the videogames industry (Boellstorff *et al.*, 2012; Nardi, 2010), so the data collection for any new study (and, indeed, for this work) is a challenging task. Any empirical insights into the practices of videogame firms are a valuable addition to the academic knowledge. To gain detailed insight into that industry would be a contribution to both innovation studies, as well as games (media) studies – which forms a third goal of this thesis.

So far, the focus of co-creation research has been placed on the dynamics of customer involvement in the co-creation practice: their motivations, incentives, dynamics, goals, and skills to do that (Kohler *et al.*, 2011a and b; Kohler *et al.*, 2009; Burger-Helmchen and Cohendet, 2011; Füller, 2010; van Dijck, 2009). This provides rich accounts of the functioning of customer communities, but the

analysis stops short of relating those dynamics to matching practices occurring inside of the firm. As such, a more detailed investigation of those customer communities in the context of co-creation can be an avenue for future research.

The potential locked in the cultural shifts embodied by phenomena such as prosumption (Ritzer and Jurgenson, 2010), playbour (Kücklich, 2005), Web 2.0 (O'Reilly, 2005), and user-generated content (Hartley et al., 2013) must be translated into firm practices and strategies. The pitfalls awaiting the firms are varied in their nature, and occur virtually in all sites of the firm (Miles and Green, 2008), service design areas (Voss and Zomerdjik, 2007), and stages of new service development (Piller et al., 2011; Hoyer et al., 2010). Understanding what they are, and more importantly, how to avoid them and succeed in co-creation, is the prime concern of industry actors.

There is ample literature on customers, their communities and creativity in marketing, sociology and media studies (Kozinets, 2007; Cova and Pace, 2006). From those other strands of literature, we have access to such general concepts as 'wisdom of crowds' (Surowiecki, 2004) and 'collective intelligence of users' (Levy, 1999). Following on Graaf (2009), many terms have been coined to capture this 'participatory turn' associated with the Web 2.0: convergence culture (Jenkins, 2006), democratizing innovation (von Hippel, 2005), produsage (Bruns, 2008), wealth of networks (Benkler, 2006), and wikinomics (Tapscott and Williams, 2006). They inform our discussion of the socio-cultural dynamics of co-creation.

Understanding how customer involvement works in the development of experiential services, where less technical knowledge is necessary (as compared to Raasch and von Hippel, 2013; von Hippel, 2005; Luthje, 2004), has the potential to expand our framing of customer innovation. Furthermore, observation of customer innovation in creative industries, where the 'content' of a service plays a significant role in determining market performance, forms another valuable contribution of this study.

This literature is further explored by focusing on the social, psychological and anthropological phenomena associated with videogames. Studies such as the ones conducted by Yee (2014), Rowlands (2012), Pearce (2009), Nardi (2010),

Boellstorff (2008) and Taylor (2006) explore the intricacies of a players' roles in shaping videogames as experiential services (but very little is mentioned how these customers' deep and involved participation in the game affects the firm). Literatures on videogame firm culture and production practices (Malaby, 2009; Grantham and Kaplinsky, 2005) shed some light on how co-creation could be playing out internally in those firms (Arakji and Lang, 2007; Aoyama and Izushi, 2008; Tschang, 2007; Tschang, 2005; Cohendet and Simon, 2007; Graaf, 2012), but more attention on the factors influencing its dynamic is needed.

This thesis exists in the context of a fragmented academic literature on co-creation, and in the absence of a single definition of the practice itself. Some attempts to establish such a definition have been made (for example in Saarijärvi *et al.*, 2013; Ind and Coates, 2013; Saarijärvi, 2012), although they lean strongly towards the service-dominant logic (Vargo and Lusch, 2004) – an approach displaying little analytical power in the context of this research. Co-creation is also surrounded by the uncertainty of using it as a viable business strategy. We don't know much about how co-creation practices should be structured in practice (Kohler *et al.*, 2011a and b). It is another goal of this thesis to propose an exhaustive working definition of co-creation, which would underline its relevance to business strategy.

Hence, a better understanding of how the firm is transformed by co-creation is needed, together with identifying and mapping the organizational conditions and circumstances for co-creation. The goal is to build a body of research to match in its richness the accounts of open innovation in firms (and their effects on the innovation practice in them, i.e. Chesbrough, 2006a, b; Nelson, 1991).

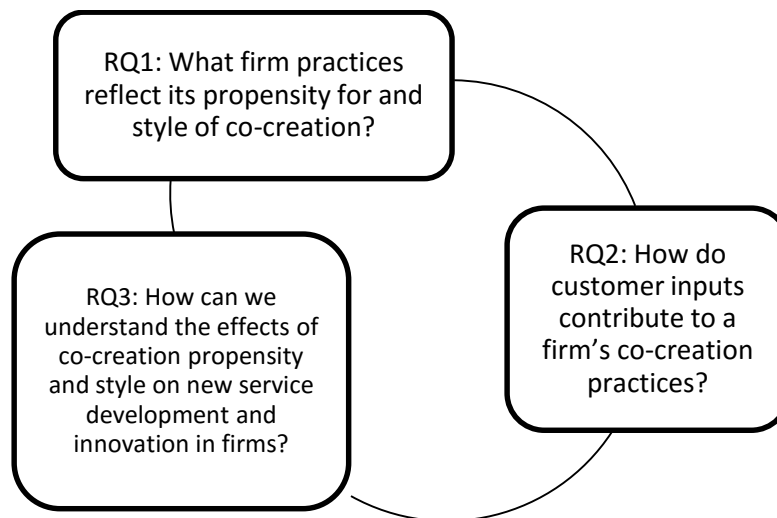
Those theoretical challenges are also matched by the problems of industry practitioners. By identifying the main characteristics of a firm that influence co-creation practice, it is possible to enhance the existing managerial practice of involving customers as co-creators in NSD. The results of this research also assist in planning, or in anticipating the organizational changes accompanying co-creation – their scope, site within the organization, as well as their effect on NSD. It also helps in strategic planning of funding and revenue model within organizations – shedding light on their consequences.

This research unifies in a single analytical framework the effects of co-creation on both market performance as well as relationship with customers, following on Banks and Potts (2010). It explains to managers how the marketing-driven decisions to co-create with customers may impact the firm's ability to develop its services, as well as affect the internal functioning of the organization. It also demonstrates the opposite – that having customers as participants in NSD must be a practice managed not only for productivity, but also for its experience, in order not to cause heavy damage to the firm's relationship with its customers (Gebauer *et al.*, 2013). Following on Jäger *et al.* (2010), this study explores the NSD dynamics in firms that have close links to customer communities, where innovation is influenced by communities of consumption (Jeppesen and Frederiksen, 2006).

Therefore, we seek to identify and understand the key organizational characteristics and arrangements that determine the co-creation practice in firms. We also set out to enhance the understanding of the changes that co-creation has on the NSD and innovation practice of firms. Finally, we investigate the way in which organizations assimilate the inputs from their customers, and how those ways are linked to both organizational characteristics, as well as co-creation's outcomes on the organizational level. Some attention is further devoted to the role of funding arrangements, the crowdfunding in particular, as well as to the role of organizational culture in influencing a firm's propensity and style of co-creation (Naranjo-Valencia, 2011; Martins and Terblanche, 2003; Barney, 1986).

In mapping out those dynamics, this research aims to enhance our understanding of co-creation and its role in firms, particularly in firms' NSD and innovation practices (Nelson, 1991). From the stance of innovation management scholarship, this work seeks to understand the possibilities of innovation stemming from co-creation in creative industries. It strives to uncover the effects of co-creation on firm's functioning related to NSD and innovation, but is also interested in other sites (Miles and Green, 2008) of the firm. Among the chief concerns of this work are the organizational transformations and processes that need to be instituted by firms embracing customers as a source of innovation.

In order to better understand co-creation and its impact on organizations, we developed three research questions. They are presented in Figure 1, and discussed in turn below.



**Figure 1.** *Three research questions guiding this study.*

***RQ1. What firm practices reflect its propensity for and style of co-creation?***

The main problem underpinning this research question corresponds to the limitations of existing theories of co-creation. They currently do not help our understanding of the nature and use of co-creation in industries where there is a high level of creative content (Hartley *et al.*, 2013; Miles and Green, 2008). Therefore, an investigation of co-creation within the context of a service with heavy experiential dimension serves to advance academic theory in this field.

The answer to this question requires asking questions about three elements of co-creation: firstly, investigating the competences for co-creation on the side of the firm – the ability to assimilate and appropriate the inputs originating from the community of customers (Piller and Ihl, 2009; Yee, 2014; Füller, 2010; Burger-Helmchen and Cohendet, 2011). Secondly, using various patterns of interaction with the customers (Lettl, 2007) and establishing co-creative practice within a firm. Thirdly, a firm's ability to maintain stable and positive relationship with its customers (Gebauer *et al.*, 2013; Banks, 2013; Gummesson, 2000; Grönroos, 1994). A firm's absorptive capacity assists in understanding the more detailed dimensions of the dynamics and origins of the process of integrating customer

inputs with firm's practices (Lichtenthaler and Lichtenthaler, 2009; Zahra and George, 2002).

The form of co-creation can differ for various NSD projects conducted by a firm. A firm can decide to tap into customers' potential for co-creation to varying extents depending on its needs, competences and strategy (Teece, 2010; Rosenbloom and Christensen, 1994). In the case studies, we observe the practice of co-creation to be moderated by two factors: the funding arrangements and organizational culture.

Funding arrangements are the first moderator (Ordanini *et al.*, 2011; Hoyer *et al.*, 2010). Of particular significance here is the phenomenon of crowdfunding (Belleflamme *et al.*, 2012; Mollick, 2012). The second moderator is organizational culture (Naranjo-Valencia, 2011; Martins and Terblanche, 2003; Barney, 1986). It reflects the history of the firm (which approaches to NSD and innovation were successful in the past), its strategic orientation (including also the stage at NSD; Cheng and Huizingh, 2014; Grant, 2010), and its employees' attitudes (meaning how employees view co-creating customers; Malaby, 2009).

## ***RQ2. How do customer inputs contribute to a firm's co-creation practices?***

While it is often seen as obvious that closer links to customers support successful innovation, there is reason to think that being too close to customers may impede radical innovation (Aoyama and Izushi, 2008; Christensen *et al.*, 2005; Gruner and Homburg, 2000). Customer inputs typically involve incremental change, which is visible in the form of their inputs to firms' NSD and innovation, as they tend to fall along the existing trajectories of service development. Those inputs focus mostly on improvements on the propositions brought forward by the company and play a well-visible role in quality assurance as well as marketing. Such inputs take various channels in reaching organizations.

This question seeks answers to three underlying problems. First of all, it sets out to understand how the customer contributes to the firm's co-creation practices in terms of eight sites within an organization (Miles and Green, 2008). It describes firm's practices when customers are closely involved in NSD (Hoyer *et al.*, 2010). Secondly, it hopes to clarify the above issue of co-creation's relationship to radical innovation and incremental improvements (Kasmire *et al.*, 2012). We investigate

what is the form of customers' inputs that influence and are assimilated by the firm, seeking their locus in the domain of incremental, 'under-the-radar' (of official, firm-level recognition) contributions rather than break-through ideas reshaping and changing the nature of the firm's service offering. The third problem, also linked to the first, relates to the extent of co-creation occurring by the means of formal practices within an organization, as opposed to resulting from numerous and close interactions of employees with customers across the firm boundary (Cohendet and Simon, 2007; Van de Ven, 1993), akin to 'hidden innovation' described by Miles and Green (2008). This research question seeks to clarify the differences between formal and informal co-creation, as well as to contextualize them within the issues of firm's control over co-creation practice (O'Hern and Rindfleisch, 2010), changes to the organization (Voss and Zomerdijs, 2007; den Hertog, 2000) as well as the outcomes of that practice (Gustafsson *et al.*, 2012).

### ***RQ3. How can we understand the effects of co-creation propensity and style on firms?***

Co-creation has profound effects on organizations. They pertain to both market and socio-cultural dimensions (Banks and Potts, 2010; Potts, 2009; Potts *et al.* 2008), and influence a firm's back-office processes, revenue model, organizational culture, design of the service, as well as relationship between the firm and its customers (Miles and Green, 2008; Sundbo and Toivonen, 2011; Bengtsson and Ryzkhova, 2015). This research seeks to understand the impact of co-creation on various aspects of a firm's functioning, as well as to identify the main dimensions of its influence on firm's practices.

For this research question, the main focus is on the firm's new service development and related innovation practices. We seek to understand how firms respond to the creative potential of their customers, and how their own internal functions and practices are adjusted to assimilate external inputs.

The changes described in the eight sites of a firm (see Table 1) are not only the outcomes of co-creation practice. Some of them constitute also organizational prerequisites for successful adoption of co-creation. Those changes are tightly coupled with the propensity and style of co-creation.

In this thesis we observe three case studies capturing various circumstances of co-creation, where the form of co-creation takes different shapes. They are linked to three ideal types of co-creation practice: structured, semi-structured, and loose. Those firms in their practices differ in respect to the degree of formalization of the co-creation practice, extent of organizational transformations associated with co-creation, as well as the role of customer inputs in NSD. We seek to understand the effect that co-creation has, in different circumstances of a firm's propensity and style, on NSD and innovation practices.

Value chain location and positioning	Internal communications and organizational culture	Transactions, financing and revenue model	Marketing and customer relationship management
Back-office/backstage production process	Content of product and genre	User interface with product and user capabilities	Users' interactions

**Table 1.** *Eight sites of co-creation outcomes within organizations. A modification of Miles and Green (2008: 67).*

The three research questions are brought together in the theoretical framework. Co-creation is determined by the competences for co-creation held by the firm: according to Piller and Ihl (2009), as well as Lettl (2007), these are disclosure competence, appropriation competence, integration competence, and user involvement competence. Communities of customers can be defined as assets for firms, and this is also a view taken in this work (Dahlander and Magnusson, 2008).

The framework also captures the co-creation results. Those results are visible in three dimensions of experiential service design (Voss and Zomerdijs, 2007): front-stage, back-stage, and customer dimensions. Co-creation influences how services are developed and delivered; it also influences the content of those services, as well as organizations that develop them. Following on Miles and Green (2008) and Green (2007), we observe co-creation-accompanying transformations in eight sites of the firm. Those transformations are not always just the results of co-creation's adoption – often they are also organizational

prerequisites for the successful use of this approach for NSD. Following on the focus established for the framework, the co-creation outcomes for the firm are of primary interest here: on the levels of organizational culture, structure, and innovation practice.

In order to answer the research questions, we investigate the practices of thirteen firms in the videogames industry. They form three case studies (Eisenhardt, 1989) structured along a replication logic (Yin, 2009), where similarities and differences between firms are explored (Nelson, 1991). To obtain the data, we use qualitative data collection methods (Robson, 2011): interviews, participant observation and document analysis.

## 1.1 Structure of the thesis

The thesis presenting this study is organized into eight chapters.

Chapter 2 presents the literature review. Theories focusing on user involvement in co-creation, taxonomies and typologies of co-creation, user communities, as well as NSD in creative industries are discussed.

Chapter 3 introduces the setting of this study – Western (North American and European) videogames industry. It discusses the heritage of the industry, and how its historic roots facilitate the advent of co-creation. An account of productive communities of players is given. Special attention is devoted to the phenomenon of crowdfunding. The chapter ends with explaining the main challenges of game development, as well as offering an insight into the operations of a generic videogame firm.

Chapter 4 outlines the research framework and methodology, building on the main themes and concepts identified in the literature review. Multiple case study design is introduced. Interviews, observations, and document and cultural artefact analysis are used as data collection methods.

Chapter 5 presents data obtained from case studies. Rich accounts of firms form a description of co-creation practices and dynamics. Three main research questions, in conjunction with the research framework, structure this description.

Chapter 6 focuses on the results of the study. This chapter explains how competences, funding arrangements, as well as organizational culture influence

co-creation in firms, and how firms are transformed by co-creation. It maps the main outcomes of co-creation on NSD, innovation practice, and firm's relationship with customers.

Chapter 7 is the discussion chapter. It presents the five key findings of this study, linking their contributions to academic literature. This chapter also demonstrates the usefulness of results to industrial practice.

Chapter 8 concludes this study. It provides an overview of all results concerning co-creation in firms. It demonstrates the ways in which this thesis advances our knowledge of co-creation in experiential services. The chapter further discusses some of the limitations of the study and outlines opportunities for future research.

## 2. THE LITERATURE REVIEW

The following chapter introduces the most relevant literature streams to this study, as well as defines key concepts. The body of literature on co-creation strategy in firms constitutes the foundation for the theoretical framework. Yet, whereas this literature has devoted a lot of attention to describing the co-creative interface between the firm and its customers, little attention has been given to the implications of co-creation for the internal functioning of the firm. More attention needs to be paid to the organizational transformations and conditions for co-creation. Literature on participation of customer communities in co-creation is called upon to address this understudied area, together with the literature on user-centred innovation.

Therefore, literature on co-creation strategy in firms is supported by a combination of insights pertaining to both the customer community involvement in co-creation, as well as the impact of customers on innovation. Two strands in the literature, describing new service development in videogame industry and creative industries, as well as the characteristics of creative industries and the role of customer communities within them, are used to further expand and deepen the scope of the study.

The structure of this chapter is as follows. Section 2.1 introduces the literature on innovation and on NSD in creative industries, as well as observations on user innovation as occurring across the permeable boundaries of the firm. This is situated in discussions concerning the role of experience in service innovation. Following on that, Section 2.2 introduces the high-level analytical framing of the videogames industry (derived from the framing of creative industries), following on its nature as rooted in the co-evolution of market and socio-cultural forces. It describes the role of networks of customers within it. Section 2.3 discusses the literature on co-creation strategy in firms, focusing on the definitions of the phenomenon (and demarcating it from related notions of crowdsourcing, service-dominant logic, and open innovation), its typologies and taxonomies, roles in the generation of value and innovations, as well as strategic considerations of firms. Section 2.4 focuses on the communities of customers and their role in the co-creation of experiential services. Building on the literatures presented, the

chapter ends in Section 2.5 with the outlining of working definition of co-creation adopted throughout this study.

## 2.1 Innovation in creative industries

Services are simultaneously product and process (De Jong and Vermeulen, 2003), and changes in them inherently involve innovation throughout the value chain (Chesbrough, 2011). Innovation often coincides with new patterns of service content, distribution, client interaction, quality control and assurance, and others (den Hertog, 2000).

Miles and Green (2008) note that innovation in creative industries is not necessarily about the content, or the aesthetic dimension of the market offering (for example ‘content creativity’ as defined by Handke, 2004, or ‘aesthetic innovation’ by Stoneman, 2007). Innovations in such settings can take place both in products, that are themselves largely aesthetic in nature, as well as in the functional dimensions of the industry’s output. The innovation in the ‘content’ or ‘aesthetic’ dimensions of a service is the most visible for an external observer and from the perspective of a consumer in particular.

Nevertheless, it is behind the stage (Grove *et al.*, 1992) that the most important innovations take place – in the way that a service is designed, developed and delivered to the customers. Situation is further complicated in the case of experiential services, which exist mostly in the mind of an individual who has been engaged on an emotional, physical, intellectual, or even spiritual level (Pine and Gilmore, 1998). In these cases, the customer can be called the co-creator of value (Vargo and Lusch, 2008; 2004) where his individual and subjective reception of a service, as well as ability to pragmatically integrate it with his needs, determine the value of any market offering. Service-dominant logic aside, it becomes clear that innovating in such highly malleable context is multi-dimensional, and applies to the service elements seen by the customer, but also to the processes and mechanisms within the firm that enable the staging of that experience in the first place.

Creative industries can be seen as producing experiential services, thus integrating them with the reasoning and definitions presented in this section. This is due to the fact that creative industries’ outputs convey an idea, rather than

playing a purely functional role of a purely economic good, and their value is usually overwhelmingly based on the experience that they help create, as well as their cultural meaning. They require consumers that can understand and process the information provided, and the consumers' experience of creative services is highly informed by their consumption of related works, prior knowledge, and changing tastes (Hartley *et al.*, 2013).

### 2.1.1 INNOVATION IN EXPERIENTIAL SERVICES

The literature identifies four main features specific to production and innovation in services: (i) a close interaction between production and consumption (co-terminality), (ii) a high information-intangible content of services products and processes, (iii) an increasing role played by human resources as a key competitive factor, (iv) a critical role played by organizational factors for firms' performance (Päällysaho, 2008). Due to the fuzzy nature of the output of services it is more difficult to detect a change or improvement in a service than in an industrial product (Agarwal *et al.*, 2015).

Voss and Zomerdijs (2007) suggest that there are five important design areas in which innovation may be created in experiential services: physical environment, service employees, service delivery process, fellow customers, as well as back office support. The innovation in those five areas directly or indirectly contributes to a customer's experience. The areas are often referred to in theatrical terms, emphasising that a service can be seen as a performance that involves a stage, actors, a script, an audience and a back stage area (Grove *et al.*, 1992).

In Voss and Zomerdijs's (2007) understanding, back office support is back stage area of experiential design (c.f. Zomerdijs and de Vries, 2007), while front stage comprises of physical environment, service employees and service delivery process. Customer experience occurs with the customers themselves, and is also influenced by fellow customers (i.e. 'in the audience').

- a. Physical environment is the setting in which a service is delivered or experience is created. In the case of videogames industry, it is environment created by digital technology and the internet. Environment is considered a key variable influencing customer perceptions and behaviour, and it performs different roles: accommodating customers and employees,

- guiding behavioural actions, and providing cues about the type of service to be expected. Sensory design is an important part of service environment.
- b. Service employees and their interactions with customers in services are a major factor influencing customer experience. Willingness to help customers, knowledge and courtesy of employees and their ability to inspire trust, as well as caring and individualized attention the firm provides to its customers are main determinants of good customer interaction.
  - c. Service delivery process stands for a series of actions or events that take place to deliver the service. It is the script that defines the service performance, as well as the flow of customer through the organization. In videogames industry, this dimension will be highly mediated by the technological artefact of the game itself, which is designed by the firm employees before the customers are allowed to interact with it (during the production stage of game development). This is linked to innovation in management of start, end and peaks of the flow of service delivery process.
  - d. Fellow customers have a significant influence on a service experience alongside the service provider. Socialising and bonding with other customers can make an experience more enjoyable, as it is seen for example in the massively multiplayer online videogames. Creation of community around a product or service is one way to improve a service experience.
  - e. Back office support denotes the plethora of processes that occur on the back stage and influence the front stage performance. Many service organizations, videogames firms included, have a considerable number of back office employees who are vital to the customer experience (i.e. they design the tangible elements of a service for example), yet generally do not interact with customers. According to Voss and Zomerdijs (2007), the main innovation related to back stage areas of service delivery involves connecting back office employees to the front stage experience.

Voss and Zomerdijs (2007) note, that the experiential service providers produce a continuous stream of innovations to improve elements of existing services. They also notice the role of customer insights (resulting from widely defined consumer research) as a driver of service innovation in experiential services. Miles and

Green (2008) add that experiential innovations are typically driven by the customer rather than technology. Service experience concept must be developed and incorporated into service design deliberately and from the outset according to Fynes and Lally (2008), in order to deliver experiential components to customers (service concept can be understood as a means for the service provider to identify the value being delivered to customers and the value expected by customers from the organization).

Therefore, in creative industries not only the content of the service or its aesthetic nature are the locus of potential innovation. More influential are the innovations on the strategic and organizational level of firms. NESTA (2006) identifies five such important areas: innovating into new markets (for example in the videogames industry: colonising new platforms, moving from game development to middleware production), disrupting the value chain through digital technologies (by bypassing existing distributors or retailers, turning towards crowdfunding), building on diversity (drawing on ethnic minorities, global cultures, or social groups), moving from being intellectual property producers to intellectual property owners, as well as collaborating to compete (co-creation of new ideas with customers, enabling the development of competitive new products). Those innovations in areas of the firm other than just content are the focus of this thesis, as it seeks to explain the impact that co-creation has on organizations and innovation within them.

Den Hertog (2000) propose an approach for conceptualizing service innovation by introducing a four dimensional model of service innovation. It consists of new service concept, new service delivery system, new client interface and technological options. Service concept revolves around highly intangible characteristics, such as new ideas of how to organize a solution to a problem. A particular service concept may already be familiar in other markets; the key thing is that it is novel in its application within a particular market. Client interface is about its design, and is the focus of many service innovations. The way the service provider interacts with the client can itself be a source of innovation.

Increasingly, there is no clearly identifiable point where the producer's activity stops and the user's activity begins – due to high levels of co-creation of service products, as well as growing influence of fellow customers on service experience.

New services may require new organizational forms, capabilities and skills (organization can be designed and employees can be trained) – just as we observe in the case of co-creation and changes that it introduces to how organizations function.

Service firms differ in their awareness of relevant available technological options (Nelson, 1991). Green *et al.* (2007) add process innovation to den Hertog's (2000) list as a fifth dimension, which reflects the fact that in creative activities, there is much 'everyday problem solving' leading to a series of small innovations that shape the final creative product. Such 'on the job' innovation is also very common in many professional services.

In addition to the meanings of these five dimensions, the linkages between them may be of even more significance. Those cross-linkages are often forged in practice by those responsible for marketing, organisation development and distribution. A particular service innovation may display one dominant feature related to one dimension, and this feature will prompt changes in other dimensions in order to bring about a successful innovation. It is the combination of four dimensions that characterizes each particular service innovation. This is likely the mechanism via which co-creation influences organizations and precipitates transformations in them. Interactions with customers during co-creation introduce changes to the work routines and behaviours of employees (because co-creation is distinctly different from traditional, 'closed innovation' approaches to NSD), which then affect cumulatively higher levels of organizational structure (Edwards *et al.*, 2015; Dahlander and Gann, 2010).

Another typology of services innovation is proposed by Voss and Zomerdijk (2007). They present a typology of service innovation consisting of: new business models or concepts (involving a substantial change in the way of earning revenues and profits; often accompanied by innovations in organizational arrangements), new customer or delivery interfaces (changes to the way in which information is exchanged between a customer and a service provider), as well as new service-product offerings (involving the introduction of new services). Nevertheless, this typology is overly general in its framing of types of innovation; it does corroborate the typology put forward by Miles and Green (2008) but the latter is significantly

more precise. Voss and Zomerdijk (2007) view service innovation as a process innovation, iterative in its character.

According to Kuusisto (2008), it is often difficult to separate the development of future services from the actual service production. Hence service innovation is intertwined with actual service production – an argument further reinforcing the observations that co-creation is largely linked to hidden innovation (Miles and Green, 2008), and that it occurs mostly on ‘on the job’ basis. Coombs and Miles (2001:55) write that “much service innovation is intrinsically entangled with customisation of continually evolving product”.

Concept of ad hoc innovation comes in particularly handy when thinking of innovation in services: production, selling and innovation in services are merged together and occur simultaneously. Such ad hoc pattern of innovation is typical of situations in which the core service is constituted in person-to-person interactions (Sundbo and Gallouj, 2001) and the innovation is an incremental improvement in nature (Kuusisto, 2008). It points towards the tendency of service innovation to occur organically, in the everyday practices of firm’s employees, without any such activities being labelled as ‘innovation’. An important locus of co-creation that we observe in this thesis is in the informal interactions between individual employees and customers (so called dyadic interactions; Piller *et al.*, 2011), which fits such organic occurrence of innovations.

### 2.1.2 INNOVATION IN THE CONTEXT OF ORGANIZATIONS

Green *et al.* (2007) propose a ‘diamond’ framework for capturing the six dimensions of innovation in the creative industries. These consist of technology and process of production, as well as cultural product (i.e. the product that carries the cultural meanings and information content), cultural concept (i.e. the information content of the product, such as characters or narratives), user interface (i.e. how the customer interacts with the product to gain the experience), and delivery (i.e. how the product is made accessible to customers). This framework is merged with the observations of Miles and Green (2008) to generate the conceptual framework for this thesis.

To achieve this, an approach is needed for understanding innovation in creative industries as innovations in experiential services, as well as (Banks and Potts, 2010) to account for their market and socio-cultural dimensions, together with

distinct modes of innovation (technological, traditional innovation that relates more to the market sphere, as well as innovations in ‘content’ and ‘aesthetic’ dimensions corresponding to socio-cultural dimension). From the models put forward by Voss and Zomerdijs (2007) and den Hertog (2000) it appears that the organizational aspects of service innovation (what happens in the ‘back stage’) is of paramount importance when thinking of service innovations.

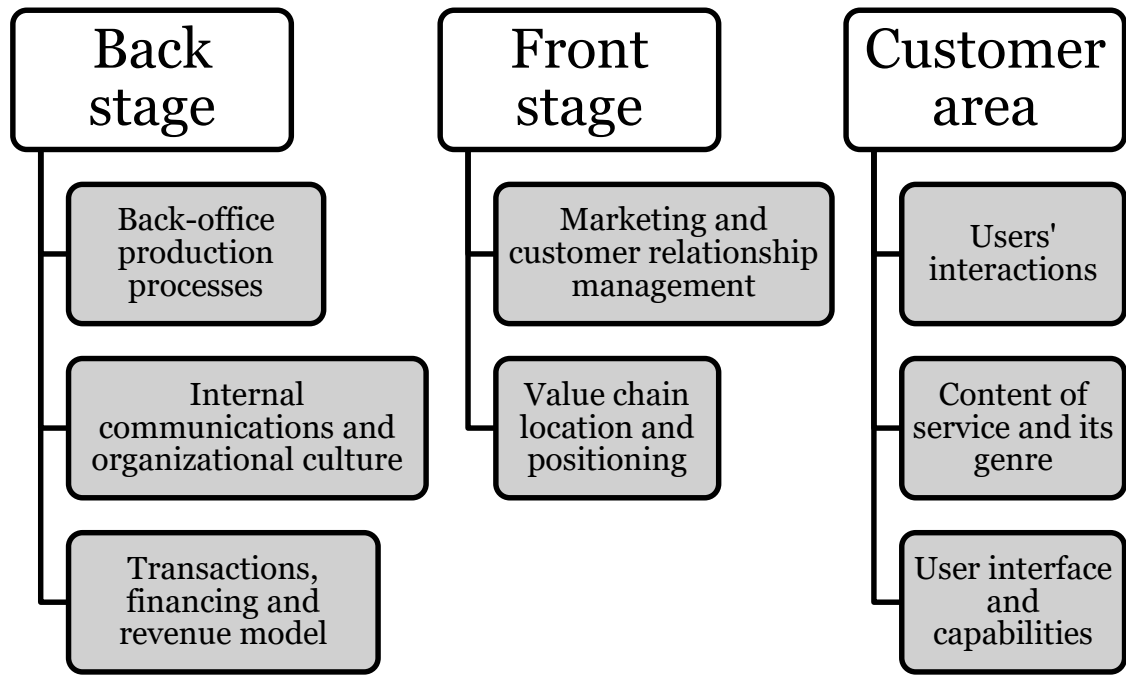
Such framework, linking innovation to specific business practices as well as adopting the perspective of the firm, is proposed by Miles and Green (2008: 67) as the ‘Olympian model’. It identifies as much as fifteen possible sites of innovation; a number that is relatively high and unwieldy for analytical purposes. A simplification of this model is required in order to integrate it within the theoretical framework of this study, and to better match it with the notions of co-creating communities of customers, as well as more fully reconcile it with the co-evolution of market and socio-cultural forces (Banks and Potts, 2010). Also, many of the sites of innovation presented in the model become redundant once its application is narrowed down to the videogames industry, as it is the case in this study.

In the context of customer co-creation of experiential services in creative industries, and in videogames industry in particular, the following refinement of the Olympian model is helpful:

- a.* Value chain location and positioning (what parts of the service are being produced and processed by the firm, and what role is taken in terms of leadership; intellectual property),
- b.* Internal communications and organizational culture (management of human resources, work organization within the firm, knowledge management, individual interactions with customers, employees’ attitudes),
- c.* Transactions, financing and revenue model (payment, raising finance, currencies and forms of exchanges),
- d.* Marketing and customer relationship management (communication with customers as collaborators, tools and techniques for managing those relationships; taking into account the interactive nature of creative services),

- e.* Back-office/backstage production process (design, scripting, prototyping, development of the tangible design of a service; heavily dependent on skilled labour, processes may be rendered visible as part of the consumer experience; innovation can involve the application of new procedures or technologies),
- f.* Content of product and genre (creation of new genres, reframing of familiar content within new context, novelty),
- g.* User interface with product and user capabilities (innovation includes decisions which facilities are created and used, and how they are configured and rendered appropriate for the experience; the role of customers as co-creators, financiers or consumers, skills/knowledge required of customers to experience the service and to participate in it),
- h.* Users' interactions (in part determined by interfaces, from basic single or multi-customer experiences, importance of other users in an experience, customer community support).

Furthermore, the above points can be divided into front stage, back stage and customer design areas, as they relate to the presence of co-creation in the development of an experiential service. These represent sites within firms which are the institutional context for co-creation – which enable the use of co-creation as part of firm's NSD effort (Figure 2). What is more, those sites are also the ones which are most transformed by co-creation over time, shifting away from the traditional models of service development (Edvardsson and Olsson, 1996) in creative industries (the videogames industry in particular). The practices and effects of co-creation in those sites are discussed throughout this thesis and constitute one of its main contributions.



**Figure 2.** Diagram representing the eight sites of co-creation outcomes in creative firms divided into back stage, front stage and customer service design areas.

Successful service innovations are often not technology based, but can depend on new organizational or managerial practices or marketing and distribution strategies (Preston *et al.*, 2009). New media workers must combine creative, business, and technical knowledge in order to succeed. The nature of innovation in creative industries hinges on the division of labour and the creative tensions involved in the production of content, balancing technical and artistic sensibilities (Scarbrough *et al.*, 2015; Panourgias *et al.*, 2014; O'Donnell, 2014; Tschang, 2007). Preston *et al.* (2009) state that external market sources, such as customers and clients, are the strongest source of knowledge for innovation for companies in creative industries (followed by the intra-organizational sources of knowledge).

Furthermore, an often under-examined source of innovation is the horizontal networks of workers in a specific sector, particularly informal networks (also discussed by Simon and Cohendet, 2007). The role of trade shows, conferences, associations, informal ties, bulletin boards, websites and social networking sites is underlined here.

### 2.1.3 ORGANIZATION OF INNOVATION IN SERVICE INDUSTRIES

In Miles (2008) we read that project management and on-the-job innovation are common ways of organizing service innovation. In much of the service sector, it is rare to find firms producing and employing specialized R&D (research is often taken to mean market research or competitive intelligence) as it is the case in the manufacturing-based model. Where service innovation is formally organized rather than treated opportunistically as a by-product of on-the-job activity, this tends to be through project-based teams, set up for the specific task at hand. This is in line with the phenomenon of 'hidden innovation' (Miles and Green, 2008).

This is illustrated in Graaf (2012), describing the practices of Valve Corporation, a famously innovative firm within the videogames industry. When it comes to the organization of innovation in the videogames industry (in the particular context of this study, i.e. focusing on the customers' role in innovation), the interactive style describes its dynamics best. It characterizes firms that are very closely involved with their clients in the production or co-production of innovations (Chathoth *et al.*, 2013). Problems are defined and redefined, and new solutions tried, requiring considerable information flows between service supplier and clients (Miles, 2008).

Sundbo and Toivonen (2011) confirm those observations and state that the role of everyday organizational practices is an important arena for the creation of innovations. When characterizing innovation in services, a number of difficulties arise: for example, the difficulty to identify when a transition from one service to another has taken place. Applying the traditional categorization into product, process and organizational innovations is also hard in services, because service products have a process in their core, and processes in turn are often visible first and foremost in the organizational settings of a service firm.

Innovation activities are carried out in projects, but very often they are involved in other activities, for example in strategic planning, training or market development; taking place in operational areas and not in separate R&D departments (Voss and Zomerdijs, 2007). Investments in human resources are often a better indicator of innovativeness in service firms than R&D expenditure or performance. Innovations are often reflected in the increased knowledge and skills of service personnel (Sundbo and Toivonen, 2011). Therefore, innovation in

services is difficult to measure because it is embedded in wider operational process and frequently is incremental rather than radical (Voss and Zomerdijk, 2007).

Jong *et al.* (2003) divide NSD into two separate stages: a search stage and implementation stage. In search stage the organization generates and gathers ideas, and determines the objectives for further development. These ideas can be initiated by various actors, such as clients, suppliers, competitors or the service firm itself. Apart from idea generation, this stage also consists of screening and commercial evaluation. On the other hand, in the implementation phase, the firm develops, tests and launches the new service, i.e. the ideas are transformed into concrete results (Päällysaho, 2008). The activities in this model are allowed to occur in parallel.

Videogames development model corresponds to Päällysaho (2008) and Jong *et al.* (2003). It contains milestones and phases, in which firm's NSD activities are different, as well as it also contains elements of task iteration (O'Donnell, 2014; Graaf, 2012; Malaby, 2009; Tschang, 2007). Therefore, when we discuss co-creation in videogames industry, we pay attention to the NSD stage of a particular service. In order to relate to the literature on co-creation (Hoyer *et al.*, 2010), in this work we identify the following stages of NSD: idea generation, development, testing, and post-launch.

Finally, helpful in thinking about services and innovation is the identification of both tangible and intangible elements of service experience (Voss and Zomerdijk, 2007). Services are driven to become more experiential and therefore increasingly intangible (Fynes and Lally, 2008). Such an approach also corresponds strongly to the characteristics of the videogames industry. The tangible elements include the products that are required for or support the service being delivered, such as the software of the game itself, or the machine that it is running on (personal computer, console or other devices, such as mobile phones and tablets). Companies have dedicated design departments that prepare tangible elements of a service – in the case of videogames studio, that will be the vast majority of the studio's activities and employees. On the other hand, intangible aspects include the service provided by employees, the interaction with fellow customers and the service delivery process.

Experiential design projects are often cross-functional, requiring contributions from people in operations, marketing, branding, business and technology, as it is demonstrated by the prevalence of for example multidisciplinary project teams in the videogames industry (O'Donnell, 2014; Graaf, 2012). Furthermore, in organizations embracing such approach, the notion that creative ideas can come from anywhere and anyone in the firm – including customer communities - is emphasised. A great deal of innovation in experiential services is undertaken by people whose affiliation or job title does not refer to innovation at all. Some respondents in Voss and Zomerdijs (2007: 23) study even argued, that having such a broad base for creativity was required to remain innovative.

#### 2.1.4 USER-BASED INNOVATION IN SERVICE CONTEXT

The dominant service management and marketing theory emphasizes the service firm's encounter with the customer as the essence of service. The term 'user', 'consumer' or 'customer' in this work refers to a person who applies the end result of the innovation process in practice and benefits from it due to the new value included; it does not denote a corporate entity.

In experiential services in particular there is no discernible end result of consumption and production process at all. The user is an active party – this co-production relationship is a fundamental characteristic of services (Arvidsson, 2011). Therefore, according to Sundbo and Toivonen (2011: 4), the concept 'user-based service innovation' refers to the development of a new or modified service, or the conditions of its production, in a way which: (1) emphasises the acquisition of deep and shared understanding of user needs, and actually utilizes this understanding in the development process, and/or (2) co-develops innovation together with users. This co-development may mean that users are original sources of innovation, partners in the innovation process, or further developers of a launched novelty (Kuusisto, 2008).

The process of innovation, as well as the interaction between producers and users during it, cannot be viewed as a linear affair with a fuzzy front end (emphasizing creative problem solving) and systematic development (reflecting rational planning; Banks, 2013). Such linear approach, also tending to view customer involvement as occurring mostly in the fuzzy front end of the innovation process, does not match the reality of the videogames industry. Customer involvement

occurs at all stages of NSD process, and pertains to numerous functions of the firm.

An experiential model needs to be adopted which merges planning and execution and relies on real-time experience, seeing service development as an uncertain path through shifting markets and technologies (Jong *et al.*, 2003). By putting the idea into practice right from the beginning in a preliminary or small-scale form provides a new way to include users in the innovation process: it is possible to create a shared experience of the object to be developed (Sundbo and Toivonen, 2011; Tuomi, 2002).

According to Päällysaho (2008), there are few key factors leading to effective customer participation in service innovation: the clarity of the task, the ability to do the work, and motivation to do the work. The interaction of the customer with the organization's business processes may occur in many different ways and levels. Overall, customer involvement is as much about organizational innovation as it is about service innovation (Dahlsten, 2004). Päällysaho (2008) also notices the need for the firm to be capable of training and guiding customers' participation in cases where customer is used in the production system as a resource – captured in this thesis as a user involvement and integration competences of a firm. At the same time, customer disposition to participate in the innovation process and the diversity of customer demand may create a certain uncertainty (Franklin *et al.*, 2013) – which is described in the section devoted to the costs and risks of co-creation.

According to Matthing *et al.* (2004), customers' service ideas are highly innovative, in terms of originality and user value, but businesses do not implement them. This is suggested to be due to the company's current structures, processes and culture preventing them from continuing with customer involvement in a given form. Similarly, Magnusson (2003) and Magnusson *et al.* (2003) found that user generated ideas are, on average, harder to convert into commercial services than ideas developed by professionals. As we see in data collected, users are often not aware of the working realities of firms, do not consider commercial feasibility of their contributions, or provide them using technology not used by the studio (Malaby, 2009). As a result, there are firms which solicit customer inputs not for their innovative value, but instead for the

customer relationship benefits arising from such exchanges (Gustafsson *et al.*, 2012; Grönroos, 1994).

This exacerbates this research's focus on the specific capabilities and transformations of organizations as a prerequisite for successful co-creation. Lagrossen (2005) argues that customer involvement in NSD complicates the innovation process – especially, it might be reasonable to exclude customers from the processes of developing fundamentally new services (Aoyama and Izushi, 2008).

Ordinary customers need help, experience and time to meaningfully contribute to the development of new service concepts. Customers need assignments that are meaningful and motivating (in different ways, depending on the customer and the nature of the task at hand; Füller, 2010). This is in line with the empirical observations of this thesis, which outline organizational difficulties in adopting co-creation, as well as transformative impact of co-creation on a firm.

Furthermore, firms should be aware that developing an accurate understanding of user needs, and integrating customers in innovation, is not simple, or fast, or cheap (von Hippel, 2007; 2005) – instead, it requires appropriate competences from the firm (Piller and Ihl, 2009). One response to that problem is the use of toolkits for user innovation, which improve customers' ability to innovate for themselves, allowing developing products via iterative trial-and-error (Päällysaho, 2008). Nevertheless, we demonstrate that such formal methods of co-creation are not the only ones deployed by the firms – for reasons associated with various competences of different firms, as circumstances of funding and organizational culture, as well as the desired outcome of the co-creation process.

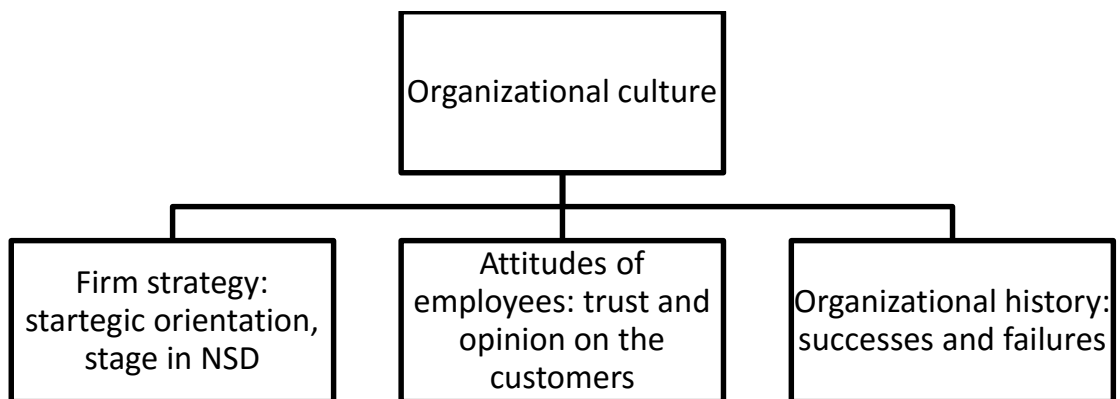
### 2.1.5 ORGANIZATIONAL CULTURE

Organizational culture is understood in this thesis as a source of sustained competitive advantage (Barney, 1986), and as such is considered as an important factor influencing the propensity and style of co-creation in firms (as well as its outcomes on innovation and NSD). It plays a significant role in influencing creativity and innovation within a firm (Martins and Terblanche, 2003), including its approach towards the creativity generated outside of the firm boundaries (Chesbrough, 2011; 2007) – for instance in the customer communities.

Organizational culture has been shown to support or inhibit organizational innovative orientation (Naranjo-Valencia *et al.*, 2011). Malaby (2009) and Graaf (2012) demonstrate similar findings in their works: open and accepting organizational cultures in firms enhance the communication with customers, influx of new ideas and selection of best solutions, as well as contribute to the positive relationship with the customers. They also have a positive influence on promoting creativity and innovation (Barret, 1997; Robbins, 1996).

Organizational cultures are not things that are easy to change, and transformations within them may also lead to changes in firm's competences (Chatenier *et al.*, 2010). As they are a source of competitive advantage, they are closely linked to firm's dynamic capabilities (Teece, 2010; 2007; Teece and Pisano, 1994). The organization's historic activities and its past successes (and failures) also shape the organizational culture, in which employees will be predisposed towards some, and not the other, NSD approaches (Cohen and Levinthal, 1990).

Firms also articulate their strategies on the management and leadership level by formulation of vision and mission, which can be customer and market oriented. Therefore, in the course of this study, organizational culture is seen as consisting of the following elements: firm strategy (in the context of co-creation and using the customers as a resource in NSD and innovation; Chatenier *et al.*, 2010), attitudes of employees, as well as organizational history (Cohen and Levinthal, 1990; see Figure 3).



**Figure 3.** Diagram displaying three constituents of organizational culture as defined in this study.

#### 2.1.5.1 *Attitudes of employees*

Organizational culture consists of the values, norms, beliefs and hidden assumptions that organizational members have in common (Cameron and Quinn, 1999). These elements can either support or inhibit creativity and innovation in organizations (Martins and Terblanche, 2003). They also influence the relationships between the firm and the customers (Gummesson, 2000; Grönroos, 1994). Very often, in organizations with such good relationship, we observe strong and numerous links between employees and individuals in the customers' community that cross the organizational boundary – becoming the setting of 'dyadic co-creation' (Cohendet and Simon, 2007; Piller *et al.*, 2011).

Those links are not only a locus of knowledge and creativity exchanges, but they also are the driver of increasing similarity between the culture of the firm and culture of the customer community (Malaby, 2009). A match between those two forms an asset for the firm, greatly enhancing customers' perceived fairness of the firm, as well as contributing to network effects such as positive word of mouth and increased maximum willingness to pay (Gebauer *et al.*, 2013). This is for example illustrated by the fact how hiring of employees from among the customer community increases that positive relationship by forming overlaps in the firm and customer culture (Bergstrom *et al.*, 2013; Burger-Helmchen and Cohendet, 2011).

Furthermore, we observe in the empirical chapter how the attitudes of individual game developers influence co-creation, and thus playing a gatekeeping function to assimilating their inputs into NSD or innovation processes (Martins and Terblanche, 2003). This attitude of an individual employee affects the attitudes of fellow employees within a firm in a bottom-up dynamic. An opposite, top-down dynamic of organizational culture as established by firm management also exists, but in this research it is classified as an element of firm strategy.

One of the most interesting contributions from the literature states, that adhocracy organizational cultures foster innovation strategies (Naranjo-Valencia *et al.*, 2011), showing a link between informal forms of co-creation (occurring 'under the radar' of official classification as R&D for instance; Miles and Green, 2008) and a firm's propensity for innovation. An organization that favours risk taking by its employees, learning from mistakes, placing focus on the generation

of high quality ideas is more likely to engage in co-creation (which is largely seen as an experimental and risky approach, due to reliance on external and difficult to control resource of customer communities).

#### *2.1.5.2 Firm strategy*

Martins and Terblanche (2003) underline the role of firm's strategy in shaping the organizational culture. Other elements such as communication routines as well as attitudes of individual employees were also identified. We use Cheng and Huizing's (2014) notion of strategic orientation, defined as "the strategic directions implemented by a firm to create the proper behaviours for the continuous superior performance of the business" (following on Gatingnon and Xuereb, 1997: 78). Strategic orientation reflects how aggressively firms compete in the market and their willingness to explore and develop competences, products, or markets. Most importantly, different strategic orientations involve different investments in organizational resources. According to those authors, strategic orientations moderate the relation between co-creation and innovation performance because the accomplishment of competitive advantages may rests upon strategic orientations in utilizing distinctive innovation capabilities (Peteraf, 1993).

#### *2.1.5.3 Organizational history*

Organizational history is defined as the track record of a firm's successes or failures with a particular approach to NSD or innovation (Gruner and Homburg, 2000). It is a force promoting conservative behaviour, as it reflects the accumulated knowledge and competences of firm's employees in the light of the projects completed (and the market response to them; Banks, 2013). It is linked to how the firm functions and its organization of work (Graaf, 2012). Overall, co-creation has a strong transformative effect on organizations, and many firms will resist co-creation because of the disruption to its existing practices and processes. This is particularly evident in the videogames industry, which largely suffers from the outdated service development methodologies (for example illustrated by its adherence to antiquated project management techniques, c.f. Keith, 2010) and is slow to change its organizational structures (O'Donnel, 2014 and 2012; Zackariasson and Wilson, 2012).

### 2.1.6 UNDERSTUDIED PHENOMENA

It appears to us, that one understudied phenomenon in academic understanding of innovation in creative industries is the accounting for the audience in that process. Current descriptions of innovation discuss how the customers participate in the shaping of the market for creative products and services (Stoneman, 2010; Müller *et al.*, 2009;), but little attention is given to the transformative impact that they have on organizations. A more detailed description of how firms in creative industries change in order to respond to customer participation in NSD is required.

The existing literature only to a limited degree accounts for the role of hidden innovation in creative industries (Miles and Green, 2008). This research postulates, that co-creation is a useful conceptual tool for accounting for the informal influx of knowledge, ideas and innovations into organizations.

Furthermore, current literatures focus on either market or socio-cultural dimensions of innovation in creative industries. In innovation management literature the focus is on the former (Hartley *et al.*, 2013; Hartley and Sorensen *et al.*, 2013), while in media studies writings the attention is mostly on the latter (Jenkins, 2009; Nardi, 2010). Many innovation dynamics in creative industries occur in both of these dimensions at once (Banks and Potts, 2010), and thus capturing both of them in a single analytical framework can shed new light on this phenomenon.

## 2.2 Analytical framing of the videogames industry

One of the main characteristics of videogames industry underlined in the recent literature is the fact that firms tend to delegate a significant part of their competences – production, accumulation and circulation of competitive knowledge – to diverse communities (Haeffliger *et al.*, 2010), which can be classified into two broad types. First, the videogames industry hires creators belonging to very diverse production communities or “communities of specialists” (Cohendet and Simon, 2007): scriptwriters, game designers, 2D and 3D graphic artists, sound designers, and software programmers. One of the main challenges for the managers of the firm is to align the functioning of these rather informal groups with the hierarchical structures of the organization (Tschang, 2007). Second is the increasing role played by the large communities of customers, and

in particular their communities, in marketing and commercial performance of a service. As underlined by Jäger *et al.* (2010), virtual communities of consumption, such as brand communities, create value for firms by supporting a service, promoting a brand and spreading loyalty to a product or a firm, or acting as a resource for ideas (Burger-Helmchen and Cohendet, 2011).

The videogames industry is shifting towards online content, customer interactivity and social gaming, where the joint effort of firms and communities creates value for the consumer. Firms try explicitly to utilize these customer communities to create and appropriate value for themselves. In a creative industry such as videogames where managers must “analyse and address existing demand while at the same time using their imagination to extend and transform the market” (Lampel *et al.*, 2000: 263), the relationship of a firm with its customers is a key success factor (Grönroos, 1994). Consequently, the relationship between the firms and these communities has become an important part of the industry’s business model.

One of the most striking features of the videogames industry is that a significant part of the value is created by cognitive resources (the communities), which are not directly controlled by the firm. The organization of these firms can be seen as a nucleus of communities, whether internal to the firm (communities of production or of specialists) or external to the firm (communities of consumption or communities of users; Burger-Helmchen and Cohendet, 2011: 318). The focus of this study is placed on the firm, and how it taps into the communities of its customers for inputs to NSD and for relationship building.

### 2.2.1 VIDEOGAMES INDUSTRY IS IN A DISEQUILIBRIUM STATE

Videogames industry isn’t easily compared to software industries (O’Donnell, 2012) for research purposes. It is vital to account for its idiosyncrasies in the context of rich and numerous links between firms, communities of customers, as well as videogames as socio-cultural objects. When it comes to the mode of production in this industry, game development is understood as a creative process involving numerous disciplines rooted in a particular culture producing creative, artistic and culturally important works (O’Donnell, 2012: 18).

According to Lampel *et al.* (2008), such producers as game development firms are confronted with two problems: demand patterns that are highly

unpredictable and production processes that are difficult to monitor and control. There are numerous accounts describing the difficulties in game development practice arising from the need to organize in a commercial production context creative inputs and individuals, who are by the very nature of their work, resistant to organizational structures and management forms (Tschang, 2007; Graaf, 2012). Furthermore, on the demand side in videogames industry, firms try to shape customer preferences by distribution, marketing and promotion – but shaping of customer tastes is difficult also due to the fact that tastes are part of a wider social and cultural matrix over which firms have little or no control (Lampel *et al.*, 2000).

For the videogames industry at large, it is of prime importance to account for what Banks and Potts (2010), as well as Potts *et al.* (2008a, b) have identified as co-evolution of market and socio-cultural forces. What makes the videogames industry particularly interesting as a setting to study co-creation, is its current state of flux (disequilibrium phenomenon), that arises from various forms of networked creativity coming into play. This phenomenon, framed by Potts *et al.* (2008a) as situated creativity, is viewed as an ongoing tension between economic evolution and socio-cultural evolution exemplified by the emergent phenomena of customer co-creation.

Co-creation is a disruptive force and has transformative implications on the relations between producers and consumers (as well as on each of these parties separately), as this research demonstrates (Banks and Deuze, 2009). OECD (2007) report suggests that more participatory media environment pushes changes in the creative industries towards models of ‘decentralized creativity’ and ‘organizational innovation’.

At some point the creative industries will reach the point of equilibrium when current practices of networked creativity will solidify and form the dominant business model (Teece, 2010). That’s why it is so important, at this moment in time, to better understand the implications of co-creation for firms, as well as best practices associated with innovating in the context of co-creation.

Videogames in this thesis are ultimately seen as creative collaborative works that are infused with culture and broad cultural implications (O’Donnell, 2012: 19).

Those cultural aspects infuse the very design, and thus key characteristics, of a game and its experience. This has been conceptualized as a three-part ‘circuit of interactivity’, by which culture, technology and marketing interact (Kline *et al.*, 2005: 30-59).

### 2.2.2 CENTRALITY OF NETWORKS IN CREATIVE INDUSTRIES

Potts *et al.* (2008b) state, that in creative industries demand and supply operate in complex social networks – contrary to the perspective of those industries as having creative inputs and producing intellectual property (IP) outputs. Complex social networks play significant coordination role in the videogames industry (Potts *et al.*, 2008b). Also the decisions to produce and consume are largely determined by the choice of others in a social network – a phenomenon enabled by the technological and communication affordances granted by Web 2.0 (O’Reilly, 2005).

This is often seen in the videogames industry, where the reviews of fellow players, as well as seeing who consumes a particular game, determine an individual customer’s decisions whether to buy that game as well. Phenomena such as word of mouth or popular culture are of great influence here (Gebauer *et al.*, 2013).

As outlined also by Jenkins (2006), Banks (2013), and Banks and Humphreys (2008), the division between active producers and passive, consuming-only audiences no longer applies. The value chain cannot be seen as unidirectional. Experiential services, videogames included, where the role of customers in co-creation of value (according to service-dominant logic by Vargo and Lusch, 2004) and word of mouth are prominent, are a prime example of social network markets. In this understanding of videogames industry the central node of analysis is the interaction between firms and the social network. ‘Social’ means the ability of one agent to connect to and interpret information generated by other agents, and to communicate in turn; and ‘network’ means that these are specific connections, often technologically enabled, and not an abstract aggregate group (Hoyer *et al.*, 2013). Firm’s employees belong to such social networks together with their customers (Potts *et al.*, 2008a and b).

Social network theory provides an analytic modelling language that represents the features of organizations and institutions that characterize both the production of creative industries output, as well as the processes by which

consumers make choices over new services (which are often experience goods; Pine and Gilmore, 1998) of uncertain quality (Potts *et al.*, 2008b). Again, the radical uncertainty of demand is emphasized as one of the defining characteristics of creative industries (Franklin *et al.*, 2013). This mode of analysis also allows this research to integrate both the competences of community of customers for co-creation (Piller and Ihl, 2009), together with the competences of the firm in one analytical framework. Nevertheless, only the competences existing within firms are of interest to this thesis, while the investigation of customers' competences for co-creation remains an avenue for future research.

Co-creation is a prime example of the conflation of the production and consumption decisions in a social network, in which the value of such co-creative actions is ultimately determined (Hartley *et al.*, 2013). Adoption of such analytical frame further assists in the abandonment of the notion of one way flow of causation along value chain (Jenkins, 2009 and 2006). Identification of social networks as having a central role in NSD in creative firms is the theoretical foundation for the investigation of co-creation (von Hippel, 2007).

### 2.2.3 UNDERSTUDIED PHENOMENA

There are very few accounts of innovation in the literature on videogames industry. Overall, very little information exists about the processes and dynamics of videogame development – this is in stark contrast to the abundance of writings on the software development (both proprietary and open source; von Krogh and von Hippel, 2006).

Virtually no accounts exist on the process of innovation itself in that industry – which forms a unique setting due to its nature as creative industry (Banks, 2013), strong role of participatory culture (Jenkins, 2006) and customer communities (Burger-Helmchen and Cohendet, 2011; Jäger *et al.*, 2010) in shaping of its offerings. We don't know how videogames firms develop innovations; whether they use established processes or are characterized by a more 'doing, using, interacting (DUI)' approach (Jensen *et al.*, 2007). Finally, the analytical frame for understanding digital videogames is somewhat lacking – the literature has not decided whether to treat videogames as products or services.

## 2.3 Co-creation

### 2.3.1 SITUATING CO-CREATION IN THE CREATIVE INDUSTRIES

According to Aoyama and Izushi (2008), there are three major implications for the operations of firms from the empowered role of user in the development of new products or services:

- a. Boundary between producers and consumers is redefined.
- b. Boundary between common property and private property regimes is questioned.
- c. Potential customer involvement as co-creator at all stages of innovation process is foregrounded.

The sources of these changes are enabled by technological affordances, but also interrelated with and enhanced by other factors: economic, institutional and cultural. Furthermore, Graaf (2009) shows that users, in case of freely shared developments, can outcompete closed-innovation firms due to their sharing of the best ideas and practices from across the innovating community. In such social networks, shared empathy spaces appear where critical knowledge is shared as part of a community of practice (Saur-Amaral *et al.*, 2011; Saur-Amaral and Rego, 2010). That further underlines the significance of users as producers in the present-day economy and the waning significance of closed innovation paradigms (Raasch and von Hippel, 2013; Prahalad and Ramaswamy, 2004).

When it comes to co-creation and its definition, as well as its contextualization within participatory media and content production (Jenkins, 2006), two major dichotomies are identified. Firstly, the opposition between firms that produce media (in the case of videogames industry those are game developers), and the communities of productive customers. The narratives of labour, exploitation, intellectual property accompany this discourse (Grimes, 2006; Humphreys *et al.*, 2005; Humphreys 2007; 2005a and b).

Second is the dichotomy between seeing co-creation as belonging to either market (i.e. economic), or cultural domains. Co-creation is a phenomenon that accompanies forms of participation in cultural production first and foremost, and relies on social and psychological effects related to fandom and intrinsic motivations (Jenkins, 2009; Füller, 2010). In the discussion that follows, it is

demonstrated that co-creation exists in both of these domains at once, and that they are integrated together via the mechanisms of multiple games and social network markets.

Banks and Potts (2010: 260) suggest an explanatory model of consumer co-creation that integrates both market exchange explanations and cultural production explanations at once. It conceptualizes cultural and economic factors in a dynamic open relationship. Co-creation is an evolved process in respect of practices, identities, social norms, business models and institutions of both market-based (extrinsically-motivated) exchange relations and culturally-shaped (intrinsically-motivated) production relations. Cooperative and altruistic behaviours are most certainly fundamental to many co-creative activities. Still, in this analysis we don't prioritize them over market-based, commercial practices – which are platforms enabling co-creation in the first place (Hartley *et al.*, 2013).

The cultural factors (identity conceptions, received practices, power relations) affect the space of economic outcomes, and at the same time economic factors (implicit contracts, incentives, markets and business models) affect the space of cultural outcomes (Banks and Potts, 2010; Potts, 2009). According to this framing of co-creation, the focus of the analysis is placed on understanding the interactions between those two domains. Customer co-creation analysis is focused on how they mutually affect and continuously transform each other.

### 2.3.2 DEFINITION OF CO-CREATION

According to Roberts *et al.* (2014), customer co-creation is defined as collaborative work between a consumer and a firm in an innovation process, whereby the consumer and firm engage (to varying degrees) in the activity of co-ideation, co-design and co-development of new products or services (Prahalad and Ramaswamy, 2004). It refers to a process where more than one person is involved, which results in a service that none of the creators could achieve alone (Sanders and Stappers, 2008). Customer co-creation is the collaboration between firms and customers to create value together, rather than by the firm alone (Prahalad and Krishnan, 2008). The co-creation experience is the basis of unique value for each individual (Weber, 2011).

In part, co-creation is a specific form of user contribution whereby 'active' as opposed to 'passive' consumers participate with the firm and voluntarily contribute

input (be that knowledge, informed opinions, experience or resources) into an innovation process (Cook, 2008), which outcome is better and more market-focused innovation. Co-creation is defined as a process occurring at all stages of new service development process, as well as after the service is launched in the marketplace. According to Weber (2011: 104): “it is neither the transfer nor outsourcing of activities to customers, nor a marginal customization of products and services”.

The following definition of co-creation captures the role of co-creation in the practices of videogames firms, and underlines the importance of customer inputs in co-creation practice (Roberts *et al.*, 2014; Banks, 2013: 1):

Co-creation is defined as a collaborative work between a consumer and a firm in an innovation process, where a non-trivial component to the design, development, production, marketing or distribution of a new or existing service is contributed by a customer, or customer communities.

Still, this definition does not account for the full extent of the process – as co-creation has a profound effect on organizations which embrace it. The statement “non-trivial component to the design, development, production, marketing or distribution” (Banks, 2013: 1) underplays the significance of the transformative effect of co-creation on firms and their services. The changes to all of those categories result from profound changes to the firm itself: its culture, practices, routines and others. Thus the component being the subject of co-creation cannot be just ‘non-trivial’ – instead, more emphasis needs to be placed on co-creation as a meaningful exchange between customers and the firm.

Co-creation challenges the existing power structures of companies that are built on hierarchy and control – it requires that control be relinquished and given to customers (Sanders and Stappers, 2008). This is also in line with Prahalad and Ramaswamy (2004) who argue that value is increasingly co-created by both firm and the customer. Commons-based forms of peer production are no longer marginal cultural or economic activities, but are moving from the periphery to the core of contemporary economies (Benkler, 2006). Co-creation is advancement from personalization and customization (Friesen, 2001).

Scholarly perspectives on user-created content and its circulation within social networks generally fall along classical development versus dependency theories (Banks and Deuze, 2009). Development focuses on customer empowerment and recognition of fandom, while more sceptical dependency describe the unequal power relationships that remain between a handful of media corporations and the multitude of consumers. Various authors such as Jenkins (2006, 2009), Bruns (2008), Benkler (2006) tend to focus on the democratizing potential of this increased user participation, although they adopt various perspectives on the phenomenon.

Interestingly, what literature and scholarship on those contestations of control over the process of co-creation (which at times resemble a discussion about ‘who exploits whom’) often omit, is the agency of the customers themselves in the shaping of this process (O’Hern and Rindfleisch, 2010; Bonsu and Darmody, 2008). Co-creating consumers are not some hapless starry-eyed participants who have no idea that firms are benefitting from their work (c.f. Wexler, 2011; Kline *et al.*, 2003). Not only that – customers do benefit from freely revealing their work in that context, in line with discussion on user innovation phenomena, having more products or services tailored to their needs and tastes (von Hippel, 2005; 2007). Finally, it is precisely through these commercial networks that both consumers and media professionals explore the possibilities for participatory empowerment and emancipation (Hartley, 2009b).

### 2.3.3 ORIGINS OF CO-CREATION

Ind and Coates (2013: 91) see co-creation as having emerged due to the coincidence of several developments: the mainstream adoption of internet technologies, the orientation towards services and experiences, a more open approach to innovation, and the growth of social, collaboration and customisation technologies. Customers can collaborate with one another to meet their needs for socialization and meaning making. Firms should influence the process of co-creation not from a position of dominance, but that of equality. Such an attitude is framed as ‘power with’ – a jointly developed, co-active, and not coercive, power (Ind and Coates, 2013).

Nonaka and Hirotaka (1995) note that individuals are always linked through social interaction, so that while an organization may believe it controls the

meaning of its brands, it can be argued that brand meanings are created by consumers and other stakeholders in a process of interaction. While organizations may be able to influence the field of possible meanings in that they write the narratives of the brand, meaning itself is dialogic and co-created (Morris, 2003).

This is reflected by the industrial move of the recent years towards constructing brand meanings beyond the walls of the organization, and is made manifest by the emergence of consumer brand communities (Fournier and Lee, 2009). Ind and Coates (2013) further state, that the emergence of co-creation is linked to the move away from the products, and focus on service elements, because it is their usage that matters to customers (Saarijärvi, 2012; Saarijärvi *et al.*, 2013).

For Hoyer *et al.* (2010), co-creation is linked to the sense of ‘empowerment’, revolving around customers’ desire for a greater role in exchanges with companies, and in value creation. This in turn is seen as an important manifestation of customer engagement behaviour (van Doorn *et al.*, 2010). In their paper, Hoyer *et al.* (2010: 283) focus on customer co-creation in new service development (NSD), where they define it as a ‘collaborative NSD activity in which consumers actively contribute and select various elements of new product offering’, and it allows consumers to take an active and central role as participants in the NSD process.

Those definitions are similar to the ones proposed by O’Hern and Rindfleisch (2010), who argue that co-creation is a collaborative NSD activity in which customers actively contribute and/or select the content of new product offering. Customer co-creation is seen as involving two key processes: [1] contribution (that is, submitting content), and [2] selection (choosing which of these submissions will be retained). In this understanding, co-creation is a response to the condition of information asymmetry (von Hippel, 2005), when the customers mostly have the information about their needs, and the firm has the information about the possible solutions.

Customer needs are often idiosyncratic and tacit in nature and, hence, hard to accurately measure and coherently implement. Customers have deep and complex (‘high fidelity’) needs; however, traditional market research methods

often provide managers with only a cursory ('low fidelity') signal of what customers want or need, which then leads to their misinformed decisions about new services (von Hippel, 2005). Co-creation is seen as a solution to that problem. This is coupled with the cultural development of consumers' growing suspicion and distrust of marketing communications (Darke and Ritchie, 2007), as well as their heightened activism (O'Hern and Rindfleisch, 2010).

This is particularly visible in the videogames industry, where the most impactful channels of marketing are now players broadcasting from their own bedrooms, unaffiliated with any firm. Customers are also less fulfilled by the consumption act itself. Co-creation is seen as an alternative to the traditional NSD paradigm. Hence the act of co-creation with customers, apart from the NSD potential, also can carry the benefits to the relationship between firm and its customers (Gustafsson *et al.*, 2012).

#### 2.3.4 S-D LOGIC, CROWDSOURCING AND OPEN INNOVATION

One major approach to what co-creation means is that offered by marketing literature, and pioneered by the works of Vargo and Lusch (2004; 2008) and Lusch and Vargo (2006). Those authors introduce the concept of service-dominant (S-D) logic, which represents the view that service is the common denominator in exchange. Central to this perspective is their foundational proposition relating to co-creation that involves customer's active involvement and interaction with their supplier in every aspect, from service design to service consumption (Payne *et al.*, 2009). Value starts with the supplier understanding customer value-creating processes and learning how to support customers' co-creation activities. Thus, the customer as "always being a co-creator of value" is a key foundational proposition of S-D logic (Vargo and Lusch, 2004; 2008). Also brands in this understanding are viewed according to experience-centred, co-creation perspective where the brand becomes the experience (Prahalad and Ramaswamy, 2004).

##### 2.3.4.1 *Rejecting S-D logic*

Service-dominant logic is not a useful tool for understanding co-creation in the context of this study. Due to its sweeping statements about the nature of value as always co-created, it lends no analytic power to this research. It is useful, however, in demonstrating the points presented above and made in the works of Banks and

Potts (2010), Potts *et al.* (2008a, b), Hartley *et al.* (2013) and others. The role of customers in determining the value of firm's offerings exists both subjectively, i.e. individually for every customer as a service is being consumed, but also within social network markets, where the sum of those individual experiences and subjective opinions comes together in a networked and communicating society to determine real market value of (in the case of the videogames industry) a game (Franklin *et al.*, 2013).

Nevertheless, this thesis focuses not on co-creation of value, but co-creation as a process involving both firm and customers in new service development. It is of interest as a set of practices, where firms choose to tap into their customers as a resource, but at the same time stressing those customers' power and initiative in those exchanges.

We study the role of co-creation as an increasingly democratic process in innovation, one allowing firms to benefit from their customers' knowledge and skills. We also view co-creation as giving those customers a real power of actively influencing how services are shaped. As mentioned in Ind and Coates (2013), it is about 'power with' the customers, and not just one-way street of tapping the customers' skills and knowledge by the firm (such a process in literature is framed as crowdsourcing; Belleflamme *et al.*, 2014; Ordanini *et al.*, 2012; Mollick, 2012). Similarly, Prahalad and Ramaswamy (2004: 8) define co-creation as being about joint problem definition and solving.

#### 2.3.4.2 *Crowdsourcing*

Crowdsourcing is a framing of the co-creative dynamic that occurs between firms and customers, which is reflected by the following integrated crowdsourcing definition (Estelles-Arolas *et al.*, 2012: 197):

Crowdsourcing is a type of participative online activity in which [...] a company proposes to a group of individuals of varying knowledge, heterogeneity, and number, via a flexible open call, the voluntary undertaking of a task. The undertaking of the task, of variable complexity and modularity, and in which the crowd should participate bringing their work, money, knowledge and/or experience, always entails a mutual benefit. The user will receive the satisfaction of a given type of need, be it economic, social

recognition, self-esteem, or the development of individual skills, while the crowdsourcer will obtain and utilize to their advantage what the user has brought to the venture, whose form will depend on the type of activity undertaken.

It is not only the benefit that is mutual. This definition does not take into account the following: [i] the customers establish their power of influencing the product or service being developed by the firm; [ii] a by-product of such 'undertaking of the task' is the formation of complex relationship between firm and the customers, as well as among the customers, and the strengthening of the communities of customers; [iii] crowdsourcer not only obtains advantages from the process, as it involves significant restructuring of the way in which a firm functions, and there are numerous risks associated with that process.

Customers who decide to devote their time, energy and effort to co-create are not unaware participants of some sleek labour exploitation scheme. They have their own agenda on one hand (reflected by their various motivations to engage in co-creation processes), and on the other the communities that they form in the process hold real power both in the relationship with the firm itself, but also in influencing the market (by mechanisms such as word of mouth; Gebauer *et al.*, 2013; Bonsu and Darmody, 2008; Arvidsson, 2011).

In the current economy, characterized by participatory culture, Web 2.0 dynamics, and open source movements (OECD, 2007), it is not possible to tap customer community for a single project without taking into account the impact that it has on the formation of those customer communities. They in turn put pressure and affect the firm in various ways (both on the organizational, cultural, as well as on the market level). The view that 'the new elite' champions the customer community for self-interested reasons, as well as that crowdsourcer seeks to extract the benefits and privileges from the customer community, is one-sided, and does not account for the reactive role of the community to such crowdsourcing mechanisms (Wexler, 2010).

Dominant in crowdsourcing thinking view of the firm as an instrumental user of the value to be conferred by calling, filtering and managing the customer community (Green and Jenkins, 2009), is no longer corresponding to reality.

Customers now demand an active stake in the development of the brands that they love, and simple framing of some nebulous ‘crowd’ which has no dynamics, motivations, organization or influence is outdated (Jenkins, 2009; 2006).

Therefore, co-creation, which accounts for that bidirectional dynamic between firms and customers, is a far more realistic framework for describing what is happening when firms decide to tap the resource of customer communities. This is reflected in the seminal work by Prahalad and Ramaswamy (2004: 12), who describe the transformation of the relationship between firms and consumers as part of the phenomenon of co-creation: from one way, firm to consumer, controlled by the firm, to two-way, consumer to firm and consumer to consumer dynamic.

The market itself is also seen as a forum for co-creation, instead of a target for the firm’s offerings or devices such as crowdsourcing. Consumers and consumer communities can initiate a dialogue among themselves, just as well as among themselves and the firm. This is also reflected in the work of Gummesson (2000) who describe the shift in marketing paradigm to total relationship marketing, relying on the firm’s meaningful interactions with individual customers, who form communities.

#### *2.3.4.3 Open innovation*

Co-creation as a phenomenon fits within the general boundaries of the open innovation paradigm, as the latter is a broad concept that comes in many different forms (Huizingh, 2011). Following on Chesbrough (2011; 2003), it shares its underpinning tenets of opening the firm up to the ideas and concepts from the outside of its immediate environment, due to the fact that it is impossible for a single, even the largest firm to have all the knowledge and skills in-house. Open innovation is “the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively (Chesbrough, 2006: 1). Closed innovation is an internally focused logic, while open innovation combines internal and external ideas to create more value for the firm (Chesbrough, 2006a, b, 2007; Hau and Kim, 2011).

Open innovation can be deconstructed into the concepts that first came to comprise it, meaning ‘not invented here’ syndrome of Katz and Allen (1982), the

lead user concept (von Hippel, 1986), complementary assets (Teece, 1986), as well as absorptive capacity (Cohen and Levinthal, 1990; Zahra and George, 2002). Open innovation relates to inflows and outflows of knowledge and their impact on innovation, as well as the opportunities for external exploitation of markets.

### 2.3.5 TYPOLOGIES OF CO-CREATION

Co-creation plays out in a variety of contexts – at all stages of new service development (as well as long after its launch on the market), between a variety of actors (for example different departments of a firm can get involved in co-creation, different segments of the customer community etc.), as well as in a plethora of forms (as it is demonstrated in the empirical chapters in this study: co-creation can range from simple contests, via voting mechanisms and feedback-giving activity, all the way to the production of assets and sitting on customer-elected advisory councils to the firm).

The literature on co-creation reflects this chimeric nature of this phenomenon, and a number of categorizations and ways of classifying co-creation in its empirical settings has emerged. O'Hern and Rindfleisch (2010) state, that developing a new service entails two essential activities: (1) the contribution of novel concepts and ideas, and (2) the selection of which specific concepts and ideas should be pursued. Firms can release control of either contributions made to the NSD process and/or the selection of these contributions, thus engaging in co-creation. The basis for this typology is consequently formed by the degree of customer autonomy across these two activities. The implicit in this model is the power of the firm in the co-creation mechanics – it is the firm's decision whether to open the contribution activity to its customers, as well as the firm's decision whether to involve customers in deciding which of those inputs become new service features. This model sits well with the theoretical underpinnings of this study, demonstrating the rationale for focusing on the firm as the dominant actor in co-creation.

In a related paper, O'Hern *et al.* (2011) discuss the impact of user-generated content (UGC) on service innovation, focusing on its role as a form of consumer-to-developer communication that facilitates innovation. The authors identify two types of UGC (i.e. contributions that reflect customer ideas and contributions that contain customer-generated solutions) and their impact on two possible

innovation outcomes (product improvement and market response). This typology builds on the notion that successful innovation depends upon sourcing novel ideas and solutions directly from the customers and marrying these contributions with the internal efforts of the development team (Bhalla, 2010; von Hippel, 2005).

Information-centric UGC revolves around customers' communicating how well a given service performs and satisfies a need. This type of UGC provides ideas to the core development team (videogame firm in the case of this study), who decides which of these ideas will get implemented (the typology of O'Hern and Rindfleisch, 2010). On the other hand, solution-centric UGC occurs when users themselves modify an existing service to better suit their needs. That division could also be seen as underpinning co-creation for relationship (in the case of idea-centric inputs) and co-creation for NSD (for solution-centric inputs).

The work of O'Hern *et al.* (2011) is interesting as it demonstrates that in some cases, user contributions may actually be a detriment to innovation activity within a firm. Their findings suggest that while idea-centric UGC enhances market response (for example number of downloads of a software), solution-centric UGC hinders service improvement (for example number of code commits in OSS). This is in line with the empirical findings presented in the chapters to follow, which reflect the disruptive effects that co-creation can have on organizations and their processes, as well as on the large amount of useless and low quality inputs that vast numbers of users are providing in their co-creative exchanges with firms.

Similar dichotomy is observed in Witell *et al.* (2011), who distinguish two types of co-creation: co-creation for use and co-creation for others. The two processes differ in their orientation: co-creation for use is performed by a specific customer for his or her own benefit, while co-creation for others is oriented towards other customers. While the aim of co-creation for use is to enjoy the service development process and its outcome (pointing towards co-creation experience, Kohler *et al.*, 2011; Verhagen *et al.*, 2011), co-creation for others aims to provide an idea, share knowledge or participate in the development of a service that can be of value to other customers. This dichotomy is also congruent with the theories outlining the motivations of co-creating customers (intrinsic versus extrinsic for

instance), as well as various types co-creation activities underpinned by those motivations. It is in line with the observations of Gustafsson *et al.* (2012), pointing towards the possibility of both relationship- and NSD-related outcomes of co-creation.

It is also reflected by the categorization by Piller *et al.* (2011), who identify dyadic co-creation and networked co-creation. In the former, co-creation takes place between a firm and one customer at a time. In the latter, co-creation exists in the context of networks of customers who collaborate among themselves as well as with the firm. This dyadic co-creation is of particular interest to this study, as it points towards the role of interactions between individuals for co-creation, and those interactions' role in transforming organizations in the presence of co-creation.

Füller and Matzler (2007) contribute to various typologies of co-creation with their identification of four forms of virtual customer integration. Their typology sheds some additional light on how customer inputs are integrated with NSD. It outlines two dimensions: level of integration, describing how actively customers engage in NSD, ranging from rather passive to highly active, as well as continuity, which deals with the frequency customers are integrated into NSD (and it ranges from one time integration for one task only, to continuous interaction during the entire NSD project or several such projects). These two dimensions also seem to reflect the dual nature of co-creation outcomes: for relationship (relating to 'continuity'), as well as for NSD (relating to 'level of integration').

#### 2.3.5.1 *Co-creation at various stages of NSD*

Another typology proposed in the literature is the one demonstrated in Piller and Ihl (2009) and Piller *et al.* (2011). It is based on three dimensions, addressing [1] the customers' autonomy in the process, [2] the nature of the firm-customer collaboration, and [3] the stage of the innovation process when the customer integration takes place (early or late, where early means in the front stages of NSD, i.e. idea generation and concept development; and where late denotes the back-end of NSD, i.e. service design and testing). Co-creation occurring at the front end of the NSD is characterized by generation of novel concepts and selection of specific ideas to be pursued further.

Interestingly, this framework is quite similar to the one proposed by O'Hern and Rindfleisch (2010), as it also focuses on the degree of freedom existing in the context of degree of collaboration between customers and the firm. In this approach, Piller *et al.* (2011) build and strengthen the understanding of co-creation as a power tension and imbalance between firm and the communities of customers when it comes to deciding what kind of ideas and solutions (following on O'Hern *et al.*, 2011) become integrated with the product or service in development.

At the back end of NSD process, customer inputs need to be more concrete and elaborated in order to be of value to the firm. A higher degree of collaboration often requires a more structured approach for the interaction with the customers. Piller *et al.* (2011) mention the high cost of the co-creative processes at this stage – as the firm needs to combine need information (which is highly sticky with the customers; von Hippel, 2005) from the customer domain with their own solution information (which, in turn, is sticky on the side of the firm; von Hippel, 2005). Because of that, exchanges between parties here tend to be tedious and accompanied by high transaction costs. This contributes to the point made by Gebauer *et al.* (2013) and Payne *et al.* (2009), who stress the importance of structuring of the co-creation experience so that it is positive to the participating customers.

Hoyer *et al.* (2010) offer a framework focusing on the degree of consumer co-creation in NSD as well. The authors identify four stages of NSD when customers can become involved as co-creators: ideation, service development, commercialization, and post-launch. The model focuses on the understanding of various characteristics of the co-creation process. Degree of co-creation is understood as a function of the scope of activities across service development stages, as well as intensity of those activities.

The paper outlines the firm-level impediments and stimulators of co-creation, demonstrating the critical things to consider for the firms before they become involved in such strategy: impediments include concerns about secrecy, ownership of intellectual property rights, information overload, and development feasibility; while stimulators are linked to increasing the benefits to consumers

from co-creation, and reducing the costs in terms of time, effort, and foregone opportunities of co-creation activities (Hoyer *et al.*, 2010).

### 2.3.6 DYNAMIC CAPABILITIES

Firms are different and compete on the basis of competences and capabilities (Tushman and Anderson, 1986; Nelson and Winter, 1982; Pavitt, 1990; Cohen and Levinthal, 1990). External and internal environments of a firm are dynamic, and as the external environment of the firm is changing, so must its internal processes and characteristics. We are currently observing many such changes to the environment of creative industries, and in the modern economy overall. They are focused around the production-consumption relationship between firms and customers.

Following on the work of Teece (2007), Eisenhardt and Martin (2000), and Teece and Pisano (1994), dynamic capabilities form a starting point for the analysis of service innovation in firms. Dynamic capabilities capture the firm's ability to adapt to changing customer and technological opportunities. Following on Teece (2007: 1319), "dynamic capabilities can be disaggregated into the capacity (1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through enhancing, combining, protecting and reconfiguring the business enterprise's intangible and tangible assets."

In that respect, the firm's ability to co-create with its customers is a reflection of those dynamic capabilities. Co-creation requires a firm to respond to changing conditions of the marketplace, as precipitated by the socio-cultural shifts (Bruns, 2008; Jenkins, 2006). New models of participation of customers in the service experience (which is also expanding and being redefined), and customers' interest in getting involved in firm's processes, form such a change. Co-creation is challenging for the firms which have been successful in the past using traditional, 'closed innovation' NSD paradigms (Dahlander and Gann 2010; Cohen and Levinthal, 1990). Dynamic capabilities reflect firm's willingness to evolve its innovation practices successfully in the light of changing external environment, and the ability to implement NSD and innovation practices that embrace customers' active role in that process.

Despite the fact, that firms engaging in both internal and external sourcing of knowledge exhibit better innovation performance than firms relying only on one

or the other (Cassiman and Veugelers, 2006), empowering users with tools and technologies has significant effects on the firm's capabilities. This is because firms have to adapt to a new way of dealing with users and user knowledge (Ogawa and Piller, 2006; Prahalad and Ramaswamy, 2004).

Bengtsson and Ryzhkova (2015) present a framework of capabilities and management practices related to the effective management of different types of online service innovation tools. Those authors list three types of service innovation capabilities:

- a) Online service exploration capability in order to find, direct and motivate users to contribute.
- b) Online service conversion capability in order to select, develop and appropriate users' contributions.
- c) Online service exploitation capability in order to transfer, integrate and combine users' contributions into service offerings.

In firms deciding to pursue co-creation in their innovation processes, necessary reconfiguration of existing capabilities and development of new capabilities do not come for free. Bengtsson and Ryzhkova (2015) highlight the importance of understanding the costs and risks of dynamic service innovation capabilities and balanced view of these tools.

Dynamic capabilities that allow firms to successfully adopt co-creation are reflected by the competences for co-creation present within a firm. Those competences ensure that the firm is capable of taking advantage of the new customer-firm dynamic in the development of its services. They are a sum of skills, attitudes and abilities present in the co-creation firm (Chatenier *et al.*, 2010). We now turn to discuss them in detail.

### 2.3.7 COMPETENCES FOR CO-CREATION

Organizational competences are defined as knowledge, skills, management practices and routines acquired over time and difficult to replicate (Trott, 2005; Danneels, 2000). They are embedded in the tacit knowledge and organizational routines of a firm (Prahalad and Hamel, 1994). Competences reflect firm's ability to use its assets to perform value-creating activities. In co-creation, the focus is

on the customer community as such an asset. Therefore we identify competences for co-creation, which describing firm's ability to harness that asset in its NSD.

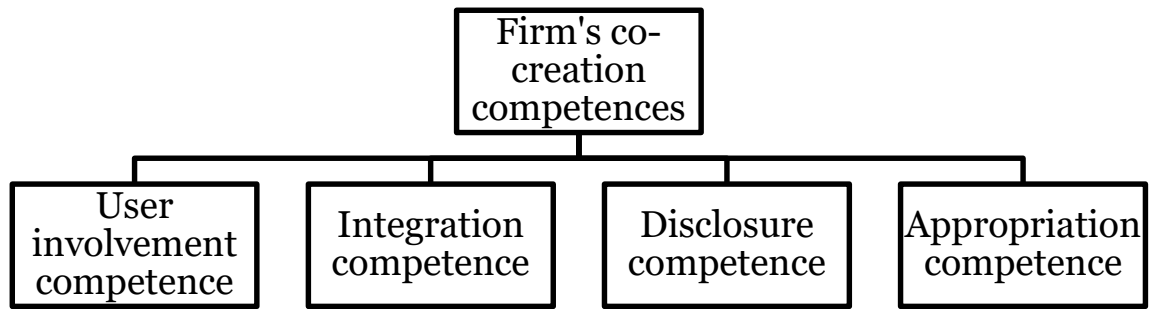
The main theoretical contribution here is the work by Piller and Ihl (2009). These authors state that co-creation can only be successful if the involved partners (meaning the firm and the communities of its customers) have sufficient and symmetric degrees of both motivation and competence. The co-creation competences of the firm are described here, and form the basis for this thesis' framework. The model presented by Piller and Ihl (2009) also reflects the role of the stage in NSD.

Piller and Ihl (2009) identify three competences for co-creation on the firm side of the process. Those are disclosure competence, appropriation competence, as well as integration competence. These competences can also be thought of in a process-like manner: first, firms need to disclose their problem in order to establish an interaction with innovative customers; secondly, firms need to be able to capture and protect the knowledge co-produced with customers; third, firms need to assimilate and integrate new knowledge co-produced with customers into their own NSD process.

Model proposed by Piller and Ihl (2009) is complemented by the work of Lettl (2007), who identifies user involvement competence<sup>1</sup> in relation to NSD. User involvement competence is a competence on the organizational level that allows firms to systematically involve customers in the innovation process. The integrated model of firms' co-creation competences is presented in Figure 4.

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<sup>1</sup> The term *user* involvement competence is used throughout this thesis. We did not replace the word *user* with *customer*, choosing to adhere to the original wording of Lettl (2007).



**Figure 4.** *Diagram representing four co-creation competences, combining the models of Piller and Ihl (2009) and Lettl (2007).*

Two dimensions of user involvement competence can be distinguished. First, firms need to know which customers are capable of providing valuable inputs in innovation projects, which means organizational knowledge about critical customer characteristics. It allows firms a segmentation of capable customers according to distinct activities in the NSD. Second, the firm needs to know what interaction patterns with customers are appropriate in the course of NSD. This dimension contains variables like the personal level of interaction, the number of customers, the temporary extend of interaction, and the network competence of the customer interaction personnel (Lettl, 2007). This competence therefore strictly determines the co-creative interface between firm and the customer communities, and the firm's ability to structure that interface (and, in the long run, the relationship) for maximum efficiency in co-creation (i.e. bidirectional flow of ideas, inputs, suggestions and communication at large between firm and customers). As such, it complements the more inward, organization-focused competences described by Piller and Ihl (2009), as well as allows relating those to co-creation competences characterizing customer community.

Those competences are visible when investigating a firm's aptitude for identifying and solving challenges resulting from co-creation. One of the most recognized cases in the academic literature on co-creating customers is the Dell *IdeaStorm* community, where customers could submit, vote and comment on ideas (Gangi *et al.*, 2010).

Four key challenges to customer co-creation were identified. These challenges demonstrate the types of problems that co-creating organizations encounter in their practices. They are listed below:

- a. Understanding the ideas posted (i.e. organization facing difficulty implementing ideas due to lack of understanding among the idea contributor, other customers, and the organization itself),
- b. Identifying the best ideas (i.e. organization facing difficulty identifying the most promising ideas contributed by customers),
- c. Balancing the needs of transparency with the community against disclosure to competitors (i.e. organization facing difficulty balancing information disclosure to customer community members against disclosure to competitors, who were assumed were listening in on the exchanges of ideas),
- d. Sustaining the community (i.e. organization facing difficulty maintaining customer engagement within the community and the continued contribution of new ideas to improve its product and service portfolios; Gangi *et al.*, 2010).

All of those challenges are discussed by Hoyer *et al.*'s (2010) as costs and risks associated with co-creation. As their result, new strategies had to be developed to effectively solve them. Gangi *et al.* (2010) list recommendations for overcoming the challenges of implementing customer communities in firm's operations. These are: creation of a toolkit, strategic positioning of key personnel, engaging lead users (von Hippel, 2005), promoting self-governance, responding quickly and asking questions, making customer votes count, and presenting firm's progress clearly and openly to the community. The authors also draw the attention to the fact, that if a community of co-creating customers is poorly managed, it becomes a waste of resources as well as it can disenfranchise customers.

Dahlander and Magnusson (2008) proposed an alternative definition of harnessing a community: it means (i) accessing communities to extend the resource base; (ii) aligning the firm's strategy with that of the community, and (iii) assimilating the work developed within communities in order to integrate and share results. This definition corresponds to user involvement (accessing and

aligning) and integration competences (assimilating; Piller and Ihl, 2009; Lettl, 2007).

Accessing corresponds to the capacity for the firm to collect the production and competences held by the community. Firms use two major tactics to access developments in communities to extend their resource base: (1) establishing new communities to attract outsiders to work in the firm's area, and (2) identifying and using developments in existing communities. Both of these approaches are linked to specific advantages and challenges.

Aligning refers to the existence of common goals between the strategy of the firm, and goal or ambition of the community (which change depending on the community type – Burger-Helmchen and Cohendet, 2011).

Assimilating corresponds to the integration capabilities of the firm, its absorptive capacity (Lichtenthaler and Lichtenthaler, 2009; Zahra and George, 2002), utilisation or reutilisation that can be made by the firm of the outputs or resources of the communities. By harnessing different types of communities (developer, player and tester type in cognitive customer communities), or helping their establishment, firms structure a portfolio of resources (Burger-Helmchen and Cohendet, 2011).

### 2.3.8 BALANCING THE BENEFITS AND COSTS OF CO-CREATION

When customer communities participate in co-creation, the positive outcomes of that process are not guaranteed (Edwards *et al.*, 2015). Firm may enjoy valuable inputs to its NSD and improvements to its customer relationship. On the other hand, customers organize themselves, which means that a firm is dealing with an external organization that can amplify problems (O'Mahony and Ferraro, 2007).

Hoyer *et al.* (2010) outline positive outcomes, as well as risks and costs of co-creation at different stages of NSD, as well as for the co-creation process as a whole. Positive outcomes of co-creation include cost reduction, increased effectiveness of products/services, as well as relationship building potential (Whitla, 2009), while the risks and costs are associated with diminished control over strategic planning, increased complexity of managing firm's objectives, as well as complexity of managing mis-performance and selection of consumers' ideas.

In idea generation and service development stages, positive outcomes are the same as for the co-creation process overall, while risks and costs are centred around provision of incentives for more and better ideas from customers, challenges in recognizing potentially successful ideas from numerous customer inputs (Saur-Amaral, 2012), as well as managing customer expectations and relationships (Gebauer *et al.*, 2013; Gummesson, 2000). In testing and post-launch, risks and costs involve challenges in managing potentially negative word of mouth, while positive outcomes include increased likelihood of success and faster diffusion (as services match customers' needs better), savings on marketing expenses (greater customer enthusiasm and word-of-mouth effects), savings on customer education and other support activities, as well as early warning of potential issues with the new service.

Further reflecting on the differences between NSD stages, Bayus (2013) identified the fluctuations of community members' ability to come up with innovative ideas over time. He identifies one additional challenge to firms co-creating services with their customers: maintaining an ongoing supply of quality ideas from the customer community over time is problematic, as the quality tends to decrease.

It is vital for organizations to counteract this trend by enticing new members into the community who are unencumbered by past successes. The firm's ability to overcome those challenges is an aspect of disclosure competence for co-creation (Piller and Ihl, 2009). It hinges on the organizational ability to provide the customers with enough material and information, so meaningful co-creation can sustainably be taking place, and new customers are attracted to contribute to it.

Similarly, Füller and Matzler (2007) stress the fact that the co-creation with customers' needs to be attuned to company's goals and support its competences in the first place. They underline the importance of balancing the expected benefits of an intensive interaction with customers against possible costs of integrating them.

According to Füller and Matzler, 2007, the benefits of co-creation include reduction of market uncertainties, identification of future needs, greater variety of ideas (Saur-Amaral, 2012), accessing new potential customers (Whitla, 2009), increased customer retention, as well as broader decision basis by parallel testing

and more product alternatives. On the other hand, the critical aspects include intellectual property problems (Bach *et al.*, 2008), disturbance of internal processes, niche market orientation (needs and ideas articulated by participating customers may be specific and not transferable to a larger target group), lack of secrecy protecting from competitors, as well as required expertise to structure co-creative interface between firm and its customers (Füller and Matzler, 2007).

Enkel *et al.* (2005) contribute to these observations on risks and costs of co-creation by suggesting a number of ways of managing the risk of customer integration. The inherent risks are: the company's loss of know-how to the customer, the company's dependence on customers, the company being limited to only incremental innovations, serving a niche market only, dependence on customers' demands or personality, as well as misunderstandings between customers and employees.

Saur-Amaral (2012) notices two types of benefits to the process of involving customers: NSD-related and market/strategy-related. This supports the observations of this thesis about the dichotomy of co-creation for NSD and for relationship (or market/strategy). In the former category, Saur-Amaral (2012) identifies such benefits as problem identification, idea generation and problem-solving. In the latter, these are advertising and promotion activities, opening markets and creating new market share. This thesis explores in further detail these outcomes and frames them as the two possible and non-exclusive categories of co-creation results.

These lists of outcomes as well as costs and benefits demonstrate the breadth of strategic considerations that a firm must make before embarking on co-creation, as well as profound impact that co-creation has on numerous departments within a firm. The latter has been demonstrated by Miles and Green (2008: 66) where innovations are linked to specific business processes in creative industries. Co-creation therefore is framed as a high-level strategic choice that significantly influences the firms.

Firm's explicit strategic orientation enhances the effectiveness of co-creation, including of co-creation with customers (Cheng and Huizingh, 2014). Furthermore, some strategic orientations are more conducive to co-creation than

others (Martins and Terblanche, 2003; Naranjo-Valencia *et al.*, 2011). Cheng and Huizingh (2014) review three such orientations: entrepreneurial, market and resource orientation. Not surprisingly, entrepreneurial orientation, which is associated with the firm proactive stance toward market opportunities, tolerant of risk, open to innovative ideas, and actively and intensively supporting the innovation process, is most positively related to the innovation performance stemming from co-creation. This implies that firms wishing to benefit most from co-creation with their customers need to integrate co-creation into their strategic and long-range planning, as well as decisively embrace it as a source of value and innovation. Conversely, firms that remain undecided as to the role of co-creation in their strategy, have a harder time unlocking its full potential.

Of consequence here is also the fact whether firms seek to use co-creation for customer-firm NSD or relationship gains (Whitla, 2009). Entrepreneurial strategic orientation could promote co-creation for NSD inputs, while market and resource orientations could be favouring co-creation for relationship benefits.

### 2.3.9 UNDERSTUDIED PHENOMENA

Overall, there aren't many publications concerning co-creation. In particular, when compared with open innovation, co-creation seems like an under-researched field (Chesbrough, 2011; 2003; Chesbrough and Crowther, 2006). Furthermore, there are very few studies of organizations in the context of co-creation. The existing literature focuses on the co-creation processes and tools that firms deploy, thus highlighting the interface between a firm and its customers. Writings account for what firms did externally in order to tap into their customers as a resource, and discuss the best practices in co-creation. Little attention is paid to the consequences that co-creation has on organizations in all sites of a firm's innovation practices (Miles and Green, 2008).

Similarly, not much has been written about the organizational (and other) characteristics that determine the form and success of co-creation. Some literature discusses the impact of co-creation on new product development (Hoyer *et al.*, 2010; O'Hern and Rindfleisch, 2010), but we found no accounts of co-creation's influence on NSD (or to experiential service development in general).

Existing literature also does not fully account for co-creation's use for benefits other than those pertaining to NSD or innovation. From the communication studies literature (Gustafsson *et al.*, 2012; Gummesson, 2000) we suggest the function of co-creation for boosting customers-firm relationship (Whitla, 2009). We seek to relate various typologies and taxonomies of co-creation to the internal environment of a firm, accounting for various transformations and impact of co-creation on organization (using Miles and Green's framework, 2008).

## 2.4 Customer communities and their involvement in co-creation

This section of the literature review focuses on the communities of customers in the context of their roles in co-creation activities, and the ways in which firms make use of those communities in their NSD. The underlying issues of customer agency and labour are investigated. Attention is paid to various motivations of customers to form the co-creating communities and to contribute their ideas, labour and creativity to the firms and brands. A discussion on the experience dimension of co-creation follows. Furthermore, this section also contains the analysis of current literature describing the ways in which firms tend to their communities' functioning: nourishing and structuring them.

Customers can be considered genuine experts in the field. As it is demonstrated in this study, customer communities are also a valuable source of skills to the firm. Nevertheless, those communities are very diverse. Different types of communities bring the firm different advantages and require different configurations of competencies to maintain these advantages (Burger-Helmchen and Cohendet, 2011; Piller and Ihl, 2009; Lettl, 2007).

Bitner *et al.* (1997) identifies three roles of customers in service delivery, with particular attention in creating quality and productivity in service experiences. Offerings within the context of creative industries vary regarding to the role of customer and their participation. Within those levels of participation, customers can play a role of a productive resource, contributor to quality, as well as a competitor to the service organization.

Furthermore, these roles are not mutually exclusive. Therefore we see various sub-segments of the community of customers emerging. Nevertheless, it is the

customer community as a productive resource and a contributor to NSD that is of interest to this study – its ability to provide a firm with creative and innovative inputs in the co-creation process.

#### 2.4.1 DEFINITION OF A CUSTOMER COMMUNITY

According to von Hippel (2005: 96), customer community is defined as “the nodes consisting of individuals or firms interconnected by information transfer links which may involve face-to-face, electronic, or other communications. These can, but need not, exist within the boundaries of a membership group.” Von Hippel (2001) views the incentive to voluntarily reveal innovation-conducive knowledge as an important condition of customer communities.

Customer communities are believed to be the strategic resource that cannot easily be imitated by competitors (Jeppesen and Frederiksen, 2006). Pisano and Verganti (2008: 81) classify collaboration modes and describe a customer community as “a network where any [customer] can propose problems, offer solutions and decide which solutions to use”. Füller *et al.* (2007: 61) define customer community as a place “where members actively discuss provided ideas, offer possible solutions, further elaborate and test them, or just give their opinion.

Following on Burger-Helmchen and Cohendet (2011), a community is a “unit of competence” (Wenger *et al.*, 2002) that attracts passionate people willing to focus their cognitive work on the specific domain of knowledge of the community. A community can be broadly defined as a “gathering of individuals who accept to exchange voluntarily and on a regular basis about a common interest or objective in a given field of knowledge” (Amin and Cohendet, 2004).

We find all of the above framings of customer community relevant to the focus of this thesis. Members of a given community share knowledge on an informal basis, and respect the social norms of their community that drive their behaviour and beliefs. As a firm increasingly delegates parts of its competencies to customer communities, a progressive ‘division of knowledge’ comes into play: the firm has to manage its relationships with increasingly specialized communities. Consequently, each specialized community requires a specific mode of management from the firm to harness the community to serve the functioning of the firm.

Hau and Kim (2011) see three commonalities of any customer community: innovation-conducive knowledge sharing, network based on user interaction, as well as the existence of an active collaborative relationship with the firm. Thus, for the purposes of this study, the definition of a community adopted is that of a network, in active collaboration with the firm, where customers voluntarily and freely develop and share their innovation-conducive knowledge with other community members (Hau and Kim, 2011: 957).

In a community, customers can participate in the firm's entire value chain process, from the innovation of the product or service to its distribution and beyond (this is different in communities that treat physical goods). In a customer community, users not only share their ideas, information and knowledge about the firm's product or service, but also interact to improve them. Its members create a pool of collective knowledge based on their interaction with the service, and this knowledge is sticky with this community (von Hippel, 2005; 2007). Such a pool of sticky and collective knowledge can be an efficient as well as effective external knowledge source of a firm's innovations (Hau and Kim, 2011).

Although in customer literature a perspective has evolved focusing on individual innovators, more recently an increased focus on 'community-based innovation' can be detected. The underlying idea, which is also recurring as the basic theme for this research, is that customers inspire, assist, and collaborate with each other in innovation process (Graaf, 2009). Customer-led innovation increasingly involves peer-to-peer interactions and communal efforts among customers (Aoyama and Izushi, 2008).

When it comes to the motivations of customers to participate in innovation practices, von Hippel (2005) argues that customers engage in innovations if their use benefits exceed their costs. Thus, customers tend to innovate because they seek to satisfy their own needs. As we see in Füller (2010) and others, their motives can also be mapped along the intrinsic-extrinsic spectrum, where enjoyment, learning, and the process of participation lay on the intrinsic side, and firm and peer recognition and career development belong to the extrinsic end of spectrum.

Customers are viewed as sovereign and rational, being able to decide whether they want to get involved with a specific firm and having the option to choose between different services (Alford, 2002). The so-called cultural consumption theory draws attention to social, cultural, moral and political values that influence both individual consumers and consumer groups (Banks and Potts, 2010). There is also the importance of elaborating information on customer needs into shared understanding within an organization. In order to be applicable, customer information has to be structured, elaborated, interpreted and shared within the organization – underlining the importance of integration competence for co-creation (Piller and Ihl, 2009).

#### 2.4.2 CUSTOMER MOTIVATIONS TO CO-CREATE

There have been many works in the academic literature discussing the reasons for which customers decide to co-create services. From the free revealing of innovations among lead users as observed by von Hippel (2005), via the free provision of one's labour in open source software communities (von Krogh and von Hippel, 2006), to modding specifically rooted in the videogames industry (Nardi, 2010; Graaf, 2009; Jeppesen and Molin, 2003) – the customers have always seemed to be driven by a compelling set of motivations and incentives, even when the firm did nothing to incentivize its customers.

Furthermore, customer communities are not uniform entities, and the sub-segments of those communities are motivated by different incentives, as well as have interest and skills to engage in co-creation in varying aspects of the service, and to various extents as well. Skilful and knowledgeable recruitment of those customers' creativity is the cornerstone of successful co-creation.

This demonstrates the heterogeneity of the co-creating communities of customers, and the differences not only in their motivations, but also in their capacity to co-create, and to provide the innovative and valuable inputs. Füller (2010) notes that customers engage in virtual co-creation for several reasons: curiosity, dissatisfaction with existing services, intrinsic interest in innovation, to gain knowledge, to show ideas, or to get monetary rewards. In order to create vibrant co-creation platforms, the needs of the heterogeneous user groups – experience-oriented as well as goal-oriented ones – have to be addressed.

Differences in customer motivations for co-creation exist and persist across each of the three forms of co-creation identified by Roberts *et al.* (2014): independent innovating, joint innovation, and direct collaboration with the firm. To motivate consumers to engage in any form of value co-creation then requires firm to create situations in which consumers are informed of opportunities to co-create. Consumers must also believe that the firm is genuine about its involvement (in line with Gebauer *et al.*, 2013 and their customer-perceived procedural justice). Consumer cynicism is one of the major dangers here – goal and value incongruence can cause breakdowns in relationships between firms and consumers (few meaningful outputs will emerge as the goals of the firm strike as overtly self-centred). Management of those challenges, as well as the ability to understand customers' motivations in a particular setting, are parts of a firm's user integration competence (Lettl, 2007).

#### 2.4.3 FIRMS' TAPPING INTO CUSTOMER COMMUNITIES

According to Dahlander and Magnusson (2008), a number of successful open source software firms have demonstrated that it is possible to rely on communities to provide inputs to service development over a prolonged period, implying a shift from owning important resources to coordinating them. In order to invest in co-creation activities, firms need some degree of control over a number of the elements in their networks. Firms need to develop competences for co-creation to be able to screen and assimilate network developments. Firms can manage their 'external interfaces' with co-creating customer communities by building strategies that combine externally available knowledge with the knowledge residing inside firms in a way that allows them to appropriate the value this creates.

Co-creation is a frequent, bidirectional, and face-to-face communication process based on four dimensions of communication: frequency, direction, modality and content (Gustafsson *et al.*, 2012). Those dimensions result in an interactive communication climate that is more or less conducive to the learning, sharing, and understanding of customer needs (Amin and Cohendet, 2004). Frequent, bidirectional, face to face, and active communication is likely to enable trust and high-quality information exchange about customers' needs.

The communication process, and therefore co-creation, is different for radical innovations than for incremental innovations (Kasmire *et al.*, 2012). Companies must apply different communication strategies in co-creation depending on the degree of innovativeness of a service under development. From a managerial perspective, it is beneficial when working with incremental innovation to spend time with customers and to become immersed in the customers' context as much as possible. Frequency, direction and content of communication with customers affect it positively, meaning that firms should communicate with customers often, in a democratic manner, as well as focus on specific types of content of that communication (Gustafsson *et al.*, 2012).

On the other hand, when co-creating radical innovations, companies should communicate with their customers frequently as well, although should not be bothered by the customers' suggestions for the features of the new offering (which is also in line with the notion that customers have trouble radically innovating as they create solutions based on their previous experiences of usage of different services; Gustafsson *et al.*, 2012; Aoyama and Izushi, 2008).

According to Edvardsson *et al.* (2012), customers are integrated in service development by obtaining use information from them, in various use situations (which refers to activities and interactions at a specific moment when resources are integrated, operated on with specific intention to create value). This demonstrates that for various types of a co-creating customer, different methods of tapping into their use information are necessary (von Hippel, 2005). Firms differ in their ability to identify those types, and to deploy appropriate methods – which feeds into this thesis' argument about competences for co-creation (user involvement competence in particular, Lettl, 2007).

Customers also change over time with regard to knowledge, skills and motivations to co-create; that change results from their evolving experiences and changes in needs, wants and preferences (Magnusson, 2009; Bayus, 2013). Edvardsson *et al.* (2012) make a recommendation to interact with customers on the bases of duplex, dialog-based methods, allowing giving feedback to customers and allowing their learning (also for organizations, promoting learning from and with customers). This suggestion is entirely in line with the principal definitions of co-creation as process, as well as its co-location with individual interactions

between employees and customers across the firm boundary (Cohendet and Simon, 2007).

#### 2.4.4 THE ROLE OF CO-CREATION EXPERIENCE

Customer communities also have their dark side, as demonstrated by Gebauer *et al.* (2013). The quality of ideas provided by co-creating communities is not the only thing that firms need to be aware of. As customers form networked communities, they can influence the perceptions of the services in the market, significantly influencing their commercial performance by affecting word-of-mouth and willingness to pay. In particular, perceived injustice as well as dissatisfaction with a company's actions and offerings may unleash customer misbehaviour: complaining, boycotting, various forms of fraud, and verbal or physical abuse of employees. These behaviours may result in negative brand perceptions of customers, stress and job dissatisfaction for affected employees, financial damage to the company and a loss of reputation.

Managing co-creation in communities is a challenging task that resembles a multi-user dialog – it is important to consider not only the interactions between the company and the participants but also interactions among the participants (Pearce, 2009; Boellstoff, 2008). It represents another challenge for a company seeking to integrate customers as participants in NSD. Commonly agreed norms and values between the firm and the community of customers are required (Malaby, 2009; Taylor, 2006).

Interestingly, both positive and negative actions of the innovation community members stem from their feelings of affiliation and commitment to it – without emotional investment in co-creation, community members would be taking no positive or negative actions whatsoever (in terms of word-of-mouth and willingness to pay; Gebauer *et al.*, 2013).

The design of co-creation experience has been the focus of a large number of academic journal articles (Verhagen *et al.*, 2011; Payne *et al.*, 2009; Füller and Matzler, 2007). According to some, it is an extension of the brand experience (Payne *et al.*, 2009), while for the others a successful co-creation experience is a prerequisite for attracting and motivating appropriate types of innovative consumers (Kohler *et al.*, 2011a, b).

Nevertheless, considering the form and feeling of co-creation experience has become a major concern for both academics and managers alike, as it influences not only the quality of contributions, but also the perceptions of the brand and the attitude of the customer community towards the firm (Ebner *et al.*, 2009). Positive co-creation experience, i.e. one that results in satisfaction, stimulates customer loyalty and recommendation behaviour – both of which are highly prized by the firms in creative industries (Verhagen *et al.*, 2011).

Co-creation experience is understood as the content of participation in a co-creation process. Experience is a complex interplay of situations, the individual, and the system over time, and designers of the virtual co-creation do not control all aspects of the experience. Understood this way, users in co-creation processes always have an experience – whether good or bad (Kohler *et al.*, 2011a) – and they share their opinions of that experience in their social network.

Firms go to great lengths to ensure that not only their products or services, but also their general communication and interactions with customers are branded and convey the emotions and aesthetics of their offerings. In this understanding, customers are always engaged with the brand and remain immersed in broadly defined virtual world as designed by the firm (Kohler *et al.*, 2011b; Kohler *et al.* 2009).

Kohler *et al.* (2011b) propose the collaborative dimension, which stands for the requirement for a system to invite users to co-create the content they wish to experience. The collective sharing of experiences by the co-creating customers in virtual worlds is seen as inducing a sense of community. Following on Yee (2014; 2006), if the experience fulfils participants' hedonic needs, the efforts involved in a co-creation system are no longer considered work (which feeds into the literature on playbour and prosumers; Ritzer and Jurgenson, 2010; Kücklich, 2005). Kohler *et al.* (2011a) and Payne *et al.* (2009) stress the interaction experience as a motivator to join and enjoy co-creation projects, as well as regard it as critical for inspiring consumers to make creative contributions.

Creating a compelling experience can be linked to the state of flow – a term introduced by Csikszentmihalyi (1991) to describe a highly enjoyable and rewarding 'optimal' experience, in which challenge and skills match (a similar

term is 'jouissance', Kohler *et al.*, 2011a). A compelling experience leads to increased persistence and interest in further co-creation activities. It also positively influences participants' attitudes towards the topic.

Kohler *et al.* (2011a) see the success of co-creation as stemming from the firm's ability to aggregate participants, retain them and encourage them to make contributions – in other words, to stage positive co-creation experience. Füller and Matzler (2007) also notice, that virtual interaction has to meet not only producers', but also participating customers' expectations in order to get honest inputs to NSD. Not only lead users (von Hippel, 2005) are able to deliver high quality input for new service development, but a wide range of different customers assume different roles and are capable of providing various contributions (Burger-Helmchen and Cohendet, 2011).

Raasch and von Hippel (2013) further elaborate the concept of co-creation experience by focusing on the benefits of the innovation process to customers. Customers are characterized by three types of motivations to innovate: use, sale and process motivation, which affect voluntary participation in an innovation project. Co-creation experience influences the quality and type of innovations produced by participating customers. Differently motivated customers will respond differently to the experience dimension of a co-creative project.

The contributions presented in this section demonstrate how the experience impacts the success of co-creation as an innovation strategy. It translates into attracting various types of customers, influences the quality of the ideas that they come up with, as well as impacts the social network effects such as word-of-mouth and willingness to pay. Co-creation experience is linked to and informs the experience of the service. The staging of the right co-creation experience is enabled by the competences for co-creation embedded in a firm (Piller and Ihl, 2009).

As customers become more engaged with the service, they interact more among themselves as well as with the firm. These interactions form the space in which co-creation plays out, extending the experiential service itself. Creative service fulfils the function of unifying those various forms of interaction in the domain of culture. This feeds back to the observations of Banks and Potts (2010) where co-

creation is captured as a process which is played out in both socio-cultural, but also in the market dimensions. An example of such socio-cultural and market change affecting the co-creation is crowdfunding (Belleflamme *et al.*, 2014; Ordanini *et al.*, 2011).

#### 2.4.5 UNDERSTUDIED PHENOMENA

The co-creating communities of customers are not the main focus of this thesis; hence this work makes relatively few contributions to that literature. There is an abundance of literature discussing the motivations, composition and dynamics of co-creating customer communities (Roberts *et al.*, 2014; Füller, 2010) mostly focused on online settings (Ebner *et al.*, 2009) and virtual worlds (Kohler *et al.*, 2011a and b; Füller and Matzler, 2007; Castronova, 2005). Nevertheless, virtual worlds and online settings are too broad of categories, and a need exists for describing co-creation in those environments more precisely.

Furthermore, existing literature focuses mostly on toolkit and call-for-submission types of co-creation, giving less attention to less formal co-creative interactions between firms and customers (for instance taking place on the level of individual exchanges between employees and customers). Another understudied aspect of the literature addressed here pertains to the transformative effect that crowdfunding has on customers' participation in co-creation experience (Belleflamme *et al.*, 2014; Mollick, 2012; Ordanini *et al.*, 2011).

### 2.5 Working definition of co-creation

To bring all the contributions of the literatures reviewed in this chapter together, as well as building on the work of Banks (2013), we propose the following working definition of co-creation:

Co-creation is such transformative practice of a firm, when collaborative work between a consumer, or customer communities, and the firm takes place, entailing a meaningful exchange that influences the innovation, design, development, production, marketing or distribution of a new or existing service, transforming the 'back-end' processes of the firm, as well as rendering accessible some functions of the firm so far unavailable to the customers.

The meaning of the exchange in the course of co-creation differs for the actors involved. For the firm it pertains to tapping into customers' need-related knowledge (von Hippel, 2005), using the labour made available by accessing customer communities (Kücklich, 2005; Castronova, 2005), tapping into the customers as an investor (Ordanini et al., 2011), as well as benefitting from positive word of mouth (Franklin et al., 2013; Gebauer et al., 2013). On the other hand, for customers that meaningfulness will correspond to their motivations for co-creating and participation – both intrinsic as well as extrinsic (Roberts et al., 2014; Füller, 2010), as well as will meet their desires for participation in culture and influencing the organization holding the keys to it (Banks, 2013; Hartley *et al.*, 2013; Jenkins, 2009; 2006).

At the same time, co-creation must be framed as a deeply transformative practice for firms. Linking to the works of Voss and Zomerdijs (2007), den Hertog (2000), Sundbo and Toivonen (2011), Kuusisto (2008), as well as Päällysaho (2008), it demonstrates how the processes that were the sole domain of the firm become visible to the customers (migrating from 'back-office' to 'front-office' for instance) and can be influenced by them. This is also underlined by Miles and Green (2008), who describe the sites in which innovation can take place in creative industries – listing sites in virtually all functions of a firm. With the involvement of customers in co-creation related to the phenomenon of hidden innovation, as well as the role of organizational culture in co-creation practice, co-creation must be captured first and foremost for its transformative influence on firms.

This definition best fits this thesis' approach to examining co-creation to explore practice of videogames firms. The working definition presented above builds on the existing body of knowledge about co-creation, complementing it with insights from the literature on service innovation, as well as customer (user) innovation. It emphasises the understanding of the organizational transformations as the key to framing co-creation and differentiating it from, for example, open innovation in general (Chesbrough, 2011; Christensen *et al.*, 2005) or crowdsourcing (Estelles-Arolas *et al.* 2012). For the former, it frames with more specific detail the phenomenon itself, instead of focusing on general mapping of the source of ideas and their crossing of organizational boundary, and a description of firm strategy. For the latter, it demarcates itself by placing the emphasis on the

organizational transformation, which is largely absent in crowdsourcing (which constitutes an open call for submissions, closely controlled and curated by the firm; Estelles-Arolas *et al.*, 2012).

This definition also clearly captures the differences between co-creation and peer production (Graaf, 2009; Benkler, 2006) or open source movement (von Krogh and von Hippel, 2006). Co-creation is a practice undertaken by the firms, and for anything to be identified as co-creation, a corporate actor who plays the role of coordinator of external competences must be present. Co-creation has its roots in the labour of the customer community, spans the boundary of the firm, as well as transforms the organization by questioning the traditional separation between internal, so far unavailable to customers functions, and functions into which the customers traditionally have had an input (Miles and Green, 2008; den Hertog, 2000).

Therefore, it is a unique practice – it exists in all three of those areas (Voss and Zomerdijs's back-office, front-office, as well as customer interaction areas; 2007), while crowdsourcing omits the back-office, and peer production largely excludes corporate actors from the equation altogether (and open innovation describes only a general corporate paradigm of sourcing ideas and solutions). Co-creation, as framed in the definition above, also captures the role of customers in the internal processes of the firm, such as innovation and new service development. It allows for integrating this role of customers as advisors and influencers to the firm, not simply a source of easily-identifiable solutions, together with more palpable and measurable outcomes of firm-customer collaboration, thus assisting us in better understanding of the phenomenon of hidden innovation as well.

## 2.6 Chapter summary

Co-creation in experiential services is a complex and multi-faceted phenomenon. It is influenced both by the organizations, their processes and cultures, as well as by service experience, communities of customers and wider socio-cultural changes such as crowdfunding. Numerous typologies exist to account for co-creation in organizations, pointing towards firm's role as the regulator and controller of that process.

Co-creation is an interesting process because it occurs in the context of social network markets. What it means is that co-creation resides not only in the interactions between firms and customer communities, but also in the individual ('dyadic' or 'duplex'; Piller *et al.*, 2011) relationships between employees and customers. That has an influence on how co-creation affects organizations and their NSD – in an organic, almost 'hidden' way. Co-creation's effects are then visible not just in the firm itself or its processes, but also on the relationship with its customers.

The concepts discussed and defined in the course of this literature review are taken further in the following chapter, where their operationalization and theoretical framework are presented. Nevertheless, our observations point towards the need to use highly descriptive, qualitative methods that allow rich and detailed insight into practices of studios.

This is because co-creation is an elusive phenomenon, which resides in discrete interactions across the firm boundary, as well as which impacts organizations in subtle and often officially unaccounted for ways. Its effects are felt in various departments of a firm, as co-creation is a far cry from traditional, 'closed innovation' models (Dahlander and Gann, 2010; Chesbrough, 2011).

We need to investigate organizations and their various NSD-related practices, paying attention to various functions of the firm, and focusing not only on what in the literature is described as directly influencing NSD and innovation. A holistic approach (Corbin and Strauss, 2008) is necessary, where we seek the answers to the research questions.

## 3. THE VIDEOGAMES INDUSTRY

This chapter contains the discussion of the videogames industry in the context of the two main actors involved in co-creation: videogames-developing firms (referred to as ‘videogames firms’, ‘game developers’, ‘developers’, or ‘studios’) and communities of customers (the terms ‘users’, ‘consumers’ and ‘players’ are used throughout the thesis).

### 3.1 What does the videogames industry do?

The videogames industry develops videogames to be played on various electronic devices: personal computers, dedicated game consoles, as well as mobile devices (including both phones, as well as tablets). Videogames are artefacts consisting of software code, script (determining the rules of the game, as well as its premise), artwork, and music. They belong to a large number of genres, which display great variety: there are racing games, shooting games, strategy games, role-playing games, as well as simulator games. Videogames studios vary greatly in their size (from one-man operations, to organizations with a few thousand employees). Studios are also often specialized in developing videogames belonging to a particular genre. Videogames are distributed to customers by the means of both physical (discs) and digital (downloads) channels.

Some videogames command large fan following. Their players form communities, where various game-related topics are discussed. Players develop social bonds, band together in guilds or clans, help one another with various game-related problems, as well as compete against each other. Those communities are an important asset to videogames firms, as they ensure continued sales, both for the existing as well as upcoming videogames, as well as reduce demand uncertainty (Franklin *et al.*, 2013). They can also be an asset during videogame development – as it is shown by this thesis.

Videogames industry also includes other actors apart from studios and customer communities (such as publishers, middleware developers, platform owners), but they do not engage in co-creation with customers (Broekhuizen *et al.*, 2013). Videogames firms design the gameplay, build the underlying software, create art and compose the music, as well as coordinate the work process and ensure problem-free functioning of the finished game (Scarbrough *et al.*, 2015;

O'Donnell, 2014; Graaf, 2012; Malaby, 2009). Videogame studios have the most to gain from learning about co-creation, and they are the focus of this research.

### 3.1.1 CHAPTER OVERVIEW

The contents of this chapter are as follows. Section 2 discusses the central role of the firm in the context of co-creation, together with explanation of cultural forces that shape this process. Section 3 provides an account of those characteristics of the game developer firms and videogames industry that are particularly precarious, and which form some obstacles to adopting co-creation. Section 4 briefly describes communities of players. Section 5 introduces the concepts of indie studios and crowdfunding, and argues for their importance in shaping of both the videogames industry, as well as the fan communities and their relationship to firms. Section 6 discusses modding, which is a historic and spiritual precursor to co-creation. Finally, Section 7 offers conclusions to this chapter.

## 3.2 Videogame firm and co-creation

When talking about the videogames industry, the attention is attracted to the large number of actors that shape the balance of power within its structures: developers, publishers, platform owners, distributors and others (O'Donnell, 2014). In the course of this research, the communities of customers are treated as yet another such actor influencing the videogames industry through the mechanisms such as social network markets and situated creativity (Potts *et al.*, 2008 a and b). They are framed not as passive consumers of media content, but instead as their co-creators (Banks and Humphreys, 2008; Jenkins, 2006; 2009; Hills, 2002).

It is one of the main implications of this thesis that videogame firms will continue to retain their central position in relation to the communities of customers. The firm plays a coordinative role of a vast array of various production-related activities, and consists of numerous functions that could not be outsourced to the community of customers. Nevertheless, players' desire to influence NSD has been encroaching upon the firms with increasing force in the recent years. The control over creative agency (O'Hern and Rindfleisch, 2010) can be ceded to customers to varying degree depending on the competences and culture of the firm behind it. Still, the firm's role as the coordinator of customer's competences and architect

of the systems in which customers' creativity plays out will remain undisputed in the foreseeable future (Boellstorff, 2012; Malaby, 2009; O'Hern *et al.*, 2011; Piller and Ihl, 2009).

This comes together with the realization of the recent years, that customers can actively seek and adopt strategic positions in the official production space (Hills, 2002). The understanding of fandom no longer needs to rely on the assumed separation between producers and consumers (Banks, 2013). Jenkins (2006) and Graaf (2009) see media users as pursuing complex and contradictory alliances and suggest that fans seek to open and explore possibilities for participatory alliances within these commercial networks. Also according to Graaf (2009), problems become those of access, and the terms and conditions of this participation – for example in considering the changes in the internal functioning of the firm, or in its culture– rather than opposition or resistance (Bruns, 2008).

Game development is a highly coordinated and complex activity (Graaf, 2012; Tschang, 2007) performed by expert groups (Panourgias *et al.*, 2014; Scarbrough *et al.*, 2015). The role of game design, which is essentially a process of ensuring that the game experience is enjoyable, is a highly centralized and focused process, requiring skills which are tacit and thus difficult to pass on to others (or learn in formal education; O'Donnell, 2014).

There are many terms in the practice of game developers that denote bad design, which vastly reduces the quality of any game – such as 'feature creep' or 'kitchen-sink design' (Schell, 2008; Koster, 2005). Attempting to outsource portions of game design could result in a game that is essentially unplayable. The same applies to other aspects of game development – for example to writing of the software code governing how the game functions, or creation of the high-level game art, setting the mood and feel of the game (Hight and Novak, 2008).

According to Banks (2013), without the nexus of the firm and its role of coordinating customers' competences (c.f. O'Hern and Rindfleisch, 2010), co-creation would quickly descend into a chaotic and unstructured process, unable to produce any type of media that would be competitive in the market economy. Furthermore, the ownership of intellectual property resulting from co-creation remains an unregulated issue which sits uneasily with current framings of

copyright and plagiarism (Humphreys, 2007; 2005; Grimes, 2006). Since particular pieces of IP form one of the most important assets that a firm in the creative industry may have, any risk or uncertainty associated with it is avoided. Firms don't want to open themselves to lawsuits over use, and benefitting from, a valuable element of their IP which may, or may not, have been ideated by a customer.

### 3.3 Overview of a videogame firm

Game development is a highly complex process. It consists of both technical, as well as aesthetic expertise, and skilful coordination of those two in the conditions of demand-driven marketplace (O'Donnell, 2014). In the videogames industry, this means bringing together large numbers of specialists in completely different fields. The videogames have become a prime outlet for entertainment industry, with the drive towards satisfying ever larger market segments in videogames' drive to appeal to all. This has caused the development costs to soar for many such mass market titles, as the graphics, level of complexity, as well as connectivity of videogames have become expected by the consumers to be in the highest possible standard.

The focus in game development is not software, but experiences and content for customers, and the player experiences a complex system as constructed above and beyond the software of the game, which is always secondary to the experience (O'Donnell, 2012). Hence videogames are deeply experiential products, where the value is truly determined individually by every customer while playing the game itself (reflecting the service-dominant logic and value-in-use; Saarijärvi *et al.*, 2013; Saarijärvi, 2012; Vargo and Lusch, 2004). The opinions of individual players circulate widely in the highly connected networks where value is determined based on the opinions of peers in that network (Gebauer *et al.*, 2013; Banks and Potts, 2010; Potts *et al.*, 2008 a, b). The market demand, and thus commercial success, for any particular title is difficult to predict (Tschang, 2007; Franklin *et al.*, 2013).

Such dynamic occurs in an industry, where the production methods rely on continuous innovation, as well as marrying technological achievements with artistic content capable of creating lasting socio-cultural impact, and creating dedicated communities of customers. The game development process is creative

in its nature (Graaf, 2012; Tschang, 2007; Cohendet and Simon, 2007). It is difficult to frame into prescribed routines and instructions to be simply followed by a firm's employees.

Videogames industry is highly secretive about its practices, as well as shows little institutional memory (O'Donnell, 2014). Following on O'Donnell (2014), this state of flux, which characterizes the mode of functioning of the videogames firms, is linked not only to the process and organization, but to the relative youth of the industry. The precarious nature of NSD process in videogame firms is the outcome of technological change, as well as not retaining experiences or learning long-term lessons about how to respond to particular situations during game development. This is also linked to the game developers and other firms within the industry (such as publishers) being unwilling to grant access to researchers (Nardi, 2010: 35).

### 3.3.1 CO-CREATION AND ORGANIZATIONAL CHANGE

In such a context of game development practices, any type of deviation from the true-and-tested methods of game development are seen as adding to the already high uncertainty (Sakao *et al.*, 2009; Knight, 1921). Co-creation is seen as requiring new organizational routines and processes that are not proven, as well as it is equated with investment in an external resource which essentially cannot be controlled ('the crowd'). Managing the inputs from the customers and assimilating them into the internal game development processes is seen as a difficult task, one that can be easily very disruptive. The game development professionals themselves are reluctant to process customers' ideas as well, as that requires a change in their role within the studio – from the makers of content, who can “simply go in their hole and make some stuff” (O'Donnell, 2014: 52), to curators of external ideas and inputs. The fears for the stability of their employment and becoming obsolete accompany this (Wexler, 2010).

A game development project can be divided into three major functions: programming, art, and design (Hight and Novak, 2008; Irish, 2005; Bethke, 2003). Employees working in these respective disciplines are highly specialized professionals, whose work is coordinated and brought together by producers and project managers. Communication and coordination between those specializations pose one of the main challenges to successful game development.

Co-creative inputs from customers fit uneasily within these disciplines (customer inputs often concern numerous issues at once, falling into remit of different specializations within the studio). This further increases the firm's reluctance to accept them, as they are disruptive to established methods of game development and require interdisciplinary teams to process them.

Still, recent trends in the videogame development practice enable the rise of such interdisciplinary teams, as well as industry professionals, who in their skillset combine two or three of those disparate disciplines (for example tools engineers and technical artists; O'Donnell, 2014). Some firms do embrace them, thus opening the doors to sustainable capitalization on co-creation in their practices.

Some studios embrace co-creation. They purposefully depart from more traditional approaches to game development, experimenting with their team composition, project management timelines, revenue streams, as well as degree of player involvement in internal affairs of the firm. Those studios integrate those processes deeply into their own practices and operations, becoming unique actors within the industry. This study focuses on such firms, just as it demonstrates more traditional type of firms that have only adopted co-creation out of necessity and as an add-on to their proven game development practices, normally in the wake of crowdfunding.

### 3.4 Player communities

The roots of the videogames industry are related to the notions of fandom and participation – gaming as an activity stems from niche forms of interests and thus closely-knit communities (for example the original MUD communities; King and Borland, 2014; Boellstorff, 2012). In the environment of online videogames, emotional and social bonds form that are unique to play, and that are viewed by the players as equally authentic as the bonds that they form in the offline lives (Pearce, 2009).

Only recently we observe rapid expansion of videogames into the mainstream mass market, and the drive of the industry to market its products to all possible demographics (Zackariasson and Wilson, 2012; Marchand and Hennig-Thurau, 2013). In its wake, the gaming as a cultural activity has been losing its niche character. Social groups associated with gaming have been gradually expanding.

Gaming is no longer popularly perceived as something that only socially-awkward, white, teenage, middle-class boys do (Pearce, 2009).

As the result, playing the mass market, big-budget titles, no longer is synonymous with mandatory belonging to a community of players. Being a member of such communities has become optional; a domain of only the most involved and engaged customers, who enjoy it the most and are invested in it to the high degree (as demonstrated by Burger-Helmchen and Cohendet, 2011). Furthermore, some videogames lend themselves to growth of player communities better than the others. Certain videogames are single-player experiences by design; others rely on the social dynamics, interactions and cooperation between players for their core functionality.

### 3.5 Small videogames firms and crowdfunding

The most visible manifestation of increasing involvement of players and their communities in the videogames industry is the phenomenon of crowdfunding (Belleflamme *et al.*, 2014; Mollick, 2012; Lehner, 2012). Enabled by such platforms as Kickstarter<sup>2</sup> or Indiegogo<sup>3</sup>, and boosted by recent technological developments, it has taken the industry by storm, enabling the development of numerous innovative services (Levenshus, 2010; Lipton, 2009; Howe, 2008).

According to Ordanini *et al.* (2011), crowd-funding is an initiative undertaken to raise money for a new project by collecting small to medium-size investments from several other people. In the case of the videogames industry, those donations are predominantly small (for the case of Obsidian Entertainment described in this work, overwhelming majority of crowdfunding customers contributed less than 70 USD to a project). The donors do not receive any financial benefits from contributing, such as equity in the firm or share of the revenues.

The types of crowdfunding 'backers' (as they are called by game developers) that we see in the videogames industry can be described as motivated by non-economic benefits. Their actions in supporting projects are described using the literature on donor behaviour (Cermak *et al.*, 1994), which suggests that they are

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<sup>2</sup> [www.kickstarter.com](http://www.kickstarter.com) [Accessed on 14.09.2015]

<sup>3</sup> [www.indiegogo.com](http://www.indiegogo.com) [Accessed on 14.09.2015]

motivated by self-esteem, public recognition, satisfaction of expressing gratitude for one's own wellbeing, and relief from feelings of guilt and obligation (White and Peloza, 2009). This is complemented by Rutherford (2000), who highlights the role of crowds in trying to sustain small projects having a social meaning (Ordanini *et al.*, 2011).

Crowdfunding, on the highest level of analysis, has led to the major change in the videogames industry manifested by the mass appearance of small, independent game development studios, called 'indies'. Those indie game developers, which are firms normally consisting of just a few employees (many of them are single-man enterprises), take advantage of the facilitated communication between themselves and their customers, offered by Web 2.0. Because of the limited budget, indie studios cannot develop photorealistic graphics or complex videogames that would captivate the mass market, just like the big-budget videogames do. Instead, those small developers seek to attract a market niche by offering products that are unique.

### 3.5.1 BRAND COMMUNITIES

Due to the inherent nostalgia as well as heightened artistic dimension of indie videogames, as well as tapping of the indie developers into their own social network to advertise their productions, it is common for indie videogames to garner a following of dedicated customers. This forms what Ordanini *et al.* (2011) call a brand community, or a community of consumption (Jäger *et al.*, 2010). Such community consists of customers who are deeply involved with a brand that offers then symbolic benefits, can develop "a common understanding of a shared identity" (Muniz and O'Guinn, 2001: 413) and actively engage in activities such as new service development, quality reassurance, experience sharing, and joint consumption (Ordanini *et al.*, 2011: 447; c.f. consumer tribes in Kozinets *et al.*, 2007).

Ordanini *et al.* (2011) identify two distinct traits of customers who are likely to participate in crowdfunding initiatives in the videogames industry (which are characterized by a 'donor' type of behaviour): innovative orientation (stimulating the desire to try new modes of interacting with firms and other consumers), and social identification with the content, cause or project selected for funding (sparking the desire to be a part of the initiative).

Brand communities are one of the most important resources for those small studios, which are often composed of relatively inexperienced game developers. Brand community members are typically motivated by fun, learning, identification and status, especially when the activity is shared in social networks (Bagozzi and Dholakia, 2006). Online, they generate “a process of collective value creation” (Schau *et al.*, 2009: 30) – facilitated by the community of customers, which often includes experienced consumers (customers with high product competence; Lettl, 2007), as well as game developers already established in the industry (Cohendet and Simon, 2007; Van de Ven, 1993). Such community can provide suggestions, feedback, help with some activities (such a testing) – overall be an asset of considerable importance to the small indie team.

Brand community can be tapped into as a source of funding in the crowdfunding model. The literature on co-production identifies information, knowledge, and labour as the primary resources that consumers can use when co-producing a service offering (Chathoth *et al.*, 2013; Arvidsson, 2011; Fang, 2008). In collective contexts, such as crowdfunding, consumer’s monetary funds and project-screening capabilities represent important additional resources (Ordanini *et al.*, 2011). The motivations of customers involved in crowdfunding relate to the feeling of being at least partially responsible for the success of others’ initiatives (desire for patronage) as well as striving to be a part of a communal social initiative (desire for social participation; Etgar, 2008).

The similarities between crowdfunding behaviour and, for instance, user-led innovation (von Hippel, 2005) and co-creation participation (Roberts *et al.*, 2014; Füller, 2010), are apparent from the above remarks. This underlines the proximity of the two phenomena: crowdfunding and co-creation. But it is not only the indie studios that take advantage of crowdfunding. Major and established videogame studios that are characterized by strong customer following (a result from having released at least one product that had proven to be a success, at least in the socio-cultural dimension) turn to crowdfunding as well.

In the course of this thesis, a few of such firms are discussed in detail: apart from aforementioned Obsidian Entertainment, those will be inXile Entertainment, Cloud Imperium Games, as well as Born Ready Games. Crowdfunding as a strategic decision heavily influences a firm’s propensity for co-creation, elevating

the status and role of community of customers in relation to the firm. The dynamics of interaction between those two parties are significantly affected in the wake of such an funding arrangement, and have reverberating implications for many of the firm's operations and processes.

### 3.6 Modding as a precursor to co-creation

In one of the most popular MMO videogames of all time, *World of Warcraft* (Blizzard Entertainment, 2004), many technically-savvy players are engaged in the activity termed as 'modding' (Davidovici-Nora, 2009; Jeppesen and Molin, 2004). Modding is a phenomenon well described in the available academic literature (Arakji and Lang, 2007; Graaf, 2009; Harvard Law Review, 2012), and it outlines many of the dynamics of the customer community that also pertain to the phenomenon of co-creation. In its essence, modding is a modification of videogame by its users in order to add new functionality to it (a functionality which was not included in the original, officially-released title).

Interestingly, mods are created by players who enjoy the videogames and generate ideas for customizing gameplay, seeking to explore new directions and to deepen their connection to the game (Nardi, 2010). This is very much in line with the observations of user-innovators by von Hippel (2005), as well as the motivations for co-creating customers (Füller, 2010), which are very much to do with the intrinsic, altruistic motivations related to learning, as well as internalized extrinsic motivators having to do with peer recognition and social standing.

Following on Graaf (2009) and Sotamaa (2004), firms regard mod development as attractive sources for free brand creation, extensions of the game's shelf life, increased loyalty, innovation, and recruitment (Kücklich, 2005; West and Gallagher, 2006). As such, modding can be viewed as a form of co-creation, albeit a limited one. It mostly pertains just to the content of the service offered by the firm, as well as to the customer interface with it – which are only two out of eight sites within a firm that are affected by co-creation (Miles and Green, 2008).

Modding does not occur on the level of NSD in a firm; instead it pertains to the customer experience domain of a service. It constitutes inputs to the front stage area of experiential service design (Voss and Zomerdijs, 2007). Firm's NSD processes are not affected by modding – which is contrary to co-creation.

Communities of modders have been around the videogames industry for a long time already (Arakji and Lang, 2007), but they exist in separation from the game development firm. They are either not supported by the game developer, or supported by very few and select employees of the firm, who tend to do that in their free time.

### 3.7 Chapter summary

This chapter has drawn attention to the dynamics and characteristics of the videogames industry that influence co-creation. In the context of game development, co-creation is not an easy NSD approach to embrace, as it brings many new challenges that can be disruptive to the already precarious practices of firms. Studios work within tight budgets, in conditions of demand uncertainty (Franklin *et al.*, 2013), and need to continuously manage their complex relationships with customers (Gustafsson *et al.*, 2012; Grönroos, 1994).

Those customers form distinctive communities, engage in emergent behaviour that sometimes comes to game-breaking, are vocal, and their opinions exist in the context of social network markets (Potts *et al.*, 2008b). The appearance and success of such phenomena as crowdfunding, as well as rise of indie game developers and their capitalization on market niches, further empower the customers in their interactions with studios (Bonsu and Darmody, 2008). Videogames themselves are experiential services, where the aesthetic impressions of an individual matter (Verhagen *et al.*, 2011; Pine and Gilmore, 1998) and contribute to the creation of value (Saarijärvi *et al.*, 2013; Vargo and Lusch, 2004; 2008).

Co-creation is not new for the videogames industry. It has its roots in historic dynamics between the studios and their customers (Bradley and King, 2014). Phenomena such as modding (Nardi, 2010; Graaf, 2009), fandom and participatory culture (Jenkins, 2009 and 2006), as well as the role of customers as co-producers of services as exemplified in MMO videogames, have paved the way for co-creation as a viable game production practice. Despite the advent of high-definition consoles in the first decade of 21<sup>st</sup> century, and associated entrance of gaming into the mainstream culture, this industry retains its power to create experiences that promote the development of emotional bonds between customers and videogames that they play. Very often, as demonstrated by Pearce

(2009), this bond plays out not only in-game, but spills over to other media and forms of communication, for example to internet forums, fan events, and other outlets of human sociality. Firms in the videogame industry have taken note of the power of those phenomena, and their recent interest in harnessing co-creation for creation of value in their business practices reflects that awareness.

In co-creation dynamics it is the firm who bears the risk of the process (Gebauer *et al.*, 2013; Banks, 2009). It is also firm who needs to find the application and means of assimilating customer inputs internally (Zahra and George, 2002; Hoyer *et al.*, 2010). Firm needs to understand and manage (by developing new competences; Piller and Ihl, 2009) the ebbs and flows of the resource ‘crowd’ – remaining ever outside of the reach of traditional management tools. It is these and others considerations that solidify the focus of this study on the firm’s role in co-creation, together with its characteristics.

## 4. METHODOLOGY AND METHODS

Here we explain the methodology of our research. The objective for this study is to understand the consequences of co-creation as an innovation strategy and practice in organizations, as well as to determine the factors that shape the its dynamics within firms. Co-creation is a practice that occurs also at the interface between a firm and its customers, and despite the fact that the focus of this work remains strictly on the internal practices and characteristics of the firm, it is not possible to discuss co-creation without understanding the underpinnings of this process that occur within the community of customers.

In this study, we used a methodology to best examine the organizational dynamics accompanying co-creation. We sought to observe how customer inputs are integrated with firm's practices, as well as how firm's practices are altered by the assimilation of customer inputs at the same time. In order to achieve this, this methodology utilizes qualitative methods to investigate three case studies. Three major firms within the videogames industry: Obsidian Entertainment, CCP, and Cloud Imperium Games, as well as a number of smaller firms in that industry are selected as the research site for data collection by using semi-structured interviews, site visits, and online document analysis.

This chapter is organized as follows. Section 2 restates the three research questions, presents the theoretical framework, and outlines the research design with particular attention to the operationalization of those research questions. Section 3 describes the rationale for selecting Obsidian Entertainment, CCP and Cloud Imperium Games (together with accompanying smaller firms) as three replication-logic case studies. In section 4 the principal research methods used for data collection are set out and discussed, that is interviews, participant observation, as well as the analysis of documents and cultural artefacts. Section 5 discusses the analytical framework for the data, together with research validity, reliability and generalizability. Section 6 summarizes the main aspects of this chapter.

### 4.1 Research design and theoretical framework

This section operationalizes the concepts and research questions, translating them into the language of research design. It also presents the theoretical

framework lying at the heart of this work. It demonstrates how this research builds and expands upon the three research questions:

- i. What firm practices reflect its propensity for and style of co-creation?
- ii. How do customer inputs contribute to a firm's co-creation practices?
- iii. How can we understand the effects of co-creation propensity and style on new service development and innovation in firms?

Those three questions allow us to investigate the practices of co-creation in various firms, and observe co-creation as taking different forms and shapes depending on firm's organizational culture, funding arrangements, competences and other factors. In order to capture appropriate depth associated with the answers to those questions, qualitative, interview- and observation-based methods were used. A variety of organizations has been studied occupying unique positions within the videogames industry, and the findings from them are compared below.

#### 4.1.1 OPERATIONALIZATION OF RESEARCH QUESTIONS

In the pursuit of operationalizing these lines of investigation, this study has identified four constructs. They are: (i) competences for co-creation, (ii) funding arrangements, (iii) organizational culture, as well as (iv) outcomes of co-creation.

The 'competences for co-creation' construct informs the empirical investigation of particular characteristics of the firm that are conducive to co-creation and which aid its success, following on Piller and Ihl (2009) and Lettl (2007). It also guides our understanding of the integration of customers' inputs with the internal practices of the firm – corresponding to a firm's absorptive capacity (Lichtenthaler and Lichtenthaler, 2009; Zahra and George, 2002). In this study, the competences for co-creation embedded in a customer community are assumed to be constant across all cases.

The 'funding arrangements' construct explores the consequences of embracing crowdfunding as a way to finance NSD, affecting the relationship between the firm and its customers in particular. It follows on the definitions of Belleflamme *et al.* (2014), Lehner (2012) and Ordanini *et al.* (2011). Crowdfunding is accompanied by customer empowerment in brand (or consumption)

communities (Kozinets, 2007) and their gradual transformation into communities of creation (which generate ideas and provide feedback on firm's offerings; Jäger *et al.*, 2010).

The 'organizational culture' construct pertains to the attitudes of the employees towards co-creation and externally-developed ideas and innovations, which heavily influences the shape and presence of co-creation in any organization. It is closely linked to organizational history (i.e. as organization's capabilities depend on its cumulative historic activities, and firm's success is dependent on its past activities; Cohen and Levinthal, 1990) and a firm's strategic orientation (Cheng and Huizingh, 2014). The 'organizational culture' construct is also of critical importance in rooting the analysis within the context of the videogames industry, and idiosyncrasies of production and new service development in its context. Following on the works of Martins and Terblanche (2003) and Naranjo-Valencia *et al.* (2011) we observe how organizational culture directly influences firm's creativity and innovation strategy. Organizational culture is also linked to a firm's competences for co-creation, as they reside in the skills and attitudes of individual employees (Chatenier *et al.*, 2010).

The 'outcomes of co-creation' construct reflects the effect that co-creation has on organizations, and aids in empirically describing which functions of the firm, stages of new service development, or dimensions of a service are affected by it. It also refers to the outcomes of co-creation that do not pertain to the firm alone, but more to its relationship with the customers, their role in the development of current or future offerings, as well as roles that they can play in a firm's operations and value chain.

The concepts presented above have been linked to particular groups of literature, as well as to concepts and theories found within them. The overarching theoretical framework provides an overview of how those key concepts relate to one another in empirical settings, as well as how they are connected by theoretical considerations. The details of this structure, demonstrating the relationships between operationalized concepts, their link to research questions, data collection method and main themes are presented in Table 2. Coding table is also presented in Table 2.

<i>Operationalized concept</i>	<b>Link to research questions</b>	<b>Methods used</b>	<b>Themes in data</b>
<i>Competences for co-creation</i>	RQ1. Competences determine the firm's ability to benefit from co-creation. Co-creation also depends on the co-creation competences of the customers in the community, but they are not a variable in this study.	Interviews with studio managers and line employees.	Firm's absorptive capacity; approaches, tools and platforms to tap into customer insights; customer community characteristics; controls on the co-creation practice and its management; risks and challenges of co-creation; integration of customer inputs; managing the relationship with customers; managing customers' expectations; game design and genre.
<i>Funding arrangements</i>	RQ1, RQ2. Funding arrangements (crowdfunding in particular) influence the occurrence and extent of co-creation in firms, and thus the propensity and style of co-creation (see the three ideal types of co-creation).	Document (emails, articles, community updates) and artefact (gameplay) analysis.	The role of crowdfunding; customer/backer community; role of customers in firm strategy; keeping the customers satisfied; crowdfunding trade-offs; impact on revenue model.
<i>Organizational culture</i>	RQ1, RQ2. It reflects the trust of an organization to its customers as collaborators. For many firms within the videogames industry there is a strong divide between the game makers and game players – this barrier is reconfigured, together with employees' roles, in the practice of co-creation.	Participant observation and interviews.	Feelings about co-creation; attitude of employees towards the community; perceived skills that community has for co-creation; history of the organization and its successes and failures; proven best practices; social and market demography aspects of innovation.
<i>Outcomes of co-creation</i>	RQ3. It describes the outcomes of innovation practice in various innovation sites of a firm, showing changes to its structure, relationships with customers, value chain, financing and revenue chain and many others.	Participant observation, interviews, artefact and document analysis.	Degree of innovativeness of customer inputs; communication routines; organizational structure; project management techniques; feasibility of customer inputs for production; organizational functions involved and transformations related to co-creation; expanded dimensions of innovation's success.

**Table 2.** *Demonstration of the relationship between constructs, research questions and data.*

<i>Operationalized concept</i>	<b>Codes in the data</b>
<i>Competences for co-creation</i>	Community characteristics (intrinsically vs. extrinsically motivated) Organizational structure (traditional development or cross-disciplinary teams) Communication routines (fixed vs. elastic) Use of techniques (toolkits, crowdvoting, contests) Project management (waterfall vs. agile vs. scrum) Costs and risks Innovation in critical and non-critical functions of a product Firm's dynamic capabilities (capitalizing on social changes) Judging production feasibility Intellectual property and copyright issues
<i>Funding arrangements</i>	Impact on financing and revenue model (disruptive or incremental) Customer (backer) base (supportive vs. critical) Presence/absence of alternative sources of funding Customers' expectations Rendering internal processes (visible vs. limiting access) Backers' lead vs. firm's lead Following on through the obligation to backers Use of crowdfunding for future projects vs. one-off approach
<i>Organizational culture</i>	Community building/acquisition Studio culture (closed vs. open) Design choice rationale (communicated vs. actual) Employees' attitudes towards co-creation (positive vs. negative) Firm's purpose in co-creation (innovation, marketing, relationship) Employees' relationship with customers (incl. individual) Recruitment of new employees Firm history (successes or failures) Established 'best practices'
<i>Outcomes of co-creation</i>	Transformation of the firm vs. no transformation Role of co-creation in firm strategy vs. marginal afterthought Firm departments involved in co-creation (eight sites) Disruptions to the firm's functioning Customers' access to the firm (rules, limits, agreements) Internal vs. external development of innovations Expanded dimensions of innovation's success (WOM vs. WTP) Co-creation as a relationship-building tool vs. innovation tool Focus on experience ('game as service') Co-creation outcome in NSD (radical vs. incremental innovation) Social and market demography aspects of innovation

**Table 2 continued.** *Coding table.*

#### 4.1.2 'PRACTICE OF CO-CREATION' MODEL

The theoretical framework for this study is presented in Figure 5. It represents how co-creation's practice is formed within firms. It accounts for the interplay of key mechanisms and institutions shaping co-creation in firms. It illustrates the interdependencies between competences for co-creation, funding arrangements, organizational culture and outcomes of co-creation within firms, which also are the organizational conditions for co-creation, and which ultimately influence its practice within firms. The focus is placed on the institutional arrangements (organizational culture and funding arrangements).

Figure 5 also depicts how the co-creation-related transformations of organizations occur not only as the outcomes of that practice, but also as its institutional prerequisites. This is because some of the organizational transformations, or innovations, that we observe in various sites of the firm, had to be initiated by the firm before successful co-creation took place. Even though the changes in them are then accelerated during the co-creation itself, they are organizational prerequisites for successful co-creation in the first place.

Potential for co-creation dormant within the customers' community (defined as their skills and knowledge, or as the customers' competences for co-creation) needs to be awakened and tapped into by the use of appropriate approaches, tools and techniques. These techniques and approaches reflect the firm's competences for co-creation. The firm's overall ability to make use of external inputs in its innovation practice is determined by its competences.

Therefore, for every firm this propensity and style of co-creation will be different. Firms and communities can be compared based on those dimensions of competences. Such elements as organizational practices and processes, project management, organizational hierarchy, and communication routines in particular come into play in this context. This also determines the overall co-creation practice in the context of a firm – whether it is structured, semi-structured, or loose.

We posit that the potential co-creation, consisting of the competences for co-creation, is influenced by two factors. Those two influencers are funding arrangements, as well as organizational culture. They reflect the attitude of an organization towards external sources of ideas and innovations, as well as the role

of customers in its operations, strategic goals, and value chain. They also integrate the transformative impact of crowdfunding into this framework – as in the data we observe how the use of crowdfunding changes the relationship between the firm and its customers. It demonstrates that the extent and shape of co-creation is dependent on the firm and the way that firm wants to strategically use it.

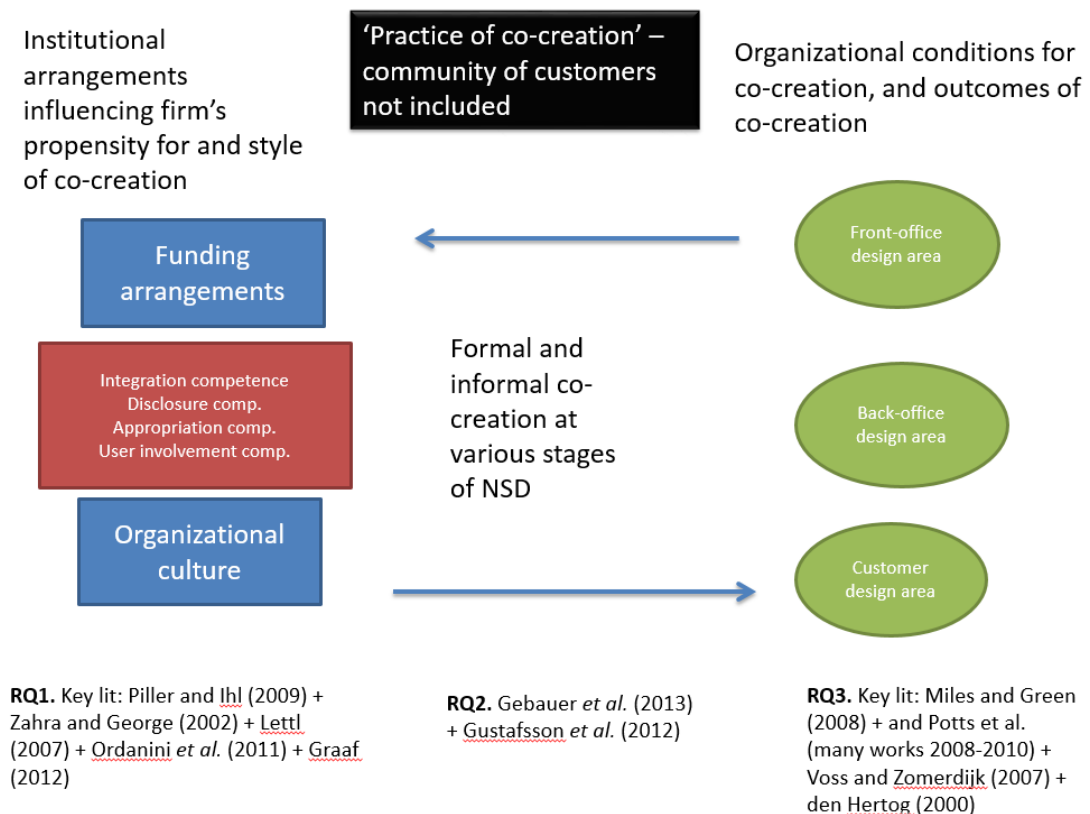
Corresponding to RQ2, we focus on the ways in which customer inputs contribute to firm's NSD and innovation. Co-creation can occur both as a formal practice, established by the firm and articulated in its planning, management and strategy. On the other hand, there are many 'under the radar' interactions between the firm employees and customers, and creativity and ideas also cross firm boundary in this manner. This is what we call 'informal mode' of co-creation, and it is of no less importance than the formal mode. Those modes, among others, determine whether co-creation practice in a firm is structured, semi-structured, or loose. Furthermore, the customers' inputs are also influenced by the firm's goals for co-creation. These fall under NSD-related goals, as well as relationship-building goals. Firms that engage in co-creation with different goals in mind will be interested in similarly different customer inputs.

As stated in RQ3, we also seek to understand the effects of co-creation propensity and style on innovation outcomes. The outcomes of the integration of customers in new service development and innovation in firms can occur in eight sites of a firm. Co-creation requires profound changes to an organization, as well as reconfigurations of employees' attitudes towards customers. Depending on co-creation readiness of a firm, as well as how co-creation becomes realized in its context, those outcomes vary.

We trace the effects of particular forms of co-creation (structured, semi-structured, loose) on changes within organizations, and those changes that have to do with innovation and new service development in particular. Of importance at that stage is understanding of those changes as occurring both in the socio-cultural and market dimensions. The focus here is placed on the firm, as well as on the changes to customers' roles in its value chain (resulting from the integration of customers as a co-creative resource). Corresponding changes

within the customer community itself are not discussed – as they are beyond the scope of this study.

Figure 5 focuses on the fact that organizational changes resulting from co-creation, as implied in the third research question, can also be the prerequisites for co-creation's success in organizations. Instead of focusing on particular sites within a firm, this framework presents the three areas of experiential service design (following on Voss and Zomerdijk, 2007). This reflects the fact that co-creation as a practice is not focused on the organization itself, but on its services, and organizational changes occurring are linked to the changes to the service itself – its design, development, and delivery. Co-creation, similarly to a service, occurs in the context of the engagement of customers and the firm and at the interface between those two actors (Sundbo and Toivonen, 2011; den Hertog, 2000).



**Figure 5.** Research framework. It demonstrates the key concepts involved in describing co-creation and its outcomes in experiential service firms.

As presented in Figure 5, the ‘practice of co-creation’ framework depicts the main units of analysis that this thesis focuses on: competences for co-creation, funding arrangements, organizational culture, as well as outcomes of co-creation. It is from various interactions between those elements in organizations that co-creation takes shape, and a firm’s propensity and style for co-creation are determined (answering the first research question).

Furthermore, by investigating the dynamics between the elements outlined in this model, we explore the second research question (which focuses on understanding how the inputs from customers contribute to firm’s NSD and innovation practices). Finally, this framework also points us towards the answer to third research question. The effects of co-creation’s particular propensity and style are both prerequisites and outcomes for the changes in an organization’s NSD and innovation practices. Those changes are depicted in Figure 5 as falling into three areas of experiential service design: front-office, back-office, and customer area (see also Figure 2).

Co-creation originates and plays itself out both in the interface between a firm and its customers (and their communities), as well as in the internal dynamics, organization, practices and culture of the firm that has to adapt its structures (as well as understanding of itself and its role) to accommodate such external source of innovation. Therefore, Figure 6 focuses on the internal environment of the firm, its practices and characteristics, and how it is transformed by co-creation.

The importance of rich theoretical framework in a multiple-case study cannot be overstated (Robson, 2011; Yin, 2009). The purpose is to state the conditions under which a particular phenomenon is likely to be found. Theories used are seen as also practical, and not just academic. The predictive power of the framework presented is of significance. By understanding the impact of particular forms of co-creation on both innovation and its outcomes within firms, it is possible to provide the industrial practitioners and managers with a powerful tool for charting the course for the use of co-creation.

#### 4.1.3 THE CHOICE OF METHODS

The object of this study – co-creation in a creative industry developing experiential services – calls for a qualitative methodology. We don’t have strong prior research to base our work on – hence a qualitative methodology was used

to establish new concepts and to explore how co-creation affects companies. Furthermore, the choice of qualitative methods is also supported by the sheer complexity of the co-creation practice and its multidimensional effect on organization.

The concepts presented here do not lend themselves to quantitative analysis. The detailed description, provision of rich background for their occurrence, as well as the need for vivid accounts of how these concepts function within organizations have led us to choose qualitative research methods. Many of the phenomena associated with the four concepts also occur simultaneously, within the context of a single organization. Their careful disentanglement and identification within a complex setting of a firm were further contributing to the qualitative analysis rationale. The appreciation of the totality of the dynamics of co-creation that occur within firms requires focusing on the cases of particular firms in order to account for all facets of this multidimensional phenomenon.

The difficulty in observing causality in the context of co-creation also contributed to the decision of choosing qualitative methods. We attempted to create a research tool that eventually can help to identify mechanisms, and through this the work presented here is generalizable. The variance is high in the complex sector under study, and the object of the study demanded different kinds of approaches.

Co-creation involves various actors in its course, both internal and external to the organization; both individuals and groups of individuals; even communities shape its dynamics. Various organizational departments become involved in this practice and are affected by its outcomes; it is a practice that depends both on the firm strategy, as well as on the culture and attitudes of individual employees. In order to account for all those interlocking influences, qualitative methods are called upon. They are capable of providing rich detail in the in-depth understood context of a phenomenon, allowing for the explanation of its dynamics, actors, as well as relevance (to firms, their customers, or industries at large).

All in all, we are not sure whether we have managed to work out the exact mechanisms influencing co-creation and its effect on organizations. Nevertheless,

we view our work as an important first step towards a deeper understanding of those practices, and thus a contribution to knowledge.

## 4.2 Case study rationale

In order to describe, analyse and understand the occurrence of co-creation within the videogames industry, as well as to map the impact of this phenomenon on innovation in the firms, this study focuses on three case studies. Among these case studies each revolves around the accounts from a single, major videogame development firm in the USA or Europe. The activities of that firm and co-creation as occurring in its context are the focal point of the description of each case.

We chose the videogames industry as a setting for this study because of the advanced state of co-creation within it (as this is an exploratory study in nature, we did not know how much co-creation we would find) and the prevalence of ‘crowd-related’ phenomena within it (i.e. crowdfunding, modding, firms’ attention to customers, large fan events; Saur-Amaral, 2012). Strong presence of communities of customers and their involvement in development of videogames as discussed in academic literature (Banks, 2013 and 2009; Burger-Helmchen and Cohendet, 2011; Jäger *et al.*, 2010; Malaby, 2009; Taylor, 2006; and others) contributed to that rationale. Furthermore, the researcher has a personal interest in the videogames industry, as a long-time member of game-related customer communities.

### 4.2.1 SELECTION OF CASES

The videogames industry can be divided into three large segments basing on the platform of service delivered to the customers. Those are: personal computer (PC) games, console games (i.e. large budget titles released on mainly Sony Playstation and Microsoft Xbox systems), and mobile games. The degree of co-creation in those three segment varies significantly, mostly due to the high barriers of entry for modding-related activities (easy accessing of videogame code is available only on the PC platform; similar manipulations of game code on console or mobile platform tend to be technically difficult and violate the license agreements). Those three platforms are also characterized by different patterns of use and types of audiences attracted to them. PC games are regarded as the domain of the most demanding fans, who seek tailored and highly customizable game

experiences. This is also the platform which is almost exclusively associated with modding (Nardi, 2010). Mobile platform games are considered to be catering predominantly to the casual or 'on the go' audiences, i.e. players who seek simple and undemanding games which serve mostly as a distraction. Console games focus on the experiences that target as large populations of customers as possible, who seek well-crafted and complete services that are simple to set up and enjoy (Zackariasson and Wilson, 2012).

We decided to focus on the firms developing videogames for the PC segment of the market, due to their association with modding (Nardi, 2009), age (PC games were the first games developed; King and Borland, 2014), close links between firms and their audiences (due to the fact that PC games are developed for niche audiences, or customers of particular taste and preference in gameplay; Pearce, 2009), association with crowdfunding (e.g. console games are too expensive to crowdfund; Marchand and Hennig-Thurau, 2013), as well as fast rate of innovation (due to low development, production and distribution costs, there are great many firms of all sizes releasing games on this platform, in numbers vastly exceeding for example console games). This is not to say that co-creation is absent from console or mobile segments of the videogames industry – although its practice, tools and competences might vary from what is described in this study.

Hence our data collection effort focused only on the PC games. Out of these, we identified the games which had a reputation for being developed together with the help from the customers (the author is an avid videogames player, and thus has a good overview of the industry and frequents relevant forums on the Internet, reads industry press and belongs to various communities). Of most interest here were the large MMO (massively multiplayer online) games, which, by their gameplay design and technology employed, are particularly prone to be co-created – a phenomenon observed already by Castronova (2007; 2005), Nardi (2010), Pearce (2009) and Boellstorff (2012). This is because MMO games have large and very active communities of players, and the firms interact with them frequently in order to make sure that the service meets their needs and expectations. Also of interest in this study were games that were crowdfunded. As the selection of cases was occurring largely in the mid-2013, there were still very few videogames that were funded that way. Obsidian Entertainment's *Pillars of*

*Eternity*, inXile Entertainment's *Torment: Tides of Numenera*, as well as Cloud Imperium Games' *Star Citizen* were all financed using crowdfunding. As it is demonstrated in this study, crowdfunding creates an expectation among the customers that they are entitled to participate in the internal works of the firm – and the firms tend to meet that expectation by frequently releasing various reports to the crowdfunding customers, inviting them to the offices, granting them formal stake in the game development process and so on.

#### 4.2.2 ACCESSING THE CASES

Initial selection of cases within that industry was largely opportunistic. Videogames firms are secretive and difficult for a researcher to access (O'Donnell, 2014; Nardi, 2010). We had to develop a network of contacts within the industry from scratch in order to access the firms that would provide us with data. The selection was guided by the researcher's knowledge of the videogames industry as a player, as well as his data collection experiences from working on M.Sc. dissertation in 2011 (Czarnota, 2011).

The speculative approach was adopted – firm representatives were approached at various events and conferences and the research was pitched to them. Follow-up emails were exchanged, and contacts were established that way. From these, a few resulted in a company granting access and participating in data collection. In some cases, industry professionals agreed to participate as individuals, not representing their firms (sharing their general experiences as game development professionals).

One of the largest obstacles encountered in the course of this study was the issue of accessing videogames firms. Our request for access has often been turned down at the outset. Nevertheless, many of the studios that were the primary choices for case study subjects have agreed to participate. Some of them then became very interested in our work.

In order to facilitate further data collection, the snowball sampling technique has been used. After successful accessing of a particular firm, the interviewees were asked to provide recommendations for other respondents, and to make introductions. Such a technique worked well in terms of gaining access to people within organizations at different levels and in a variety of functions, which

corroborates the richness and diversity of data obtained. On the down side, that diminished the author's influence on choosing the firms to be studied.

Various methods have been employed to provide a rich and insightful description of the phenomena associated with the four concepts operationalized in the course of this study. The data those firms has been collected using a variety of methods: semi-structured interviews, participant observation, as well as documents and cultural artefacts. Therefore, the description of how co-creation plays itself out in these contexts, as well as its relationship to innovation, is approached from a variety of perspectives and does not rely on a single method of data collection.

Apart from the accounts from those three major game development studios, each case study also involves the analysis of a few minor firms. Those firms are related to the core case firms by similarity of their operations and practices along the analytical dimensions of this study. They are connected to each other by a common theme. Their inclusion serves to deepen the understanding of some phenomena that were not in the first place explored or present in the main firm for each case study, as well as to view a certain aspect of co-creation in additional detail (firms have been selected basing on the replication logic; Yin, 2009). For those additional firms, data is more limited and usually comes from a single type of source – predominantly semi-structured interviews.

#### 4.2.3 JUSTIFICATION OF THE SELECTION OF CASES

Three cases described in this study were selected first and foremost based on the relationship structure between the firm and customers, which then translates into three distinct types of co-creation. This relationship is described by the practice of integrating customer inputs with internal firm processes in various sites of the firm (Miles and Green, 2008; Voss and Zomerdijk, 2007). This practice is influenced by competences for co-creation of a firm (Piller and Ihl, 2009; Lettl, 2007), absorptive capacity (Lichtenthaler and Lichtenthaler, 2009; Cohen and Levinthal, 1990), organizational culture (Naranjo-Valencia *et al.*, 2011; Martins and Terblanche, 2003), presence of crowdfunfing (Ordanini *et al.*, 2011), as well as overall customer relationship management (Gebauer *et al.*, 2013; Gummesson, 2000). Three cases presented in this study fall on the spectrum of structured, semi-structured, and loose co-creation.

The larger the amount of particular routines, processes, and systems that surround co-creation in the practice of a particular firm, the more structured its practice of co-creation is. Internally, it means that employees know which channels to use when customers provide various inputs to service development, marketing, innovation or other functions of the firm; those are routine activities embedded in project management, team structure, and the way that people communicate within an organization. Furthermore, such practice of co-creation is accompanied by the presence of formal channels for the influx of ideas into the firm. Those channels for instance will take form of clearly formulated contests, volunteer programmes, or democratic elections among the players, when participating customers know from the outset what kind of rewards or outcomes they can expect, what will happen with their ideas, and so on.

At the opposite end of the spectrum is loose co-creation practice. This approach means that the firm does not have any set practices for assimilating customer inputs, and that it processes them 'on the job' by the employees of the firm. It is down to the judgment of individual employees, and their relationship with particular members of the customer community, how co-creation practice is shaped. Moreover, there may be some processes that a firm deploys to assimilate customer inputs, but these are purely functional, incurring no obligations on the part of the firm for its customers. Customers may provide ideas to the firm, but they are promised nothing in return (contrary to parallel practices in structured co-creation).

Semi-structured co-creation practice is in-between structured and loose co-creation. It is characterized by the presence of both formal and informal practices for assimilating customer inputs, in roughly equal measure.

The three cases selected for this study have been matched with those descriptions of ideal types of co-creation. Case Alpha, describing Obsidian Entertainment and other firms, is an example of structured co-creation. Case Beta, discussing CCP and related studios, is the case of semi-structured co-creation. Case Gamma, which focuses on Cloud Imperium Games, illustrates loose co-creation. This thesis compares these three cases and thus these three ideas forms of co-creation, using this comparison as a tool for better understanding the practice of co-creation in firms overall.

The three cases also differ on the strategic orientation of the firm (Cheng and Huizingh, 2014), funding arrangements (Ordanini *et al.*, 2011), as well as stage in NSD (Hoyer *et al.*, 2010). Main firms corresponding to each case are significantly different from one another, and at the same time sufficiently similar to each other as to allow for a coherent analysis of their variations. There are other differences between case studies (for example differences in co-creation competences or various innovation outcomes), but they were not used to differentiate cases analytically.

These differences are important, because they allow us to observe co-creation at various stages of the NSD and service lifecycle. This provides a richer account for the dynamics of co-creation in firms. The differences in strategic orientation help to understand the importance of co-creation for an organization, and the degree of its formal integration with firm's practices (i.e. articulation as a part of the business model). Funding arrangements greatly alter the relationship between firms and their customers, empowering the latter – its presence or absence is a critical variable in determining the firm's propensity for and style of co-creation.

Case study firms differ in the dimension associated with organizational culture. The three main firms are active in similar sectors of the videogames industry (producing videogames of similar genres and for the same platform). Nevertheless, there are some significant variations in their organizational culture (defined as their attitude towards co-creation and external sources of ideas and innovations, as well as the history of organization's successes and failures) that significantly affect the effect of co-creation on their innovation practices.

Those differences allow us to focus on the importance of organizational culture on shaping co-creation. By selecting firms characterized by varied cultures, we see how the attitudes of employees and organizational history (Cohen and Levinthal, 1990) contribute to adoption and successful retention of co-creation. It also accounts for the role of the relationship between individual employees and customers, and the function of the 'hidden innovation' dynamics (Miles and Green, 2008) in co-creation.

Therefore, an approach of altering experimental conditions in cases has been adopted (Yin, 2009). Subsequent cases were chosen for predicting similar results

(a literal replication), with some degree of variance (stemming from the fact that they illustrate three different ideal types of co-creation).

#### 4.2.4 DESIGN OF THE CASES

Each individual case consists of a 'whole' study, in which convergent evidence is sought regarding the facts and conclusions for the case; each case's conclusions are then considered to be the information needing replication by other individual cases. Since the underpinning theory is straightforward and the issue at hand does not demand an excessive degree of certainty, the decision was made to go for two replications only. The cases serve in a manner similar to multiple experiments, with similar results (a literal replication) predicted at the outset of the investigation (Yin, 2009).

The main firms selected for the purposes of the three case studies are respectively Obsidian Entertainment (located in California, USA), CCP (located in Iceland, as well as other locations worldwide), as well as Cloud Imperium Games (located in California, USA, as well as other locations worldwide, including Manchester, UK). The analytical variables guiding the rationale for their selection and comparison in replication logic is presented in Table 3.

This rationality is developed a posteriori, meaning that it did not guide the selection of firms in the first place – which was opportunistic. The next section explains the practicalities of the data collection and access process that dictated the selection of firms included in the case studies.

<b>Case</b>	<b>Case Alpha</b>	<b>Case Beta</b>	<b>Case Gamma</b>
<i>Main firm</i>	Obsidian Entertainment	CCP	Cloud Imperium Games / Foundry 42
<i>Supporting firms</i>	inXile Entertainment	5 <sup>th</sup> Planet Games, ArenaNet, Zenimax Online Studios, Valve Corporation	Square Enix Collective, Born Ready Games
<i>Predicted ideal co-creation type</i>	Structured	Semi-structured	Loose
<i>Theme</i>	Single player experiences,	Massively multiplayer	Multiplayer experience and the

	crowdfunded, with strong community following	experiences, synthetic worlds, hardcore audiences	participation in its realization
<i>Strategic orientation</i>	Maximization of resources; marketing	Innovation and entrepreneurship	Marketing
<i>Funding structure</i>	Crowdfunded	Subscriptions and game purchases	Crowdfunded
<i>Stage in NSD</i>	Service development	Mature product long after launch	Early, modular development
<i>Perceived customer competence</i>	Funders, loyal customer-base	Customers are very skilled and have knowledge about their needs	Marketers, funders, customers are skilled but can't innovate
<i>Desired customer role</i>	Fans and consumers of experience	Emergent gameplay, play in sandbox, innovate	Fans and supporters of the firm, marketers
<i>Employees' attitude</i>	Firm-centric, customers cannot be trusted as creators, barrier around firm	Integrating customers on various levels, personal links to the audience	Importance of keeping fans happy, fans can be useful contributors but not innovators, good relationship with customers is a priority
<i>Changing employees' roles</i>	Employees' in their own time engage customers, but it is optional	Maintenance of the system, "janitors", facilitators	Active members of the community, curators, coordinators, PR function.

**Table 3.** Comparison of characteristics of three case studies with focus on variables, under the auspices of the replication logic.

Nevertheless, when comparing the main firms forming the case studies, there are still more similarities between them than differences – allowing for replication logic to be successfully implemented. All three main firms produce videogames in similar genres, for the same platform, consist of videogames industry veterans,

are of similar size, as well as are located in the Western world (meaning North America and Western Europe). They are all characterized by the presence of devoted and highly skilled communities of customers. They also operate in market niches of comparable size and type. For a comparison of empirical similarities between the firms see Table 4.

<b>Case</b>	<b>Case Alpha</b>	<b>Case Beta</b>	<b>Case Gamma</b>
<i>Game genre</i>	Role-playing, single player	Role-playing, online multi player,	Role-playing, online multiplayer
<i>Platform</i>	Personal computer (Mac/Windows)	Personal computer (Mac/Windows)	Personal computer (Mac/Windows)
<i>Size</i>	Around 200 employees	Around 600 employees	Around 200 employees
<i>Location/HQ</i>	California, USA	Reykjavik, Iceland	California, USA

**Table 4.** Comparison of the key characteristics of the main three firms studied.<sup>4</sup>

As mentioned above, some respondents spoke to us only in a private capacity (although still describing in some detail the practices of their firm). That meant that for a number of firms, a successful interviewing of an employee did not mean any kind of access to that organization or its documents. We ended up having a large number of stand-alone interview data from individual employees of various videogames firms. Despite their limited detail, they still constituted a valuable source of data, and had to be included in the case studies. It has led the theming of the data into three cases, where the single-interview firms provide information about some variations of the phenomena discussed in the main firm within each case study.

Firms had to meet certain prerequisites in order to be of interest. They had to embrace some form of customer involvement in their value chain, as well as have a proactive approach towards tapping into their customers' community as a

<sup>4</sup> Firm size data obtained from LinkedIn on 03.09.2015.

resource. The number of interviews conducted with various firms, as well as access to other types of data, are outlined in Table 5.

<b>Company name</b>	<b>Interviews</b>	<b>Observation</b>	<b>Documents &amp; artefacts</b>
<i>Obsidian Entertainment</i>	5	Yes	Yes
<i>CCP</i>	5	Yes	Yes
<i>Cloud Imperium Games</i>	7	Yes	Yes
<i>inXile Entertainment</i>	1	No	Yes
<i>5<sup>th</sup> Planet Games</i>	2	No	Yes
<i>Deep Silver Volition</i>	3	Yes	No
<i>Born Ready Games</i>	1	No	No
<i>ArenaNet</i>	1	No	Yes
<i>Zenimax Online Studios</i>	1	No	No
<i>Valve Corporation</i>	1	No	Yes
<i>Square Enix Collective</i>	1	No	No
<i>ICO Partners</i>	1	No	No
<i>Press Space PR</i>	1	No	No
<i>UKIE</i>	1	No	No
<b>Total</b>	<b>32</b>	<b>Yes</b> for all major firms	<b>Yes</b> for all major firms

**Table 5.** *The comparison of the number of interviews, as well as the use of participant observation and document (or artefact) analysis in firms under study.*

As a consequence of such an opportunistic data collection strategy, data from a few firms positioned outside of the immediate scope of this study has been collected. Those are interviews with two videogames industry consulting firms (ICO Partners and Press Space PR), two videogame distribution firms (Valve Corporation and Square Enix Collective), as well as one trade association (UK Interactive Industry Association – UKIE). Nevertheless, information obtained

from those interviews assists in building a richer and more in-depth picture of the videogames industry and the role of co-creation as a general business approach within it. Those interviews do not provide any insights pertaining to the operations or practices of any particular studio (or its organizational culture for that matter), but they do discuss interesting cases, general problems, trends, as well as various approaches to co-creation. As such, they are used to enrich the insights from all three cases.

### 4.3 Data collection methods

In the course of this study, three main data collection methods were used: semi-structured interviews with firm employees and managers, participant observation of firms' practices, as well as analysis of documents (mostly communications issued by the firms, as well as online forums) and cultural artefacts (meaning the videogames produced by the respective firms). The methods have been implemented concurrently for each case – with participant observation and interviewing often occurring around the same time (within a single three-month period). The interview and participant observation data has been collected in a sequence for the three case studies: Obsidian Entertainment was interviewed in the autumn of 2013 (visited in the Spring of 2014), CCP in winter and Spring of 2014, and Cloud Imperium Games in Autumn of 2014 and Winter of 2015. The methods used in the course of this study are discussed in detail in the following section.

The whole period of data collection lasted for 18 months, from August 2013 to February 2015. It was not continuous, and was interspersed with writing-up and analysis activities. As an overview, the overall amounts of data collected were as follows:

- i. The researcher spent 9 days total in the field engaging in participant observation in the firms – 1 days in Obsidian Entertainment, 4 days in CCP, and 4 days in Cloud Imperium Games. At times those days would also include evenings or part of the night, as the researcher would attend after-work informal gatherings and parties as well. During that time, the focus was on observing the practices of the firm, participating in various meetings and company life, as well as talking (in an unstructured way) to

the employees. The details of those activities have been captured in the field notes, describing the practices and organizational details of firms.

- ii. In the course of this work, the researcher spoke to 32 different individuals in a format of formal interview, as demonstrated in Table 5. The total number of interview hours is 33.5 hours (see the further details in section below).
- iii. The researcher also participated in various industry events and conferences, where he was also a speaker. Those events gathered many of the professionals from the videogames industry, and included detailed discussions (both public and private) about various firms' practices. The total number of days in attendance at such events was 28 (days would often include evenings, as the researcher would attend parties and informal gatherings with videogames industry professionals).
- iv. The total number of hours analysing the artefacts (videogames developed by the firms under study) as well as other documents relevant to this research (such as online articles, blogs, forum threads, videos and podcasts) is difficult to estimate.

A set of themes and codes (presented in Table 2) were used throughout the research to identify patterns in all three types of data (interview, observation, and artefact/document).

Table 6 matches constructs to themes in data analysis, following on Table 2. It also lists some examples of phenomena captured by them. They are linked together in detail in Chapter 6. Themes allow for differentiating the cases into the three ideal types of co-creation practice: structured, semi-structured, and loose. They are used to capture the organizational practices described in the cases, as well as to categorize in terms of their function and meaning for co-creation.

<b>Construct (operationalized concept)</b>	<b>Themes in data analysis</b>	<b>Examples of phenomena captured</b>
<b>Co-creation competences</b>	Firm's absorptive capacity; approaches, tools and platforms to tap into customer insights; customer community characteristics; controls on the co-creation practice and its management; risks and challenges of	Assimilation of customer inputs with minimal disruption. Managing customers' expectations.

	co-creation; integration of customer inputs; managing the relationship with customers; managing customers' expectations; game design and genre.	Understanding community motivations. Managing IP risks. Setting up internal communication and project management routines.
<b>Funding arrangements</b>	The role of crowdfunding; customer/backer community; role of customers in firm strategy; keeping the customers satisfied; crowdfunding trade-offs; impact on revenue model.	Tightening the customer relationship. Customers as stakeholders. Rendering visible some functions of the firm.
<b>Organizational culture</b>	Fears or hopes for co-creation; attitude of employees towards the community; perceived skills that community has for co-creation; history of the organization and its successes and failures; proven best practices; social and market demography aspects of innovation	Prevalent perception of customers. Customers' role in the past. Actions of superiors. Existing proven practices. Self-perception of staff.
<b>Outcomes of co-creation</b>	Degree of innovativeness of customer inputs; communication routines; organizational structure; project management techniques; feasibility of customer inputs for production; organizational functions involved and transformations related to co-creation; expanded dimensions of innovation's success; service genre; user interface; marketing	Changes to eight sites within a firm. Establishing new routines and structures. Co-creation's prevalence in various firm functions. Increased importance of customer relationship. Strategic business and service design decisions.

**Table 6.** *Links between constructs developed from the research questions, themes emerging from data analysis and examples of phenomena that they capture.*

#### 4.3.1 SEMI-STRUCTURED INTERVIEWS

Interviews were semi-structured – the interviewer had an interview guide containing the list of questions to be asked. The order and wording of those questions were on many occasions altered in the course of an interview, based on emergent themes and follow up discussions (Robson, 2011). The interviews lasted approximately 60 minutes each (with a few exceptions; one interview was only 30 minutes long, while another was almost 5 hours in duration). Interviews were mostly conducted via Skype, although a few interviews have also been conducted in person (but still using the same interview guide).

All of the interviews were voice recorded and the recordings are stored securely by the researcher. The researcher has also been taking notes during every interview. Questions asked in the course of the interviews have been formulated to correspond to operationalized concepts (constructs presented in this chapter).

For analytical purposes, non-verbatim transcripts of those interviews have been prepared. The use of verbatim transcripts has been deemed unnecessary (upon consultation with the researcher's academic advisors) due to the focus not on the opinions of the interviewees, but on the organizational practices that they are describing (i.e. 'facts of a matter', Yin, 2009). According to Robson (2011: 478) there is no need to use full verbatim transcripts when intending subsequent thematic analysis of the data.

Some of the interviews were 'in-depth' (Yin, 2009, pp. 107), taking place over extended periods of time and in more than one sitting. The remainder were focused interviews, in which respondent was interviewed for no more than 60 minutes (due to the practical fact that people in the videogames industry are overall busy, and the researcher was having difficulties convincing them to devote more than 60 minutes of their time) in a conversational and open-ended manner.

Key informants were used in the course of the study – for each of the main firms there was one such informant. They were providing the investigator with insights into a matter and initiating access to corroboratory sources of evidence (Yin, 2009). Considered verbal reports only, the information given in their course has been corroborated to the maximum possible extent (due to the secrecy of game development firms, as well as access issues, some of the information could not be checked or corroborated in any way) by the use of participant observation and analysis of documents and cultural artefacts.

Overall, a large number of interviews was conducted with representatives of various game development firms (publishers, developers, business-to-business services), collecting their views of the co-creation in the videogames industry. The respondents belonged to various functions within organizations, from management, producers, game designers, specialists within various disciplines, as well as customer support and quality assurance staff.

#### 4.3.2 PARTICIPANT OBSERVATIONS

Direct and participant observations were used in the course of data collection (being a participant observer means having social interactions, undertaking specific functional activities within the videogames industry; Yin, 2009). The researcher conducted studio visits, as well as attended fan events and professional conferences. Both Obsidian Entertainment's (single one-day visit) and Cloud Imperium Games' offices (four day visits) were visited in the course of this work. The offices of CCP have not been visited, although the researcher attended for four days a large annual event (Fanfest 2014) where many of the studio's practices were visible otherwise.

The researcher attended Dragon\*Con 2013 (a convention of fans of videogames), as well as EVE Fanfest 2014 (a convention of CCP customers) as part of fan event attendance. Data here also reflects author's attendance at nine industrial conferences: GDC 2014 and 2015, Develop in Brighton 2015, GDC Europe 2014 (and being a participant observer there as a conference associate/volunteer), Game Connection Europe 2014, Game Connection America 2015, Launch Conference 2013, as well as Games Industry Gathering Ireland 2014 and 2015. The researcher has been an active participant in those conferences, presenting as well as meeting many industry professionals.

Participant observations were conducted from the perspective of a single observer, due to the nature of the project (individual thesis) and limitations of resources. Perspective of the person inside of the phenomenon was studied. The single most significant limiting factor to participant observation was resolving the issues of access – videogames studios are overall reluctant to let outsiders observe their practices, and often perceive it as a waste of time. At the same time, limitations of participant observation - potential for biases, becoming a supporter of an organization or phenomenon under study – are also accounted for here.

Another reason for bias is that observations have not been conducted equally for every organization under study - some observed phenomena at one firm could be assumed as non-existent at another firm, only because the researcher did not have a chance to visit the site. Furthermore, apart from purely academic interest, the researcher remains a fan of the productions of Obsidian Entertainment, as well as a supporter of the titles developed by CCP and Cloud Imperium Games.

This may form another source of bias in the course of this study – causing viewing of the game development activities within firms under study as a somehow hallowed and emotionally charged task.

The author has also undertaken some consulting jobs whilst working on this thesis. Therefore, consulting is another source of data about the videogames industry that corroborates the results of the interviews and it is considered a form of participant observation. Unfortunately, large portions of information obtained in the course of those consulting activities are protected by non-disclosure agreements (NDA). Only general information and observations about a studio's practices and attitudes are therefore extracted from those engagements for the purposes of this study.

The author has collaborated with two firms: VMC (a firm located in United States as well as in Canada and other countries, specializing in tailored quality assurance solutions), as well as Deep Silver Volition (a game development studio based in Champaign, Illinois – incidentally, the author has also conducted three interviews with the employees of that firm before the consulting engagement took place). Those engagements have afforded the author some observations on the business practices and culture of firms within the videogames industry, as well as its mode of work together with lived experience of various roles and responsibilities within videogames firms.

#### 4.3.3 DOCUMENTS AND CULTURAL ARTEFACTS

The documents analysed include game design documents released to community of users, emails sent to crowdfunding backers, information from user forums (both posts from the community as well as those from the firm), Kickstarter pitch websites, as well as news articles and commentary pieces (published on a number of independent news source websites). Furthermore, other media, such as conference presentations, YouTube videos, panel discussions and others are also included in this analysis.

The researcher has not gained access to any confidential documents relating to any of the firms studied in the course of this research (the only confidential documents the author gained access to was in the course of the consulting jobs, and those are protected by NDAs). The information from those sources can vary from being very revealing about a firm's practices (for instance, some conference

presentations, panel discussions, or commentary articles in videogames industry press), while others provide rather general insight into day-to-day communications between users themselves, as well as users and the firm.

The cultural artefacts mentioned here are the videogames produced by the firms under study, at the time of the study. The author has played those videogames in order to better understand the role of the user (customer) within them, their players' agency, the degree of empowerment (for example in terms of creating new elements of the game, modding, emergent or sandbox gameplay; Bonsu and Darmody, 2008) and interactions among customers in-game. The videogames played and analysed include *Pillars of Eternity* (Obsidian Entertainment, 2015), *EVE Online* (CCP, 2003), *Dawn of the Dragons* (5<sup>th</sup> Planet Games, 2013), *Guild Wars 2* (ArenaNet, 2012), and *Star Citizen* (Cloud Imperium Games, 2013<sup>5</sup>).

## 4.4 Data analysis

Data analysis relies on the theoretical propositions presented in the literature review and operationalized in this chapter, which in turn are linked to the objectives of case studies and replication logic (see Table 6). Affinity of this approach to working with 'how' and 'why' research questions is something that Yin (2009) draws attention to.

Analytic technique embraced in the course of this study is 'explanation building'. This is due to the learning process, as well as iterative reformulation and refinement of the research questions in the course of this work. According to literature (Yin, 2009; Robson, 2011), it forms a good match with explanatory research questions - stipulating a presumed set of causal links about a phenomenon, or how or why something happened. It also lends itself to a narrative form of reporting (which is an approach embraced in this thesis), reflecting theoretically significant propositions – as outlined in the research framework and research questions. Following on Graaf (2009), this form of narrative analysis to 'tell the story' of co-creation within firms "link[s] personal experiences to organizational experiences narratives allow[ing] us to study organizational reality as constructed and transformed by its actors" (Garcia-Lorenzo, 2004: 47). This method is particularly useful as it highlights practices

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<sup>5</sup> As *Star Citizen* has not been released as of the time of writing, the release of its first working module is quoted as the game release date here.

as well as participants' roles as various stakeholders embedded in dynamic relationships (Bryman, 2004; Reissman, 2004).

The explanation building approach used in this work is of iterative nature - Obsidian Entertainment is the first case studied, and cycles of iteration of data analysis start from it, moving on to the other firms and cases (Yin, 2009: 143). This allows for replication logic to be implemented – with clear highlighting of the subsequent case study's aspects that are analytically different.

A crucial data analysis technique employed in this research is thematic coding analysis of the interviews (Robson, 2011). It is used as a realist method, reporting experiences, meanings and the reality of participants. In the case of this study, that means the outcomes and effects of co-creation on innovation, firm strategy and organizational culture. Thematic coding analysis in this research is used inductively, as the codes and themes emerge from the researcher's interaction with the data (similarly to grounded theory approach; Robson, 2011: 475).

The researcher had been familiarized with the relevant literature, so our analysis has been enhanced by being sensitized to various features of the data as discussed by others. Generating of codes, coding and identification of themes within the data have been conducted according to the guidelines set out by Robson (2011) as well as Gibbs *et al.* (2007). The qualitative analysis focused on the content or meaning of what was said rather than on how it was conveyed. Rather than using words and paragraphs as units of analysis as is common in qualitative content analysis, this study identified common elements reported by research participants across qualitative data (Haythornthwaite and Gruz, 2007). This resulted in the organization of data into themes and sub-themes (Fereday and Muir-Cochrane, 2006; Reissman, 2004).

We developed categories and a coding scheme. Given our aim to validate and extend the conceptual framework for this study, initial sets of codes were developed based on the theoretical framework, which is informed by the theories discussed in Chapter 3. However, the framework was expanded as themes emerged during the analytical process (Graaf, 2009), which for example led to the highlighting of organizational culture as a moderator of co-creation's effects

on organizations. Examples of codes and data are presented in Table 8 in Chapter 6.

Documents and interview transcriptions were coded, checked and rechecked throughout the coding process for consistency. Organization of data around notes helped us to keep track of the context in which observations had been said or written (Graaf, 2009).

#### 4.4.1 GENERALIZABILITY AND RELATED ISSUES

The results of this work can be generalizable only if we succeeded to uncover the mechanisms through which co-creation functions. Generalizability is further limited because of the opportunistic case selection and the very large exploratory element of this work – as there was not much prior work to build on. The data sample used is small (videogames industry contains thousands of firms, and co-creation is a widespread phenomenon), snowball sampling technique was involved, as well as problems of inbuilt and unaccounted for bias remain relevant.

Even with multiple case study design, which is used in this study, the objective is saturation of information from those cases, not their representativeness. Methods such as constantly evaluating the quality of data (both in terms of sampling adequacy and sampling appropriateness), sampling for scope and variation, investigator sensitivity (including researcher reflexivity and techniques that enhance interpretation of data), as well as recognizing the progressive nature of enquiry are used to alleviate this problem (Robson, 2011: 154). This research seeks to explain key elements and dynamics of co-creation's impact on organizations, and makes no claim of being exhaustive or accounting for all possible variations and configurations of factors.

The issue of internal validity has been dealt with by explanation building approach where careful inferences are made from the use of three different data collection methods. This is one form of triangulation as defined by Robson (2011), where similar patterns of findings from different methods increase confidence in the validity of findings. In replication logic, discrepancies between them are revealing in their own right.

External validity is also addressed here – use of replication logic and comparing how the results of the first case study analysis apply to the subsequent case

studies assist in bolstering external validity. Nevertheless, external validity will remain restricted due to the limitations of the study's generalizability. The issue of reliability and replicability suffers from the same limitations – reliable replication of the conditions of the study in other settings may be difficult or impossible. Overall, the analytical methods were made more robust by adopting Yin's (2009) tactic towards constructing validity by using multiple data sources, establishing operational measures, as well as having key informants review data collection transcripts and drafts of empirical chapter.

## 4.5 Chapter summary

The process of making sense of the data involved identifying relationships between the themes and coding categories, exploring the properties of co-creation in firms, as well as different dimensions of firm affected by customer inputs to NSD. During the analysis, the concepts and theories emerging from the evidence were compared with, and interpreted in the light of, our initial assumptions and the results of existing research. This allowed us to check for affirmative and contradictory findings (Eisenhardt, 1989). The approaches to the qualitative data lead to the new theoretical insights which are set out in Chapters 6 and 7.

All in all, this study seeks to develop a framework for understanding the influence of customer co-creation on various aspects of organizations. The determinants of co-creation's propensity and style in firms, together with the implications of those on the innovation practice, as well as on the innovation outcomes, are the goal of this study. This work also seeks to contribute to the innovation in services literature by accounting for various forms of user involvement in service-providing firms and the transformation occurring within a number of sites within those organizations and their relationship with customers. This study also seeks to be of practical use to the industry practitioners – hoping to serve as a predicting tool for the best form of customer involvement to choose in order to suit a firm's particular context (defined here as the co-creation competences), as well as its funding arrangements and culture. It also helps managers to predict which aspects of their organization will be most likely affected by inclusion of the customers as a resource in particular circumstances of co-creation.

Chapter 5 that follows encompasses the empirical investigation of the effects of co-creation on NSD and firms in the videogames industry. It contains a descriptive presentation of cases, accounting for the data in rich detail. This is then followed by Chapter 6, where that data is analysed using the theoretical framework.

## 5. EMPIRICS

This chapter describes the practices of over 10 different videogame firms across three case studies. It is the account of actions that firms take in order to assimilate the inputs from customers and to shape them into value adding assets. This chapter consists of a rich description of data obtained over a period of one-and-a-half years, from mid-2013 to early 2015.

This chapter presents three case studies where co-creation is observed in its various forms. The study purposefully modifies certain elements of those case studies according to the replication logic as outlined in Chapter 4. In those cases, we observe various practices of co-creation and, more importantly, various implications of those styles of co-creation for the firm. We track the ‘competences for co-creation’ that particular firms display. Of importance here also is the presence of crowdfunding (corresponding to ‘funding arrangements’ construct), and how it affects the relationship between firms and their customers. More importantly still, the degree of trust and attitude of firms’ employees towards the creative customers is a factor of heavy influence (corresponding to ‘organizational culture’ construct), and remains one of the key focal elements of this study.

This chapter is structured as follows. Section 2 introduces the game development process as the unit of analysis. Section 3 then discusses the first case study, including Obsidian Entertainment and inXile Entertainment firms. Section 4 covers the second case study, consisting of CCP, as well as ArenaNet, Zenimax Online Studios (ZOS), and 5<sup>th</sup> Planet Games (5<sup>th</sup> Planet). Then, Section 5 introduces the third case study, focusing on Cloud Imperium Games (CIG) and Born Ready Games (BRG)<sup>6</sup>. Finally, Section 6 summarizes the chapter and paves the way for the analysis of results in Chapter 6, which relates the findings described here to the theoretical framework.

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<sup>6</sup> The insights from five additional interviews with videogames industry: consulting firms (ICO Partners and Press Space PR), distribution firms (Valve Corporation and Square Enix Collective), and one trade association (UKIE) are also presented in this chapter. They account for the overall dynamics of customer involvement in the videogames industry, and are relevant to – and appear in – all three cases.

## 5.1 The focus of data collection

Data collection for this study has focused on the co-creation-related practices of videogames firms. Games are experiential services. This accounts not only for the deeply subjective and personal reception of videogames and the mode of their consumption (also linking here to Vargo and Lusch's service-dominant logic, although not adopting their definition of co-creation of value; 2004), but allows for conceptual and theoretical integration of the notions from the field of game studies and media studies with the ideas from the innovation studies literature.

Therefore, it is possible to analytically reconcile the rich and detailed contributions of ethnographic and anthropological studies (conducted by authors such as Nardi, 2010; Pearce, 2009; Boellstorff, 2012; Taylor, 2006; Castronova, 2005; Rowlands, 2012; Yee, 2014; and others) that describe the individual's and community's engagement and deeply personal interaction with videogames, to thinking about videogames as an artefact produced and offered by firms. From here, it is possible to account for both the market forces that shape videogames (perspective embraced by the innovation and management literature), together with the social, psychological and deeply subjective experiences and effects that videogames elicit (in the social and cultural spheres). This is in line with the works of Banks and Potts (2010), Potts *et al.* (2008a, b), Hartley *et al.* (2012) who describe the co-evolution of market and socio-cultural forces in shaping co-creation in creative industries settings.

In the writings about NSD in videogames industry, various analyses include different functions of the firm as participating in the process, placing most focus on the production team itself (meaning programmers, artists, designers and sound), as well as marketing and public relations team, customer service and quality assurance, distribution, human resources and administration (O'Donnell, 2014; Banks, 2013; Graaf, 2012; Cohendet and Simon, 2007; Malaby, 2009; Tschang, 2007 and 2005). The role of creativity and its management, formal and informal networks of professionals existing both inside and outside of the firm, and the worldview and philosophical outlook of game developers are all described as influencing the process of game development, as well as its outcomes.

A similar attitude must be embraced when searching answers about co-creation – various functions and departments of the firm must be investigated. That

attitude also stems from the theoretical observations of co-creation as seeping into organizations via different channels, many of which are informal, occurring at all levels of organizational structure. The data collected and presented in this chapter strives to reflect that richness of co-creation's influences on organizations.

This focus is reflected by the narrowed-down list of Miles and Green's (2008) model of fifteen sites of innovation within firms in creative industries (reduced down to eight; see Figure 2). Not all of the sites pertain strictly to intra-organizational characteristics of the firm. Some of them describe the characteristics of the service itself, or users' interactions with it. Still, data has demonstrated that a lot of co-creation-related activity occurs in those sites as well (as they often are the platforms for negotiation of access, empowerment and player roles).

Employees in various functions of firm have been interviewed in that process. Practices of professionals on all levels of organizations have been observed. The respondent bias (due to differences in experiences, knowledge and field of expertise, as well as position within organization) should not affect the results significantly. A variety of data collection methods have been deployed to counteract this problem – complementing interview data with participant observation as well as analysis of documents and cultural artefacts. Data presented in this chapter also covers the subtler manifestations of co-creation in organizations.

## 5.2 Case Alpha

Obsidian Entertainment (OE) forms the first case discussed in the course of this study. OE embraced its community as a source of funding and support as an early adopter within the videogames industry. Together with a handful of other studios, such as Double Fine Adventure and inXile Entertainment, they discovered the power of a devoted and vibrant community of passionate customers in realizing market offerings. The production of OE's game that was occurring at the time of this study - *Pillars of Eternity* (2015) – could happen only because of the successful crowdfunding campaign, which managed to raise a sum of approximately 4.2 million USD for this game's development.

Prior to that, the company had explored more traditional means of obtaining funds to develop *Pillars of Eternity* – without any luck, as the producer firms (i.e. firms that normally fund the cost of the development of a new game in exchange for significant share in revenues, or intellectual property developed in the course of production, or other types of benefits; O'Donnell, 2014) regarded this type of a game as not having a market large enough. In other words, game could have never been produced if it was not for the funds raised for its development via Kickstarter, a major crowdfunding platform on the Internet (field notes from GDC, 2014). Furthermore, a successful crowdfunding campaign could not take place if it wasn't for a number of factors, prime of which was the presence and involvement of a strong and loyal community of OE's customers and fans of their previous productions (interviews with ICO Partners, 2014).

### 5.2.1 ORGANIZATIONAL BACKGROUND

Obsidian Entertainment has long specialized in the production of story-driven, immersive role playing videogames (RPGs).<sup>7</sup> This type of videogames has always been well-represented within the videogames industry, and there is a strong connection between classical pen-and-paper RPGs (such as Dungeons and Dragons system developed by Gary Gygax and Dave Arneson in 1974) and the first videogames, and thus the advent of the videogames industry in its early days (King and Borland, 2014; Boellstorff, 2012; Nardi, 2010). Nevertheless, to this day, it is considered that the high point of those types of videogames occurred in the latter half of the nineties of the 20<sup>th</sup> century, with the titles such as *Ultima*, *Diablo*, *Fallout*, *Baldur's Gate*, *Planescape: Torment*, and *Icewind Dale*.

Those were deeply interactive, graphically advanced (for their time of course) and ground-breaking videogames that garnered a large fan following and still function as classics within the community of videogame players (for instance, *Baldur's Gate* and *Icewind Dale* were remastered and re-released in 2012 and 2014 by Overhaul Games and Beamdog). What is more, those videogames have

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<sup>7</sup> RPGs are videogames where player creates and takes control of an avatar in a world (usually fantasy or science fiction themed). The avatar experiences adventures and interacts with other characters (be they controlled by the computer or other players). Players have complete control and agency over the actions and development of that character, choosing skills, personality traits, appearances and many other elements.

set the standards for the whole RPG genre of videogames, and no newly released RPG game can avoid being compared to those titles of old, regarded as ‘classic’ and ‘must-plays’.

Many of those videogames were made in the studio called Black Isle. That studio ceased to exist in December 2003. Following its dissolution, many former employees of Black Isle Studios have established Obsidian Entertainment. It has retained its expertise and capability to make RPGs, and those types of videogames have become the focus of its development efforts.

Obsidian Entertainment remains both a spiritual, as well as factual successor to Black Isle’s accomplishments. Throughout the years that have passed since Black Isle’s disappearance, the studio has managed to continue making RPGs. OE has also retained, as well as further developed its brand name together with the loyalty and following of the community of fans and engaged players. Even though their productions until *Pillars of Eternity* (started production in 2012) did not involve players as co-creators of videogames, some of their titles (with the best example of *Neverwinter Nights 2*) have enabled extensive modding, and have become very popular among the modding communities (interviews with OE, 2013).

As the videogames industry has been growing in the last years (Marchand and Hennig-Thurau, 2013; Zackariasson and Wilson, 2012), expanding its reach to new technological platforms, as well as appealing to broadened audiences and demographics, role-playing videogames in their classical formula have become too risky to produce. That is due to their cost and duration of development, as well as the relatively niche and small audience. As the result, classical role-playing videogames have ceased to be made, not meeting the need still present among the audiences. Communities of loyal and involved customers had to turn to other, less satisfying productions, as well as rely on the efforts of modders in adding unofficial content to the old titles.

### 5.2.2 CROWDFUNDING AS A SOLUTION

In 2012 some firms within the videogames industry realized the potential dormant in devoted customer communities when coupled with the affordances of crowdfunding (interviews with Square Enix Collective, 2014). Crowdfunding of the development of classical role-playing videogames would allow for bypassing

the main obstacle of publishers not willing to fund those types of videogames. Instead, funds for their development would be obtained directly from the communities of customers, which – despite their position as niches within the now huge videogames industry – were still large enough to fund the development of complex and technologically advanced videogames. This effect was further reinforced by the fact, that it would be the original makers of the nineties' classical titles who would be asking for those funds, therefore acting as guarantors of their quality and their relevance to those classics. This is illustrated by a quote from the interviews with OE (2013):

We knew that customers were out there, and there was no other way to get the game made for them than to do a Kickstarter [campaign]. [The current financing options are] publisher money, your own money, or crowdsourcing. People have tried debt financing, film financing etc., but those are not popular. Can't get certain games made. From that perspective, our customers are a resource – because we know they are out there and want our game.

Obsidian Entertainment was among the wave of established studios and well-recognizable names in 2012 and early 2013 that managed to obtain sizable amounts for the development of their 'nostalgia-fuelled' titles. The other firm being discussed in this case, inXile Entertainment, was another such studio, as well as Cloud Imperium Games discussed in Case Gamma. For those firms, it was the time when the community of customers was first formally used as a resource for game development.

### 5.2.3 CO-CREATION AT OE: PRIMACY OF CUSTOMERS-FIRM RELATIONSHIP

This case study illustrates co-creation performed mainly for customers-firm relationship gains. The firm is not interested in customers' inputs to NSD; instead it focuses its co-creative efforts on building closer ties to the community of its customers (field notes from Dragon\*Con, 2013). This is further reinforced by the fact that OE operates within a market niche, exacerbating strengthened impact of social network mechanisms such as word of mouth and customers' willingness to pay. The goal for co-creation at OE is primarily for relationship benefits. Community of customers is a long-term resource for a firm – not just on a single project, but in a sustainable capacity (interviews with OE, 2013):

On the business side: the more you engage with your customers as a resource, the more inclined they are to speak well of you, to buy your next game, tell about you to their friends... They become a long-term resource for us.

This is related to the competences for co-creation present in OE – the company has learned how to understand the customers' needs for interaction and engage with the players. OE has learned how to balance satisfying the expectations of the co-creating customers together with its internal game development processes. In meetings at OE, which are attended by employees from various functions and disciplines of the firm (production, programming, sound, art, etc.), customers' inputs are labelled as originating from the community and discussed alongside the ideas generated internally (field notes from OE, 2014).

#### 5.2.4 IDENTIFICATION OF THE CUSTOMER COMMUNITY AS A RESOURCE

Crowdfunding campaign gives players a strong sense of empowerment and many new avenues to discuss videogames with game developers (interviews with Press Space PR, 2013). The importance of central position is highlighted in the case of design ideas coming to OE from KS backers who have exceeded certain pledge threshold and can now provide design suggestions to the developers (analysis of OE's website, 2014). The financial involvement of customers had to be accompanied and followed by their deeper integration with game development at OE.

According to the field notes taken at Dragon\*Con (2014):

[Deeper interaction takes place due] to a number of reasons, chief of which are the obligations incurred by OE during its crowdfunding campaign – promising some backers the ability to have their ideas taken on in the course of development, or simply having an engaged community of customers who wish to be a part of the game development process, and to have an 'insider's look' into what is going on at OE.

Furthermore, customers were used as a source of funds even after the initial campaign on Kickstarter had ended (analysis of OE's website, 2014). Customers have also become identified as a form of a publisher by the OE's management –

thus leading to the view, that they should be kept informed about the game development. This is reflected in the following quote (interviews with OE, 2013):

OE should keep players informed about what is being done on Pillars of Eternity. Similar conversations are normally held with publishers.

Such a dynamic between the firm and the community of its customers called for a close and engaged relationship between those two parties – and thus development of user involvement competence by OE. “Positive relationship serves to increase the influx of monies from crowdfunding campaign, sustain customers’ interest about game’s development, as well as to help spread positive word of mouth throughout the social network of players and potential new players” as we read in the field notes from Game Connection (2014). Allowing players to have insight into the internal works of a firm, as well as to be able to comment on them and provide feedback, served as a mechanism for enhancing customers’ satisfaction with crowdfunding the game, as well as providing them with exciting co-creation experience (interviews with Press Space PR, 2013).

#### *5.2.4.1 Co-creation mostly for relationship gains, not for NSD inputs*

The community of engaged players was to much lesser extent seen as a resource in game design, and as a sounding board for various decisions taken in the course of the production (field notes from OE, 2014). Customers were helping OE by validating the trajectories of game production and feature incorporation, although their function was purely advisory, resembling focus group approach. This points to the presence of integration competence at OE. According to the interviews with OE (2013):

If we can’t convince the players about something, maybe this idea is not feasible. That’s the way that we think and use our players. We are also making videogames for niches – players are seen as experts in playing videogames, as OE hasn’t been exposed to as many videogames as players (especially when seen as a collective).

The customers are strongly opinionated and seek involvement in the making of decisions in the course of game production (field notes from Dragon\*Con, 2013). Furthermore, various videogames developed will have different types of customers associated with them, and the characteristics of their community will

vary. This is in line with the observations of Burger-Helmchen and Cohendet (2011), Jeppesen and Frederiksen (2006) and others (interviews with OE, 2013):

Making of a niche game is very different from making a mass market game. When it comes to releasing huge games such as Call of Duty, I need to keep the giant group of people progressing from game to game, so I need to listen to either marketing or some key customers. When we make our games, we make our game [involving players] in different ways, and they are very specific group of people, strongly opinionated and liking to dabble in the specifics.

Community of customers also came in handy at later stages in game development process at OE, where testing and quality assurance (QA) become of greater importance. This also exemplifies the thinking of OE of its community of customers in terms of their sheer numbers. According to the field notes from OE (2014):

Testing is one good example where customers are involved. Another is asset production (for PE, it is mostly the players who have exceeded certain crowdfunding backer threshold and who can design an element of the game in return for their financial contribution).

Those big tests conducted with the help of the players were seen as providing best value from customer engagement (field notes from GDC, 2014). Their involvement enabled testing across thousands of systems; companies like OE don't have that kind of scope in-house of course (interviews with Valve Corporation, 2014). Customer community involvement in quality assurance was also identified as an important element of relationship building and making better products overall. Customers' involvement was seen by studio management as allowing customers to better understand what OE does and why – deepening OE's relationship with the players, but also establishing closer fit to the market (again, pointing to OE's user involvement competence; Lettl, 2007).

Those points demonstrate the OE management's realization of co-creation's role in enhancing the customers-firm relationship, which translated itself into marketing and funding resource. From the field notes from OE (2014):

Most of the applications for customers as a resource revolve around having customers as providers of feedback on the game.

This relates to the basic function of user-innovators identified by von Hippel (2005) as having the need-related knowledge, and firms being able to access that knowledge without having to transfer it across the customer-firm boundary by co-creation techniques.

Still, where that parallel does not apply, is the innovation-generating functions of the customers in the context of OE – they were not viewed as a reliable source of creative or innovative inputs by studio employees. In other words, OE has retained the maximum of the traditional model of closed game development in the wake of its successful crowdfunding campaign. OE involved customers in the game development mostly for the purposes of public relations management, as well as fulfilling firm's obligations incurred during the crowdfunding campaign (interviews with OE, 2013):

Outside of our backer stuff we don't have people on our project who are directly contributing from the community.

Co-creation is a problematic and complex activity for studios because of how different it is from traditional game development practices (interviews with Square Enix Collective, 2014). OE also has a long history and strong tradition of making successful games – studio has developed its best practices that are proven to work. This adds to this firm's reluctance to depart from its established 'closed' game development paradigms, and slows down its adoption of co-creation throughout the organization. Furthermore, as we see in the field notes from OE (2014):

There are logistic difficulties in incorporating inputs from players into the game. They are often to do with community's ideas being unfeasible for production. Engaging customers as a marketing resource is easier, as it does not require changes in the essential NSD functions of a firm.

This demonstrates, that competences for co-creation carry over from other, related activities performed by the firm – such as allowing modding of its games. OE could embrace co-creation in the wake of crowdfunding because of the

competences it already had, developed while engaging with customer community as modders to *Neverwinter Nights 2*. OE already had good understanding of creative customers' needs and knew how to structure their interaction with them (analysis of OE web forums, 2014).

#### 5.2.4.2 *Formal integration of customers in NSD at inXile Entertainment*

The reluctance of OE toward integration of customers in NSD and the firm's entrenchment in more traditional, retrospective models of production and community management are best contrasted with the practices of inXile Entertainment (XE), a sister company to OE. Some of the developments of XE have been also co-authored by OE (for example *Wasteland 2*), and some key staff from OE has also been involved in helping XE with their other projects. inXile Entertainment has, similarly to OE, successfully crowdfunded two projects that are classical RPGs – gathering 7.2 million USD for both projects combined from the customer community. Nevertheless, XE embraces more experimental and open approach to using player inputs and co-creation in general.

XE taps into the community of its customers in three ways. First of all, it has a formalized system for crowdvoting (Saur-Amaral, 2012), where the customers as a collective can let the firm know about their preferences regarding a particular aspect of the game – for instance, whether the combat system is 'real-time with active pause', or 'turn-based' (field notes from XE, 2014). Secondly, the employees of the firm have a system for letting the community know about their opinion about customers' creative inputs on forums (including their suggestions and feedback; analysis of XE website, 2014):

A variety of labels such as 'seen', 'considering', 'tell us more', 'will do' and 'won't do' is in use. The forums themselves are called UserVoice, further underlining the role of customers in influencing the development decisions made by the firm (this forum is available to the backers of the project though, and is not accessible by the general public).

The team at XE asks questions to the community to benefit from having multiple opinions about various aspects of the game. This is illustrated by the following quote (interviews with XE, 2013):

Perhaps the greatest value added by the community is not the ideas themselves, but the discussion itself. If you don't have that discussion with your co-workers, then your community, among other things, can provide you with that discussion (and with the benefit of knowing other mind-sets).

Thirdly and most interestingly, due to the fact that one of the XE projects was being developed in a publicly available and easy to use system (called 'Unity'), the customers had been invited to directly submit ready-made graphical assets to the firm.

Those differences between OE and XE in the role of customer inputs in co-creation could be related to the size of the studio, with XE being couple of times smaller than OE (where OE has approximately 200 employees, XE has no more than 50<sup>8</sup>). That causes the firm to be in position of benefiting more from co-creation with customers due to more limited resources, as well as facilitates use of co-creation due to smaller, and thus more agile, organizational structure.

#### 5.2.5 CUSTOMER INVOLVEMENT IN GAME DEVELOPMENT

At OE, customer inputs to game development have occurred in the context of successful crowdfunding campaign, as well as were present at all stages of NSD (save for the very earliest stages of for creation of concept for the game, which due to its nature must be done internally in a studio) – from very early prototyping and design, all the way to testing and post-launch fixes (Hight and Novak, 2008).

As the field notes from OE (2014) show:

One of the major channels of discussion and information flow between OE and its customers are the regular (occurring at various frequencies, but at least once a month) and extensive email updates sent out too all backers of *Pillars of Eternity* project.

In those updates, the development team describes what they are currently working on and what their difficulties or dilemmas are. Those communiques fulfil a function of not only updating customers with the actions of the firm, but also putting a human face on the company, demonstrating that game development is

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<sup>8</sup> LinkedIn, accessed on 17.08.2015

not performed by “a corporate machine”, but by people with emotions, personalities and preferences (interviews with Press Space PR, 2013). That contributes to the relationship between the company and the customers in a meaningful way, as well as allows the firm to defend its vision for the game under development – as in the context of co-creation, NSD increasingly involves negotiation of how the game will be shaped and what its key characteristics will be. Successful structuring of such communication takes skill on the part of the firm, and illustrates both disclosure and user involvement competences. As we read in the field notes from OE (2014):

In those updates, project team explains the reasons for their decisions, informs the backers about any delays and reasons for them, shares the plans for the future of the project, informs what is happening inside the firm...

Many of the staff spend time on forums and engage with the community. Subsequent translation of what they learned there into the language of the firm is a locus of integration and appropriation competence. This was particularly the case for OE in the very early stages of the production of *Pillars of Eternity*. This is illustrated by the following quote (interviews with OE, 2013):

[During the KS campaign] I spent roughly 4 hours every day chatting to players all over the world. Usually late evening/night PST – this way other continents were also online. I would create lists of suggestions from players – and discuss them once or twice a week with [executive producer and lead designer].

Senior staff, for example lead designer, is spending time on forums. Staff at OE is also actively soliciting feedback, and the company has seen a lot of “good feedback” coming from for example people with good technical skills in the field of user interface (UI). OE’s staff spend time not only on the forums that are proprietary and ‘official’ (meaning accessed via the company or game website), but also in the third-party forums on the Internet, independent of the studio, as well as on other channels – such as YouTube, Tumblr, spring.me and Twitch, because players tend to be more forthcoming with their opinions on the fora independent of OE (interviews with OE employees, 2013). On the other hand, in the contacts with the PE development team itself (or where they suspect the team might be

listening in) players are more restrained in expressing their (particularly critical) opinions (analysis of OE web forums, 2014).

#### 5.2.6 THE ROLE OF CUSTOMERS' INPUTS

OE employees, when following customers' discussions on forums, seek to understand whether a point or a problem raised is indicative of a wider issue affecting many players. Sometimes interesting ideas are found by OE employees in those discussions (interviews with OE, 2013). That points to the minor, although factual role of customers as ideators (be that accidental or purposeful) in firm's innovation processes. This is very unlikely to occur though – this study has no tangible account of even one such occurrence, therefore it will not be taken into consideration as a function of co-creation in this case.

As we see in the sections below, the difficulties of implementing co-creation, as well as certain requirements of firm strategy, are a limiting factor on the uptake of this approach to NSD. Firm's integration competence allows to better understand what kind of customer inputs can be useful in the firm. The general usefulness of working with customers is highlighted in the quote below, pointing out to the sympathetic attitude of employees towards player inputs (interviews with OE, 2013):

Sometimes players' discussion provides new perspective and the team revisits the idea which had been discarded previously. Sometimes, although very, very rarely, 'nuggets' of interesting ideas from players appear that the team hasn't thought of. The ideas that we get from the players are definitely beneficial, and it is much better to work on the game this way, getting immediate feedback from the customers. Players will be discussing things, and they might mention something of real use.

This demonstrates the role of organizational culture in catalysing co-creation in firms. Customers also help the studio employees in the middle stages of game development, for example in refining certain aspects of the game such as user interface (UI). Again, the studio tends to accept only general ideas and suggestions from the players, not ready-made solutions (O'Hern *et al.*, 2011). The studio has clearly identified the type of input that it can accept from its community (idea-centric inputs) and has no internal capacity for processing

solution-centric inputs – relating both to integration competence, as well as to user involvement competence (field notes from GDC, 2014).

The studio also seeks to retain all of the control co-creation. In the practice of OE, the influence of crowdfunding and player involvement as an extension of that practice is very visible with the selective approach to customer contributors (interviews with OE, 2013):

On PE there aren't players who would be directly contributing to the development of the game. Players' inputs pertain more to 'paper design' rather than implementation of the features/mechanics into the game itself. Backers will not be building assets but they will be designing properties of various in-game details.

For OE, the customers fulfil mostly the function of a barometer of the community's mood and attitude (field notes from OE, 2014). The co-creative relations between the firm and the community are catalysed by the prior use of crowdsourcing for raising finance (thus by the funding arrangements).

The exact practices of customer involvement in game development at XE are much more structured and visible. Most unique and interesting of these is the use of Unity Asset Store in the course of development of *Torment: Tides of Numenera* [TOM]. According to the field notes from XE (2014):

TOM is developed in Unity game engine. That technology is well-known and available in the community of its customers (and overall in the community of people who are interested in videogames and game-making).

Therefore, it is easier for the community members to contribute to the development of the game, as they do not need to learn the specific and complicated details that normally accompany a proprietary game engine (interviews with Square Enix Collective, 2014). Such proprietary game engines are normally developed in-house and are closely guarded secrets by game development studios.

This forms the basis for XE's increased affinity to customer co-creation – the technological barriers to co-creation have been greatly lowered at the outset of the project. Accompanying Unity game engine is Unity Asset Store, where various

developers and programmers sell and buy assets produced by others. XE has been making a good use of that functionality, which basically allows for external sourcing of certain elements of the game – pertaining to various functions of NSD (for instance to programming and underlying code, art, animation, or sound). This is reflected by the following note in field notes from XE (2013):

XE overall buys a lot of materials from Unity Asset Store: mostly minor art assets or models for the game. This approach has proven both money and time saving for IE, and is safe from the perspective of intellectual property. By sourcing player inputs via Asset Store, XE pays its customers for their work, and the ownership is unambiguously and legally transferred.

The above note points towards XE's appropriation competence, which enables its co-creative practice. Still, apart from sourcing assets from Unity Asset Store, the studio relies on releasing guidelines to the community of customers (for example backers on the UserVoice forums) pertaining to the production of non-critical art assets (also referred to as 'props') for the game. This demonstrates XE's user involvement competence, as well as disclosure competence, and their role in enabling co-creation (interviews with XE, 2013):

We provide specifications for submissions to the community. Any such assets that we like will get bought, and will also be marked as "used in the game". For W2, there are some problems to the arrangement of players developing assets. It has been overall successful, but there have been also challenges. There are some regular users, who are better than others at meeting expectations and specifications.

When it comes to the sourcing information from the forums, XE identifies two systems that it uses: passive and active (interviews with XE, 2013). Passive is about the labelling regimen described above. It is regarded as a very low cost way of showing that the studio reads the contributions. From the analysis of XE website (2014):

Active system is the process that IE uses to get feedback from players – by targeted discussions on a particular topic, for example as it was the case for a discussion on combat system in-game. Those discussions are encouraged and 'seeded' with topics by the team, and can be initiated at a time convenient

for the firm. Those specific discussions can be limited only to backers – as it is often done on the UserVoice forums. Active system is a great example of user involvement competence at work.

XE lets community know what they are thinking and that they hear their opinions, and observe the discussion evolve from there. This is illustrated by the following quote (interviews with XE, 2013):

When we are going to design a new system, for example inventory, we will look through UserVoice. There can be some ideas that will spark our guys' imagination; we will also get a sense of what is the community's desire. We will not do that for all aspects of the game, but for some. We will be telling our players about various improvements to the game in the updates, and then we will be looking at their reactions and opinions.

Again we see, that firms prefer to use idea-centric, not solution-centric, inputs from the customers (O'Hern and Rindfleisch, 2011). This relates to the integration competence: for the reasons relating to intellectual property, project management and causing disruptions to the current work of the firm, it makes more sense to use more modifiable inputs.

#### 5.2.7 INTERNAL PRACTICES OF CO-CREATION

Customer inputs to game development precipitated by crowdfunding have triggered some changes in OE. Nevertheless, the core processes within the firm have retained their characteristics of a traditional game development (field notes from OE, 2014):

OE, when prototyping *Pillars of Eternity*, used Scrum (Keith, 2010) in the early phases of production – focusing on interdisciplinary and responsiveness. In the later phases of development, it used more of Waterfall model – which means that the tasks were scheduled out on the production schedule, and followed one another.

In Waterfall project management, it is difficult to account for sources of external inputs which, by their nature, are unreliable and difficult to plan in advance (a firm has no means of forcing its customers to deliver on time or to specifications), as all tasks follow in succession and each task is dependent on the completion of

a previous task. Iteration and slack that widespread co-creation requires are anathema to Waterfall model.

On the other hand, OE had used Waterfall with great success in the past. Still it had to allow for some degree of co-creation – because of its use of crowdfunding and changed nature of customer relationship. It found a solution by controlling who would co-create, when in NSD, and in what way. This illustrates the role of organizational culture and history in influencing the practice of co-creation. From the field notes (2014):

In the context of OE, co-creation had to be clearly structured and formalized in order to fit with the Waterfall project management technique, as OE didn't want to depart too far from what it knew worked. That's why at OE we observe co-creation only in some, clearly demarcated, aspects of NSD.

The interviews with the studio employees also highlight that the company has never attempted co-creation with its customers in the past. The requirement to incorporate player inputs (from those players who have backed the project with certain amounts of money) was something new to the firm; all processes needed to be learned and explored, which further increased the barriers for them. This is reflected by in the interviews with OE (2013):

It is costly to get players' feedback from alpha and beta tests; we need to build infrastructure for getting feedback from our players. Today it takes a lot of time out of the game development just to gather this feedback.

It demonstrates that the studio sees usefulness in customers' feedback and inputs, but at the same time the construction of necessary infrastructure to assimilate it is something that does not make financial or cultural sense to the firm. Furthermore, instead of investment in the development of that capacity (interviews with OE, 2013):

We prefer simply to hire a junior in house person for the position [of the curator of community's inputs] and grow this person into an artist that we can have on staff. [...] Getting [customers'] bug reports is difficult and costly for us, we need to build a special build that needs time, put in an infrastructure for feedback, people to collate this feedback and convey it to

developers... [...] It's almost a full time job for someone like lead artist or lead environment artist to manage the community to get art from them, review it, make sure it has a place in the game. You would have to have someone fairly senior, with an eye for what's going on in the game, with good technical skills.

The quote above demonstrates the role of organizational culture in influencing the co-creation-related practice. Not only business rationale, but also organizational history (i.e. the experience of what worked for similar problems in the past) and unarticulated attitude of employees toward the customers determine whether co-creation will be used in this instance, or if a more traditional solution will be embraced.

What is also highlighted in that quote is the broad array of skills required to assimilate customer inputs by a firm (for instance an artist who is both proficient in production of art, but who also has good technical skills). Moreover, the people processing player inputs as they reach the firm need to be fairly senior, with good overview of the project overall, and good judgment of an idea's feasibility. All of these remarks point us towards the importance of competences for co-creation, and integration competence in particular, as well as heavy use of the people resource in organizations that co-creation demands. From the OE field notes (2014):

To process and successfully integrate customer inputs with game development, managerial decision-making is necessary. OE has established some routines for considering and integrating player inputs in game development. Players' ideas and contributions are discussed in meetings with other team members – those contributions come from the customers who crowdfunded the game.

One established practice accompanying co-creation at OE, personal telephone conversations with the backers who exceeded the 'feature contribution' threshold in crowdfunding, also serves to enhance the relationship between the customers and firm. OE's employees "[...] talk to people on the phone, so they get personal treatment, so they feel that they are getting their money's worth (interviews with OE , 2013)." Looking again into the field notes from OE (2014):

For ideas coming from the internet fora, the team normally does not discuss them with individuals, but more with groups, also on that platform. Players can also email the studio, and those emails are filtered by the receptionist. The information contained in them then trickles down to the development team and they respond to customer questions.

Also at XE, the major barriers to co-creation are secrecy from competitors, management of customer expectations and finding 'safe places' within the development process where customer inputs can be inserted without risking disruption to established work practices (interviews with XE, 2013):

The quality of ideas coming from the community varies drastically; the problem is also players' lack of context information about game development. Secrecy is also important when communicating with players, as not to spoil the game for them. Overall it can be dangerous to talk to customers – you can create great expectations, and then loose by not meeting them. That's why it is critical to take proper care when communicating with the players, so the mode and contents of that exchange are controlled by the studio.

This points us towards the competences for co-creation again, and disclosure and appropriation competences in particular.

#### 5.2.7.1 *Structured forms of co-creation: quality assurance and mailing lists*

The site at OE where player inputs are processed in a structured way is quality assurance (QA). For bugs (issues flagged for resolving) there are databases separate for each project. From the GDC field notes (2014):

Overall, QA manager and then QA department provide structure to filtering player inputs. This is an important detail that many of the firms have in common – the QA department plays a visible role in co-creation processes, especially in providing the initial structure for the processing of customer inputs.

This is because QA had been structured in the past to account for and understand a large volume of inputs coming from the outside of the organization. The merit of QA inputs is also easier to judge (i.e. they are technical in nature). An example of such practice is given below (interviews with OE, 2013):

Processing feedback and bugs is not ad hoc. We have a bug database and it changes from project to project. It is usually dictated by publisher, that's why it changes. A developer has a list of bugs that they need to fix. QA team make sure that there are no duplicate bugs on the list. [...] If you are getting a lot of feedback from the users, that feedback has to go through some sort of filter before it gets to development team, that's usually a QA person. Other things don't get filtered, and are more valuable to the development team: crash bugs. It is an easy thing for us to look at and fix.

This demonstrates that the firm sets up categories for customer inputs, designates people to look through those inputs, assigns priorities to them depending on how useful or relevant they are. This adds structure to the co-creation practice in firms, and transforms QA-related functions of the organization (and thus the late stages of the NSD). From the OE field notes (2014):

OE has internal and publisher testing group, and sometimes there is a third group (a contractor) who is doing testing. Testing group is seen as a resource for suggestions. Bugs go into a database (A, B, C priority) and there are corresponding various priorities of bugs. There is also the 'S priority', which is for suggestions. The team goes through them regularly – sometimes a database entry gets elevated, and turns into a task and is given to someone to work on.

For XE, the focus is on internal communication and exchanges between key people on the team – so called 'leads'. XE has a producer who monitors the forums, and when some contributions strike him as exceptionally interesting, he sends an email to the producer, design lead, as well as creative lead (field notes from XE, 2014). This again demonstrates, that any decision regarding an externally sourced idea must be carefully considered by the key people on the team – which is one of the reasons for co-creation's disruptiveness. There is a high cost to considering such ideas – as the time of key people is scarce and precious within an organization.

At XE, there are absolute owners of aspects of the game in the course of its development. As one of the senior managers puts it, he "believes in benevolent

dictatorships” (interviews with XE, 2013). From the XE community emails analysis (2014):

Particular people are in charge of particular aspects of the game, they have creative constraints, but within those constraints they do whatever they like (provided it is possible from the standpoint of technology, narrative etc.). Community feedback falls into the jurisdiction of those absolute owners of game aspects.

Such a cell-like structure of a company plays a role in facilitated judgment and decision-making on player inputs, thus increasing firm’s co-creation competences – including integration and appropriation competences.

#### 5.2.7.2 *Business-to-business dependencies and production feasibility*

Pointing towards the importance of integration competence, the most expensive aspect of co-creation is getting customer inputs to the firm employees in a structured and intelligible format. This is accompanied by various dilemmas of the team, illustrated in the quote below (interviews with OE, 2013):

One of our area designers goes through [customer inputs], and talks with [the producers], and asks whether it’s possible, where we draw a line when it comes to scope of these things and how they fit in our game. Then we need to have a discussion with the customer and work with him. We know how to get the same effect that players want, but doing it in a less costly way for us – due to our experience in game development that we have accumulated over the years.

The quote above points to the large amount of time and effort consumed by co-creation. It is also revealing about the organizational culture, and the attitudes of the employees toward customer inputs. There is a general feeling of redundancy of customer inputs, and the fact that the only reason for their use by OE is to maintain the customer relationship (by following on the crowdfunding’s promises). The quote also mentions the self-perception of the employees as the curators in the practice of co-creation, who have the ultimate responsibility for the quality of the game produced.

### 5.2.8 ORGANIZATIONAL CULTURE IN THE CONTEXT OF CO-CREATION

The element of regular exchanges with the customers has always been present at Obsidian Entertainment. It is visible in OE's affinity towards modding, and the support that the studio has shown for this kind of activity in their games (in *Neverwinter Nights* series in particular). Firm managers appreciate the need to devote effort and time to exchanges with players; as well as the need to have two-way conversations with players about what they want. The importance of finding the right forum for exchange is often highlighted in the interviews. "We invest a lot of time on our forums, since 1995 or 1996 when we set up message board for the original Fallout game (interviews with OE, 2013)." That organizational culture determines the propensity of individual developers to speak to the players, as well as their attitude towards player inputs to game development. Also this practice also helps to explain the competences for co-creation that OE holds – which have been gained through such modding-related activities throughout the firm's history.

In the cases observed, the attitudes of employees towards customer inputs can vary from being very open and enthusiastic (due to creativity of players which they display when interacting with the game, their maturity and understanding when speaking to the industry professionals, efforts that those customer puts in their fandom etc.), all the way to being distrustful and guarded (in the aftermath of repeated abuse of game developers by their customers on the online forums for example, or in the context of a higher corporate or managerial entity prohibiting any form of communication with the customers save for the official marketing and PR channels). Personalities also play a role here – for some members of the development team it will be easier to face even unjustified criticism, while others prefer to leave that kind of interaction with customers to the community management staff. As an employee puts it (interviews with OE, 2013):

I am in minority when it comes to reading and responding, but there are other people around who read through forums. Some people on the team get upset with the things that they read, so it is difficult for them. [...] It is part of my routine to read forum feedback; I find value in reading about what players are doing, not necessarily responding to them.

The critical element influencing the shape and role of co-creation within a firm is its organizational culture. It matters when it comes to generation and origination of ideas, as well as self-perceptions of employees and their opinions about the customer community. At OE, the developers stick to the principle that “we know what kinds of things can and can’t work” (interviews with OE, 2013). According to the OE field notes (2014):

Game developers appreciate that there are useful bits of knowledge to be obtained from the players’ community, and the general feel of the interactions between PE team and community is positive. Nevertheless, there is a perception in the team that players’ community are mostly “churning the same stuff over and over again” in their discussions.

The relationship between the game developers and the players is also determined by the self-identification of OE’s employees as professionals in the videogames industry. They are the ‘auteurs’ of the videogames, and their decisions result from their professional experiences and skills. According to the words of OE employee (2013):

We want to make a game that we want to make. We have been doing this for a long time, our team is very experienced. We are making our game for them but we want to make good game at the end of the day. We know how to make games; we also have the entire view of the project – which players don’t have. Players also aren’t professional game developers like us. We make changes based on feedback, we want to please customers but at the end of the day we will do what we think is best.

As illustrated by the following quote from another OE employee (2013): “Games are developed for the OE’s players, not just for the development team.” Studio staff is overall positively predisposed towards its customers and their creativity, as long as it occurs in separation from the internal game development process (interviews with OE, 2013): “I love seeing what people do, mods that they make, even if they are just goofy.”

This underlines the acceptance of customer inputs as long as they don’t interfere with the studio’s work, without much of a real transformative impact on the firm’s functioning and NSD. This stems from the tradition of modding at OE. For

modding, customer inputs were entirely separate from the game development effort and didn't affect the work of employees. In co-creation, it is that interference which becomes the issue – together with associated disruptions and new stakeholder in the game development process. According to the analysis of OE email communication (2013-2015):

OE staff thinks of their customers in terms customers, or players of the game. In some cases, for those customers who have individually pledged thousands of USD in crowdfunding, this is overlaid with those customers being also significant financiers ('super fans'), whose sanctioned desires must be met.

The studio employees become obliged to listen and integrate customer inputs with game development. This introduces the tension to the organization, between the employees' preference for more traditional, closed model of game development, and the need to open that model up to customers because of the prior use of crowdfunding. The practice of co-creation at OE is the resultant force from that tension, or a compromise of sorts – where customer inputs are allowed only from some customers, in clearly formulated ways, in very specific aspects of NSD. All other customer inputs and manifestations of co-creation are optional (interviews with OE, 2013):

We discuss how we are going to guide them [the co-creating customers]. When player who has dropped two thousand dollars on our game, we simply can't turn his inputs away. We need to work with him, with his input, especially that his input is creative in nature. It can be stressful to people on the team.

That stress has its effect on the team and is associated with co-creation. Some employees are opposed to it. That negatively affects the mood within the firm as well as erodes esprit-de-corps. That is also exacerbated by the power asymmetry that exists between the studio and the players, and that gives the firm employees the (necessary for successful game development) right to overturn any suggestion or request coming from the customer community (interviews with OE, 2013):

If a whole lot of people say something, and I still think they are wrong, I will still not do it – because I think they are wrong. But sometimes I will not agree

with their solution, but I will agree that there is a problem and will work to solve it.

This demonstrates that in OE's organizational culture customers are seen as not necessarily wrong, but unaware of the professional game development effort. As such their inputs might have merit, but are also regarded as associated with a lot of disruption to the 'business as usual'.

#### 5.2.8.1 *Informal co-creation and hidden innovation*

A quote from the interview with XE captures employees' attitudes towards customer inputs (2013):

In game design, there are many subjective aspects, there are many good answers – but some answers are better than the others for particular games. Sometimes our players point us towards interesting solutions to problems as implemented in other games – players are very well versed in various titles.

The account of practices of XE underlines close collaboration of the studio with its players, especially when it comes to sourcing of ideas. Attention is being paid to the more inspirational function of the ideas from the customer community and the role that they have on the development team in a 'hidden' way (interviews with XE, 2013):

We need to acknowledge that the community assisted in the effort, because we don't keep the track of which idea came from whom even internally. Often that it is not the specific idea, but more like something that makes you think of something else, a catalyst.

Such behaviour of firm employees draws our attention to the co-location of co-creation with hidden innovation. According to this view, firm employees communicate with customers (who belong to a single community which transcends the boundaries of organization; Cohendet and Simon, 2007) and through those numerous and informal interactions, the minds of employees are exposed to the ideas of the customers. In such way, customers' ideas find their way into the organization: not through an officially recognized channel, but by 'seeping into' the firm. That is illustrated by the quote below (interviews with OE, 2013):

Usually there is nothing to act on right away, sometimes there might be specific thing for a design that we created and we will update the design document. Usually it is something that we will forget about, something that will be in the back of our minds and the origin of the idea will be lost – although it still may influence us.

Some of the customers' ideas find their way into firms under the radar of official recognition – albeit influencing the developers in subtle and difficult to map ways. Still for many firms the only customer inputs that are acknowledged are the ones stemming from formal co-creation (i.e. customers contributing to the paper-design of agreed upon details of the game), or QA (as submitters of bug reports and beta testers).

#### 5.2.9 CASE SUMMARY

Interestingly, XE could not adopt the approach of sourcing various assets from the Unity Asset Store (and thus from the community of its customers, as well as the community of Unity Asset Store frequenters) for all of its productions. Due to the fact that TOM is a project which is “much more unique” artistically than Wasteland 2 (for which the sourcing of assets was used), the assets for that game had to be done entirely in-house by the studio (interviews with XE, 2013). Therefore, such aspects of the service as its aesthetic familiarity to customers, as well as the technical level of skill required to work with it (as it is demonstrated by the broadening of the potential community of creators of assets with the use of easy-to-master Unity technology), have significant influence on the potential scope of co-creation. As such, the familiarity of technology and aesthetics to the customer community form an important element of strategic consideration for a firm when planning co-creation.

When interacting with the customers, one of the major challenges is the representativeness of the customer sample having the discussions with the firm (interviews with UKIE, 2014). There is an inherent bias to the discussions occurring on forums – only very particular type of customer frequents those, and those customers who do form a tiny percentage of the total number of customers (some firms estimate it at 2%, the others at around 10%). Those customers can form a so called ‘vocal minority’ – meaning a group of dedicated and visible players pushing their views and opinions forcefully in exchanges with the firm

(interviews with Valve Corporation, 2014). This is contrasted with the fact, that majority of the players do not engage in exchanges with the studio at all, and their opinions are not articulated in the public domain. Listening to the ‘vocal minority’ customers can cause the firm to take direction that does not meet the needs of majority of the customers, or that is locked in the existing trajectories of the market (Utterback, 1994; Dosi and Nelson, 1994). The phenomenon has been discussed further by Aoyama and Izushi (2008).

All in all, Case Alpha in this thesis is an example of structured type co-creation. Co-creation is tightly controlled by the firm, and occurs only in the form and time chosen by the firm (linking back to the work of O’Hern and Rindfleisch, 2011). It is clear what types of inputs customers will provide, how they will be dealt with (by whom in the firm, in which meetings etc.), as well as why that’s happening (due to co-creation). Customer inputs are processed by established channels and dealt with in formal meetings, with senior employees present.

This approach to co-creation stems from the reluctance towards this unproven service development style in OE’s organizational culture. At the same time, it is made possible by the user involvement and integration competences that the firm had developed earlier in its history, by allowing its customers to engage with modding of their games. OE, in other words, has become an unlikely exemplar of co-creation.

OE attempts to fulfil its obligations incurred by asking its customers for financing of the game, at the same time developing it using approaches as close to the ones that they used in the past. In the case of XE, similar pattern is dictated by the very small size of the studio, and thus shortage of the resources, as well as cultural and historical similarities to OE (many key employees in fact work for both companies at the same time and XE has also been making games for a long time).

Despite that structure, hidden innovation still takes place in this structured practice of co-creation. Employees do spend time listening to their customers, engaging in discussions with them and expanding on their ideas. Complete isolation from those forms of inputs would not be possible – as the firms need to maintain good relationship with their customers in the crowdfunding’s aftermath. That’s why there is a minor degree of loose co-creation in Case Alpha as well (just

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as there is a degree of structured co-creation in Case Gamma), when employees gain first-hand understanding of their customers' needs (von Hippel, 2005).

### 5.3 Case Beta

CCP, an Icelandic game development firm, is the focus of the second case study. Having a reputation of a highly innovative company in the industry (embodied by CCP's use of the latest techniques of software development; field notes from EVE Fanfest, 2014), this firm is a favourite object of study to many academic researchers (c.f. Bergstrom *et al.*, 2013; Gibbs *et al.*, 2013). This is due to many reasons – prime of which is the fact, that the main game of CCP, *EVE Online*, is a rare example of a successful MMO (massively multiplayer online) game that has survived for over ten years in the sector of the industry which is notorious for high failure rate. *EVE Online* has not only survived – it has done so with an astonishing degree of success, managing to capitalize on a market niche.

Players of *EVE Online* form a peculiar sort of customers – they enjoy forms of gameplay that aren't interesting for the majority of the videogames audience. Furthermore, *EVE Online*, due to its open-ended nature, is classified as a 'sandbox' in which players have a high degree of freedom when determining how they interact with the game. There are very few videogames that are designed and structured like that (in particular the game *Second Life* has garnered a lot of attention from scholars, c.f. Bonsu and Darmody, 2008; Malaby, 2009; Pearce, 2009; Boellstorff, 2012).

The observations from CCP are complemented by the accounts from 5<sup>th</sup> Planet Games. 5<sup>th</sup> Planet Games is an American studio, located in California, developing web-browser MMO videogames. In this work, the focus is on *Dawn of the Dragons* title (released in 2013). It is much smaller than CCP (it has around 60 employees, where CCP has over 500). Its main revenue stream is 'microtransactions', i.e. the game itself is free to download and it costs nothing to play, but players are enticed by the game design to repeatedly spend small amounts of money on making their experience better. By contrasting and comparing the practices of those two firms, we can produce interesting insights and observations into the dynamic of player involvement in NSD.

Additional insights into co-creation of massively multiplayer online videogames that do not rely on crowdfunding are provided by Zenimax Online Studios and ArenaNet. ZOS is headquartered in Maryland, USA, and developed *Elder Scrolls Online* (2014), a fantasy-themed RPG for both personal computers and consoles.

It has around 250 employees<sup>9</sup> as well as offices in two other locations in USA and Ireland.

ArenaNet are developers of another fantasy-themed RPG *Guild Wars 2* (2012). The company is based in Washington, USA, and has around 300 employees.<sup>10</sup> *Guild Wars 2* realizes the concept of a 'living world', where the game is being regularly updated (on a weekly or bi-weekly basis) with new content to improve player experience.

### 5.3.1 EXPLAINING *EVE ONLINE*'S UNIQUENESS

*EVE Online* is a subscription-based, MMO game set in a science fiction space setting, released in 2003. For a long time, it has been the only game produced and maintained by CCP. Only recently did the company release its second title, *Dust 514* (2013). *EVE Online*'s subscriptions are the chief means of generating revenue – meaning that the first prerogative for CCP is maintenance of stable and committed customer-base that keeps on playing the game. The company is majority owned by its founders and staff. That captures some differences between this case and the Case Alpha, where OE's game is single-player and crowdfunded.

Furthermore, as an online multiplayer game, it is characterized by a deep integration of inter-player dynamics into its core gameplay. As it is a sandbox game, it places much more emphasis on players' creativity in determining the shape and feel of the service experience. Furthermore, development of 'sandbox' type of videogames also aids to foster a more open organizational culture, where inputs from the outside of the firm are more easily accepted (Malaby, 2009). It therefore forms an excellent back-drop for firm's use of co-creation – as its customers are already familiar with high degree of agency and autonomy, and those types of pro-active and co-creative behaviours are inscribed in the community of customers, as well as among the employees of the studio.

Another major difference setting this case apart from Case Alpha and Case Gamma is the stage in *EVE Online*'s development. The game has been released commercially over ten years ago. CCP continues to heavily support it by

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<sup>9</sup> <http://www.gamesindustry.biz/articles/2012-07-17-the-elder-scrolls-online-reinventing-a-franchise-in-an-online-world> [retrieved on 14.09.2015]

<sup>10</sup> <https://forum-en.guildwars2.com/forum/archive/bltc/What-to-buy-with-800-gems#post1218058> [retrieved on 14.09.2015]

continuously adding major pieces of content, new functionalities as well as options (together with the improvements to underlying game technology, graphics, systems etc.). Nevertheless, the service itself is familiar to the customers, who form communities around it. It is nothing like what we observe in Cases Alpha and Gamma, where the game is still deep in the development process and has not been yet released to the market. This generates significant differences in the way that customers can be integrated with internal game development practices – for instance, secrecy concerns to ward off competitors will be higher for an unreleased product, as well as development of a novel ideas for game under production requires different form of expertise than generating improvements to an experience which tone and design are already established.

This case is also an illustration of semi-structured co-creation practice in a firm. It means that the firm uses both structured, highly formalized practices of co-creating with its customers (as we for instance saw in Case Alpha, or as illustrated by such approaches as contests and toolkits) together with loose, largely informal practices (which are akin to Miles and Green's hidden innovation, and occur via numerous informal contacts, exchanges and relationships between employees and customers; 2008). Case Beta demonstrates a situation where a degree of trust exists between the firm and its customers, and where customers are seen by employees as partners in the development of the service (field notes from CCP, 2014). This could be because of the niche nature of the service itself (meaning that it has a relatively small audience), the design of the service (it attracts more mature customers than industry average), and firm's practice of hiring mostly from among its customers (field notes from CCP, 2014). In the following sections we consider those circumstances in more detail.

### 5.3.2 CCP'S PROXIMITY TO CUSTOMERS

The exceptionally homogeneous player community composition of *EVE Online* (Bergstrom, 2013) contributes to the stronger than in other videogames relationship of players with the game developer. From the interviews with CCP (2013-2014):

Average age of *EVE* player is 32. Other MMOs have audiences which are much younger. *EVE Online* has players from very unlikely demographics; many very highly qualified people are attracted to play *EVE Online*.

The strength of this community is reinforced by *EVE Online*'s unique single-server configuration and player-driven governance of the game (Gibbs et al., 2013). Design decisions made by CCP decrease the size of the likely audience for *EVE Online*, while making its player base more homogenous and stickier for those who fit the narrowed target demographic (Paul, 2011). Other game design elements, such as departures from conventions of how a player is represented in *EVE Online*, further contribute to that (Bergstrom et al., 2013).

In those idiosyncratic gameplay circumstances, in a system which encourages emergent, sandbox interactions and player self-governance, the community of players as a source of knowledge about *EVE Online* is an asset of enormous value to CCP. This view is also corroborated by Burger-Helmchen and Cohendet (2011: 321) in their observation that "game players can be considered genuine experts in this field, and as such they are an important source of knowledge, which circulates through [...] channels that lead to the firm". This is a sentiment expressed by CCP employees (interviews with CCP, 2013-2014):

Players are experts at playing *EVE Online*, with their knowledge about the game surpassing that of ours [developers'] on many occasions... Our players are best informed about the ways they like to engage with *EVE Online*.

Moreover, players of *EVE Online* have proven their usefulness as developers of software enhancing the service experience. By development of such toolkits as EVEMon (Battleclinic), EVE Fitting Tool (EFT) or Dotlan Evemaps, the players have not only contributed to the quality of EVE's gameplay, but also established new ways of playing the game, as well as delivered value to the customers and CCP as a company (c.f. Nardi, 2010). According to the field notes from CCP (2014):

CCP considers players a valuable source of information about their needs and gameplay habits, as well as a resource for creativity equipped with the skills necessary for game development (many *EVE Online* players are skilled programmers, talented artists, or competent IT project managers).

The community of *EVE Online* players is comprised of members with various sets of those skills and interests (interviews with ICO Partners, 2014). Managing those diverse player types and thus various sub-segments of *EVE Online* community requires strong competences for co-creation from CCP, which are components of

the studio's commercial success with *EVE Online*. It grants CCP a competitive advantage over other studios in the MMOG sector and forms the cornerstone of its continued survival in the industry, as well as allows it to succeed in a market niche. User involvement and integration competences seem of particular importance here, but so are the appropriation and disclosure competences (i.e. being able to create the conditions for and attract customers' solution-centric inputs for the former, and to balance the degree of information openness against potential IP risks).

Similarly at 5<sup>th</sup> Planet, catering to customer communities has always played a key role in the strategy. According to the interview with a 5<sup>th</sup> Planet employee (2014):

I like to think that we have a special relationship with our players. I feel that a lot of people care about the well-being of our games and community.

The ability to build a relationship with customers falls under the user involvement competence. Consequently, the creativity of community members is present in 5<sup>th</sup> Planet Games as an important resource for the studio. At the same time, we observe how those community inputs at times fit uneasily with the goals of the firm, as well as how they can generate problematic situations (interviews with 5<sup>th</sup> Planet, 2014):

A portion of our community enjoys making tools for our games; some of those tools go against our terms of service. In terms of risks we have had some situations when we listened too much to the community, we introduced what they wanted, we had to then take it out of the game, but this has happened rarely.

Firm's ability to resolve those tensions corresponds to its integration competence. Sometimes the TOS (terms of service), as well as EULA (end user license agreement) also contribute to the limiting or expanding of the possible scope of player inputs to game development. Depending on how relaxed or how restrictive these are, players' creativity will be directed to some, and not other, outlets (or barred altogether).

In the interviews with ArenaNet (2014), the role of customer feedback in influencing NSD is underlined: "[Customers'] feedback influences us in a myriad

of ways, probably sub-consciously.” This quote also accents the proximity of hidden innovation to co-creation, and the informal ‘osmosis’ of customers’ inputs into an organization via mechanisms not accounted for on the formal, strategic level. We demonstrate in this thesis, that setting the appropriate organizational and customer relationship management conditions for such osmosis is also a part of firm’s competences for co-creation, and does not happen accidentally.

### 5.3.3 CUSTOMER INVOLVEMENT AT CCP

Integrating customer inputs with the studio’s service development practices, is critical to CCP’s success with *EVE Online*. Various tools for interacting with the community, as well as multiple practices to engage players in co-creating *EVE Online*, are all parts of an open dialogue between the company and its customers. From the CCP field notes (2014):

There is a constant review happening within CCP, taking player inputs and reflecting on them in the context of CCP’s vision.

Formally, co-creation of *EVE Online* occurs via three main channels: physical gatherings, internet-mediated communication (such as discussion forums, emails and mailing lists, etc.), and players’ voluntary advisory bodies to CCP (player council, as well as the volunteer program). The other roles of these channels are to ‘filter the noise out’ – to create outlets for communication that will be transparent to CCP’s analysis, and that will yield information relevant to NSD. Another application is to produce information that is possible to assimilate into game production practices of CCP. In the field notes from CCP (2014) we read:

Still, the practice of assimilating player inputs via these channels (which structure and effectiveness stem from CCP’s user involvement competences) is relatively loose and malleable. CCP displays a degree of organizational flexibility when integrating customer inputs coming into the organization. How the employees deal with them, how the teams discussing them are composed, people responsible for them within the organization – they are all relatively fluid, pointing towards the semi-structure practice of co-creation at CCP.

The note above suggests that CCP's integration competence does not reside only in stiffly established routines. To large extent it is located in 'on-the-job' practices of employees, their experience and 'professional intuition'.

#### 5.3.3.1 *Fanests and other physical gatherings*

The largest and most important of *EVE Online* player gatherings is Fanfest, held annually in the spring in Reykjavik, Iceland. "Up to two thousand *EVE Online* players and fans come to celebrate their involvement in the game, as well as to meet the developers. Additional fifteen to twenty thousand watch the live broadcast from Fanfest on the internet (interviews with CCP , 2013-2014)." For CCP this presents an opportunity to connect with their players, but more importantly, to gather their feedback about the game in an informal, personal way. For players it is also an occasion to give their suggestions to the developers. Such direct communication allows CCP a better insight into players' needs. According to interviews with CCP (2013-2014):

There have been many instances where EVE was changed as a result of those informal chats.

During Fanests the activities are geared towards enhancing the communication between players and the developers, as well as ensuring that both formal and informal channels for information flow are open. CCP takes this opportunity to announce new expansions, new features, to present upcoming products and long term vision for the game. It also uses these events to familiarize the players with business aspects of CCP. Important community announcements, such as Council of Stellar Management election results, are also announced during Fanests. Finally, Fanests encompass rich informal interactions between players and CCP employees. Events such as pub crawls, trips around Iceland, concerts as well as spontaneous activities such as hotel and house parties are all venues of informal and in-depth information exchange between the players and developers. As we read in the field notes from CCP (2014):

It is possible to specify couple of various activity types during Fanfest, such as roundtables, presentations, keynote talks and social events. During roundtables, developers sit down together with players and discuss the game. Such events are recorded; their time and location are advertised in the

Fanfest's programme to ensure attendance of interested parties. The discussions pertain to upcoming and existing features of *EVE Online*. There are dedicated roundtables for various aspects of the game. Presentations are about developers familiarizing the players with CCP's work and where the studio is going with new or existing features, as well as what will happen in the future of the game. There is always a Q&A session at the end of a presentation, and those discussions are another source of feedback and ideas for CCP.

Nevertheless, Fanfests are not the only gatherings of this type. Other events include EVEVegas (held in Las Vegas, USA), EVE Down Under (held in Sydney, Australia) and many other smaller player gatherings throughout the world. Many of those events are organized and run entirely by the players. Often CCP sends some developers to participate in the gathering, bringing news and promotional materials. CCP delegates developers even to events which are attended by as few as 40-50 people. For other events, CCP developers will often connect with their players via Skype (interviews with CCP, 2013-14).

All of those activities greatly contribute to the customers-firm relationship, as well as to the opportunities for the idea transfer between the customers and the firm's NSD. They also illustrate CCP's user involvement competence – pointing towards their ability and resources to engage with the customers in meaningful ways, which flows out of CCP's understanding of customers' needs and motivations for co-creation.

#### 5.3.3.2 *Forums, social media and blogs*

Online discussion forums serve the function of communicating players' feedback, ideas, concerns and wishes to the game developers. Forums themselves are also indispensable for the game-related exchanges between players to occur, and thus vibrant forums are a *sine qua non* condition for the emergence of players' community. For the purposes of co-creation, a section of the forums that is of most interest is the 'Features and Ideas', where players are invited to share their ideas and participate in the discussion about the existing and upcoming features. Another section of forums which is instrumental to *EVE Online*'s co-creation is the 'Test Server Feedback' section – from which CCP can gather players' opinions,

as well as observe how players utilize game features. Game developers and community managers frequent those forums.

#### 5.3.3.2.1 Example of customer design in NSD

The idea of a capital ship, which arose from a discussion in the 'Features and ideas' section, is one example of co-creative activity in CCP's context. From the CCP field notes (2014):

As players were discussing their ideas for the ship design, the developers were listening in (and getting involved in the discussion as well). Eventually the discussion fizzled out, but sometime later the players' design got incorporated into *EVE Online* (with some alterations as compared to the original discussion, which resulted from CCP making sure that the design fit within the artistic vision and aesthetic theme of the game).

In this case CCP sourced some ideas from the community of players for subsequent internal development and introduction into the game. This kind of practice requires appropriate competences for co-creation from the studio, as well as the right type of organizational culture. Firm's employees must be willing to see their customers as sources of valuable ideas, and to recognize the benefits to the company stemming from collaborating with them (i.e. relationship improvement, customers brand loyalty, increased maximum willingness to pay, spreading of the positive word of mouth). From the analysis of CCP's web forums (2014):

CCP also organizes contests where customers are invited to submit their entries on a particular problem – for example their designs for ship hulls (ships and their properties, including their appearance, are a critically important aspect of *EVE Online*).

Such practice not only has a chance of generating innovative inputs to the game (developed by the people who are free of organizational 'group think' and have a different perspective), but also creates good will and enhances the customers' feelings of ownership of the game.

#### 5.3.3.2.2 Communication on forums

CCP and its customers also communicate via the comments section below 'EVE dev blogs'. It illustrates CCP's user involvement competence, as well as their semi-

structured practices of co-creation (which depend on the employees' visiting and reading of the forums in an unstructured way). Following on the analysis of CCP's website (2014):

*EVE Online* developers describe their work on new or existing features in those blogs, where the players' community is invited to leave comments and suggestions. From there, CCP can get a good idea what the players' preferences and issues are ahead of time, before any tensions with the community caused by changes to the existing gameplay can occur. Other valuable outlets for listening in to players' feedback and ideas include third-party forums (such as Reddit or The Mittani), as well as social media. Players also help in the marketing of *EVE Online* by spreading word of mouth, but also by making videos, writing stories, developing lore, as well as costume and role playing.

One detail that recurs in interviews is the problem of 'management of expectations', revealing inherent challenges of maintaining positive relationship with its customers (interviews with CCP, 2013-2014). It requires care on the studio's part not to promise or reveal too much to the community of players. This links back to the disclosure competence. The use of co-creation in game development does not necessarily produce only positive impact on customers-firm relationship; it is also possible that unsuccessful co-creation will lead to degradation of that relationship (as observed in the case of Auran; Banks, 2013 and 2009).

#### 5.3.3.3 *Council of Stellar Management and ISD volunteer program*

Council of Stellar Management is a democratically elected group of players assigned an advisory function to *EVE Online*'s development (the rules and rationale for this democratic process have been outlined in CSM White Paper written by firm's employees; Oskarsson, 2014). From that document analysis (2014):

The members of CSM are flown to CCP's headquarters twice during their one-year term, where after signing a non-disclosure agreement they are invited to participate in *EVE Online* development meetings with the studio's staff. CSM members also have access to dedicated section of the forums, where

they can discuss *EVE Online* and its community with developers, as well as their communication with CCP is facilitated overall (for instance, CSM members can Skype-call developers or community managers directly).

Also in the field notes from CCP (2014) we read:

A Council of Stellar Management (CSM) Summit lasts normally three days. There are separate sessions for marketing, PR, community and business leadership of CCP. During those meetings, CSM members are brought up to speed in terms of what CCP is currently working on, and provide their inputs and perspective. After the summit, CCP goes through compiled meeting minutes and ensures their compliance with non-disclosure agreement (the minutes are later released to the public). Once the summit ends, those minutes are distributed to respective development teams, and the issues which have been identified as valid during those meetings are put to development.

Feedback from CSM in such format is tailored to fit with CCP's NSD practices, and the practice of acting upon CSM feedback is to an extent routinized within studio's production. It is an example of formal co-creation, accompanied by structured (to some extent) internal practice for assimilating customers' inputs. The exact practice of internal processing of co-creation inputs may vary at CCP from case to case, but an overall map of responsibilities and decision-makers is known to the employees.

Apart from CSM, CCP has established another tool for involving players in *EVE Online*'s development. Interstellar Services Department (ISD) is a volunteer program that invites players to become collaborators of CCP on some aspects of game development (aspects selected by the firm). Similar to CSM, after successful application process, those volunteer players are asked to sign NDA (interviews with CCP, 2013-2014):

Players sign NDAs and are required to do a specific amount of work, but they also get access to developers' tools. They try to reproduce bugs that other players reported, then rewrite the bugs into CCP's standard format and send to the developers (or have a dialogue with developers about them). Bug

hunters are given access to various private IRC channels, that's where primary coordination is done. They also have access to defect tracking system – JURA, as well as to internal mailing lists, as well as exploit reporting system. There is an employee in the QA department who is a bug hunter liaison, looking after the volunteer division. Volunteers are crucial part of QA at CCP.

Players involved in ISD do not become employees of CCP in any way, and are under no obligation to fulfil any duties for the studio; nevertheless, they become involved in the development of *EVE Online*. From the field notes from EVE Fanfest (2014)

ISD displays some basic organizational hierarchy; volunteer players are given tasks by the development team, as well as they remain in closer communication with CCP than the regular players. Those players are not explicitly rewarded by the studio (they are granted no special privileges and are not paid), except for recognition and higher chances of getting employed by CCP, if they want it.

Player councils and volunteer player programs are examples of formal co-creation, where the practice of assimilating player inputs has been established and structured. Still, a high degree of self-governance is given to the players, who operate outside the organizational boundaries of CCP. That points toward semi-structured nature of the co-creation practice at the firm. Player inputs are accepted in various forms and formats, at different times, pertaining to all functions of the firm. Such practice requires excellent integration competence on the part of the firm, where co-creation is inscribed into project management, organizational culture, as well as other day-to-day operations of the firm.

Furthermore, player councils and volunteer programs also embody co-creation geared towards NSD inputs from the players, tapping into their need-related knowledge. As we read in the notes from EVE Fanfest (2014)

There are gains for customer-firm relationship resulting from player councils and volunteer programs. All customers are engaged in for example democratically electing player councils, or can witness how they are being listened to by the firm – because both of these practices are highly visible to

all of the community, and the firm also celebrates them on every occasion (for instance during Fanfests, or in communication with the players).

Similar to CCP, 5<sup>th</sup> Planet Games and its game *Dawn of the Dragons* have been available in the market for some time already. In the interviews, company employees mention that as much as 25% of staff is dedicated to community management, pointing towards the importance of customer relationship in 5<sup>th</sup> Planet's business model. The firm has also established close collaboration with its customers in the format of player councils, with some minor differences to how that process works (interviews with 5<sup>th</sup> Planet, 2014):

We do one council every 9 months for each of our games. At high level it is a focus group consisting of people, who represent different types of players. They are somebody who speaks on behalf of various groups of players. We have an agenda that we want to discuss with them, we have time period for the council to bring ideas etc. After the weekend of the council summit, council members are asked to remain available for Skype conversations/feedback. We drop design documents on this Skype group, they have forums tag, they act a bit as community managers, they put out many fires, works very well on both ends.

The quote above demonstrates the semi-structured practice of co-creation at 5<sup>th</sup> Planet. The firm has an agenda, provides the customers with various documents, sets deadlines for inputs – but all of these are not framed as 'guaranteed' to be reviewed by the firm. There is no obligation for the firm to listen. The practice of assimilation of inputs can also vary from case to case, leaving the company a lot of freedom in choosing how they use customer inputs, and if at all.

Overall, there are numerous similarities between the approach of 5<sup>th</sup> Planet Games and CCP. 5<sup>th</sup> Planet Games also does monthly 'state of the game updates', as well as discusses upcoming features on forums with players. The characteristics of 5<sup>th</sup> Planet's organizational culture, which are conducive to co-creation practice, are described in the passage below (field notes from GDC 2015):

For 5<sup>th</sup> Planet Games, involvement of customers means maintaining a level of organizational transparency to allow people to participate in the development process within the studio (also demonstrating changes to the

internal functioning of the organization induced by co-creation). 5<sup>th</sup> Planet Games seeks to reply to everything that appears on the forums; not replying is viewed by the company as one of the biggest mistakes that developers do.

This is also underlined in the interview with 5<sup>th</sup> Planet (2014):

You are not going to get the good posts if you don't validate the ones that are less useful. Key of making an environment for players to know that they are being listened to, that somebody looks at their submissions.

5<sup>th</sup> Planet Games also has volunteer players helping with some aspects of game development (for example chat channel moderators or testing), but no formalized programme for those volunteers exist (again, pointing towards semi-structured practice of co-creation). The company also organizes contests (for example for game lore creation), where the staff narrows down the submissions to the top ten, and the community votes on the winner. This also illustrates a fairly relaxed, but still to some degree formalized, practice of co-creation.

At ArenaNet, the customer involvement in NSD takes the form of 'CDI project'. It again displays the characteristics of a semi-structured co-creation practice. The detailed account of it is provided in the interviews with ArenaNet (2014):

We will put out a topic and a call for votes – on what are the top three or the single most important topic to us. We still don't have a voting mechanism in our forums, but you get a feeling about what's most important to players. Make a separate forum thread specifically dedicated to this topic, with the person in our company who is the biggest stakeholder of that feature involved. We experiment with the structure of that: how long players are allowed to rant for (paragraphs, focus), how do we communicate what we are looking for. It is a process by which we are trying to change our internal company philosophy, as well as to honour and give voice to the players. [...] We have done CDI 3 times now, 3 different phases. Every time, our director of development tries to iterate the process, and to involve community in that iteration.

This quote demonstrates the experimental approach of the studio towards co-creation with the customers, as well as organizational learning that occurs as the

firm tries various approaches. Interestingly, the company also involves customers in iterating and improving of the process itself. This is an example of the transformative influence that co-creation has on organizations.

#### 5.3.4 ASSIMILATION OF CUSTOMER INPUTS

At CCP, there are many practices of assimilation of player inputs (CCP uses SCRUM project management practice; Keith, 2010). We take a look at them below to illustrate the more structured aspects of co-creation practice in that company – but still we observe a large degree of freedom in those more formal practices. From the CCP field notes (2014):

Feedback is systematically consolidated and brought on a regular basis to the developers by Customer Support and Community Management teams. Those teams use both quantitative (software searching for key words in players' forum posts) and qualitative methods (judging of the players' sentiment by community managers and game masters) to synthesize feedback from the players. One rule of thumb used by CCP for determining the pertinence of an issue is how frequently it appears in the reports on the state of community. If any of those issues becomes a recurrent theme, it is taken on as a development or marketing project (the issues do not only pertain to strictly in-game problems).

Another interesting description is provided below (field notes from CCP, 2014):

During a design department daily 10-15 minute stand-up meeting, one of the developers can bring up an issue encountered on a forum. Then the group checks whether that is a pertinent issue, or something not to worry about (design department on the aggregate level has a very good holistic overview of the game and they excel at determining the urgency of such problems and issues).

If the issue can be solved by the design team, it is taken to the production level where a senior producer takes it to the product owners and lead game designer, who will then come up with the team who should take it on; the problem or issue becomes inserted into this team's backlog. There are regular meetings of business leadership team for each project – including the representatives from development, marketing, finance and community

departments. This team copes with responding to those player issues, which require significant or composite changes to *EVE Online* (if the team is conflicted, executive producer casts the tie-breaking vote).

Those practices demonstrate very strong integration competence on CCP's part, coupled with user involvement and disclosure competences. They also show how deeply co-creation practice has been integrated with the functioning of the organization; it would be actually difficult to draw the boundary of the firm in CCP's case. The case of CCP is an example of the transformative impact of co-creation on firms – visible in meetings, project management, communication routines, employee responsibilities and many other sites. Those transformations are also accompanied by particular characteristics of organizational culture, as illustrated later in this chapter.

Further exploration of semi-structured co-creation practice is present in the field notes from CCP (2014). Illustration of formally structured practice of co-creation follows:

For technical issues (for example a bug in the game code) formal and informal channels exist. In the formal channel, a bug petition is reported, normally coming from a player or one of the bug hunters (who are volunteer players themselves). Subsequently it is formally tracked via defect tracking system and will go into bucket of a relevant department, and a person responsible for fixing it is assigned together with the bug's priority.

We also observe how the needs of an organization to cope with players' inputs translate themselves into externally-facing techniques for managing the influx of those inputs into the organization (interviews with CCP, 2013-2014):

[Processing players' inputs to QA] is very chaotic, and hence some processes were introduced such as volunteer bug hunters – to order the reports. Without that CCP might not be able to cope with all the issues.

We witness the co-existence of formal and informal dimensions of co-creation practice, pointing us again towards semi-structured ideal type of co-creation. Description of CCP's informal method of dealing with customer inputs follows (field notes, 2014):

In the informal channel, staff members who are involved as players in *EVE Online* will personally push for the bug to be fixed (despite the fact that bug flagging is not part of their job description) – becoming sort of champions for fixing of that bug. After such champion successfully advocates that a bug needs addressing with the relevant members of the development team, this bug is brought into the official track (for bookkeeping reasons), and processed formally from that point onwards.

These practices reveal the attention paid to player inputs by individual game developers, as well as deeply ingrained responsiveness to them in CCP's organizational culture. Similar practices are also observed at ArenaNet, where some prominent employees argue for the ideas of listening to the customers and involving them in NSD (interviews with ArenaNet, 2014). They effectively act as champions for co-creation within a firm, spearheading some of the organizational transformations being a prerequisite for, or resulting from, co-creation. Use of champions is also a highly malleable practice, containing the structured and loose elements of co-creation practice.

The ability to use both formal and informal practices in co-creation for gathering player inputs points towards high user involvement competence. Still, once those inputs reach the organization, it is the integration competence that determines how successfully a firm will cope with co-creation. In the case of CCP we also observe formal and informal elements here (interviews with CCP, 2013-2014):

One of the biggest advantages of CSM is that it provides CCP with distilled, coherent feedback aggregated from the players.

The mention of 'distilled' and 'coherent' are noteworthy here. They point us to the underlying rationale of ordering the chaos of external inputs, making them friendly for the more hierarchical and regulated environment of a company. The details of those practices are described in the field notes from Fanfest (2014):

Within CCP, there is a community management team member who is entirely responsible for managing the activities of CSM, as well as monitoring its interactions with CCP. Overheads required to run and manage CSM include communication infrastructure, internal mailing lists and involvement of CSM

in sprint reviews; CSM members also are stakeholders on various development teams.

Nevertheless, these overheads also provide an intra-studio framework for processing CSM's inputs, which facilitates their integration with game development. This interaction between CCP and CSM occurs normally via forums, email and Skype, with the highpoints of interaction being the summits. The modes and format of CCP's collaboration with CSM have been evolving over the years before reaching their current shape (in May 2015 the CSM was in its tenth term).

One barrier to successful processing of player inputs is the legacy of technical decisions, as well as specific fields of expertise of the firm's employees. That limits the possible scope of what can be feasibly processed by the firm employees without devoting huge amounts of time to understanding a piece of player input (interviews with Square Enix Collective, 2014). This problem is underlined in the interviews with CCP (2013-2014):

Players suggest changes in other programming languages; but also they don't know the surrounding systems around a single issue. Sometimes feedback from players is of high quality, but there is no time or priority to investigate; or because it pertains to something that can't be changed because of the nature of other systems in game. And about the latter [player's suggestion invalidated because of legacy systems limitations] you don't want to talk on forums due to confidentiality and community management reasons.

These legacy of old programming languages and systems has accrued due to CCP's age – when it was first made in early 2000's, there were other technological standards and practices that there are today. Therefore, the technological age of the game is a factor potentially negatively influencing co-creation (while other aspects of a game's age, such as established brand and strong customer communities, have the opposite effect). Firm's ability to overcome this limitation and co-create despite it, it's a part of appropriation competence.

Another factor limiting firm's propensity to engage in co-creation in that context is the size of the organization. In larger organizations in particular, only public relations or human resources departments contact players directly, and they

control how much an individual employee communicates with the customers (interviews with ZOS, 2013). The above is also true for smaller firms owned by large multinational umbrella organizations, for example small studios working on particular titles commissioned by game publisher firms such as Activision, EA or Ubisoft.

#### 5.3.4.1.1 Inputs from volunteer bug hunters

The role of volunteer bug hunters is noteworthy when discussing integration of customer inputs with firm's NSD. As the quality of QA reports submitted by the players to the firm varies greatly, volunteer customers standardize the reports, and they reproduce them and investigate them so the developers don't need to. As mentioned in the interviews with CCP (2013-2014):

Overall we get far less quality reports that we would like, and player bug-hunters bring those reports to high quality.

When describing the difficulties of integrating customer inputs to game development, CCP employees (2013-2014) mention not being able to give customers the access to the tools that CCP has as the main one. That limits the usefulness of customer inputs to game development team: bug hunters who have this access produce much more insightful and useful reports, while regular players' reports are more speculative unless issue happens to be very clear. The ability to overcome this limitation is an example of disclosure competence of a firm, as the firm needs to render some of its potentially sensitive processes visible to the public (i.e. in their communications with customers).

Further expanding on the co-existence of structured and loose practices of co-creation at CCP is demonstrated in the paragraph from interviews (2013-2014):

Within CCP, there are both established and ad hoc methods for processing players' inputs to game development. Quality Assurance forms a point of entry for a lot of player inputs to game development: At QA we get the feedback and help to obtain the information, but follow up on this feedback is done by the feature teams. What feedback is given also affects what happens. In some cases, it is handled completely by the features team and QA has nothing to do with it, in other cases QA collects the feedback, analyses it and provides it in a clearer form. QA team will then send the reports to

involved parties (production, feature team etc.). For example, surveys for mass tests are an established process. Direct feedback from forums is more ad hoc.

At 5<sup>th</sup> Planet Games, after developers talk to players, they discuss customers' ideas among themselves. Even brief chats on the forums can become a very drawn out processes when discussed internally. Employees consult user data in that practice as well. According to the interviews with 5<sup>th</sup> Planet (2014):

There are definitely some established processes for players' inputs, but they also sometimes shift. On the most general level, customer inputs follow the path of community managers reading the feedback, bringing it to lead designer, which then is being discussed with the team.

In this example we see both the structured and loose elements of co-creation practice. On one hand, people responsible for processing customer inputs within an organization are known. On the other hand, it is up to their own *personal* judgment and preference that determines which customer inputs will be taken forward. Further details of those practices are reflected in the quote below (interviews with 5<sup>th</sup> Planet, 2014):

For something quick, we will hash it out then and there – in the instances, when the decision on a piece of customer feedback can be made easily. If it is a more complicated decision, the team will discuss it around desk or even in a meeting. The developers also may establish internal chat group for everybody within the firm to leave their feedback when they have a chance, and meeting is organized after that.

The above observations are corroborated by the field notes from GDC (2014):

Three things are always considered when making a decision in such scenario: how much of firm's resources are required to make the change, how many players it is going to affect, and the merit of the change itself. Correspondingly, the people sitting in those meetings depend on the level of change required. Typically, it is just the design lead, production team, assistant designers, project manager, and a community manager. If the group feels that the issue needs escalation (especially with technology-heavy issue), then other people

also get involved. If need arises, for the changes affecting significant proportion of the service, things can be taken even higher – to CEO or head of design.

We notice, that processing players' feedback and their inputs to NSD is a multi-tiered system at 5<sup>th</sup> Planet. It points us towards a degree of structure to the co-creation practice at that firm, but at the same time the lack of documentation or formalization of that practice is underlined (interviews with 5<sup>th</sup> Planet, 2014):

The first point of entry is the player council. Council members are on the forums a lot. Second line is the community managers. They know how to interact with the player community; they know what's going on within the company as well. Third tier is the lead designer of the game. He or she does not post a lot, except for 'state of the game' posts. It is also a person known as the 'head honcho' for a particular game. Fourth and final tier is the people at the 'chief executive' level within the company. Most things are contained within tier 1 and 2, but sometimes it goes to 4. It is not a documented process, but that's how things often shake out.

Even less structure is seen at ArenaNet, where there is no formal practice for sorting and distributing action items to individual teams following on inputs from customers. Still, the inputs from the customers are being shared around the team and discussed before being taken forward in NSD. The following account of the informal practice is given in an interview with ArenaNet employee (2014):

A player will post an exploit, bug, cheat or hack information on the forums, maybe together with YouTube video. One of us will see that and will send the link to relevant employees. After the information about it is received, we still need to go through proper production channels to get it fixed.

Such practice of co-creation is linked to corresponding competences, in particular integration, user involvement and disclosure competences. We see that challenge underlined in the interviews with ZOS (2013):

We aggregate players' voices. Individual players will often be very strongly convinced; the question is in the numbers.

In practice, these challenges are overcome by a few 'best practices' for co-creation, as captured in the field notes from GDC (2014):

Best ways of responding to customer inputs are honest answers from developers, transparent production methodologies, rationalization of features, as well as regular communicating with the community of customers.

Another problem that firms face when wishing to integrate players' inputs with their NSD, is the legal challenges. Firm's ability to positively resolve them is determined by appropriation competence. According to an interview with ArenaNet (2014):

We have had a lot of [customer inputs] for music; I spoke with someone from legal department about it. This person said that the amount of paperwork and lawyering that would have to occur [to use those customers' inputs] would outweigh any benefits.

This demonstrates that the firm must have the ability to navigate the complex and redefined relationships of ownership of intellectual property when engaging in co-creation. As discussed earlier in the literature review, the boundaries of producers and consumers of content are shifting, and the classical division between the makers of a videogame and its consumers is blurring. A co-creating firm must have the ability to cope with this new landscape and develop appropriate legal knowledge, approaches and tools.

### 5.3.5 ORGANIZATIONAL CULTURE AND CO-CREATION

Such rich interaction between the users of *EVE Online*, as well as its developers, is possible because of the belonging to a single community that transcends the boundary of the firm. The presence of such unifying body, which includes both customers and firm employees, creates the foundations for organizational culture of increased respect for customer inputs. According to the interviews with CCP (2013-2014):

The game is the topic of many conversations during the Fanfest, and other fan gatherings as well. We try to be like 'dry sponges' soaking up all the feedback and information throughout the event. Developers record their

conversations with fans [in order to capture all of their feedback and ideas], or write themselves emails with notes.

We observe CCP establishing an organizational culture where the customers are seen as valuable collaborators and partners. The firm devotes a lot of effort and resources to maintaining positive relationship with its customers. For instance, CCP engages with customer community to ensure that players' interest in contributing inputs to *EVE Online* remains high and that their contributions are appreciated. In the interviews with CCP (2013-2014) we read:

Community's sentiment is usually at its highest around the Fanfest, or right after it, and we try to keep this feeling going throughout the year [by releasing videos from CCP's offices, providing the community with updates, or by writing developer blogs].

At the same time, CCP understand that feedback from the customer community can be purposefully inflammatory, or represent the opinions of a very small portion of the customer base (which is still very visible, hence the name 'vocal minority'). Therefore, the skills of aggregating feedback trends and not taking negative opinions personally among the employees are important to develop (interviews with ZOS, 2013). This links to the already discussed user involvement and disclosure competences in particular, as well as is embodied by a particular organizational culture.

#### 5.3.5.1 *Examples of employees' attitude to co-creation*

CCP's employees are characterized by a cooperative attitude towards their players' inputs – a trait which is fostered throughout the firm. This is illustrated by the following passage from the field notes (2014):

In the case of ship rebalancing [an activity important for maintaining *EVE Online*'s playability], the developers provided statistics and raw mathematical data about ships requiring balancing to the community. Players started working with the numbers and discussing possible changes, resulting in very long forum threads. The development team was involved in those discussions as well and went through multiple iterations with the players, listening to their feedback. Finally, the CCP balancing team and the

community came to a compromise between innovating and staying true to the classical *EVE Online*'s feel and gameplay.

This is an example of how CCP delegates some of the tasks which players are adept at solving (due to deeper individual familiarity with *EVE Online*, their numbers, and their ever-emergent gameplay habits), or have better knowledge of, to the community of its customers (interviews with CCP, 2013-2014):

Players are usually very knowledgeable about the game, while developers find it at times difficult to stay on top of the shifting game dynamics. If we have never listened to our customers, *EVE Online* would not be running.

This reflects the organizational culture which recognizes customers as valuable sources of ideas, as well as the role that they have had in the firm's success to date. Still, probably the best reflection of CCP employees' attitudes towards the community of *EVE Online* players, as well as their creativity is encapsulated in the following quote (interviews with CCP, 2013-2014):

We are not the gods of *EVE*, we are her [sic] janitors. We help players to make *EVE* great. Studio has an approach characterized by humility towards their players' wishes and feedback. It is also important for the game developers to grow a thick skin, as players give all kinds of very harsh feedback. Players are central to CCP's functioning.

This points us towards the fact, that working with customers also takes a particular type of professional attitude – the employees of CCP should be characterized by 'thick skin' and 'humility'. Those traits are promoted within the organization, as well as link to the user involvement competence.

Another interesting aspect of CCP's organizational culture and attitude towards co-creation in general is the fact, that players are seen as a talent recruitment pool. According to the interview data (interviews with CCP, 2013-2014):

CCP prefers to hire a new employee from amongst the players, who understand the principles and dynamics of *EVE Online*, as opposed to hiring a developer with experience in the industry, but who has not played the game.

Similarly to CCP, there is a strong culture of collaboration with the customers at 5<sup>th</sup> Planet Games. From the field notes from GDC (2014):

Lead designers are on the forums all the time (according to their own words).  
5<sup>th</sup> Planet Games has players who have suggested whole parts of the game.

The open communication is a piece of the firm's model. According to the words of a senior manager (interviews with 5<sup>th</sup> Planet, 2014):

[...] nothing would work without it. We want the players to post things; we want them to know what we look for in their ideas, we will reply even to ridiculous ideas.

Often company employees will develop personal relationships with the players on the forums. The general feeling and attitude of studio employees toward player inputs is captured by the following quote (interviews with 5<sup>th</sup> Planet, 2014):

We all like to read through the feedback. We can put a product out and get immediate feedback. It is inspiring because you put your heart on everything that you put into the game. That passion of players and seeing it- that's part of why I do that job, I think everybody feels that way, that's why we love it. I have great passion for what our community produces, we are blown away by their knowledge of the game, creativity; we have players who have huge spreadsheets with data. Interesting to see that, players making those data a little bit of their own and running with it.

Another interesting account of how co-creation relates to organizational culture is given below in ArenaNet interview (2014). It underlines the new possibilities for communication arising in the wake of co-creation, thus demonstrating the organizational transformations that accompany customers' involvement in NSD:

[Co-creation] influences our company culture in two ways: it leaves us paralysed because we see all of this community feedback contradicting itself; there is no consistent voice in our community. But it also helps us articulate as individual team members to the rest of the team the feelings that we have about issues.

Employees are aware of the fact that those exchanges are not always easy and pleasant. Management of players' expectations surfaces again as a problematic issue. That's where a dedicated community management department steps in to help 'regular' developers in communicating with the community. Developing appropriate functions of the organization, as well as corresponding competences for co-creation are reflected here. This is particularly well observed at ArenaNet, where the employees describe how some exchanges with the customer community are toxic for individuals within the studio because of the aggressive criticism displayed by the customers. Consequently, many employees develop 'guarded hearts' and become less inclined to even communicate with the customers (interviews with ArenaNet, 2014). Also according to the interviews with ZOS (2013), the negativity on forums is one of the reasons why companies don't want 'line employees' to go on them, instead of leaving this task to specialized community managers (who know how not to 'fuel the hate' on internet forums).

#### 5.3.6 ROLE OF CO-CREATION IN FIRM STRATEGY

Over the lifetime of *EVE Online*, the degree of players' influence on the game has been changing (interviews with CCP, 2013-2014):

In the early days [of *EVE Online*] player inputs were quite innovative. Today, long-term vision has become important. So it has become less of players' influence on high level development, and now it is more about giving tools to the players, ensuring that players get the best out of the infrastructure available in the game.

In the early days of *EVE Online*, the suggestions and inputs from the players had the tendency to be more innovative and open up new trajectories for *EVE Online* gameplay. Today, mostly because of the existence of long-term plans for *EVE Online*'s development, as well as other titles which are designed to be integrated with *EVE Online*, players' input cannot influence high-level vision for the game – which is controlled more strictly by studio's strategy. Instead, CCP focuses on giving tools to the players which allow for the maximum of emergent gameplay to occur within *EVE Online*'s existing systems. This is also being accompanied by increasing formalization of co-creation practices within the firm. It highlights the varying usability of co-creation at different stages of NSD. Players' inputs are

mapped onto O'Hern and Rindfleisch (2010) contribution versus selection activity matrix discussed in literature review, with the tasks moving across it as the NSD effort progresses.

#### 5.3.6.1 *Unique role of player councils in firm strategy*

CSM is a player council, and as such has come to play an important role in the firm strategy, especially after the failure of *Incarna* (an expansion to *EVE Online*) in 2011. During that time, CSM played a pivotal role in communicating and mediating between the community of very disgruntled players and the firm. This is because CSM is seen as neither part of the firm, nor part of the customer community – instead, it combines the characteristics of both. CSM is designed to fulfil the following functions (interviews with CCP, 2013-14; Oskarsson, 2014):

- a. Represent players' interests and be their voice, influencing the development of *EVE Online* so that players do not feel that their interests are being threatened, as well as ensuring that their feedback is given a fair consideration (for example when CCP wants to introduce changes to ToS or EULA),
- b. Function as a review board for CCP when they are planning to make changes to the game, such as introducing new features, and to highlight any potential problems (for example the balancing of *Marauder* ship, when CSM was providing direction and insight to the many iterations of developers' work),
- c. Mediate between CCP and the community in crisis or otherwise acute situations (for example during the *Incarna* expansion's aftermath, when CSM was a conduit to speak with the very unsettled community in a controlled manner; CSM was instrumental in calming things down and acting as a buffer for emotion-laden communications),
- d. Convey the community's sentiment and mood to CCP (for example speaking to CSM after the release of a new expansion, explaining how the new features and content have been received by the community).

Moreover, the inclusion of players' designs into the game serves as an element of deepening their relationship with the game (which becomes more of their creation with each such successful submission). Therefore, co-creation not only serves to improve the game by including customers' ideas into NSD, but also

works as a PR and marketing tool, drawing the customers closer to the product as well as increasing the likelihood of positive network effects (manifested for example as favourable word-of-mouth and increased maximum willingness to pay; Gebauer *et al.*, 2013; Banks and Potts, 2010).

CSM is the most structured element of CCP's co-creation practice. Described in a dedicated White Paper (Oskarsson, 2014), it clearly outlines its goals, practices and outcomes. Practices such as electing new members, function fulfilled by the members, their communication with the firm, have all been clearly defined and described. Still, when it comes to the internal processing of the inputs delivered by CSM, the company has a lot of freedom and choice. There are universal patterns in how the inputs from CSM are assimilated (for instance people responsible, how CSM inputs fit with project management etc.), but these can vary from case to case; CCP also does not have the obligation to follow what CSM says. As such, player council in the shape encountered at CCP remains an element of semi-structured co-creation practice.

#### 5.3.6.2 *Integration of co-creation with firm strategy*

The role of close collaboration of CCP with the community of its fans is demonstrated in the quote below. It expands on the observations made by Hoyer *et al.* (2010) and gives a sense of the strategic positioning of the resource 'crowd' in high-level organizational thinking (interviews with CCP, 2013-2014):

Community interaction can provide you with a proof of concept, make the game more fun, instil more passion in your community, ensure business' success, and it is not an altruistic endeavour.

Similar account is mentioned in the field notes from CCP (2014):

People feel more vested in *EVE Online*, because it gives them the opportunity to be more vested, more involved; they see the results of their actions reflected in totality of it. Such dynamic generates terrific PR opportunities.

Firm strategy also trickles down to the service design decisions that a studio makes. The role of the players within the game, the degree of their freedom in managing gameplay, and game's technological availability for reconfiguration (by modding for instance) are all determined by those decisions. According to the interviews with CCP (2013-2014):

EVE is a game designed to be open-ended, which is the cornerstone of allowing a wide array of player inputs into it. In such a game it is vital to follow the flow of players' gameplay patterns. As much contact as possible with the community of players is absolutely essential. *EVE Online* can't really survive without it.

Here we observe how the close interaction with customers has become the pivotal element of firm's business model. It has been recognized and formulated in the firm strategy, and the resource 'crowd' in its context is seen as strategic. Such prevalent attitude in both organization's functioning and culture is a significant facilitator of co-creation practice.

### 5.3.7 CASE SUMMARY

To summarize the case of CCP we focus not on the necessarily innovative inputs to NSD coming from the customers, but on the general relationship and power balance between the firm and customers instead. According to the field notes (2014):

Players only occasionally provide CCP with innovative ideas – it is rare for CCP to take up some completely new ideas from players' activity on forums and assimilate them into NSD.

On the other hand, the nature of players' involvement at CCP is captured in the quote below (interviews with CCP, 2013-2014).:

Players' ideas and propositions have a very high take-up rate when it comes to balancing and tweak work on *EVE Online* – amounting to roughly 70-80% of all work done.

This shows that CCP mostly follows its own vision for the game, which nevertheless is moderated by the high input from players and close monitoring of their needs. That vision is at times vehemently negotiated – as it was for example shown by the *Incarna* affair in 2011. Still, what seems to be of the highest priority to CCP is maintaining the good relationship with its customers, as well as ensuring that the service is tailored to their (relatively idiosyncratic in the marketplace) needs. This is ensured by engaging with customers in many

different ways, for inputs of varying nature, across the functions of the development effort.

Such extraordinary strength of the player community is the result of the market niche that *EVE Online* capitalizes on. That strength of players is further reinforced by their central role in affecting the experience of playing *EVE Online* for other players. Numerous personal links between the community of customers and CCP employees, which have been built both in-game, as well as during physical gatherings and discussions on forums (as well as CCP's practice of hiring people from the community of its customers) significantly contribute to the strength of networks in which co-creation takes place. Those networks cross the firm-customer boundary in a number of ways, some of which are regulated and recognized by the firm, and some of which are more organic, ad hoc, and hidden from the formal identification.

We arrive at similar conclusions looking at the case of 5<sup>th</sup> Planet Games – there are many common elements between the two companies studied in this case. Properly utilizing community input is the priority for 5<sup>th</sup> Planet Games. According to the interviews with 5<sup>th</sup> Planet (2014):

Filtering through the customer inputs that are not useful and grabbing golden eggs of player creativity – that is an ongoing struggle for the studio. There is no 'catch all' solution for capitalizing on customers' inputs, and that's the biggest challenge.

The issue of vocal minority remains one of the biggest concerns to 5<sup>th</sup> Planet Games. Therefore, thinking of the ramifications of what players say is really important during the employees' community training: people who are the loudest may not be representative of the community of all customers (interviews with Valve Corporation, 2014).

The firms described in Case Beta are an illustration of semi-structured practice of co-creation, where an array of both formal and informal practices and methods exists. Customer inputs are accepted via various channels and then assimilated with NSD in different ways – where the firm is not obliged to follow them.

## 5.4 Case Gamma

Cloud Imperium Games (CIG) has become well-known even before the release of their first game. Founded in 2012 and having offices all over the world (from California, via Texas, to United Kingdom and Germany), it is helmed by a famous videogames designer Chris Roberts. In the course of the crowdfunding campaign for the *Star Citizen*, their yet unreleased game, the studio has gathered over 90 million USD in funds from its community (the crowdfunding campaign is still ongoing). Interestingly and contrary to what we observe in the Case Alpha, where the crowdfunding campaign had a clear beginning and end, and after which studio functioned without much input from its customers, CIG decided to do it otherwise. According to the description of the studio quoted from the company's official website<sup>11</sup>:

CIG aims to pave new ground in game development by sharing the process with the players. Where game development was once hidden, Cloud Imperium has opted to share the process with those backing *Star Citizen*. Supporters come to know the team and follow them every step of the way as the game created. The community is closely engaged and their feedback is considered in all aspects of game development, avoiding standard publicity to put Roberts' epic vision directly in players' hands.

The observations from CIG are accompanied by the insights gathered at Born Ready Games – a British game development studio which developed the *Strike Suit Zero* (2013). The studio also relied on the crowdfunding to finance its NSD, raising approximately 175,000 USD on Kickstarter.com.<sup>12</sup> Interestingly, this crowdfunding effort was conducted towards the end of the NSD, which is a unique occurrence – as crowdfunding is normally used to raise initial funding for a service. Nevertheless, this approach makes Born Ready Games similar to CIG – where the firm tapped into its existing community of customers for funds to improve the game already in development.

Case Gamma also represents an example of loose co-creation practice. We observe how co-creation can occur via the individual relationships between

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<sup>11</sup> Sourced from: <https://cloudimperiumgames.com/about> [accessed on 14.09.2015]

<sup>12</sup> Sourced from: <https://www.kickstarter.com/projects/43153532/strike-suit-zero/description> [accessed on 14.09.2015]

employees and members of the customer community, without much formal practices associated with it. This form of co-creation bears a lot of semblance to the hidden innovation as described by Miles and Green (2008).

#### 5.4.1 SUBSCRIBING TO A RELATIONSHIP

Co-creation at CIG is very different from that described in Cases Alpha and Beta. The game that has gained the huge fan following and popularity among players' community is still in the works and is an ambitious project. When released, it will consist of numerous modules of gameplay, each of them different and belonging to a different genre. It will be a MMO title, but at the same time it will be a space simulator, as well as it will contain a single-player storyline. CIG has adopted a model of continuous crowdfunding of its game, where the players, in lieu of being able to play the actual game, are invited to participate in the game development process. From the field notes from CIG (2015):

This participation is not simply about accepting as many customers' inputs into NSD as possible. Because of its unique funding arrangement, CIG engages in such extensive co-creation in order to maintain continued influx of monies into its project. The richer, closer and more engaged the relationship of CIG with its customers, the more money those customers are spending on game production updates, purchasing of service add-ons, or spread the word of it to their fellow players.

CIG's approach could be described as 'having players subscribe to game development and observe it, as well as have the power to influence some aspects of it'. The company has been gathering funds in that manner ever since its initial crowdfunding campaign ended (meaning the campaign conducted on its Kickstarter website). To illustrate that point is the analysis of CIG's website (2015):

The initial funding goal for the game was 500 thousand USD. Within one month (and at the end of that Kickstarter campaign) the game has gathered over 2.1 million USD, and went on to continue gathering funds via its own website. The funds that it has been gathering come from the sales of in-game assets, subscriptions to special updates, customization items, discounts,

priority tickets to various community events, as well as access to early testing opportunities and viewing of in-progress works of the studio.

We observe the peculiar function that the customer community plays at CIG. They are fans as well as sources of funding, and the company has found a way to directly transform the strength of the relationship between itself and customers into money. It is possible to be a fan of the game and follow what is going on within it without paying any money; but it is those community members who pay, that enjoy much deeper access to the firm as well as are recognized as part of the '*Star Citizen* development effort'. Apart from an example of loose co-creation practice, we witness here the transformative power of co-creation on the functioning of the firm – including profound changes to the business model and strategy.

#### 5.4.2 CUSTOMER COMMUNITY AS A RESOURCE FOR CIG

To CIG, the main benefit of community involvement in game development is boosting and maintenance of the relationship with its customers. According to the field notes from CIG (2015):

CIG seeks to make the experience of *Star Citizen* different than just “consuming something” – instead, the company speaks of '*Star Citizen* Universe' which is to elicit the feelings of belonging from the customers, and which encompasses not only the game, but also the community of fans and the firm.

There are also the benefits recognized by CIG's employees, which pertain to the business side: they mostly have to do with marketing and the use-generated content on social media such as Twitter, YouTube, Twitch, as well as various forums. We read in the interviews with CIG (2014-2015):

Videos from fans have different flavour; they feel more authentic than our marketing materials.

The firm's management frames their goal for community involvement more as an empowerment of the customers, rather than just harvesting their labour or creativity (something that we also see at Square Enix Collective; interviews, 2014). They tap into unique benefits of having customers engaged as marketers and advocates for the service. The company has realized, that the best way to

achieve that is to enable individual relationships between key community members and firm's employees to develop.

CIG is not very interested in the customers' inputs when it comes to their value as new ideas or improvements to the NSD itself. We read in the field notes from CIG (2015):

CIG doesn't provide its customers with many incentives to get involved in co-creation for NSD. A studio such as CIG has an ample capacity for production of assets (be they art, programming, sound or any others) in-house. Frequent and ubiquitous inputs from customers could easily disrupt already difficult (because geographically dispersed, and because it is the firm's very first development) NSD processes.

Studio's employees are creative professionals and the general sentiment at the firm is that (interviews with CIG, 2014-2015):

[...] we already have more material than we can work with; we don't need more material. Best material gets filtered by the community and highlighted, because it is so active.

This demonstrates that some content produced by the community is of interest to CIG, although the expectations for the quality of that content are very high. In the context of the young age of the firm and its relative inexperience (employees haven't been working together for long, the organizational culture doesn't have long tradition, business model of the firm is highly innovative and different from even the most experienced employees' professional track record), the increased protection of the firm's formal structure and processes makes sense. The risk is, that if customers were allowed to interfere with those processes with their inputs coming via highly formalized channels, the disruptions to NSD would be too hard to manage and the whole game development effort be at risk.

Co-creation therefore is seen as primarily a marketing device, but its capacity for generation of high-quality inputs to game development is appreciated. In the course of Case Gamma study, we observe one highly structured co-creation practice – one which, despite its usefulness at producing high-quality NSD inputs, is still heavily geared towards marketing and customer relationship benefits.

Moreover, huge amount of feedback on forums helps the studio with prioritization of game development tasks (as the game is still in development, and is being released to the public in modules, or pieces). The examples of that are customization of controls and leaderboards.

#### 5.4.2.1 *User involvement competence*

The studio compartmentalizes the community of its customers (interviews with CIG, 2014-2015):

We have some players who pledged very early and those players will have different weight to their opinion than people who just joined.

Those oldest supporters of the project are an important aspect of the company's strategy – they are considered as the 'core' audience for the game, who create positive word-of-mouth and set the tone and culture for the community of customers. It is also predominantly those customers who have the individual relationships with employees of the firm (for example their usernames are recognized by the studio employees in various forms of communication).

CIG is characterized by high user involvement competence. The studio, thanks to the individual relationships between employees and customers, has a good ability to identify the key members of the customer community and respond to their needs. The role of that competence is underlined in the field notes from CIG (2015):

The community's overall sentiment is an important indicator for the studio. Knowing that the players agree or are happy reaffirms the direction of the studio's work and employees feel that they are 'on the right track'. Dissenting voices are also of importance to the developers and are not ignored – trying to figure out why players don't like the game or some of its aspects can be equally important.

This allows the firm to understand what is happening within their community. CIG constantly takes the pulse of it – whether customers are happy with new additions to the game, what they might need, how likely they are to recommend the game to others etc. This is met by the involvement and emotional investment of players in helping the firm, and is highlighted in the following quote (interviews with CIG, 2014-2015):

[What is also great about the community is] the fact that the community has the patience, and they are really into giving their feedback – which is opposite from a normal focus group. They want to give the feedback, they are invested in the quality of feedback that they are giving.

Customers in the co-creation practice are appreciated for the unique nature of inputs that they can provide to a firm's NSD. Players contribute to certain functions of the firm differently than for instance other firms or professional groups. One example of that is found in the QA. Internal testing conducted by a firm can be formulaic and regimented, while player testing is free and unrestricted; thus players are more likely to come up with new things or non-standard approaches. This can also have a positive effect on staff morale, and has the added benefit of breaking up the routines dominant in the workplace. This is reflected by the following quote (interviews with CIG, 2014-2015):

YouTube is almost like a database of bugs. Good for us to be able to see players having fun. QA can sometimes be boring, the same. Seeing people doing crazy stuff makes our staff a bit happier.

The above are the examples of the user involvement competence present at CIG, as well as its roots in the organizational culture (revolving around the appreciation of the role of customers in the non-NSD functions of the firm – marketing and quality assurance in particular). CIG's ability to identify and establish relationships with key community members is the best illustration of the user involvement competence. In the following sections we observe how this is linked to organizational culture, as well as the funding arrangements.

This occurs in the context of loose co-creation practice – where those inputs are rather reluctantly assimilated formally by the firm (i.e. by visible and official channels). At the same time, via the dynamics akin to hidden innovation, we notice that the individual employees of the firm are actually rather enthusiastic about receiving some ideas (in particular feedback and improvements on the employees' ideas) and collaborating with the members of customer community. This is illustrated by the paragraph from field notes from CIG (2015):

At CIG's offices employees communicate directly to a few members of the customer community. They recognize them by their forum handle or some

other nickname. They communicate via forums but not only – sometimes also via email or Skype, as their relationship grows more personal. This is further strengthened by the fact that CIG approves of fans' visits to the offices, where after a tour individual fans will be sitting down with individual employees at their work stations. CIG employees seem to be enthusiastic about their exchanges with members of the community, they treat them almost as an extension to the intra-studio game development team. They genuinely respect the inputs from the customers, as they see them as mature, of high quality, and quite professional in nature.

This dichotomy between the reluctance on the formal level to accept customer inputs and the enthusiasm towards it displayed by the line employees is interesting, and constitutes the cornerstone of the loose practice of co-creation at CIG. The high informality of processing customer inputs comes to the fore here.

#### 5.4.2.2 *Customer inputs and innovation*

When it comes to the innovativeness of the community of players and their inputs, they tend to be small contributions and improvements along the existing trajectories of firm's game development efforts. It is illustrated by the CIG field notes (2015):

The employees at CIG do not recall a single 'big', innovative input from the community, but they do admit to having assimilated many small things. In their own words these were "good ideas that [they] were deciding to use". Examples here include discussions about some aspects of the game.

Overall, the changes suggested by the community are implemented when lead systems design (a senior function within the game development) agrees with those changes. What is interesting is that lead systems design needs to approve all changes to the NSD, including those introduced by the employees themselves. At CIG many customer inputs enter the organization at the level of individual employees via the relationships described above. The question remains how many of those customers' inputs are later bundled and not differentiated from the ideas generated by the employees themselves, and approved as internal by lead systems design. A brief overview of that practice follows (interviews with CIG, 2014-2015):

We do respond to suggestions; those do get filtered up. Not big huge things, but definitely we do that. Commenting on how things should work, it happens a lot. Design department is more involved in the blue sky thinking stuff, while QA gathers all the information from feedback and condenses it into a format which is then conveyed to the design team and to Chris Roberts. I can't remember one massive thing [customers' piece of feedback] through.

Overall CIG has the attitude of releasing a lot of information to the community of its customers, so they can comment and build on those materials. This practice can serve to further strengthen this mechanism of hidden innovation (interviews with CIG, 2014-2015):

Players are often riffing off the ideas that we gave them, or come up with their own ideas.

There is no doubt that there is close collaboration between employees and customers in the game development – which could be working in the two-way fashion (as implied in the quote above). One note from the field notes (2015) says:

The inputs of customers to NSD at CIG are limited and pertain mostly to the functions of providing feedback and validating the decisions made by the firm.

Again, the 'feedback giving' function is a broad category, where the exact nature of the feedback given (and how much novelty is contained in it) is difficult to capture, again confirming the observations of Miles and Green (2008) about hidden innovation.

Overall in Case Gamma, players are seen as having the valuable knowledge, although they are not trusted to be innovating (interviews with ICO Partners, 2014). Players are not professional game developers; they don't understand the business rationale of making videogames, as well as they can easily stray from the core vision for the service. Similar trend is observed at Born Ready Games, where the dominant opinion is that customers are very enthusiastic to aid the studio in its NSD efforts, but at the same time they are 'child-like', i.e. their inputs do not always fit with the vision for the service, or are unrealistic to implement (interviews with Born Ready Games, 2014).

### 5.4.3 TAPPING THE COMMUNITY: NSD AND RELATIONSHIP GAINS

The importance of co-creation with customers does not go unnoticed at CIG. According to the interviews with CIG (2014-2015):

Players' feedback has defined some of the directions we have taken with the game in macro and micro scale.

From that we see that customer inputs are influential at CIG, and that co-creation indeed takes place in its setting. The primary form of CIG's interaction with the community of customers is via forums (interviews with CIG, 2014-2015):

We have very active forums; people post their hearts out there. We want people to have the conversations there, and to have our players posting their work. We watch that and we swoop in when there is something special there, we start working with that person...

Further details are provided in another interview with a CIG employee, which point to the individual relations between the firm employees and customers that cross the firm boundary and that, by the mechanism of hidden innovation, contribute to informal co-creation (2014-2015):

A lot of people in the studio are giving one to one feedback to people on forums: coders do that, designers do that, and writers do that too.

The official website of the game plays also an important role. According to its analysis (2015):

There is a significant amount of communication there: it has a section dedicated to forums, which are the biggest communication channel between the firm and the fans.

Related practices are described in the field notes from CIG (2015):

CIG has a major YouTube channel – 'Around the Verse', which is meant to be more of a fan interaction-based show. Comments are left on YouTube, which functions almost like another forum. The company also uses more bespoke channels, for when the players are encouraged to discuss various topics – for example in response to 'ask a developer' blog posts. The company regularly releases fanzines which collate information, as well as makes sure that

official and dedicated wikis are updated. CIG also uses other channels for listening to the customers – for example voice chat in the released portions of the game, when the QA department will be playing with or against the community.

Additional details are provided when reading further into the field notes from CIG (2015):

It is not just the community management or customer support employees who read the forums and observe social media. Everybody within the organization is encouraged to do so. Chris Roberts is “obsessive” [according to the words of one employee] with reading forums and listening to players’ opinions. The figure of Chris Roberts remains very present and involved in the continued communications with the community. Among the fans he is considered a visionary and his name carries a huge weight in shaping the fandom around Star Citizen. His attitude towards players and listening to their input is widely known, both within and outside of the organization. He often personally responds to forum threads, as well as regularly creates videos called ‘Ten for the Chairman’ in which he answers community’s questions and updates them about the new developments on the game and within the studio.

All of the above points to the wide array of fairly unstructured methods of communicating with customers used by CIG. How they are used and what kinds of inputs are taken from them changes throughout the NSD cycle and from task to task. This points to the high user involvement and disclosure competences on the part of CIG, where the firm has the ability to tailor its interactions with customers depending on their needs and moment in NSD. The approaches towards co-creation are informal and highly chimeric, showing strong correlation with employees’ interactions with customers on everyday basis.

#### *5.4.3.1 Contests and physical gatherings as co-creation tools*

Apart from the forums and social media, CIG organizes contests where players can submit their work. One example of that was Next Great Starship (NGS) contest conducted in 2014, which resulted in the top contestants getting employed by the studio. The usefulness of such format of customer inputs to game

development is highlighted in the following quote (interviews with CIG, 2014-2015):

NGS is a great way of having players produce assets, but they have their own pipelines, so good to keep things formalized and separated.

It points out to the fact, that for a studio it is often difficult to integrate player inputs with internal game development, as the routines, technology and standards of work are different for the company and for an individual, external contributor. A contest allows for bypassing this problem. Contest format also has the advantage of creating a formal and clear rules for what happens with customer inputs – for example allowing for alleviating intellectual property concerns (Edwards *et al.*, 2015) or preventing accusations of being unfair or biased in the selection of the winner (Gebauer *et al.*, 2013).

NGS is the only example of highly formalized co-creation practice taking place at CIG. It has its benefits – for instance it allows for assimilating customer inputs without any fears about intellectual property laws, in the light of which co-creation is an unclear practice. More importantly, it is a highly visible and popular tool for garnering customer community's attention – and as such it has powerful marketing benefits. This is illustrated in the analysis of the contest website (2014):

Many of the highly engaged customers aspire to be employed by CIG or to work in the games industry. NGS shows them that such fantasies can be true; it borrows its format from similar very successful TV shows (The X Factor, Britain's Got Talent). The provision of inputs to NSD is a valuable function of this contest, but still it is probably the marketing outcomes (positive word of mouth, increased willingness to contribute money to the development effort) which are its key benefits. NGS produces high-quality inputs (from the entries and works of the contestants), identifies candidates for employment (the winners, apart from money, are offered jobs by CIG), as well as creates a lot of very positive buzz. CIG is shown as being fair, transparent, modern and loving its customers and their community.

The ability to stage such a contest, which was done by CIG with very high production value, is also an example of user involvement and appropriation competences for co-creation.

Furthermore, the company organizes physical gatherings with players – at large game industry events (such as Gamescom in Germany), but also it has its own dedicated annual event called CitizenCon. From the CIG field notes (2015):

During CitizenCon the company presents the community with large updates on the development of the game, reveals new content, communicates with them in person, as well as forges close relationship between developers and customers.

CIG accepts the visits from regular fans (and not only from player council members at a designated time, as in Case Beta). The account of this comes from the field notes from CIG (2015):

People fly in from all over the world and have a tour around the studio, and game developers chat to them and show them what they are currently working on. Those visits need to be prearranged, but they are a direct interaction between the community and the firm – a phenomenon unique in the game industry at large, which is normally reluctant to ‘fraternize’ with its fans to that extent. The developers at CIG enjoy these tours: once a month on average they have a group of backers, show them what they are doing, spend half a day with them, show stuff that’s not out yet... Those fans can talk one to one with developers, and individual developers will often take individual fans to their workstations to discuss things.

The role of those visits for creativity and co-creation in general is illustrated in the interviews with CIG employees (2014-2015):

We don’t know until they come whether those visits will be beneficial in terms of creativity or ideas; we want to give things back to our players, to show them gratitude in exchange for their support and money. It also gives us good feedback whilst they are here, and showing what they really want.

In the course of those informal discussions at the workstations, or during conversations at fan gatherings, ideas get exchanged between the customers and the employees. This again underlines the importance of informal communication with customers as an important form of co-creation in firms, and the influence of hidden innovation on loose co-creation practice.

Born Ready Games has different ways of tapping into players' NSD-related skills and knowledge. According to the interviews with BRG (2014) the studio gathers feedback from previous title, invites customers to play 'alpha build' (an early version of the game, unfit for commercial release), incorporates general feedback, as well as invites explicit feedback on particular topics. Also, at the alpha build stage the studio uses user metrics, as well as both quantitative and qualitative feedback (surveys, forums) to better understand customers' preferences. In the interviews (2014), BRD employees point out, that incorporating customer inputs gets harder in the late stages of game development.

#### 5.4.4 ORGANIZATIONAL PRACTICES: INTEGRATION COMPETENCE

CIG is characterized by a dispersed organizational structure. In such circumstances of intra-organizational communication and task management, which heavily relies on the use of the internet, it can be easier to integrate customers with internal processes. This is due to the fact that almost all of the customers' inputs occur online as well. It does not require heavy alterations to work practices (coordination and communication) to start making use also of the resources technically outside of the firm. Naturally, many other barriers and organizational problems affecting co-creation remain, but this could be making co-creation at CIG easier to implement.

As also mentioned above, for the same reasons of dispersed organizational structure, CIG is particularly prone to disruptions arising from co-creation. It is a young company, which is still developing its practices, consolidating its organizational culture, and changing internal routines and project management approaches. Also the business model, relying on continued funding and marketing support of customers, as well as modular releasing of discrete aspects of the service, is innovative and unseen before in the industry. In such context, external inputs from customers could precariously add to the already high uncertainty, thus resulting in heavy disruptions to the firm's work. That's why integration competence is reflected mostly by the approach of individual employees for building relationships with members of the customer community, and the 'on-the-job' co-creation in a highly informal manner. This is illustrated by the following paragraph from the field notes from CIG (2015):

There isn't an established practice for processing player inputs. At CIG, it is done in a more organic way – because of individual communications between the developers and members of the customer community, many ideas and player inputs are looked at and considered by the developers, who then discuss them informally and on an on-the-job basis with their colleagues.

This kind of practice is in line with hidden innovation, as well as with the data obtained from Case Alpha.

#### *5.4.4.1 Assimilation of customer inputs*

Still, some practices for customer inputs can be identified at CIG. Those practices also reflect the firm's integration competence, as well as, to some extent, its appropriation competence. In the field notes from CIG (2015):

What happens most often is as follows: list of interesting player suggestions is made, passed on to the relevant group within the company. At the end of the day game design employees look at this list and flag the interesting ideas, then it goes to Chris Roberts [the CEO] who makes decisions.

Apart from that general, company-wide practice, we also observe more specialized practices of co-creation. Those localized practices exist within the firm for integrating players' inputs. We keep on reading in the field notes (2015):

The job of QA, apart from the usual responsibilities of testing the game and fixing the bugs, is to filter all the comments from the community, and production of a list. That list contains the summary of the feedback and commenting activity going on at the forums. It is sent out by email to all of CIG production team, as well as to the entire leads team (leads team is composed of the decision-makers in every major aspect of game production, such as programming, art, design, animation, and sound). It is part of one QA specialists' job to read the feedback and to prepare that list. It tends to be collected two days after a patch is released.

Accurate and objective conveyance of customers' sentiment is of importance in the context of such practices and is something that co-creation practices within CIG rely on (interviews with CIG, 2014-2015):

When we send the email with 'community feedback digest' to production and leads, all of QA is cc'ed [sic] on it. We [QA] as a department are passing on both positive and negative feedback from customers. Stuff is passed on but not always acted upon by the production. Leads will highlight some things that they think are most important. Production will be asking us to investigate something more, to see how much validity there is in something. There is a big talking process for it going on around the company. It grows and changes. The main pattern I see is that the things that get looked at the most is the things that have most forum threads to them.

The practice described above is to large extent informal in many respects. This underlines the loose practice of co-creation at CIG, which is enabled by the firm's integration and appropriation competences for co-creation.

#### *5.4.4.2 Other conditions for co-creation*

CIG uses agile game development methodologies (a methodology in which requirements and solutions evolve through collaboration between self-organizing, cross-functional teams, emphasizing face-to-face communication, frequent delivery of new deployable business value and collaboration between the development team and business experts; Agile Alliance, 2015). CIG also uses project management software assisting in tracking various tasks within the organization – Jira. The studio also uses various milestones. Those NSD approaches facilitate the use of co-creation in the organization by making the organization more capable of processing external inputs, which do not fit easily into any particular department's responsibilities. It can be summarized, that the use of agile production methodologies are a part of a firm's integration and appropriation competences, enabling faster and less disruptive assimilation of customer inputs into NSD.

Similarly, agile game development methodologies are used at Born Ready Games. From the interviews with Born Ready Games (2014):

Inputs from customers go into backlog and become a task to be completed by the firm. Customer inputs are vetted for their suitability and quality as they are received by the firm, although this practice (despite being unstructured

and subjective) is seen as adequate, as employees screening the customers' ideas are professionals.

Again, the emphasis is placed on the individual employees' ability to screen and process the inputs from customers. Such reliance is linked to loose co-creation practice, and to hidden innovation.

#### 5.4.5 ORGANIZATIONAL CULTURE

A telling overview of CIG's organizational culture is conveyed in the field notes (2015):

The company identifies its close links to the community as one its main priorities and it is translated into the organizational culture which is largely customer-centric.

CIG embraces many approaches to forge closer links between the development team and community of customers. Again from the CIG field notes (2015):

Some players who are active on forums and who contribute regularly have their names known among the developers in the studio. Developers recognize those players for good or bad. All employees are encouraged to go on the CIG chat and speak to the backers. Some CIG employees are online all the time on game chats, talking to players and just 'being themselves'. They do not only talk about the game and work with the customers.

As it is mentioned above, such open and close links between the development team and the customers are a rare thing in the videogames industry at large, and are unique feature of CIG's organizational culture (interviews with CIG, 2014-2015):

Some people are better at [communicating with players], and some people are worse at it. We push the culture of going out and answering questions, letting people know in the community. In the games industry it is common not being allowed to share things with the customers, but here we encourage developers to share.

As a result, the players are evangelists for the game, but also have the ability to come up with truly insightful and creative inputs (interviews with CIG, 2014-2015):

One good thing about the way we build games with community is that everyone sees the community as a part of the team, extended part of the team. People are open about getting feedback. When it comes to the community inputs their ideas are very appreciated.

CIG attempts to include players' feedback in various elements of the game, but they are also sure to point out to the players that the game is still work in progress. That integration of customer inputs constructs Star Citizen as an artefact owned by both the company, as well as its players (in the socio-cultural dimension; in the market dimension the ownership is purely that of the company). That assists in forging closer relationship between the community and the firm, creating rich environment for co-creation in NSD. Furthermore, visible elements of engaging customers have also positive impact on the employees' morale. Such details as players' messages approving of new features in their comments on forums, or pleasant and positive personal interactions of developers with players (either online, or during studio visits or fan gatherings) are of significance.

#### *5.4.5.1 Establishing co-creative culture at CIG*

Such culture of the company is induced organically, and it seems to begin with the guiding vision of Chris Roberts for the game – underlining the role of game design in promoting or inhibiting co-creation in numerous ways. From the CIG field notes (2015):

Chris Roberts [the CEO] sets the tone and example for the interactions with the customers, as well as organizational attitude towards them. He is deeply engaged with the community members.

This attitude permeates the company and is adopted throughout the organizational ranks (interviews with CIG, 2014-2015):

You watch people around the company talking with the players, and then you start realizing the benefit of it. And you just adopt it and want to see how it's like and how it works – I have never done it before. There was never a solid 'ten commandments' on the wall, just watching Chris Roberts and seeing that he has all those fans around, and respecting that. It has never been said that we are supposed to listen [to the customers]; maybe it trickles down in the emails that everyone's voice is listened to.

This organizational culture and attitude is also viewed by the employees as an advantage, making their current workplace different and more interesting from their previous experiences. Developers appreciate not only the relaxed culture of communicating with the players, for whom the game is essentially being made, but also appreciate having their help in their everyday duties. This is reflected in the following statement (interviews with CIG, 2014-2015):

I think that approach [to customers] is definitely open, people [at CIG] coming with this fresh or hopeful stance, no one has been critical of it. Everyone is excited. Its open, no one is too worried about it. I think such an approach is worth its risks, that's what makes our studio different.

Similar characteristics are observed at Born Ready Games, where the CEO is a proponent of listening to feedback from customers. The focus is placed on improving the organizational ability to listen to the customers – hiring of external firms, specializing in analysing customer behaviour, is considered to further enhance that practice (interviews with Born Ready Games, 2014). Such close integration of customers with organizational culture is becoming a sentiment shared by many firms in the videogames industry overall (interviews with UKIE, 2014).

#### 5.4.5.2 *Organizational tensions related to co-creation*

There are some concerns at CIG when collaborating closely with the customers. One such example is the exploitation of the customers by companies. We see an example of this in the CIG field notes (2015):

The worry is of ethical nature (but also one that translates itself into issues of legal ownership, need for remuneration or acknowledgment of intellectual property), and pertains to the point at which accepting high-quality customer inputs, even if freely given, becomes problematic.

Issues like that are symptomatic for the participatory culture at large though, and it is not only CIG that faces them. One answer to that concern was having players offering their inputs by participating in a contest – such as Next Great Starship. That way, the rules governing players' collaboration with the company, as well as the issues of ownership of intellectual property, were clearly defined in a standard format. The idea of the contest arose because (interviews with CIG, 2014-2015):

[CIG] needed a legal framework in case we use the work [of players in the game], so it became a process.

Such strategic structuring of the co-creation practice contributes to the legal security of the firm, as well as can be further developed to serve as a public relations and marketing device.

Interactions with players can also get emotional, and customers can get critical of the developers' work. From the CIG field notes (2015):

In the interactions with the employees at CIG, the customers directly remind the firm in anger that if it wasn't for their money, all developers at CIG would be out of work. The customers haven't forgotten, and will not forget, that they are funding the game – it is their money which is allowing the firm to operate, basing on the trust that customers have for the firm (that it will deliver a quality service at the end). CIG has to walk on a high rope, balancing its vision and professional expertise against fulfilling customers' wishes and just keeping them happy. To an extent, CIG is a hostage of its own popularity with the customers, who do have the ways of pressuring the company, sometimes against its will.

That's why dealing with such negative comments is an important ability for an organization – CIG has a dedicated customer support as well as community management teams whose sole job is to diffuse such negative scenarios. Such organizational functions are examples of both co-creation conducive organizational culture, as well as of integration and user involvement competence in firms.

The reaction of the firm's management to an employee's mistake in communicating inappropriately with the customers is not about accusing and blaming. Instead, such communication or customer relationship failures are seen as learning opportunities (interviews with CIG, 2014-2015):

[Negative behaviour of customers happens] but it has not been extreme – our customer services and community team are good at diffusing those [toxic] situations. Having those people is a bit of a safety net, I feel more comfortable

knowing they are there to have my back. When there is a problem, there isn't an accusatory dynamic – it is more about 'lesson learned'.

At times prolonged exchanges with customers, as well as their constant presence and observation of many of the internal practices of the firm, becomes problematic and difficult for the employees. This is reflected below (interviews with CIG, 2014-2015):

Developers like some of the ideas from the players, but mostly they see them a bit as a nuisance. Players don't quite understand the physics engine for example. Developers are then irritated by prolonged exchanges.

Again, this quote points us towards the hidden innovation and co-creation occurring via individual relationships between the employees and customers. Further details of that are provided in the CIG field notes (2015):

When employees don't want the customers to get involved, they avoid contact. On the other hand, when an individual employee is interested in customers; feedback or inputs, he or she can always seek them out among the customer community.

All in all, at CIG we observe an organizational culture which is highly tolerant to the inputs of customers, as well as which is extensively customer-centric. Despite the lack of formality or structure in CIG's co-creation practices, they are more than enabled elsewhere (i.e. in the individual relationships between employees and customers) in a more unstructured, informal, and loose fashion.

#### 5.4.6 FIRM STRATEGY

In a company such as CIG, game developers have the vision of what they want to make in terms of a finished game (interviews with ICO Partners, 2014), but there are conflicting interests. From the field notes from GDC'Eu (2014):

There are designers wanting to make the best game, production team which wants predictable schedule, and business team which wants to keep the studio alive. The ideas of input, redesign and interaction, that are required for making a great game, run contrast to other interests about predictability.

Predictability is something that the videogames industry at large is desperately striving towards. It seeks consolidation of cash flows and reliability of business

models. That's why, despite the fact that customers have been recognized overall as a valuable resource in videogame development, learning how to harness that resource is not the priority for the industry at the moment. The unique position of CIG and its success in co-creation are reflected in the words of a studio employee (interviews with CIG, 2014-2015):

CIG has been very fortunate that its players have been so supportive. One of the main reasons for players' motivations to give us money is that we don't have too many of those competing interests, and that we can focus on just making the best possible game without worrying too much about the business side of things [such as compromising the vision to cater to mass audience for instance, or working within constraints enforced by a publisher].

Even before CIG launched crowdfunding campaign, embracing modding community and provision of modding tools was an important part of the project. CIG wanted people to tinker with the project and have deeper involvement in it. From the academic theory we know, that customer behaviour like that helps to drive sales and brings additional awareness about the game to the people from the outside of the community (Gebauer *et al.*, 2013).

CIG doesn't have a marketing budget. Instead, players are a resource when trying to market a game; that mechanism is working mainly via positive word of mouth and increasing maximum willingness to pay. Involvement of players contributes greatly to those players' satisfaction with the game, and that is also the purpose of the firm in co-creation. In the interviews with CIG (2014-2015) we read:

Making players happy by making them feel that they are listened to.

CIG's funding arrangements, meaning the use of crowdfunding, play the role of the game changer in the context of that firm. The studio is forced to interact and collaborate with its customers, especially because the crowdfunding effort is ongoing (not clearly finished, as it was the case with Obsidian Entertainment in Case Alpha). Such a strategic choice allows the company to embrace an innovative business model, but at the same time makes it more dependent on the relationship with the customer community. It is that 'making players happy' that CIG likes to talk about, that must be balanced against sticking to the company's vision for the service, and exercising the firm's professional expertise in the

conditions of incessant litany of wishes and demands coming from the empowered customers.

*5.4.6.1 Control of co-creation practice resides with the firm*

The role of the customer community is seen by the firm as helping in refinement of the vision for the game. That vision is first and foremost held internally – its main executor is the CEO of the company, who provides leadership and centralized guidance of how to realize it. The following of that vision is contrasted in the accounts of CIG employees to ‘making games by committee’. That means a situation where that central vision is absent, and the game is made basing on the popular vote, or on metrics of customer behaviour (so called ‘data-driven design’; interviews with CIG, 2014-2015):

You can’t make games by committee. What the community does is helping us to refine that vision. They are telling us what they like and don’t like. But as far as core vision is involved, that can’t change it, because Chris [Roberts] will make the decisions here. We do integrate ideas from our players, but they do not affect the core vision for the game.

One of the biggest risks stemming from co-creation that arises is issues surrounding misrepresentation of the original content created by the firm. This has the potential of affecting public image of the company, as well as deeming the game inappropriate for some age groups (interviews with CIG, 2014-2015):

There are also downsides [to customers’ inputs to game development]: dishonest representations of our material; people try to pass our material as their own. Another thing is people taking our stuff and modifying it, reconfiguring it. It could be construed negatively if customers did something negative with it; also our competitors could take those things and steal our ideas.

This is also linked to the issues of secrecy and revealing the information about the internal activities of a studio to the customers. It is easy to imagine CIG’s competitors listening on those exchanges and benefitting from either information about the studio, or data about its community of customers. Other risks to involvement of players are discussed in the interviews with CIG (2014-2015):

The risks are where you draw the line between what you tell and don't tell your community. Long development process – keeping players involved, the community can get bored. It also elongates the development process, as it means more iterations of doing and redoing.

The ability to manage and mitigate those risks feed back into the firm's appropriation and disclosure competences.

#### 5.4.7 CASE SUMMARY

Cloud Imperium Games is strongly reliant on the communities of its customers. The realization of the vision for the firm revolves around deeply engaging community of customers and capitalizing on the customer-firm relationship. Those customers are meant not only as consumers of the game that the firm produces – they are also funders, marketers, as well as co-developers of the experience of *Star Citizen*. *Star Citizen* is a game that will be still long in development in the coming months and even years, and therefore it serves as a unique setting for observing co-creation prior to commercial release of that service.

CIG's relationship with customers is mirrored by organizational culture, and the many links between the development team and player community. Those links are only to a degree formalized. There are many formal channels between the community and the firm, but it is via the informal channels where co-creation really thrives in the context of CIG. Employees are encouraged to interact with the community of customers. It is mostly in all kinds of conversations and discussions that ideas and knowledge are being transferred across firm-customers boundary.

What needs to be stressed here is the amount of resources that CIG expends to manage its relationship with customers: to keep them involved, to inform them, to maintain their loyalty and interest, and to satisfy their needs for participation – as well as to monetize that relationship. In that sense, the company doesn't have only formally articulated marketing budget – while marketing activities are extensively undertaken nevertheless, manifested in the rich relationship between the firm and customers.

In that case, our attention was also drawn to the unique funding arrangement of CIG – one mixing an ongoing crowdfunding campaign together with engagement with the customers as marketers and providers of positive word-of-mouth. In Case Gamma we observed customers ‘subscribing to the relationship’ with the firm – paying regular subscription fees to gain access to special resources, communication channels with the firm, and other in- and out- of the game privileges. That arrangement is enabled by the unique, customer-centric organizational culture prevalent at CIG, coupled with its loose and informal style of co-creation practice, where that co-creation is similar to hidden innovation described by Miles and Green (2008).

Therefore, Case Gamma is an exemplar of loose co-creation practice, where there is little external (i.e. customer-facing) or internal (i.e. in organizational routines, communication, or project management) structure for co-creation activities. CIG embraces an innovative business model, and its success or failure will have a widespread impact on the adoption of similar business models throughout the videogames industry.

## 5.5 Chapter summary

This chapter discusses three cases central to this study. It provides an account of practices and characteristics occurring in various departments and functions of those firms. Those cases are largely similar to one another, but some significant differences between them also occur. Table 7 presents the summary of the three cases presented in this chapter.

<b>Case</b>	<b>Case Alpha</b>	<b>Case Beta</b>	<b>Case Gamma</b>
<i>Focus on co-creation outcome</i>	Focus is strongly on fulfilling the obligations towards the customers incurred during the crowdfunding campaign. Apart from that firm is conservative in its	Customers’ inputs are vital for NSD, they largely constitute service’s unique feature. The firm has embraced customers as a core element of their business model.	Use of customers as a marketing and funding resource. Heavy focus on customers-firm relationship, and all co-creation is subordinate to it.

	NSD methodologies.		
<i>Formal vs. informal co-creation</i>	Firms in this case like to stick to the proven methods of game development. Co-creation is regulated and accounted for.	Firms here like to experiment with innovative NSD methods, customer inputs are welcome in various forms and formats.	A lot of one-to-one exchanges between customers and firm employees point towards informality of co-creation.
<i>Co-creation practice</i>	Highly structured co-creation practice, where how customers inputs are provided and what happens to them internally is clearly defined.	Semi-structured co-creation practice, where we observe a large number of various methods and channels for co-creation, which still are flexible and changing.	Loose practice of co-creation, relying on the skills and judgment of individual employees of the firm. Relatively few and informal practices of co-creation are present.
<i>Structuring of co-creation experience</i>	Only for selected customers who have contributed premium sums of money in crowdfunding effort.	Sandbox nature of the service and focus on customer innovation define the service. They are the centrepiece of attention.	Engaging customers as if they were employees of the firm, rewarding their loyalty with access to insider's perspective of NSD effort.

**Table 7.** *Comparison of the main characteristics of the cases discussed in this chapter.*

Other differences between cases can be summarized as follows:

- Different stages of NSD – first and third cases were in prior-release stages, while second case had been long released into the marketplace.
- Use of crowdfunding – first case used crowdfunding at the early stage of NSD, second case did not use crowdfunding at all, and third case is essentially structured around continued crowdfunding revenue model.

- c. Organizational attitude towards customers as well as studio traditions – in first case, we observe a studio that has been making videogames for a long time, sticking to traditional model of game development. Second case studio only recently begun to work on its second game, and from the beginning of its operations it was focused on player-driven videogames. Third case is a new studio that is established with the help of the customers, dispersed geographically and working on its first title, characterized by highly innovative (and thus unproven) business model.
- d. Genre of the service offered – first studio develops single-player, story-driven experiences, while second and third cases contain massively multiplayer videogames. Various genres will be tapping either market niches (different ones) or mass market, and thus the composition and characteristics of the customers will differ accordingly. Differences in skills, motivations, spending power and many other dimensions occur here.

The following chapter presents the analysis of those cases through the lens of literature and research framework.

## 6.RESULTS

This chapter discusses in turn the issues pertaining to three research questions. Subsequently, it focuses on the relationships between research questions and phenomena captured by them. Interaction between the concepts, synergies, and dependencies are described, outlining the dynamics underpinning the research framework as a descriptor of how co-creation plays itself out in firms. The following research questions are being answered in the course of this thesis:

- i. What firm practices reflect its propensity for and style of co-creation?
- ii. How do customer inputs contribute to a firm's co-creation practices?
- iii. How can we understand the effects of co-creation propensity and style on new service development and innovation in firms?

In order to find the answers to those research questions, we conducted the three replication logic-based case studies described in Chapter 5 above. They signify three ideal types of co-creation practice on the broad level: structured, semi-structured, and loose. Those types guided our selection of cases, where we sought out firms which engaged with their customers in co-creation in a number of ways, seeking their inputs into various functions of the firm as captured by the working definition of co-creation postulated by this thesis (c.f. Chapter 2 or below in this chapter). The differences between those three ideal practices of co-creation stem from various competences for co-creation, funding arrangements, as well as trigger different transformations within firms under study – corresponding in turn to research question one, two and three.

We selected only the firms where co-creation was taking place – we did not include a control case (control sample), where co-creation would not be present. We deemed that unnecessary due to the abundance of academic literature and studies on 'traditional' or 'normal' new service development (i.e. following the closed innovation paradigm; Chesbrough, 2011). The data collection methods used were predominantly interviews with firms' employees, field notes both from those firms and related industry events, as well as analysis of documents and services themselves (meaning games and various communication materials, for instance emails, developer blogs, forums). Those data sources have generated rich insights into the practices of co-creation of the three ideal types, in firms

characterized by different configurations of competences and institutional arrangements. Data obtained has been arranged into themes and codes (Yin, 2009; Robson, 2011), and the examples of that coding are presented in Table 8 below.

<b>Operationalized concept</b>	<b>Examples in the data*</b>	<b>Illustrating themes</b>	<b>Illustrating codes</b>
<b>User involvement competence</b>	<p>“We spend a lot of time on the forums, and Chris Roberts [CEO] spends a few hours a day.”</p> <p>“During the crowdfunding campaign I tried to be on the forums as much as possible, talking to people and getting a feel about their expectations for the game.”</p>	<p>Approaches, tools and platforms to tap into customer insights.</p> <p>Managing the relationship with customers.</p>	<p>Managing customers’ expectations; web portals for customers; community research; community management; behavioural data; communication</p>
<b>Integration competence</b>	<p>“We have something called legacy systems, which are the legacy of old technical decisions as <i>EVE</i> is a long game. We don’t tell this to players, but sometimes we can’t accept their inputs because we can’t change [those outdated systems].”</p>	<p>Integration of customer inputs.</p> <p>Firm’s absorptive capacity.</p>	<p>Ad hoc practice; routine practice; slack times; project management; disruption; technical barriers; infeasible inputs; low/high-quality inputs</p>
<b>Disclosure competence</b>	<p>“XE has developed a system for</p>	<p>Revealing technical specifications.</p>	<p>Technical details; revealing</p>

	putting its game design documents online, which serve as a reference for co-creating customers.”	Release of game design documents.	information; signing NDA; volunteers; culture of confidentiality
<b>Assimilation competence</b>	“We have to draw the line at what point it’s fair to be accepting customer inputs, and where we need to formally recognize their inputs.”	Establishing specificity of inputs.  Solving IP issues.	Unclear IP situation; toolkits; contests; bypassing the firm; unique style of the game; niche; concerns.
<b>Firm history (organizational culture)</b>	“OE is a company with long traditions of making RPGs, many of the current firm employees worked for example at Black Isle.”	Fears or hopes for co-creation.  Proven best practices.	Past success; long history; experienced staff; industry segment; traditional game studio
<b>Firm strategy (organizational culture)</b>	“CIG does not have a marketing budget.” “We are not the gods of <i>EVE Online</i> . We are her janitors [for the players].”	Social and market demography aspects of innovation.  Strategic orientation.	Marketing focus, entrepreneurial; resource-focused; new resource; new form of competition; other firms; opportunity; limited resources
<b>Attitude of employees (organizational culture)</b>	“In order to get the good things that players come up with, you need to listen to	Attitude of employees towards the community.	Distrust; good skills; customers’ sociability; disruption; career prospects;

	everything that they say.”	Perceived skills that community has for co-creation.	personal background
<b><i>Funding arrangements (crowdfunding)</i></b>	“Our backers will tell us sometimes that we owe them our jobs, and that if it wasn’t for them we wouldn’t have jobs...”	Keeping the customers satisfied.  Customer/backer community.	Backer numbers; ongoing CF; pioneering campaign; obligations & promises; tiers; sense of entitlement
<b><i>Outcomes of co-creation (back-office)</i></b>	“CCP has instituted champions for players’ ideas who will advance them internally, making sure that they are being given a fair consideration by the team.”	Organizational structure.  Project management routines.	Scrum; Agile; champions; cross-disciplinary teams; new positions; informality; flat structure.
<b><i>Outcomes of co-creation (front-office)</i></b>	“Players are not professional game developers and they don’t know what would work and what wouldn’t. On the other hand, we have experience and the inside view.”	Feasibility of customer inputs for production.  Marketing.	Radical innovation; incremental improvement; feasible input; keeping deadlines; word-of-mouth; recruitment; willingness to pay.
<b><i>Outcomes of co-creation (customer design)</i></b>	“One such aspect of our games is the design of user interface – players like to have their opinion what works and we have	Service genre.  User interface.	Immersion; emergence; sandbox; open design; niche; contestation.

heated debates about this..."		
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**Table 8.** Coding table with examples of data, themes and codes linked to the concepts operationalized. (\*) Examples are sourced from field notes, interviews or documents analysed.

### 6.1 Summary of cases

In order to map the impact that co-creation has on NSD and innovation in videogame firms, we take into account four operationalized concepts, as outlined in the methodology chapter. These are competences for co-creation, organizational culture, funding arrangements, as well as outcomes of co-creation. These characteristics are illustrated in three case studies, and are presented in Table 9 below. In this chapter we will focus on linking the empirical accounts of those competences, as well as institutional arrangements, to theoretical framework and research questions.

<i>Concept</i>	<b>Competences for co- creation</b>	<b>Organizational culture</b>	<b>Funding arrangements</b>	<b>Innovation and organization</b>
<i>Alpha</i>	Moderate user involvement and appropriation competence; low integration and disclosure competence.	Strategic focus relies on the maximization of existing resources – chief of which is the community. Traditional game development practices. Single-player genre. Clear division between fans and the studio employees. When co-creating, customers' main strength is in their numbers, as well as in their videogame literacy.	Strong presence and significance of crowdfunding. Project crowdfunded from the early stages of NSD. Select customers (based on their financial contribution) provide inputs to game development in a defined and formalized practice. Game in development; i.e. currently under NSD – ideation and production, as well as testing.	Some innovation observed in the 'transactions, financing and revenue model'. Changes to 'marketing and customer relationship management', as well as 'value chain location and positioning' (especially for inXile) are also present.
<i>Beta</i>	High user involvement, disclosure and integration competence; moderate appropriation competence.	Strategic orientation is focused around innovation and entrepreneurship, and competing in the market based on offering unique service. Innovative and experimental game development processes. Multiplayer, online, sandbox-type experience. Strong partner-like relationship between customer community and studio developers. Customers	Revenue from existing subscriptions from players. Catering to market niche – players with specific taste in gameplay. Game post-launch, although under repeated cycles of improvement works, i.e.	Organizational changes visible in many sites: 'user interface and user capabilities', 'users' interactions', 'internal communications and organizational culture', 'back-office production

		are skilled technically, but also strong in numbers. Customers seen as innovators in the context of the sandbox and beyond. Cultural match between the community and the organization. Many diverse channels for communication with players. Use of contests.	expansions and add-ons that are in production.	processes’, as well as ‘content of service or genre’. Other sites are also affected by the presence of co-creation, although to a lesser degree.
Gamma	High user involvement and disclosure competence; moderate integration and appropriation competence.	Strategic orientation is focused on marketing – and expanding the reach of the game to new audiences and constructing the relationship with customers. Multiplayer game with different elements potentially appealing to diverse types of customer. Relationship with customers is a priority for the firm. Marketing-like communication with customers encouraged for all employees. Strong community-focused leadership demonstrated by the CEO. Numerous channels for communication with players, although not very diverse. Open calls for participation and inputs manifested as contests.	Innovative revenue model, relying on continuous crowdfunding and players’ participation in internal NSD processes of the firm. Early stages of NSD; the service is still far from being released.	Most organizational changes are visible in ‘users’ interactions’, ‘marketing and customer relationship management’, ‘value chain location and positioning’ and ‘transactions, financing and revenue model’, but innovations resulting from the use of co-creation are also present in other sites.

**Table 9.** *Key characteristics of the three cases.*

The role of a firm's strategic orientation plays a moderating function for the competences for co-creation. We observe how strategy that relies on tapping the co-creation mostly for its marketing and PR benefits favours disclosure competence as well as innovation sites of 'marketing and customer relationship management' and 'users' interactions'. Firm strategy that focuses on innovation and exploration of new models of production and customer relationship favours integration competence. In this strategy, customers are seen as a resource in various functions of the firm, resulting in strong innovations in 'internal communications and organizational culture' and 'back-office production processes'. Strategy that relies on maximization of existing resources and making them fit in with established production practices, does not favour co-creation strongly – but where it does, appropriation competence comes into play, and few innovation outcomes pertain to 'value chain location and positioning' site.

Organizational culture plays a role similar to strategic orientation – it moderates the action of competences for co-creation on innovation practices as well as outcomes. Framing customers as members of 'extended studio family' by studio executives, as well as encouraging all employees to communicate with customers contributes to the building of a strong customers-firm relationship as well as tapping into its marketing potential. Radical innovations occurring in 'marketing and customer relationship management' site result from this, as well as new possibilities of 'transactions, financing and revenue model' are enabled. Strong partnership between customers and studio employees, consisting of mutual respect, social bonds, cultural and worldview similarities, as well as similar background demographic, fosters innovations in 'back office production process' as well as in 'content of service and genre'. On the other hand, organizational culture which relies on the distinctive separation of the customer community and the firm, promotes innovations in 'value chain location in positioning', where new means of productively engaging customers are sought, without diminishing strategic control of the firm over its services and their content.

## 6.2 First research question: Competences for co-creation

The data pertaining to the first research question also corresponds to the first of the operationalized concepts, 'co-creation competences'. Building on the work of

Piller and Ihl (2009) and Lettl (2007), four competences of a firm for co-creation were identified: integration competence, disclosure competence, appropriation competence, as well as user involvement competence. The configuration of those competences, as well as their strength in a firm, determine the propensity and style of co-creation, together with the firm's use of crowdfunding and its organizational culture. Nevertheless, the role of those competencies in affecting the propensity and style of co-creation in the setting of a firm varies, meaning that each individual competence's role in affecting the propensity and style of co-creation is limited, and some competences will have more influence than others. We first turn towards exploring those differences.

### 6.2.1 DISCLOSURE COMPETENCE

Game developers tend to be overall very careful when revealing potentially sensitive information. Co-creation therefore can occur only in those aspects of the firm or its service, which have been deemed 'safe' (if co-creation is allowed in the 'unsafe' aspects, then customers are required to sign a non-disclosure agreement, as it is the case at CCP). At the same time, information shared with the customers, which also is the material for and a starting point of co-creation, must be relevant to NSD. Firm's behaviour here can range from releasing marketing-only materials, through opening up some of the underlying code to the customers (example of Valve Corporation), all the way to granting customers access to back office processes and tools of the firm.

Releasing of appropriate types and amounts of information about a service under development to the community of co-creating customers is the first of the competences for co-creation of importance in this study. Examples of that competence, as discussed in Chapter 5, include for example volunteer programs in Case Beta. There, individual customers are invited to participate in the NSD effort almost as if they were the employees of the firm. In order to do that, they must be granted access to sensitive information – and thus are required to sign NDA. Similar applies to player councils in the same case.

On the other hand, in Case Gamma there is more reliance on trust and personal relationship between an employee and a customer in the co-creation practice. There less information is revealed at once, but it is revealed only when a particular employee trusts the co-creating customer – this way, customer can provide

meaningful and useful inputs to NSD. Similarly, no NDAs are sign in Case Alpha, where only the general information about the setting of the game, its artistic feel and mood is given. Those types of information are not very sensitive, and there is a low risk associated with revealing them to the customers, who then can co-create basing on that information.

### 6.2.2 INTEGRATION COMPETENCE

Integration competence is about assimilating external inputs into internal routines and practices of a firm (Piller and Ihl, 2009). As long as the practices for obtaining customer inputs are relatively informal (as it is discussed for the user involvement competence; Lettl, 2007), its internal assimilation is largely done at hoc in all three cases studied. The exceptions to that rule are the QA (quality assurance) practices, as well as the inputs finding its way into the firm via contests and competitions (those normally stipulate how the entries will be judged, when, by whom, using what criteria, what the rewards will be and so on). These tend to have very formal practices, both outward-facing (in terms of how the community of customers is getting engaged), and internal (how 'bugs' or reports about issues are processed by the QA team and the rest of the studio). We see the examples of that in all three cases in Chapter 5.

Structured forms of co-creation, such as contests, purchasing of assets from online stores, or volunteer programs, allow for resolving some of the problems presented in the point above. By introducing a clear conditions of exchange of the ideas that are known to co-creating customers a priori (as well as outlining potential rewards) and the rules governing their selection, the companies are on much more legally secure ground. As an outcome, they can assimilate players' inputs directly that result from such a structured practice, without worries of opening themselves up to legal action or causing unrest among the community (Gebauer *et al.*, 2013).

In such dynamic, companies also clearly define what kind of inputs customers will provide them with. The firms are interested only in the inputs that will fit those defined guidelines. We observe the evidence of that in particular in Cases Alpha and Gamma, where specifications of inputs accepted have been released to co-creating customers. That facilitates not only the selection of the highest-

quality inputs, but also ensures their compatibility with internal practices of the firm – such as programming languages, polygon counts, or file types.

Moreover, for QA, the observed formality of the practice is also a by-product of the nature of QA itself – problems in the software code must be internally ordered, responsibilities to fix them must be ascribed, as well as the origin of those bugs must be recorded. Player councils observed in Case Beta are also typically accompanied by internal practices that allow for efficient and extensive tapping of the knowledge of players on the council by the firm. We therefore observe a degree of formality in processing those inputs by studios as well. Those practices have been developed over years of experience, and the presence of that form of customer co-creation has been evolving together with the firm, growing into its structures gradually. It fits well our broader category of overall semi-structured practice of co-creation dominant in Case Beta.

Nevertheless, vast majority of inputs from the customers does not fall into any of these three categories. Instead, they are suggestions, requests, materials loosely based on the firm's offerings, poll results, personal conversations, workshops, and others. It is impractical to establish a practice for integrating those, as that is done mostly by the individual employees as 'on the job' basis. Together they constitute 'informal' co-creation, which relies on the rich communications and organic relationships between customers and firm's employees, as well as exchange and flows of ideas between them. This is also where the integration competence resides – in the firm's ability to assimilate those inputs, integrate them with its day-to-day functioning and routines, without causing much of a disruption.

The potential impact of integration competence on the propensity and style of co-creation is high. Many digital videogames firms do not accept inputs from their customers due to their disruptive nature –the traditional model of game development does not account for the presence of customers at any stage of game development. Therefore, some degree of organizational flexibility, project management (Agile and Scrum techniques) is required to make use of feedback from the customers. It also must be accompanied by relatively experienced staff (as we see for instance in Case Beta) who know how to juggle internal work together with the inputs from customers, as well as how to manage the

relationship with such involved customers. In Case Alpha we read how the experiences of modding enabled the firms to engage in co-creation, as those two practices bear some semblance to one another.

One interesting result is that integration competence in the videogames industry is the competence that firms struggle the most with. It remains a problem for all companies – even the ones for which that competence is high. Integration competence does not necessarily have to be about formal ways of processing player inputs by a firm – after all, large proportion of co-creation is informal in nature. Therefore, this competence includes firm's ability to be flexible about its NSD practices and processes, responding to external inputs in timely and targeted fashion.

### 6.2.3 APPROPRIATION COMPETENCE

Appropriation competence hinges on the firm's ability to protect the knowledge generated with the customers, as well as bar the free-riders from benefitting from the open innovation practice (Piller and Ihl, 2009). 'Protection' aspect resulting from defending the fruits of co-creation against outsiders and free-riders is insignificant in this study. The current understandings of intellectual property do not sit well with participatory cultures, open innovation or the dynamics of playbour, and with how firms deal with the inputs from their. Therefore, how a firm manages to bypass those limitations to enable co-creation, both of its own NSD methodologies as well as resulting from imperfect legal systems, constitutes this competence.

If customer inputs are used in their original form, then for legal reasons those inputs must be originating via established and clear channel, which allows for transparent rules. An example of that is the *Next Great Starship* contest described in Case Gamma, or purchasing of assets from Unity Store in Case Alpha. That way, it is legally clear what the conditions of co-creation are, what are the rewards and who the author is. It is possible to have legally-binding terms and conditions determining the process. The customers are legally consenting to any such rules, including the transfer of intellectual property ownership. Other forms of co-creation lack this formalized aspect, and are treated more as feedback or loosely defined source of ideas. In the course of this latter category, customer inputs are reconfigured before becoming integrated with the game development,

for the reasons of safe appropriation of customer-generated knowledge and intellectual property considerations.

Appropriation competence also implies the firm's ability to attract talented co-creators to its cause, i.e. to co-create their service, and not that of the competitors. As the time of co-creating customers is also limited, and they normally are players of more than one game, their co-creative attention is a subject of competition among firms. They tend to co-create that service, which fulfils their motivations for co-creation the best. Those motivations have been already discussed in Chapter 2 as either intrinsic or extrinsic (Füller, 2010; Roberts *et al.*, 2014), and correspond to opportunities of employment, learning, or belonging to a community of like-minded individuals. Hence the appropriation competence captures what the firm is able to do in return for the customers' involvement as co-creators of their service to meet their motivations and reasons.

The above is very well visible in all three cases, although there is a degree of variation between them. Those differences stem from the fact that firms described tap into different types of co-creating customers, or different cognitive communities (Burger-Helmchen and Cohendet, 2011). For instance, Case Gamma in the NGS contest will rely on extrinsic motivations of customers to co-create by offering financial rewards and offers of employment. Case Beta on the other hands focuses on the intrinsic motivations – as the reward for co-creation customers get the feelings of belonging, customization of their experiences, as well as forging new social ties.

#### 6.2.4 USER INVOLVEMENT COMPETENCE

That competence influences the practice of co-creation in a firm, and is closely linked to the characteristics of the community of customers (Lettl, 2007). It describes a firm's ability to systematically involve customers into the innovation practice, and it has two dimensions: one, in which firms need to have a good understanding of their customer community and their creative or innovative potential; and two, in which the firm identifies the best interaction patters with customers to bring their inputs into the organization. Therefore, this competence describes a firm's ability to construct a co-creative interface with the community of its customers, and is the most outward-looking of all four competences characterizing a firm's propensity and style of co-creation.

When it comes to the first dimension of that competence, a firm has close ties and numerous links to the community of its customers. Those links rely not only on long-term coexistence between the firm and its customers, but also on the fact that those services occupy market niches. This is strengthened by personal links between the community of customers and the employees, as well as recruitment of staff from among the community of customers. Firms also collect data on their customers (when it comes to their in-game behaviour for instance), which is then being statistically analysed. The cases studied vary in the amount of data that they collect – demonstrating differences in user involvement competence across firms.

For instance, in Case Beta and Gamma a lot of information, Big Data, statistics, behavioural patterns and similar types of information is collected. That data can then be analysed using scientific method by the firm to understand the behaviour and needs of the customers. On the other hand, in Case Alpha, no such very formalized practice is visible – instead, that firm prefers to rely on its own perceptions and experiences, as well as interactions with the customers on forums and via other channels. Overall, community management and customer service functions contribute visibly to that competence in organizations.

Second dimension of user involvement competence describes the firm's ability to select the best format of interaction with its customers, so that their inputs can flow into the organization's NSD and innovation processes as efficiently as possible. We observe variation across the cases in the use of such devices as player councils, volunteer programs, crowdvoting, contests, purchasing of assets, studio visits, and physical gatherings. Those are also formal means of tapping the customers' creative potential. On the other hand, there are also forms of interaction that are displayed by all cases – forums and the activity of staff on them, regular updates provided by the firm to its community and related solicitation of feedback, as well as calls for community inputs to NSD (which also take form as an element of crowdfunding campaign).

The benefits that incentivize customers to generate inputs to NSD differ between formal and informal modes of co-creation. In the informal co-creation, customers are motivated to participate by product use and improvements, network effects, reputation, enjoying the activity and fulfilment of norms (Piller and Ihl, 2009). In the formal mode of co-creation, firms add benefits corresponding to extrinsic

motivations – such as chances of employment, in-game rewards, and official recognition – on top of the aforementioned benefits. Again, this is very well-visible for example in the case of contests described in Case Beta and Gamma.

As co-creation in the videogames industry stems from participatory culture (Jenkins, 2006) and is underpinned by both socio-cultural and market dimensions (Banks and Potts, 2010), the customers demonstrate high propensity to become engaged in co-creation. Firms are in the position of deciding whether to use or not their customers as a resource – and if so, in what form (whether for NSD or for relationship building for instance). Firms vary in their ability to use those benefits to incentivize their customers – due to for example their game development methodologies, level of understanding of their community's composition and motivations, or organizational structure. Also, a firm that uses mixed methods of co-creation (i.e. both formal and informal), will be able to tap into a wider array of incentives, and thus engage more customers in co-creation – the best example of that is visible in Case Beta, where CCP deploys an array of co-creation practices. This competence therefore reflects a firm's responsiveness to its customers, and therefore plays a significant role in shaping the propensity and style of co-creation.

#### 6.2.5 COMPETENCES AND RESEARCH QUESTIONS

The two competences that have most potential weight in influencing co-creation within a firm are integration competence (Piller and Ihl, 2009), as well as user involvement competence (Lettl, 2007). The former focuses on the organizational aspects of the firm, its practices and whether routines exist for assimilating customers' inputs. The latter looks to the outside of the firm, and towards the communities of customers. It shapes and determines the format of interactions between the firm and its customers when it comes to exchanges of ideas and creativity. It resides in the firm's ability to understand its customers and their potential, as well as to select the right tools for allowing their participation in NSD.

For disclosure competence, its impact on shaping co-creation in organizations is less significant. Firms are already guarded when it comes to revealing the information about their internal practices and works; some types of information are very rarely revealed to significant extent. Moreover, aesthetic and experiential nature of services under study further cautions firms when disclosing details of

yet unreleased services to the customers. Firms are very well aware that once a piece of information is out, it becomes available on the internet and in other media quickly. Still, information must be disclosed to the customers if co-creation is to take place. Choosing how much can be revealed of what type of information, to whom, at what time and in what circumstances of the marketplace is a skill reflected by this competence.

Appropriation competence does not have a dominant influence on firm's propensity and style of co-creation. As customers who contribute their work and creativity to particular videogames are also the fans of those particular titles, their inputs are highly tailored to the aesthetics of that particular game. Videogames are characterized by their unique artwork, gameplay mechanics, as well as code architecture, which determine its aesthetics and style, and therefore inputs contributed for a particular game are quite difficult to be also applied for any other title. Still, this competence is not without consequence on a firm's co-creation propensity and style. As discussed above, firms compete for their customers' attention as co-creators, and attracting that attention from valuable (i.e. skilled) co-creating customers is captured by exactly the appropriation competence.

This observation corresponds to the first research question, where we ask "What firm practices reflect its propensity for and style of co-creation?". We begin to notice, that those practices of firms which reflect high integration and user involvement competencies also reflect their propensity and style for co-creation.

In other words, propensity for co-creation of a firm will depend on the competences that it has for co-creation – and user involvement and integration competences in particular. The style of co-creation is also determined by those competences, which do not only exist on a uniform scale from zero to one (where a firm either has a particular competence, or doesn't have it). They exist in a number of varieties, as for one firm integration competence stems from highly formal practices for processing customer inputs (see Case Alpha), while for other it will rely on the flexibility of project management and collaborative teamwork practices (Case Beta). Therefore, we look towards the four co-creation competences to best describe a firm's propensity for, as well as style of co-creation. Examples of such practices that illustrate competences for co-creation, and thus

allow us to describe a firm's propensity for and style of co-creation, are given in the Table 10 below.

<b>Competence</b>	<b>Example in data</b>	<b>Effect on co-creation propensity* (P) and style (S)</b>
<b>User involvement</b>	Alpha: posting regular project updates and emails.	P: weak S: low integration of customers
	Beta: fan gatherings and democratically elected player councils.	P: strong S: customers have a personal stake in co-creation
	Gamma: Studio visits and paid levels of customers' involvement (access to NSD).	P: moderate S: close integration with crowd-funding and revenue model
<b>Integration</b>	Alpha: customers provide very specific inputs on predetermined topics.	P: weak S: similar to crowdsourcing and submission of work
	Beta: Champions for customers' inputs coupled with cross-disciplinary teams in Scrum project management.	P: strong S: customers become almost a team member and stakeholder in internal practices
	Gamma: Discrete decisions of individual employees basing on their knowledge of the co-creating customer.	P: moderate S: informal co-creation strongly correlated to hidden innovation, occurring 'under the radar'
<b>Disclosure</b>	Alpha: Customers don't need confidential info to co-create.	P: strong S: it is safe to use co-creation

<b>Appropriation</b>	Beta: Signing NDAs with customers.	P: moderate S: intensive, work-like co-creation
	Gamma: Personal trust between customers and employees.	P: strong S: the paramount role of relationship in co-creation, informality
	Alpha: Using assets from Unity Store.	P: strong S: transparent co-creation, no legal concerns
	Beta: Belonging to a unique and respected community.	P: moderate S: tightening the links with community
	Gamma: Winners of the contests gain employment and financial award.	P: strong S: only the best inputs are accepted, increasing visibility

**Table 10.** Table comparing examples of competences as described in empirical data (Chapter 5) together with their effects on a firm's propensity for and style of co-creation. (\*) Effect on a firm's propensity for co-creation is framed as always positive for all competence for co-creation.

Furthermore, a firm's propensity for co-creation will be cumulatively depending on the sum of strength of its competences. The more and stronger competences for co-creation has a firm, the more propensity for co-creation it displays. On the other hand, the style of co-creation, which is also described by the competences that a firm possesses, resembles more of a resultant force of what these competences for co-creation entail – i.e. what kind of firm activities constitute them. Finally, institutional arrangements of a firm (i.e. organizational culture and funding arrangements) also influence its propensity and style to some extent, although they constitute second-order influencers. We discuss them in further detail in sections below.

### 6.3 Configurations of competences

Each firm in the videogames industry has a unique mix of the four competences for co-creation. Therefore, the propensity and style of co-creation, and the differences in those across firms, are explained by various sets of competences

that those firms have. This addresses the first research question, allowing us to understand what firm characteristics determine its co-creation practices.

The mix of competences for co-creation is also the reflection of firm's dynamic capabilities (Teece, 2007; Rosenbloom and Christensen, 1994; Teece and Pisano, 1994). They capture the firm's ability to shift away from the traditional models of NSD, and adopt the organizational changes required for successful innovating in the changed market and socio-cultural environment. The firms studied differ in their dynamic capabilities.

In the sections below we will discuss the particular array of competences for co-creation in each of the main firms studied. It serves as the demonstration of the correlation between different practices of co-creation (as captured by research question 2, and described below) and particular sets of competences for co-creation that a firm has.

#### 6.3.1 CASE ALPHA – OBSIDIAN ENTERTAINMENT

In this firm, user involvement competence is the most significant. The firm knows its customer community well, and the community of customers plays an important role in the firm's commercial success, as it produces niche videogames. The best format of interaction with the community of players is selected, one which allows the company to continue using its established work practices (traditional game development), together with satisfying the demands resulting from customers' involvement in the wake of crowdfunding campaign. That's why we only observe extensive use of forums, as well as controlled inputs of customers to pre-determined aspects of the game. The practice of co-creation in that firm is therefore highly structured – which realization also helps us to answer the second research question. There are specific practices, responsibilities and goals to the co-creation in Case Alpha, and almost all of the information flows between customers and the firm are regulated and accounted for.

Such an approach to co-creation is also identified as relationship-focused in this thesis. A degree of collaboration with customers in NSD does take place, although to a very limited extent. The firm does not need (or want) its customers for making any significant NSD progress, as competences for that are present in-house, as well as co-creation is recognized as being potentially disruptive to work practices. Instead, OE allows for co-creation in order to deepen the relationship

with their customers, providing them with expanded experience of the service, capitalizing on positive word of mouth, as well as fulfilling its obligations resulting from crowdfunding campaign.

Overall integration competence is low, as the customers' inputs do not fit easily into the firm's routines and practices. They are treated as a challenge for the organization first and foremost, and the customers' role is seen as mostly that of testers, and their main strength resides in numbers. Finally, appropriation competence relies on the a priori stipulated terms of customers' ability to have their ideas included into the game – following on the promises made during the crowdfunding campaign.

It would seem that this firm's reluctance to depart from the traditional NSD models (that also have proven successful for that firm in the past; Cohen and Levinthal, 1990) reflects its low dynamic capabilities. OE sticks to the practices that have been proven to work, modifying them minimally to enable the use of crowdsourcing in its NSD. Co-creation is permitted to exist within OE only as long as it is controlled, and its influence on the organization and NSD understood.

### 6.3.2 CASE BETA – CCP GAMES

Co-creation practice in the context of CCP, as well as in the light of the second research question, is described as semi-structured. It means that it encompasses both formal and informal co-creation. Specific practices exist within the firm for assimilating customer inputs, together with assigned responsibilities, tailored project management techniques, as well as communication routines. At the same time, there is a heavy focus on the relationship with the customers, and the means of receiving the inputs from customers are flexible and deeply integrated with the organization. The community of customers is empowered both in formal and informal ways, and it can influence the employees in a myriad of ways.

Customer involvement in the case of CCP occurs at all stages of NSD, which also contributes to explaining the wealth of various methods for co-creation used by CCP. User involvement competence in CCP Games is very high (there are employees within CCP whose only job is to analyse customer behaviour, process their inputs internally, as well as liaise with the player councils). The company deploys many methods of analysing and understanding the community of its customers, as well as engages a wide array of methods to allow players' creativity

to find its way into the studio. Similarly, integration competence is correspondingly high – there are specific routines and posts within the firm that facilitate the assimilation of customer inputs.

In the case of CCP, appropriation competence is strongly linked to organizational culture and the fact that CCP sees its game as largely dependent on customers' creativity. Players are limited only by terms of use and end-user licence agreement. The control of their engagement with the firm is a bit heavy-handed on the CCP's part, which asks its co-creating customers to sign non-disclosure agreements and abide by other practices of confidentiality. Nevertheless, CCP is effective at appropriating customers' creativity, and that practice has become an integral part of the firm's business model.

Disclosure competence is high in the context of that firm – formally co-creating customers are informed about the requirements of their task. Employees participate in the discussions with customers, as well as inform them about their work. There are numerous personal links between the individuals on the both side of the firm boundary. The fact that CCP's service occupies market niche and caters to idiosyncratic consumer tastes makes it less imitable by the competitors, as well as facilitates social network effects (i.e social bonds), which reduce the risk of purposefully malicious (confidentiality-breaching) customer behaviour.

Dynamic capabilities at CCP correspond to its ability to remain successful in capitalizing on a market niche for a prolonged period of time. The firm's practices change and shift in response to customer participation in NSD. Firm responds to the 'sandbox' design of its service by its flexible NSD methodologies, as well as accommodating organizational culture. The firm has clearly demonstrated that it has the capabilities to adapt and adjust to changing conditions of the market, having thrived in its niche for over ten years. As already mentioned in Chapter 5, it has a reputation for being innovative and embracing novel NSD methodologies.

### 6.3.3 CASE GAMMA – CLOUD IMPERIUM GAMES

CIG's co-creation practices are described as loose in our answer to the second research question. The focus of co-creation at CIG is the relationship with the customers, and generation of increased maximum willingness to pay, positive word of mouth, as well as overall enlisting of the customers' help as marketers and advocates for the service. Co-creation occurs mainly via the rich personal

interactions between individual employees and customers, and is characterized by relatively few formal practices accompanying it.

As CIG's service is still in development, the observations of Case Gamma also apply to that stage of NSD. User involvement competence in that setting is very high – the amount of attention and resources that the firm expends to maintain its close relationship with customers is almost unprecedented. This is linked to the firm's success in raising the funds in the crowdfunding campaign, as well as widespread attention that its development effort has been receiving. As discussed in Chapter 5, that user involvement competence resides in the ability of individual employees to understand and communicate with customers, and is largely coupled with customer-centric organizational culture.

When it comes to the integration competence, the majority of customer inputs are processed informally and on an ad hoc basis, although the firm remains of a positive disposition towards the inputs from customers. Communicating and working with customer inputs is an organizational priority, so despite the lack of strong formal practices, the integration competence still remains high. The locus of that competence therefore remains informal, and it is also a subordinate to the company's focus on customer relationship outcomes of co-creation.

Appropriation competence is on comparable levels to what we observe in other cases, as the player inputs are highly specific to the game and are not easily transferable to other firms' offerings. CIG's appropriation competence is noticeable when observing NGS contest, which was designed to attract the most interesting contributions from the most skilled members of the community. Contest format, together with the promise of employment for the winners, attracted many excellent entries from various customers, including also the ones from outside of CIG's usual community.

It is difficult to speak of dynamic capabilities in the context of case Gamma. The main firm under study is a relatively new organization that has been developed with crowdsourcing and co-creation in mind. Its structure, mission and goals correspond closely to the current dynamics of its environment. It is characterized by an innovative and generally unproven business model (of continued crowdfunding), as well as by a highly dispersed organizational structure. Further

studies in a few years' time are required to better illustrate CIG's dynamic capabilities and to track this firm's ability to adjust to changing conditions in the industry.

#### 6.3.4 SUMMARY

The competences for co-creation that are present in various firms are summarized in Table 9 below. Each of the three companies discussed in this section has a unique profile in that classification, showing how different mixes of competences correspond to various practices of co-creation.

Each of the four competences for co-creation has a different strength in promoting co-creation to take place in a firm (thus increasing the propensity for co-creation in the answer to the first research question). All competences for co-creation, by their definition, have a positive influence on a firm's co-creation propensity. The sum of their strengths (here described on a scale from low, through moderate, to strong) is the main factor in determining a firm's propensity for co-creation.

When it comes to the style of co-creation, it is a more descriptive affair. First of all, each company has different array of co-creation competences, present in different strengths at various stages of the NSD. This unique blend of competences influences the style of co-creation – whether formal or informal, for NSD inputs or customer relationship – as well as its practice in a particular firm (from structured, semi-structured, to loose). Second of all, competences for co-creation are manifested differently in each company, and thus must be qualitatively described (instead of being just treated quantitatively on a scale correlated to their strength). The style of co-creation will therefore be a resultant force of those qualitative and rich descriptions of what those competences entail and how they are manifested in the context of a particular firm.

Furthermore, it is vital to remember that institutional arrangements - organizational culture and funding arrangements – also influence a firm's propensity for and style of co-creation. The best examples of that are the role of organizational culture in Case Gamma, as well as the influence of crowdfunding in Case Alpha. We discuss those two factors in detail below.

<b>Competence</b>	<b>Obsidian</b>	<b>CCP</b>	<b>Cloud Imperium</b>
<i>User involvement</i>	Moderate	High	High
<i>Integration</i>	Low	High	Moderate
<i>Disclosure</i>	Low	High	High
<i>Appropriation</i>	Moderate	Moderate	Moderate
<i>Dynamic capabilities</i>	Conservative – maintaining old NSD practices	Progressive – adjusting to the shifting environment	? – we lack data as the firm's environment hasn't changed yet
<b><i>Propensity for co-creation</i></b>	Low/moderate	High	Moderate/high
<b><i>Style of co-creation</i></b>	In response to the crowdfunding effort, guarded and careful.	Bold and innovative, deeply integrated with many aspects of the business model.	Integrated with crowdfunding, relying on informal interactions, coupled to marketing.
<i>Co-creation practice (RQ2)</i>	Structured	Semi-structured	Loose

**Table 11.** A comparison of co-creation competences, dynamic capabilities and co-creation practice in three firms.<sup>13</sup>

Those competences exist in the context of co-creation competences present in the community of customers – it is likely, that the communities of CCP and CIG have higher potential for co-creation (defined by their level of skill, demographic and motivation) than the community of Obsidian Entertainment. That factor, which is largely outside of the firm's control (although the genre of the videogames that a firm makes does influence what kind of user becomes studio's customer), has a significant role in the firm's propensity and style of co-creation. Its further analysis falls outside this study's scope though.

<sup>13</sup> For competences the scale is from low, through moderate, to high.

Together, competences for co-creation as well as institutional arrangements determine how customer inputs influence the practice of co-creation – thus addressing the second research question. We observe three types of co-creation practice: structured, semi-structured and loose. They describe the co-creation in firms on the broadest level, capturing the overall dynamic of how customer inputs influence a firm's NSD. That description is regardless of the purposeful or accidental co-creation practices of a firm, its formal or informal dimensions, or firm's goals for co-creation (whether for NSD inputs or customer relationship gains).

## 6.4 Second research question: Customer inputs influence organizations

Various firms, characterized by different mixes of competences for co-creation, embrace their community of customers as a resource in NSD or for the relationship building purposes (including marketing benefits). Those competences though do not fully describe the role of customers in the innovation practice of the firm (von Hippel, 2005), or the role of co-creation in enhancing customer-firm relationship (Gebauer *et al.*, 2013). The innovation practice in digital videogames firms occurring in the presence of co-creation can often be ad hoc and performed 'on the job' basis (as many creative industries' firms lack a formalized R&D department or budget; Miles and Green, 2008). It is possible that such informal forms of co-creation are more common than formal and structured ones, including a formal call for submissions and an internal practice for assimilating them into NSD.

Hence the outcomes of co-creation on innovation practice can be very subtle and occur 'under the radar' of official identification and classification, or can assume a form of 'adhocracy' (when their processing is unstructured and shifts from case to case; Naranjo-Valencia *et al.*, 2011). In such dispersed form, they cannot be easily targeted by analytical tools or metrics. Instead, their form will be most of all affected by the two institutional arrangements that underpin and provide context to all of its activities. These are funding arrangements, as well as organizational culture.

Those institutional arrangements heavily influence a firm's propensity for, as well as style of co-creation – addressing the first research question. They are also of

influence in the domain of the second research question, where they significantly modify the nature of the relationship between the firm and its customers. Expectations, attitudes, as well as obligations that determine it are all described in Chapter 5.

#### 6.4.1 SIGNIFICANCE OF ORGANIZATIONAL CULTURE

Co-creation occurs through the everyday practices of studio employees; and compared to the wealth of these interactions, the formalized practices relatively rarely replace that informal co-creation with a formalized one – but that also varies across the firms. That underlines the agency of organizational culture in shaping of this practice's success – since co-creative exchanges are dispersed among line employees, it is their individual attitudes that affect the degree and mood of their interactions with players. Also on the strategic decision-making level, an organizational culture which frames its customers as valid contributors and partners to NSD aids in absorption of their contributions or tapping them as a marketing resource.

As described in Chapter 2, organizational culture is formed by three characteristics of a firm: its history, strategy, and attitudes of its employees. All of them are significant in shaping the practice of co-creation in a firm. Organizational history generates inertia in culture; a firm will tend to stick to the practices (i.e. project management, communication routines, team structure) which worked for it in the past. As things currently are, co-creation is an innovation in NSD practices as well as in organizational structures, and thus represents such unproven and untested methodology – hence the reluctance to embrace it of those firms which have a long track record of prior success (c.f. Case Alpha and Obsidian Entertainment). On the other hand, new firms (CIG), or firms that have built their business model around co-creation, do not face resistance from that inertia.

Firm strategy and stage in NSD will be another factor influencing organizational culture. In particular, how the company formulates its relationship with the community of customers, and how central they are to the service's success in the marketplace. At different stages of NSD organizational culture will be also influenced differently – early stages are normally done without any inputs from the customers, as involving them at this stage would be infeasible (i.e. what the

service is, for whom, how it will work – all of that is uncertain or unknown at that stage). That was visible in all three cases studied in this thesis - their ‘core offering’ has been developed without any inputs from the customers. In later stages of NSD it becomes easier and less risky overall to involve customers, as the risk of disruption from co-creation is gradually reduced. It is very well-illustrated by Case Beta, which is currently at a very late stage of NSD (what is currently developed is only add-ons and modifications to the basic service) and engages heavily in co-creation. Additional discussion of the role of NSD stage on co-creation practice follows towards the end of this chapter.

Last element of organizational culture is the attitude of employees. It is a subtle yet powerful effect which determines how individual employees view and think of customers as co-creators (thus, to some extent, peers). In the case studies we see how studio developers view themselves as professionals (c.f. interviews with OE, 2013; field notes from OE, 2014) who know best what is required for a successful service development. Customers are seen as impostors at times, whose place is not within the studio. On the other hand, both Case Beta and Gamma illustrate a different approach – where the customers are regarded as having some skills (although still not matching those of the employees) that can be used in the course of NSD. In Case Beta this is connected to the role of customers’ creativity in co-producing the service, while in Case Gamma to their unique ability to generate powerful marketing benefits for the studio, as well as (in individual cases) having genuine professional skills.

Organizational culture is of consequence for the first two research questions. It partially determines the competences for co-creation that a firm has, as well as it modifies their action in the context of a particular firm. Organizational culture underpins many of them as well – we see a lot of differences between firms. For instance, in the organizational culture of OE (Case Alpha) players are seen as mostly faithful consumers and cherished fans – but not more. On the other hand, at CCP they are perceived as collective collaborators on many occasions, oftentimes providers of the spark that makes the service unique and special. At CIG (Case Gamma) we see yet another understanding of the customer community dominating organizational culture – as a resource for marketing and funding, and as interesting and skilled individuals.

Therefore, organizational culture will have a particularly well-pronounced influence on our investigation of the second research question. Organizational culture determines the attitude of employees towards all customers, and their inputs. If a firm has a culture of collaborating with customers and views its customers as valuable (this pertains in particular to whether customer community is seen as a productive body) co-creation will be facilitated, and the customer inputs may take more formal shapes and paths (as we see in Case Beta). If, on the other hand, customer community is not viewed as a skilled collaborator, then organizational culture may still promote productive relationships with individual customers. Then the customer inputs will tend towards informal and more linked to hidden innovation, as we see in Case Gamma for instance. Some additional details are illustrated in Table 12 below.

<b>Organizational culture</b>	<b>Individual customers</b>	<b>Customer community</b>
	As seen in Case Gamma.	As seen in Case Beta.
<b>For the customers as co-creators</b>	Reliance on hidden innovation, co-creation taking place via individual relations between employees and customers. Informal methods.	Many different practices, democratic and transparent in nature, both externally and internally deployed by the firm. Formal methods.

***Against the  
customers as  
co-creators***

As seen in Case Alpha. Customers are seen as a source of disruption to NSD and lacking professional skills. Closed-off NSD, closely controlled inputs from select customers. Formal methods.	As seen in Case Gamma. Customers as a community don't provide useful inputs, except for QA. Importance of identifying valuable individuals as contributors and deploying appropriate methods. Informal methods.
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**Table 12.** *Illustration of the relationship in organizational culture: the attitude of employees towards co-creating customers as individuals or collectively (i.e. customer community).*

When it comes to organizational culture's influence on the answer to the first research question, it is mostly through its influence on the articulation of a firm's competences for co-creation. User involvement and disclosure competences in particular are affected by organizational culture – for instance, whether employees take their time to understand their customers' needs, whether a firm designates resources to analyse customers' behaviour, or in how much trust there is to the customers overall when engaging them as co-creators (if at all).

As such, organizational culture is very closely linked to a firm's competences for co-creation as well as the practice of co-creating with customers. It is also

transformed by the continued and successful presence of co-creation in a firm, thus also being of consequence to the third research question.

#### 6.4.2 SIGNIFICANCE OF FUNDING ARRANGEMENTS

Crowdfunding is among the most powerful influencers of co-creation's form and occurrence in organizations. At its core, crowdfunding creates a new dynamic in the relationship between a firm and its customers – one where customers also become funders. In exchange for their funding they obtain no equity or profits, but the ability to participate in the development of a service that wouldn't otherwise be developed. That participation is a significant aspect of crowdfunding project: the firms are aware that the crowdfunding customers are their most loyal and devoted fans. Crowdfunding therefore creates a pressure and obligation for the firm to involve their customers in the NSD, as well as to listen to them – at least to some degree.

We turn towards the first research question. For the firms which decide to use crowdfunding, their propensity for co-creation increases significantly. Those firms must display at least some user involvement and disclosure competences – as they must be able to successfully identify their customer communities, communicate with them effectively, as well as disclose enough confidential information to engage those customers in the project. Also all the interactions with customer community that follows must be met by strong skills of community management and communication on the firm's part. For instance, this is well visible in Case Alpha – OE engaged in crowdfunding having sufficient user involvement and disclosure competences gained during its support for modding of the previous titles of the studio. This enabled the firm to successfully tap into the customer community as a source of funding.

Moreover, as firms which engage in crowdfunding promise their customers some degree of influence over NSD, they also need to have some integration competence. They need to be able to assimilate and process the inputs of those customers, and integrate them with internal NSD. As a consequence, there is a clear link between funding arrangements, competences for co-creation, as well as firm's propensity for it.

Furthermore, the style of co-creation is also affected by funding arrangements. We observe that in the differences between Cases Alpha and Gamma (which were

or are being crowdfunded), and Case Beta (where no crowdfunding has been used). In those two cases, there is much larger need for user involvement and disclosure competences. Large proportion of co-creation is geared towards customer relationship gains, and keeping customers happy by fulfilling promises made during crowdfunding campaign plays a big role.

Interestingly, funding arrangements also interact with organizational culture – where they are mutually influencing (reinforcing or inhibiting) each other. For instance, at CIG (Case Gamma), organizational culture makes a good match with crowdfunding – they are both open to the customers and welcome their inputs, be they financial or creative (provided that they come from individuals, not communities as discussed above). This is contrasted by Case Alpha, where organizational culture sits uneasily with crowdfunding, accepting it only grudgingly, simply because there was no other option for gathering funds for the development of *Pillars of Eternity*.

When it comes to the second research question, funding arrangements are also not without consequence. The presence of crowdfunding spearheads the need for formal co-creation to take place within firms – so that the customers see the firm fulfilling its obligations and looking to them in the development of a new service. As such it greatly affects the way in which customer inputs affect co-creation practice – especially in the formal space. That drive towards formalization is also accompanied by the increased focus on the customer relationship outcomes of co-creation.

In summary, organizational culture and funding arrangements are influential factors in co-creation practice within firms. They moderate the competences of the firm for co-creation. They also influence the competences themselves – including determining how strongly a firm develops them in the course of its business practices. Organizational culture may even be seen as intimately connected to the user involvement and disclosure competence, as argued above. Funding arrangements on the other hand play a role in increasing the formalization and relationship-centricity of co-creation practices in firms.

Therefore, firm's culture and funding arrangements play a role in determining the scale and scope of co-creation, as well as its impact on innovation practices at

various stages of NSD. This explains the dynamic governing the effect of propensity and style of co-creation on innovation practice in firms. These institutional arrangements fall respectively under the sites of ‘transactions, financing and revenue model’ and ‘internal communications and organisational culture’. They are discussed in more detail in the remainder of this chapter, along with the six other sites of organizational changes accompanied by co-creation.

#### 6.4.3 TWO OUTCOMES OF CO-CREATION

Does co-creation truly allow for bypassing the need for transferring of customers’ need-related knowledge across the customers-firm boundary? Considering the organizational changes and tensions introduced by the use of co-creation, this practice could not be classified as ‘cheap’ or ‘risk-free’ for a firm. Firms undergo numerous transformations, their work routines are forced to change, and the professional roles and identities of employees also shift. Those tensions are very well illustrated in Case Alpha, where the company, previously successful in the more traditional methodologies of game development, resists the transformations to its practices and routines arising from co-creation. This stems from the organizational history, framed in Chapter 2 as one of the three constituents of organizational culture.

Still, the intensity of co-creation in the context of a particular firm can be regulated – as we observe throughout all three cases. It is the firm who has control over that practice. Customers are very quick to form expectations for particular levels of cooperation between studio and their community. As we observed in the cases studied, firms such as Obsidian Entertainment or ArenaNet do use co-creation in their NSD, although to a relatively minor extent. Customers’ inputs are present only in very specific aspects of NSD and at stages chosen by the firm. This is linked to the ingrained belief in an organization that customers’ inputs are not really necessary for their innovative value – NSD- or innovation-related activities can be better off carried out internally. Nevertheless, what the customers can be useful for, is the funding of new projects, marketing, and provision of certain services (ones that take advantage of the large numbers of customers, i.e. quality assurance and testing).

On the other hand, with the culture of openness at Cloud Imperium Games or CCP, those inputs are far more spread across various game development

disciplines, from art, via programming, to game design, sound and even to some administrative activities. The costs of co-creation, the transformations to organizational culture or game development practices will therefore be much higher for those two latter studios, as compared to OE. Co-creation therefore becomes one of the core tenets of firm's strategy – one which devotes a sizable portion of its resources to the management of that productive relationship with customers. It becomes closely integrated with various processes and practices of a firm, its routines and style of management. CCP is the best example of that, with the plethora of various practices, both formal and informal, of tapping the creativity and labour of the customers.

This confirms the observations of this thesis that co-creation occurs in two varieties in firms: first of all, for its benefits to NSD. This dimension relates to firm's innovation management and transferring of need-related knowledge from customers to the firm. It is best visible in Case Beta. Second form of co-creation is about gains in customer-firm relationship. It is mostly about generating positive word of mouth, expanding existing or creating new markets, and increasing maximum willingness to pay among firm's customers. It is best visible in Case Gamma, but also in Case Alpha.

#### 6.4.4 STAGE IN NSD

Co-creation's influence over innovation practices evolves in the course of project cycle. The needs for inputs are different (early in the project the ideas can be speculative and novel, while later in the project they need to stick to existing trajectories and be more incremental). The degree of control of the firm is increasing (customers find it easier to provide inputs early on, when they can be more conceptual, as opposed to later stages in NSD, when they have strict guidelines and requirements). At the same time, customer inputs in the early stages of NSD are potentially more disruptive to studio's practices (as they are more likely to influence the high-level decisions for the service), and thus occur rarely. In this thesis we have not seen a single occurrence of such practice.

Approaches such as player councils, open tests, and volunteer programs work well in the late stages of production, as well as after the service commercial release. Some highly formalized co-creation techniques, such as contests, use of asset stores, as well as targeted submissions are also deployed at later stages of NSD

(as the company provides detailed instructions and requirements for them, as well as establishes some degree of dedicated routines and practices for them internally). Use of forums, crowdvoting and open discussions are particularly effective in early to middle stages of NSD.

OE's co-creation occurred during the development phase, after the main concept for the service was established and before it was released to the marketplace. Both the nature of customer inputs and the guidelines were clearly established by the studio, allowing for player inputs only in predetermined forms and selected aspects of the game (targeted submissions). The usefulness of the inputs provided through the other major channel used by OE, online forums, was becoming increasingly limited as the project progressed (because forums are best at providing ideas, while the best inputs at later stages of development are refinements). Towards the end of the development cycle, the main strength of customers was that determined by their numbers, as the customers were mainly used for QA and testing.

CCP's case illustrates different scenario. Long after its initial release to the market, *EVE Online* is being constantly improved and worked on. Channels of various types are used concurrently at CCP, as new features of the game are at different stages of development. Customers co-create both long-existing elements of the game, as well as its aspects currently in development,.

CIG's case represents a hybrid state of both elements of unreleased game under development, as well as improvements to an existing title. This is because CIG's game is being made available to customers in modules – hence some portions of it are already playable. Those released modules are still seen as 'works in progress' to some degree, and thus their features and characteristics are malleable. That creates rich context for the ongoing discussions about these features between the customers and development team. We see no customer inputs at the very earliest stages of NSD; ideation of new game features and making of major design decisions is seen as the domain of the firm.

## 6.5 Third research question: Co-creation's effects on the firm

Co-creation is about developing such productive relationship with the customers, which will allow for exchanges of creativity across the firm-customers boundary. Nevertheless, there are many other benefits from that practice. Co-creation can be performed by firms for purposes of enhancing the relationship between the firm and its customers. In such scenario, firm does not seek any significant inputs from the customers into its NSD. Instead, it wants to tighten the links between its customers in order to tap into such effects as positive word of mouth, increased maximum willingness to pay, ability to save on the marketing budget and many others – following on the definition of co-creation presented in Chapter 2:

Co-creation is such transformative practice of a firm, when collaborative work between a consumer, or customer communities, and the firm takes place, entailing a meaningful exchange that influences the innovation, design, development, production, marketing or distribution of a new or existing service, transforming the 'back-end' processes of the firm, as well as rendering accessible some functions of the firm so far unavailable to the customers.

With those broad outcomes of co-creation in mind, we turn our investigation to the sites within a firm that are both determining and affected by co-creation – serving as institutional and organizational conditions for co-creation, as well as its outcomes. Co-creation has a pronounced transformative effect on firms, and mapping of this effect is among the key contributions of this thesis.

To this end, the following section focuses on providing the answer to the third research question: “How can we understand the effects of co-creation propensity and style on new service development and innovation in firms?”. Here, in the first order we propose the framework of eight sites of innovation within firm which are affected by co-creation. This allows us to understand and map the impact of co-creation practice on organizations. In the second order, we trace the competences for co-creation that a particular company displays, together with its institutional arrangements, and compare them to the significance of changes in eight sites within a firm. This way we can understand what kind of effects a

particular co-creation practice has on an organization. This is illustrated in Table 8.

#### 6.5.1 NATURE OF CO-CREATION

In the co-creation dynamic, what a videogame studio gains primarily, is the ability to develop its services with significant input from the customers – services that will fit customers' needs better. One of the most prominent issues pertaining to innovation here is the questioned ability of customers to innovate radically, as postulated for example by Aoyama and Izushi (2008). By this we mean breaking free of existing market trajectories and incremental improvements to existing services. This is a limitation that we also observe in the case of the data presented in this study. Players are involved as co-creators with various existing projects of the studio – ones that the studio has established and which direction it controls. Feedback on existing or planned features, contests for inputs on a defined topic, votes on choices provided by the studio, volunteer programs to help with maintenance of existing services and solutions – virtually all observed manifestations of co-creation pertain to incremental innovations.

An account of a radical innovation stemming from the co-creation practice has not been encountered, perhaps with the exception of the case of *Incarna* expansion to CCP's *EVE Online*, but that case illustrates community's vehement reaction to a firm-introduced innovation and subsequent (and resulting from that reaction) backtracking of that change by the studio. So even in an example of very strong and visible influence of customers on NSD, that influence pertains to the preservation of the existing line of the product, and is against change. Such state of affairs is accompanied by the game developers' general reluctance towards customers' ideas as infeasible, unproven, impossible to implement, or difficult to commercialize. In other words, professional game developers aren't inclined to innovate radically themselves (also due to the general nature of innovation in the videogames industry, and sticking to incremental innovations which are familiar to the consumer), not mentioning letting their customers do that for them.

More interesting effects of co-creation are observed not in the domain of the service– but on the side of the firm and its organizational practices. Here, the presence of customers in the immediate environment of the firm, as well as increasingly in its internal practices and culture, forces a series of changes to how

studios function, how they establish their professional identity, and how they source labour. Those changes, albeit in most cases gradual, cumulatively are radical departures from how videogame development studios normally (or used to) operate – as illustrated in Case Alpha. They are reflected by innovation in the eight sites outlined in Chapter 2, where we see how co-creation affects organizations. Therefore, whereas in the domain of the service co-creation translates itself into incremental improvements to existing solutions, for its intra-organizational effects those outcomes are radical to how videogames are developed.

Firms embracing co-creation are required to adapt their organizational practices, culture, competences, as well as integrate co-creation with their firm strategy – including the funding or revenue model. The implications of co-creation are felt in a number of organizational functions, as various employees contribute accounts of how their jobs and work practices have changed in the wake of co-creation.

In the following section, we take a look at the main sites within a firm in which the outcomes stemming from co-creation are observed, as well as which serve as institutional conditions for it. Those sites have been first identified by Miles and Green (2008), and have been subsequently narrowed down for the purposes of this research. Furthermore, following on the work of Voss and Zomerdijs (2007) and Zomerdijs and de Vries (2007), those sites focus mostly on the ‘back stage’ and ‘front stage’ areas of an experiential service. Additional co-creation-influenced outcomes of innovation occur also in the ‘customers’ area, with focus on both customer experience and the role of fellow customers.

Therefore, this section splits the eight sites of innovation into three categories, corresponding to Voss and Zomerdijs’s (2007) experiential service design areas. The perspective of looking at digital videogames as experiential services is analytically consistent, allowing for capturing in the same frame videogames that are both in development, as well as those that are long after launch. It also allows for the accounting for the role of subjective impression and individual perception of value in consumption of digital videogames, demonstrating the links and interlocking between socio-cultural and market spheres (Banks and Potts, 2010) also on the very basic level of an individual customer.

### 6.5.2 'BACK STAGE' DESIGN AREA OF EXPERIENTIAL SERVICE

According to Voss and Zomerdijk (2007): "the main innovation related to back stage areas of service delivery involves connecting back office employees to the front stage experience" (p. 15). We observe it within the videogame firms embracing co-creation as well. As co-creation is adopted by the firm, more and more employees whose jobs in no way relate to interacting with customers begin to include elements of communication with players. The impact on the organization, its culture, practices and well as style of management (as well as employee identities) are the most pronounced areas of innovation resulting from co-creation. Organizations are required to undergo a significant change in the wake of co-creation.

#### 6.5.2.1 *Back-office production processes*

New forms of work organization emerge from co-creation's presence within an organization. New organizational functions for processing player inputs and employees appear. At CIG, the development of email digests of main inputs from the community, sending them out to selected teams, as well as resulting internal discussion, are another example. The 'S priority' class of entries to the bug database at OE, which denote suggestions from the players, illustrate how player inputs are accommodated in the aspects of the game development that so far have been solely the domain of the firm. The process of service development is rendered visible as part of the customer experience.

The outcomes of co-creation on innovation are also enabled, or at least greatly facilitated, by flexible production methodologies in those firms (such as Agile or Scrum). Innovations to back-office production processes are introduced steadily, as players' role grows and the firm learns to both harness those inputs. Sometimes new organizations are established with some degree of co-creation inscribed into their structure from the very beginning. Certain pre-existing or independent practices within firms will be a barrier or stimulator of organizational innovation in the wake of co-creation – for instance, geographical dispersion and reliance on internet communication facilitate the integration of co-creation methodologies in game development. Conversely, at a firm which is located in a single physical site, more communication is done in person and verbally, and that means that player inputs (mostly provided via internet) are

further away from existing organizational routines, and thus assimilating them requires more effort.

#### 6.5.2.1.1 Changing employees' roles

In the presence of co-creation in a firm, the roles of employees are also a subject to change. Developers are no longer the sole authors of the game. The work practices are also changing, and the curation of player-generated content is becoming an increasing portion of professional's work. Those changes are seen to different extent at various firms – CCP is very much about facilitation of customers' creativity, and the developers' job is to build a system for that creativity. On the other hand, inXile Entertainment uses customers to generate art assets from scratch, which is a practice that so far has been solely in the domain of the firm. That practice though is tightly controlled by the releasing of strict guidelines for those community inputs, as well as retaining of selection control by the studio (it is the best illustration of the framework of O'Hern and Rindfleisch, 2010). Nevertheless, we see here the change occurring – firm employees prepare the guidelines and orchestrate creative inputs originating outside of the firm.

We observe how the work of QA department has been afforded new possibilities and new modes of functioning. The role of that department within the organization has also been shifting. QA department, to that point a low visible function of the videogame firm, now becomes one of the key departments having intensive interactions with the customers. QA employees are also adopting some social and community duties, as QA becomes the main entry point into the industry for fledging game developers. We are observing both types of co-creation outcomes appearing together here – both benefits to NSD, as well as to the relationship with the customers. Those changes not always sit easily with game developers, especially in departments such as art, where the role of personal vision and skills in production of outputs is considerable (O'Donnell, 2014).

Professional identities of game developers are also at stake. They consider themselves experts at the production of videogames. Players on the other hand are seen as uninformed and not fully understanding the practicalities of videogame development. Still, the researcher has not seen any data corresponding to professionals' fears of becoming displaced by free labour of fans

and customers (apart from in literature, c.f. Wexler, 2010). Those tensions between changing role of game developers in the context of player involvement, as well as their fears of being displaced by free labour, may influence the role of co-creation in innovation practices.

#### 6.5.2.2 *Internal communications and organizational culture*

Just as organizational culture influences the role of co-creation in innovation practices, the changes to it can be the basis for innovation resulting from co-creation. Compared to the traditional way of service development, the presence of co-creation has triggered major differences in how studio employees approach and think of their customers. Departing from the model of separation of internal firm culture from that of the community of ‘fans’, the industry has started involving customers in their organization’s life and culture. Numerous personal relationships appear between the employees and customers, especially observed during physical gatherings of the customer community. Employees describe the difference between their current customer-involving work practices, and their previous job (i.e. a job without much interaction with customers). The force that is driving those transformations most of all is the presence and widespread use of crowdfunding, which promotes tightening of the relationships between customers, who are now funders and loyal fans, and the employees, who now have also a social and moral obligation to return the trust of their fans.

Similarly, internal communications are another clear innovation outcome appearing in the wake of co-creation. The videogames industry overall is departing from the outdated, Waterfall-based production models (where tasks and assets are produced in a sequence), and instead embraces the use of Agile and Scrum methodologies (which allow more flexibility and simultaneity, as well as rely on iterative production cycles and extensive coordination across multidisciplinary teams). Such environment is also more conducive to accepting customer inputs (as player inputs are largely unpredictable in production schedules, so only production schedules allowing for a degree of slack and unpredictability can fit them in).

Daily stand-up meetings, making decisions as a team, coordination of requirements and deliverables across the teams – those are all influencing NSD and innovation practice at the firm, allow for organization-wide communication

with customers, and thus increasing their effect on innovation. We observe how certain communication routines and channels have been established and evolved around the need to convey the feedback from the customer. Dedicated internal mailing lists, email forum digests, as well as allowing some insight into firm's project management and database tools – these forms of communication appear or are adopted more widely as an organization's response to co-creation. Interestingly, some communications that have been strictly internal, such as game design documents and transcripts from internal meetings, are becoming made available to the community in order to further co-creation. Use of those documents for that purpose is an innovation which transforms how a vision for a service is articulated.

#### 6.5.2.2.1 Employees' attitudes

Co-creation's impact on NSD and innovation practices hinges heavily on the attitudes of individual employees within that firm. Historically, videogames industry firms tend to be weary of the customers' involvement in game development due to the disruptions to organizational practices. Also confidentiality issues play a role here. More importantly, exchanges between the developers and customers can sometimes take a bad turn and become toxic, being a source of stress.

At all firms studied in the course of this work, the relationship between customers and the employees is good or very good. That results from the sample bias – firms that use co-creation have been sampled in the course of this work, and customer relationship benefits are one of the two main outcomes of co-creation. Nevertheless, individual employees will vary in their perception of customers, and some of them have negative opinions about their involvement or have had bad experiences when interacting with players. If customers are seen as partners for the employees, the doors are open for co-creation – the one that resides on the level of individual, 'under the radar' interactions between firm employees and customers, and is performed on 'on the job' basis. On the other hand, formal manifestations of co-creation are not as heavily affected by the attitudes of individual employees. Instead, they largely rely on the top-down managerial decisions and cannot be contested by lower echelons of an organization.

Different personal attitudes towards customers affect where in an organization there will be more co-creation taking place (or, in other words, in which sites within a creative firm, as outlined by Miles and Green, 2008). Visible exemplars of community interaction affect the tone of exchanges and attitude of lower-tier employees, becoming in time associated with that particular organization's culture.

The general attitude among employees is that customers do not have skills that would in any way exceed those resident within the firm. Customers, in such light, do not have the ability to provide the firm with innovative inputs. What customers are seen as good at, is their knowledge of the genre, as well as their excellent overview of the service (as individual developers are very focused on their field, they compromise their understanding of it as a whole). Customers are also seen as useful in numbers to test as part of QA. The problem of customers having difficulty articulating their needs is highlighted. That aspect of organizational culture determines the limited scope of co-creation, close controls on co-creating customers, as well as relatively sparse use of customers for guidance.

Customers innovate new service use patterns and expand the service software. Customers are seen as very competent in reaffirming the direction in which the firm should go, as well as a valuable marketing and public relations tool. The fact that there are close personal links between the employees and the members of customer community, as well as common interests and shared social background, further contributes to the perceptions of partnership and collaboration.

Customers' skills and knowledge are at times difficult to integrate with the firm's practices, or come in excess to the internal competences of the firm. Intellectual property issues, as well as the issue of coping with too many inputs are main limiting factors to accepting customers' creativity. Customers are seen as being able to come up with valuable ideas, but their community is also seen as the best judge of the quality of those ideas. Still, it is the customers' ability to spread the word of the game, and thus contribute to its marketing, that also is most highly valued by firms.

#### *6.5.2.3 Transactions, financing and revenue model*

One of the biggest innovations that is linked to co-creation of videogames, and which also is the easiest to observe, is crowdfunding. This model of financing

transforms how organizations function. The ability to have the customers fund the development of the game, on the capital investment basis, in exchange for nothing more but recognition and belonging in a community (as well as other optional rewards, but those rewards have mostly sentimental value associated with the feelings of fandom and community membership) has allowed many videogames and firms to function. Through the crowdfunding mechanism, players' role in voting with their money has increased in significance. It is therefore an articulation of customer needs in its bare form – after all, customers are backing ideas, not finished services.

Similarly, other big change was the rise of 'microtransactions' and subscription model of revenue. Although not directly linked with co-creation, they drive the formulation of videogames as services, as opposed to products. Before these two revenue models, videogames were simply purchased on a one-off transaction basis, making them more similar to products. In the new model, videogames can be even first played for free, and only once a customer has been involved for some time in the service they begin to pay the firm. That forces the firms to keep their customers happy, and closely listening to their wishes and demands. That has created the now-growing need for positions such as community managers and customer service in videogame firms.

For some services that means granting them an active stake in the development of a service, and getting them involved in practices of the firm. In other words, the relationship between the customers and the firm is more directly translated into revenues from the microtransactions model. Co-creation is therefore deployed by those firms for relationship outcomes – although the quality of customers' inputs to NSD still matters to them.

#### 6.5.2.3.1 Funding arrangements

Firm's strategic goals and their influence on the innovation practice are to large extent determined by their use of crowdfunding to raise finance. Use of that approach forces the firm to maintain close links with the community of its customers, permitting them insight and influence over the game development – as the phenomenon of crowdfunding is driven exactly by customers' desire to be involved. In exchange for money, customers do not receive any shares in the firm

or rights to intellectual property – a firm incentivizes their participation by various rewards, some of which are formalized opportunities to co-create.

The successful maintenance of the revenue from subscriptions hinges on the stable and satisfied community of customers. In the case of CCP, the service that is being offered (*EVE Online*) attracts customers of a particular taste, constituting a niche in the market. Those customers seek to innovate, tinker and push the boundaries of the service – and the firm seeks to satisfy them. In order for the service to truly respond to those desires, high degree of control must be ceded to the customers – therefore creating the situation in which there are strong and close links between the firm and customers.

The needs to obtain funds affect the innovation practice, inciting the firm to turn to co-creation. Co-creation plays the role of keeping the community involved and generating marketing buzz, and thus having more revenue from subscriptions and item sales.

### 6.5.3 'FRONT STAGE' DESIGN AREA OF EXPERIENTIAL SERVICE

There are numerous innovations arising in response to the active and involved communities of customers. The firms realize how much can be gained by forging close links with the community of customers – for some firms it is about PR and marketing, while for others about complementing some functions of the firm (such as QA) and sourcing NSD inputs from the players.

#### 6.5.3.1 *Marketing and customer relationship management*

As customers are becoming participants in service development (and in many cases also the investors), the maintenance of relationship with them becomes paramount to organizations. Customers are vocal and highly networked, and word-of-mouth and maximum willingness to pay form powerful forces. It can be argued, that any co-creation effort undertaken by the firm has a function of enhancing the customer relationship, as well as has a role in marketing of the service to wider audiences.

Innovations in this area pertain mostly to structuring of the communications between the firm employees and the customers – the official channel for communication is now only one of the many channels, majority of which rely on informality. User involvement competence feeds into this – studios deploy various means and channels for communication with their customers in order to

fully tap into their creative potential, or to ensure the maximum gains to the customer-firm relationship. The investment in those functions of the firm has increased greatly, which is reflected by the number of community managers and customer service representatives. Management and understanding of community's mood and sentiment has become widely practiced by collection of various metrics and data about the community (as well as talking to some key community members), together with controlling their expectations.

#### 6.5.3.2 *Value chain location and positioning*

Co-creation opens up new possibilities for value chain and positioning. Some firms choose to tap into their customers' creativity and make it into an important part of their value. Similarly, some firms choose to source many of their assets from the community, for instance skins for characters, weapons, or environmental assets, subsequently selling them in an on-line store and generating revenue out of it. Firms can reduce their costs of NSD by having some of its portions performed by the community (such co-creation also has marketing and customer-firm relationship benefits for instance, as well as helps to identify and vet best candidates for employment).

Therefore, more parts of the product can become produced outside of the firm by the customers (while other parts of the product can be sourced from software purchased from other firms, i.e. so called 'middleware'). In that scenario a videogame firm becomes a coordinator of external competencies. Such a case is a significant departure from the dominant model of game development, which relies on the production of all parts of the service in-house.

The role of co-creation in value chain location and positioning differs from firm to firm, and can occur both during the NSD, as well as after the launch. In both instances customers can be a source of free labour to the firm, helping the firm with ideation, creation of assets, testing, marketing and PR (Boellstorff, 2012; Pearce, 2009; Malaby, 2009; Castronova, 2005).

##### 6.5.3.2.1 *Strategic orientation*

Following on Cheng and Huizingh (2014), and Grant (2010), the strategy at OE is identified as maximization of resources. The firm embraces the attitude of making the most out of its existing NSD practices, as well as of the resource 'crowd' (which is seen mostly as a source of funds, not of knowledge or creativity).

This is also the most conservative strategy – the firm is relatively reluctant to open itself up to the inputs from customers.

This is contrasted by the practices of CCP, which strategy relies of innovation and entrepreneurship. Their service is a system for enabling players' innovativeness. Such approach is also embraced by the studio in its experimentation with production and delivery methodologies, new forms of involving community of customers, as well as fostering open organizational culture. Entrepreneurship of the firm, and that of the customers, is promoted (Chandra and Leenders, 2012).

CIG's strategic orientation is focused on marketing and building their game's presence in the market. They put a heavy emphasis on the communication with the customers, as well as the exchanges of creativity and ideas with them. Community, which is CIG's chief resource, plays an important role of both funders, as well as marketers in the firm's strategy. Complex integration of customers in the NSD has become commoditised at CIG, and the customers' participation in internal processes of the firm is among its chief value and revenue generating mechanisms.

#### 6.5.4 'CUSTOMERS' DESIGN AREA OF EXPERIENTIAL SERVICE

In the following section, customer experience of a game, as well as related innovations that stem from co-creation, are discussed. This section reflects the changing roles of customers not only in the NSD, but also their role as customers, members of the community and important influencers of fellow players' experience. Co-creation has profound effects on those dimensions, but it also influences how the firms design the role of customers into their services.

##### 6.5.4.1 *Users' interactions*

In online forums customers discuss the service, contribute ideas, and provide comments and feedback. With the firm listening in on those discussions, some interactions between customers become productive. Employees 'seed' the forums with topics for discussion, open contests for customers, or encourage customers to form teams and participate in various activities. The community becomes a more tightly-knit institution as the firm deploys various community-building programs and tools. Certain aspects of the service discussion can 'spill out' and take place in other places on the internet, via other channels – for instance, tactics

and strategy can be discussed on forums, or certain game-related propaganda can be displayed on various websites using Google AdSense.

Most innovation outcomes in this site pertain to the techniques and devices deployed by the firm to facilitate the formation and cohesion of a community of customers. Firms provide framework for those rich interactions among users to emerge – examples here include dedicated forums, systems of achievements, extensive moderation, player councils and player-volunteers, contests, TV-style shows, as well as gatherings and festivals. Many of those techniques also serve the purposes of marketing and PR, but their role in providing context and culture for the community of customers, and their interactions, is undeniable. The focus on those practices among videogame firms is an innovation to many organizations, and represents a significant new site of resource allocation. A chief innovator in that field is CCP, which firm employs majority, if not all, of the devices for structuring and shaping of users' interactions.

#### *6.5.4.2 Content of service and its genre*

Content of a service is probably among the sites most affected by co-creation. Many videogames are designed to allow a degree of emergent gameplay (Nardi, 2009), which relies on customers' coming up with new ways of interacting with the service. Customers are happily providing such content of service as writing, designs, art assets, balancing to game systems and many more. Some activities of customers, such as organizing into guilds, clans and communities can also be seen as contributing to the content of those services, that rely on social and multiplayer structures. Such manifestations of co-creation are relatively 'safe' for firms and do not disrupt internal NSD processes, as co-creating customers interact with the service artefacts and fellow customers, and not with the firm itself. Firms in those instances control the degree of co-creation centrally by such tools as licensing agreements, secrecy, and support shown to the co-creating customers. In the videogames industry cases studied above, customers provide ready-made assets, but also mods, improvements and extensive suggestions and feedback for the content of the game continuously and via different channels. Prime of those are forums and contests of various kinds. Players also vote on which features get incorporated in the game; that's how they affect content of the service.

#### 6.5.4.2.1 Service genre

Genre has a significant influence on the degree of co-creation that occurs. Genre denotes, among other things, the main mode of interaction between the customer and the service, and what the main premise of the service is, as well as what the customer's agency is in its context. Service platform has a similar strong effect on co-creation – because of proprietary interfaces (as opposed to much more accessible architectures and access to programming tools of PC operating systems), it is much harder for players to tinker with console or mobile videogames. Moreover, mobile and consoles attract more mainstream audiences, which are composed of more 'casual' players, who have no interest in forming cognitive communities of customers (which are necessary for co-creation; Burger-Helmchen and Cohendet, 2011). In this thesis, we will not delve deeper in the differences between platforms and their role in co-creation, as all cases studied operate on the PC platform.

In the case of OE, the game genre is role-playing, which focuses on a story-driven, single player experience. Those two characteristics heavily influence, in a negative way, the game's propensity to be co-created. Single player nature of the game, as well as its focus on the story mean, that this game is consumed like reading a novel – it is a private, aesthetic experience that is difficult to share with others. Players have no interactions with others in-game, and therefore the formation of social bonds between players is difficult. Also the discussion of the game's plot, which is its core feature, is something frowned upon in the customer communities – as revealing too much of it can 'spoil' the experience for others.

The case of CCP is the polar opposite of that. *EVE Online* is a massively multiplayer role playing game, structured around a sandbox design. What that means is that players have ample opportunity to interact with one another in-game, and that also enhances their interactions on the forums and via other channels. In a sandbox game design, it is the players' creativity and emergent gameplay behaviours or patterns that shape the game's dynamic and goals. The consumption of the experience occurs in a social network and is made meaningful by the presence of fellow consumers.

CIG is a massively multiplayer game where the social interactions among players lend the structure to the game as well as greatly enrich its experience.

Nevertheless, *Star Citizen* has elements of a story and narrative within it, as well as is not a sandbox game – instead, it is structured in accordance to the company's vision. The role of players as co-creators is thus more limited in the game itself, although possibility for emergent and innovative gameplay still remain – as we have seen even for the most structured MMO videogames (such as *World of Warcraft*), where customers still innovate new forms of gameplay (Nardi, 2010).

#### 6.5.4.3 *User interface with product and user capabilities*

User capabilities (i.e. what customers' agency is in-service, what actions and interactions the customers can undertake) are defined throughout NSD (during the ideation and prototyping phase). They are a resultant force of technological choices made by the firm, as well as of the programming competences of the studio employees. Strategic thinking also plays a role here – sometimes, as the result of using third-party software as the game engine, user capabilities must be limited and players will not be permitted to manipulate the game code in any way. Company's fears of players twisting and corrupting a particular IP and thus damaging its public image, is another reason to limit user capabilities. Modding falls into this category.

Different videogames allow for different extent of user capabilities. For OE, despite the company's past support for modders, their current production is closed off to players' tinkering with it. Change in this category is represented by opening up user capabilities by studios and videogames that have not done that in the past, or which game genre or design would make that an unlikely decision.

Additional innovations are introduced by expansion of game experience to platforms different than original; for all videogames studied here that would mean mobile, and for few of them – console. Those expansions of platform are often the direct results of customer co-creation – who will create cheap and easy-to-make applications for mobile devices such as phones and tablets, allowing new dimensions and contexts of gameplay. Firms also notice that and develop 'companion applications' of their own. Using either player- or studio-developed applications customers can engage with the service in new ways.

User interface is also an aspect of the service that is most readily co-created by the customers. This is the most visible element of the service experience. Players have very strong opinions and preferences for user interface that they like to use,

and pressure the studio to take their wishes under consideration. We observe extensive manipulation of that interface by users for instance in the case of *World of Warcraft* (described for example in Nardi, 2010; Davidovici-Nora, 2009; Taylor, 2008), where players innovate not only new elements of user interface, but also thus introducing new gameplay behaviours. Firms can then choose to either support those innovations, integrating them with the service, or attempt to stem customers' manipulation of the interface, due to prevention of loss of control over the service.

## 6.6 Chapter summary

The majority of co-creation's outcomes in organizations pertains to the context of a firm and its functioning, as well as its market offerings, relationships with customers, and organizational culture. It is difficult to track the co-creation-resulting innovations when it comes to the service itself. This is because co-creation's impact on NSD in creative industries is largely co-located with hidden innovation, as well as due to the nebulous nature of the concept 'content' in the experiential service context. Great many innovations introduced by co-creation also tend to be incremental improvements to existing services or parts of it, and the firms don't keep track of which idea originated externally, and which was sparked internally. Overall, it is safe to summarize that co-creation rarely results in radical innovations – and for other cases its outcomes on innovation are difficult to track (unless formal methods are used).

Still, the data gathered and analysed in the course of this research confirms the observation that customers provide firms with numerous ideas, and the firms benefit from them in their own creative practice. Those ideas are reconfigured, changed, developed before they reach implementation in NSD. They are very rarely integrated with the service in their original form (for instance, that happens during the contests or when community-made assets are purchased from online stores). Such direct sourcing of ideas and their assimilation occurs only in situation, where the intellectual property and copyright context can be clearly resolved, i.e. where the transfer of property is transparent and understood by both sides.

Alternatively, customer inputs aren't used for their NSD value, but instead for their benefits for customer-firm relationship. In that scenario, firm

communicates extensively with its customers, informing them about NSD and other aspects of a service. The internal functioning and processes of the firm become part of the service experience, with the firm revealing some of its ‘back-office’ processes to customers, and inviting their idea-centric inputs (O’Hern *et al.*, 2011). At the same time, the firm maintains tight control over the selection of those inputs (O’Hern and Rindfleisch, 2010).

The innovation outcomes are also explained by the dual nature of co-creation practice itself, as well as all of its inputs and outputs – namely, existing both as socio-cultural and market phenomena. Co-creation also has the potential to affect actors other than the firm – especially the community of customers as well as business partners – but when it comes to the organization itself, the eight sites outlined in this section capture all manifestations of co-creation’s impact on innovation. Those sites are affected significantly by the customer inputs on one hand, and on the other by the organizational attempts to tap into customers’ community as a resource (for either NSD, or customer-firm relationship). The particular sites where innovation is affected by co-creation depend on firm’s unique competences for co-creation, as well as the role of co-creation in its organizational culture, as well as its funding arrangements. In particular circumstances of these, the impact of co-creation on innovation in particular sites will be different.

We observe how various co-creation approaches that firms adopt translate themselves into NSD and innovation outcomes. Those approaches hinge on a number of factors, such as the issues of control (O’Hern and Rindfleisch, 2010), the calculation of costs and benefits (Hoyer *et al.*, 2010), service innovation methodology (Voss and Zomerdijs, 2007; den Hertog, 2000) stage in NSD (Piller and Ihl, 2011), community profile (Burger-Helmchen and Cohendet, 2011), organizational culture (Malaby, 2009) and funding arrangements (Ordanini *et al.*, 2011). Companies deploy those approaches based on their organizational competences for co-creation and institutional arrangements, but also those competences develop and are established in the course of co-creation.

In this chapter, we also drafted the interdependencies between research questions and data. First research question is answered by looking to organizational competences for co-creation, as well as institutional arrangements

which influence a firm's propensity for and style of co-creation. Second research question is answered by looking at institutional arrangements in particular, which determine the way in which customer inputs influence organizations. Here we also discussed structured, semi-structured and loose ideal types of co-creation practice, which also capture dynamics relevant to the second research question. Finally, for the third research question we map various sites within a firm which are affected and transformed by co-creation, and which also form institutional conditions for co-creation. We track the effects of a firm's propensity for and style of co-creation on those changes by matching the strength of competences for co-creation with degree of transformations to a particular site as captured in the data (Table 9 and Table 10).

Table 13 below summarizes the organizational practices described in the cases and shows how these are categorized in terms of their function and meaning for co-creation.

<b>Organizational practice of co-creation</b>	<b>Examples of practices</b>	<b>Function in co-creation</b>	<b>Meaning for co-creation*</b>
<b>Structured (illustrated by Case Alpha)</b>	Inputs only from customers who crossed a crowdfunding threshold. Specific guidelines for what kind of customer inputs are accepted. Dedicated staff meetings for processing customer inputs. Targeted and individual methods of communication and iterating work with individual customers.	Adding order to co-creation – insertion into organizational routines. Minimizing disruptions stemming from co-creation. Visible to the customer community. Resolving potential IP issues. Making co-creation easier to adopt for organizations. Minimizing organizational changes stemming from the use of co-creation.	Relatively low degree of co-location with hidden innovation. Co-creation serving customer relationship gains. Co-creation format closest to crowdsourcing and classical open innovation practices (Chesbrough, 2011). Very often accompanies particular funding arrangements (the use of crowdfunding). Emphasis is on appropriation competence. Presence of top-down coordination in the company.

***Semi-structure  
d  
(illustrated by  
Case  
Beta)***

<p>Use of cross-disciplinary teams for discussing player inputs.</p> <p>Use of Scrum project management method and customers as its stakeholder.</p> <p>Dedicated employees for coordinating player inputs.</p> <p>Champions for customers' inputs.</p> <p>Use of player councils and volunteer programs.</p> <p>Prominent function of fan gatherings.</p> <p>Social interactions with customers.</p>	<p>Flexibility and emphasis on NSD inputs. High quality of customer inputs. Extensive integration with the internal practices and processes of the firm.</p> <p>Requires assimilation into business model and firm strategy. Gains to customer relationship tend to be a by-product of customers' involvement in NSD.</p>	<p>Optimal balance between co-creation for NSD inputs and customer relationship gains.</p> <p>Co-creation in market niches.</p> <p>Organizational culture is of particular importance. Hidden innovation present to a moderate degree. High integration competence.</p> <p>Lateral coordination of NSD in organization among the teams.</p>
<p>Individual employees as gatekeepers for customer inputs.</p> <p>Culture of respecting and working with the customers.</p> <p>Ongoing crowdfunding effort.</p> <p>Crowdfunding linked to business model, monetization of customer relationship by subscriptions.</p> <p>Visits from customers to the studio.</p> <p>No marketing budget.</p> <p>High visibility contests (formal co-creation elements).</p>	<p>Overlapping of co-creation with hidden innovation.</p> <p>Relative lack of structure to the practice, customer inputs occur 'under the radar' of formal recognition. Individual employees form co-creative relationships. Customer inputs are processed ad hoc in most part. Reliance on the skills of employees and their judgment of usefulness of customer inputs. Managing IP issues by only formally accepting solution-centric inputs.</p> <p>Focus on marketing-related outcomes of co-creation.</p> <p>Geographically dispersed organizational structure of high individual autonomy; weak day-to-day project coordination.</p>	<p>Significant gains to the customer relationship (positive word of mouth and increased willingness to pay).</p> <p>Excellent user involvement competence present.</p> <p>Organizational culture and funding arrangements very influential on this co-creation practice. Highly innovative model, unproven game development practice.</p> <p>Reliance on informal methods of co-creation.</p>

***Loose  
(illustrated by  
Case  
Gamma)***

**Table 13.** *Table listing organizational practices of co-creation, together with examples, as well as their function and meaning for co-creation. (\*) For the list of firm sites affected by co-creation, see Table 9.*

Table 13 brings together the observed practices of studios from Chapter 5 with their classification into three ideal types of co-creation. It also discusses the function of those practices, meaning the kind of effects that they trigger in a firm's assimilation of customer inputs. Furthermore, the meaning of those practices for the classification of co-creation – as either formal or informal, for NSD or customer relationship gains – is signalled. We move on to discuss the meanings of various co-creation practices and their contributions to the theoretical perspective in Chapter 7.

Chapter 6 summarized the results of the empirical study presented in Chapter 5, as well as related them to the research framework. This framework is used to explain the interdependencies between two groups of phenomena that shape co-creation's impact on innovation and NSD in experiential services – which are competences for co-creation and institutional arrangements.

## 7.DISCUSSION

This chapter discusses the key findings arising from the research presented in this thesis. They fall into two realms. Firstly, into that of theoretical, academic contributions, which build on the existing literature on the issues of co-creation, new service development, experiential services and innovation. Secondly, this chapter also delves into the results that concern industry practitioners, and which have an impact on the praxis within the videogames industry, as well as in other creative industries (and beyond).

### 7.1 Reflecting on the objectives

Reflecting back on the goals and aims of this thesis described in Chapter 1, we evaluate the extent to which they were achieved. Following on Chapter 1, the main objectives of this research were:

- i. *To study the role of customers in innovation in experiential services.* Many discussions of co-creation focus on the setting of technology-intensive products (Kohler et al., 2011a and b; Gangi et al., 2010; Füller et al., 2008), or on contributions from lead users (von Hippel, 2008; 2005; 1988; Luthje et al., 2006; Lakhani and von Hippel, 2003). This thesis described in detail the co-creation with larger and less specialized groups of customers, following on communities of consumption (Jäger et al., 2010) and cognitive communities (Burger-Helmchen and Cohendet, 2011). As such, its rich accounts of those practices form a valuable contribution to academic knowledge.
- ii. *To focus on the firm in the account of co-creation practice.* Majority of the accounts of co-creation tend to analyse the customer or user community. This thesis managed to investigate in detail what happens to the firm in co-creation, and what kind of control it has over its practice. The contributions of this thesis fill the gaps in existing literature, advancing academic understanding of various practices of co-creation. To that end, we proposed structured, semi-structured and loose types of co-creation practice. Many authors have described co-creation in various settings (mostly in the context of IT-mediated new product development), but their contributions are dissociated and require integration in a single conceptual framework. We feel that our framework for understanding the

co-creation's practice (presented in Chapter 4) is universal and applies to a wide spectrum of organizations in various industries.

- iii. *To gain detailed insight into the works of videogames industry.* This, largely empirical and data collection goal, has been successfully fulfilled. The thesis has presented a rich account of the practices of thirteen different firms in the videogames industry, which is notoriously difficult to access (O'Donnell, 2014; Banks, 2013).
- iv. *To study customer innovation in creative industries, and its impact on market performance.* This objective was not fully realized. We studied customer innovation in creative industries, observing its relation to either radical or incremental innovation, but we did not link that to the market performance. In order to gain insight into market performance changes stemming from customer innovation, we would need to be able to precisely track which innovations came from the customers, and which originated internally. This, as we demonstrate in Chapter 5, is something that even the studios themselves don't keep a track of, and thus this data is impossible to obtain.
- v. *To propose a working definition of co-creation.* This thesis aids in the clarification of co-creation in the context of some closely related to it phenomena. A working definition of co-creation was proposed in Chapter 2 to differentiate it from service-dominant logic (Vargo and Lusch, 2004), crowdfunding (Ordanini et al., 2011), and crowdsourcing (Estelles-Arolas et al., 2012). Furthermore, as numerous studies exist focusing on the managerial challenges of open innovation in R&D-driven settings (Sieg et al., 2010), a need arises to build a matching body of knowledge for co-creation's management. This thesis adds to that body of knowledge, shedding some light on co-creation-related managerial practices in the videogames industry.
- vi. *To better understand how the firm is transformed by co-creation.* Apart from reconfigurations of conceptual approaches and frameworks, this thesis also contributes empirical evidence for mapping and explaining the impact of co-creation on NSD (Sundbo and Toivonen, 2011) and other functions (sites) of the firm, as outlined in Chapter 6. Its findings can be extrapolated to other creative industries, as well as to other commercial

settings. Some contributions originally belonging to other fields, such as communication research (Gustafsson et al., 2012), have high relevance for the discussion of co-creation as part of innovation studies.

- vii. *To identify the main characteristics of a firm that influence co-creation practice.* This point forming the bulk of this thesis, we have identified four competences for co-creation (user involvement, integration, assimilation and disclosure) and two institutional arrangements (organizational culture and funding arrangements) which influence co-creation practice, as described and demonstrated in Chapters 5 and 6.
- viii. *To enhance our understanding of co-creation and its role in firms, and in NSD and innovation in particular.* This objective has been achieved throughout this study, and is captured in the working definition of co-creation and the entirety of this thesis' contributions.
- ix. *To clarify the issue of co-creation's relationship to radical innovation and incremental improvements, and to explore the extent of co-creation occurring via formal channels versus its co-location with hidden innovation.* We have established co-creation's affinity towards incremental innovation (improvements) in services. In the data, we haven't seen much evidence of radical innovation stemming from co-creation. Moreover, we observe that a lot of co-creation, when it's not taking place via formal channels (such as contests or purchasing of assets from stores), is linked to hidden innovation. Co-creation largely resides in the creative exchanges between customers and employees, and the firm does not keep official track of those exchanges.

In this chapter, five key findings and contributions of the thesis are presented in turn. Academic contributions are discussed alongside practical findings and tools that can be of use to industry practitioners. Chief of them is the conceptual framework, which helps to describe the practice of co-creation for firms by considering their competences and institutional arrangements (such as the use of crowdfunding and organizational culture). This framework also offers an explanation for the way in which co-creation's outcomes are determined by, and have an impact on, various functions of an organization.

Key findings are as follows:

- a. The outcomes of co-creation fall into two types: for relationship and for NSD. Firms can use co-creation for either one of these outcomes, or for both of them.
- b. Two forms of co-creation are identifiable on high level of organizational practices: informal (co-creation performed 'on the job', related to hidden innovation) and formal (co-creation mediated by the use of tools, formal channels, having a structure and regulated in some way).
- c. Firms are characterized by competences for co-creation – chief of which are user involvement and integration. Other competences include assimilation and disclosure.
- d. Outcomes of co-creation are visible in eight sites of the firm, and those sites also constitute institutional/organizational conditions for it. They are organizational characteristics that both shape and are shaped by co-creation.
- e. Organizational culture (explained as organization's history, employees' attitude towards co-creation, and firm strategy) and funding arrangements (with particular attention to the use of crowdfunding) are the most important environmental catalysts for co-creation in a firm.

Those findings are covered in turn in this chapter, explaining both their academic and practical contributions.

## 7.2 The importance of practice and competence

Discussing the practice of co-creation, as well as related to it competences for co-creation, is a both important and practical solution in the light of this research. As demonstrated throughout this thesis, co-creation is a multifaceted practice, which is accompanied by numerous transformations to both how organizations function, as well as to how they structure and manage their relationship with customers. Finding a single, prescriptive definition that would capture the main domains of co-creation is not possible. This is especially true, given the hidden nature of co-creation, and its co-location with 'under the radar' inputs to a firm's NSD.

Observing co-creation practice in the context of different firms sheds the light on how co-creation works in the industry as a whole. Co-creation in firms occurs as a set of practices, some of them visible, some formally articulated, some

dependent on the strategic planning of the firm – and some not. Those practices stem from a firm's competences for co-creation, as well as from institutional arrangements of that company. Those practices escape categorization as formal routines, processes and prescriptive chains of events. The organizational context within which they occur is itself changing in response to them, making establishing any point of reference difficult. As co-creation is deployed, it affects the eight sites of a firm, progressively and iteratively changing its established routines and practices, and replacing them with the new ones. That's what Potts (2009) meant when he described co-creation as shifting the equilibrium of service development, leading to the establishing of new market and organizational practices. Studying prescriptive co-creation practices is made hard by the erosion of frames of references – what the firm routines are, what are the boundaries of the firm, who the customers are in the context of production, what are the roles of employees – which accompany co-creation practice.

Instead, it makes much more sense to talk about the degree of structure of any such co-creation practice – which is the approach embraced by this thesis. It allows to find common elements among the otherwise highly heterogeneous landscape of co-creation across firms. We also use it to make sense of various assemblages of isolated practices within a particular firm which come together to form its co-creation practice.

Competences for co-creation serve a similar function. As particular practices of co-creation are difficult to pin-point, as well as they may exist or not in a given firm (co-creation can be a highly unstructured, ad-hoc practice), it makes more sense analytically to focus on describing not those practices of co-creation, but on what determines them. Competences for co-creation affect whether a firm will engage in co-creation at all, and if so, what practice of co-creation will that be (as observed in the three cases discussed in this thesis – their practices vary in accordance to the strength of various competences that they have). Competences for co-creation therefore allow us to make sense of a highly elusive and chimeric phenomenon in firms.

### 7.3 Two types of co-creation outcomes: for relationship and for NSD

Where applicable, the literature on co-creation focuses on the outcomes of co-creation for new service development. But an equally significant outcome of co-creation is its impact on relationship between the firm and its customers. This dimension has been hardly discussed in the literature in systematic way, largely ignored by chief contributors such as Hoyer *et al.* (2010), von Hippel (2007; 2005; 1988) and O'Hern *et al.* (2011). Co-creation should be framed in the context of a relationship between firms and not only communities, but with individual customers (Gummesson, 2000; Grönroos, 1994). In their discussions of co-creation in videogames industry, Banks (2013) and Malaby (2009) point towards the significance of the relationship benefits stemming from successful co-creation. They make no attempt at framing it as a possible strategically-planned outcome of co-creation. Clear distinctions between the two types of co-creation's strategic outcomes have yet to be made: this constitutes one of the main contributions of this PhD.

#### 7.3.1 DISCUSSION

The research collected in the course of this thesis demonstrates, that firms indeed can and do engage with their customers in co-creation; and that they may do so not to obtain their inputs to NSD, but just to reinforce the customer community loyalty and affect for the brand and firm behind it. This is contrary to the established wisdom in the field, which focuses almost exclusively on co-creation's benefits for NPD or NSD (von Hippel, 2007; 2005; Hoyer *et al.*, 2010; O'Hern and Rindfleisch, 2010).

Framed in such way, the actions of studios observed in Case Alpha (Obsidian Entertainment), as well as in Case Gamma (Cloud Imperium Games) make strategic sense for a firm. Obsidian Entertainment does not seek ideas from the community of customers other than to fulfil obligations stemming from promises made during crowdfunding campaigns. Those promises themselves were an effort to raise enthusiastic support from potential funders (i.e. to generate positive word of mouth and to increase backers' maximum willingness to pay; Gebauer *et al.*, 2013). Such approach to co-creation is absent from the literature,

and yet it must be considered as an important and strategically consequential factor influencing co-creation practice.

The content of customer inputs pertains to mundane elements of the game, ones which are either entirely superfluous to the game experience itself, or ones which would be very easy to produce in-house by the firm employees. In fact, it is more resource-intensive from the organizational point of view to obtain those mundane inputs from the outside of the organization (due to the challenges associated with the management of unruly community of players, enforcing deadlines and appropriate formats of deliverables, providing codified guidance to the customers etc.) as compared to simply developing them in-house. The explanation for choosing to do that from the perspective of firm strategy is exactly to produce relationship benefits from such exchanges. Similar dynamic is observed in Case Gamma, at Cloud Imperium Games – the studio is thoroughly engaged in crowdfunding and requires a continued support and ‘buzz’ among its customers, who generate positive word of mouth and increase the potential funders’ maximum willingness to pay.

On the other hand, player inputs can and do have real value for NSD in some cases and firms. Almost universally in the videogames industry for instance, player inputs are welcomed by firms in functions such as quality assurance (we see that for all three cases studied in the course of this research). Another such areas are the creation of non-critical art assets by the players (Case Alpha), or writing of game’s underlying story minutiae by volunteers (Case Beta), as well as in community management and building (Case Beta). Those inputs are genuinely useful to the firm, and constitute a quantifiable contribution to the game development effort (directly translated into man-hours and resource expenditure). Engaging in co-creation with players is a viable method for a firm to obtain information about players’ need-related knowledge (von Hippel, 2007; 2005; Luthje *et al.*, 2006; Lakhani and von Hippel, 2003), as well as to source high quality elements of the game from their community (Dahlander and Magnusson, 2008; von Krogh and von Hippel, 2006). Still, the argument for that type of co-creation outcome is far better developed in existing literature, hence less attention is devoted to it in Chapter 5.

Extensive communication between studio employees and members of the customer community serves to bolster close and positive relationship between the firm and its customers, drawing customers into 'open development' experience, where they can see how their anticipated service is being developed, as well as, to an extent, to be a part of the process. From the interviews we see, that the firm does not require the inputs of the customers in and on themselves in many of its functions. Instead, they are being accepted exactly for the purposes of enhancing the relationship between the customers and firm. Furthermore, such dynamic can be accompanied by the lack of marketing budget and the reliance of the word of mouth (Gebauer *et al.*, 2013) and market expansion (Whitla, 2009) benefits stemming exactly from co-creation for relationship (as observed in Case Gamma).

This thesis assists in framing co-creation in the notions of experiential services, where relationship experience for co-creating customers determines the value of a service. Conceptually, it brings closer the notions of co-creation and experiential services, as well as proposes an alternative to service-dominant logic by Vargo and Lusch (2004).

This thesis demonstrates that firms can engage in co-creation hoping to achieve either relationship, or both relationship and NSD, types of outcomes from co-creation. Some firms engage in co-creation overwhelmingly for relationship gains, while others are also interested in the benefits pertaining to NSD. Although not illustrated by the empirical evidence collected for this study, a firm engaging in co-creation purely for NSD benefits is also admissible, although rarely encountered in practice (due to the high value of positive WOM which is a by-product of a successful co-creation experience; Gebauer *et al.* 2013). Such form of co-creation would resemble a crowdsourcing approach (firm's open call for contributions from a crowd, which does not need to be a community of customers; Saur-Amaral, 2012; Estelles-Arolas *et al.*, 2012), or indeed would be something belonging to the realm of open source software development (where, in absence of corporate entity, WOM is not a supporting function to sales and expanding market reach; Dahlander and Magnusson, 2008; von Krogh and von Hippel, 2006).

### 7.3.2 CONTRIBUTION

Gustafsson *et al.* (2012), writing on the importance of communication between firm and customers for product success, identified ‘content’ as one of four dimensions of that practice. They noted that this dimension, reflecting the information transmitted during communication between customers and firms, can focus on strengthening the relationship rather than improving NSD (due to the customers’ difficulties in expressing their needs, in line with observations from von Hippel, 2005, and others). Gangi *et al.* (2010) noted various relationship and communication issues accompanying customers’ involvement in co-creation, as challenges to overcome. They do not frame them as an outcome, and the present study will extend analysis of the outcomes of co-creation by going beyond the outcomes pertaining to NSD/NPD (as discussed in, for instance Hoyer *et al.*, 2010; Dahlander and Magnusson, 2008).

The notion that the enrichment of the relationship between the firm and its customers is a legitimate and worthwhile outcome of co-creation is something that has been more obvious to the industry practitioners, while eluding the researchers in the fields of co-creation or user innovation. Following on Gebauer *et al.* (2013), we see how mismanaged co-creation practice or experience can cause the relationship to sour, generating negative word of mouth, and decreasing customers’ willingness to pay for a firm’s offerings (or contribute to its crowdfunding effort). We also build on the work of O’Hern *et al.* (2011), discussing open source software development projects, whose framework enables contextualization of idea- and solution-centric inputs and their role in co-creating organizations. This framework is here expanded to settings where a corporate actor is present (and thus where the relationship between a firm and its customers can occur). We show that idea-centric inputs here can be mapped together with the co-creation that enhances relationships, while solution-centric inputs correspond to co-creation for NSD (which, in most cases, also has relationship outcomes).

A challenge faced by many firms in creative industries is maintaining control over creative content while building better customer relationships through co-creation. In most cases it means navigating the narrow straits between von Hippel’s (2007; 2005) user innovation (which means ceding high degree of control over content

to the customers) and Yen *et al.* (2004) co-production of services (which is common among experiential services in creative industries). The former is problematic for firms, while the latter often unsatisfactory to customers and insufficient to generate relationship gains. Hence we present in this thesis empirical data that demonstrates co-creation for relationship as an answer to that problem; we describe forms of customer co-creation that result primarily in relationship gains in videogame firms, allowing them to avoid both extremes mentioned above.

## 7.4 Two forms of co-creation: informal and formal

In the empirical evidence presented in Chapter 5 we observe a large proportion of exchanges between the community of customers and firm employees occurring informally, under the radar of official classification of ‘community management’, ‘customer service’, or ‘marketing and PR’. Such rich and vibrant links that cross the boundary of the organization and are rooted in wider communities (geographic or focused around a particular field of interest) have been described by Cohendet and Simon (2007). They have also been hinted at by Naranjo-Valencia *et al.* (2011) in the discussion of ad hoc organizational culture (characterized by high flexibility and external focus) as promoting innovation.

Those exchanges exist independently of the other, more structured and officially recognized (and planned) forms of co-creation that take place in organizations – represented here by activities such as contests, votes, or use of toolkits (described by Kohler *et al.*, 2011a and b; von Hippel, 2005). The existing literature does not account for that dichotomy; it also does not account for the informal type of co-creation – save for its links to ‘hidden innovation’ described by Miles and Green (2008).

Therefore, the impact of informal co-creation on organizations, and its role in relation to formal co-creation, is unaccounted for prior to this research. This is also an important contribution from the perspective of the industry practice – those two forms of co-creation have different impact on NSD and are managed in different ways – for formal co-creation by top-down, managerial action and strategizing; and for informal co-creation by bottom-up forces of changing attitudes of employees, job responsibilities and fostering of interpersonal links between employees and customers.

### 7.4.1 DISCUSSION

Empirical evidence suggests that the main body of co-creation occurs via the informal co-creation practices, when the employees of the firm interact with the customers, or simply are exposed to customers' ideas, internalizing and later reconfiguring those ideas (Bhalla, 2010). In Case Gamma in particular, firm's employees on all levels of organization are encouraged to frequent forums where various features and aspects of the service are in-depth discussed by the players, and to be active members of those forums. Feedback provided there by the customers, their suggestions and expressions of their needs (factual or perceived) seep into the minds of the employees, thus finding their way into the organization. Those ideas are introduced into the NSD resulting from those numerous and discrete interactions, that are difficult to track even for the employees involved in them. Hence the attempts to locate the origin of an idea that resulted from such informal co-creation within a service would be futile and, as the phenomenon of 'seeding' of artist's mind' with ideas from various sources is relevant to all creative endeavours.

Therefore, the customers' inputs that find their way into the organization via the informal co-creation practice, are in overwhelming number of cases recombined by the employees, i.e. they are not assimilated in their original form. Instead, they circulate through the organization for some time, being gradually modified by the employees (for various reasons: for instance, to bring their quality up, or to change their technical characteristics such as programming language or number of polygons). This is not a practice that is planned or purposefully deployed by an organization – instead, that is the path that customers' inputs take in the context of weak routine for processing of customers' inputs (Naranjo-Valencia *et al.*, 2011).

Formal co-creation practices, on the other hand, are characterized by either a toolkit approach to user innovation (von Hippel, 2005) or by a dynamic native to crowdsourcing (Estelles-Arolas *et al.*, 2012; Saur-Amaral, 2012) where an open call for submissions is made, with clear specifications and guidelines provided. In those cases, the firm formally invites its customers to participate in its service development process, although in the role and according to the rules set by the studio. Normally, formal co-creation is also accompanied by an internal routine

or mechanism for processing of co-creation customers' inputs and thus assimilating them into firm's practices.

This is for instance observed at Case Beta, where dedicated employees, studio practice (bi-annual summits with selected players, and analysis and codification of their feedback), as well as the time and place during daily team routine (daily stand-up meetings in Scrum project management) are designated to deal with the inputs from the players. In Case Alpha we observe another aspect of formal co-creation: an organization preparing a call for submissions, together with providing the community with clear technical and artistic guidelines for submissions. In Case Gamma contests for player inputs are launched, where the nature of the task is clearly described, and the process and criteria of judgment are broadcasted and fully transparent to the public.

Furthermore, one additional conclusion arising from studios' use of these two forms of co-creation is linked to the management of intellectual property risk. Current framings of intellectual property (copyright in particular in the context of software products and services) are unable to effectively account for and regulate IP arising from co-creation (Bach *et al.*, 2008; Grimes, 2006; Humphreys *et al.*, 2005). Firms avoid situation where the ownership of aspects of their product or service could be challenged by the customers who engaged in co-creation, seeking now to benefit financially from their inputs. Therefore firms accept direct inputs from the players only when they can clearly establish the rules for players' involvement in NSD – for instance in contests, when using toolkits (if players use a toolkit, which is a piece of proprietary software owned by the firm, players waive all their rights to their creation's ownership) or in conditions of having signed an individual contract with the firm (most often a non-disclosure agreement; seen in the examples of player council or volunteer programs in Case Beta).

#### 7.4.2 CONTRIBUTION

This result provides empirical evidence to the dynamic described by Cohendet and Simon (2007) and Amin and Cohendet (2004), who discussed the flows of knowledge and creativity between professionals in a community of specialists. It also updates and expands the findings of Grantham and Kaplinsky (2005), who discussed the innovation practices in the videogames industry. The community

of specialists transpired the boundaries of the firm and was rooted in the wider local network of professionals (in the 2007 paper, the network was native to the city of Montreal). This thesis not only finds evidence for that process in informal co-creation, but also makes twofold contribution to Cohendet and Simon's (2007) findings.

First of all, such community of specialists, where sharing of creativity and knowledge occurs, does not have to be geographically co-located, and can be formed by people from all over the world at the same time. Secondly, customers of a firm, and not only fellow professionals, can be involved in such a community. This is because customers can have professional skills comparable to those of a firm's employees (customers can be professionals in some other field, simply, or can be students or self-taught aficionados; Cook, 2008). We observe the blurring of the divide between professional and customer, or between a media producer and its consumer, confirming the observations of Jenkins (2006, 2009), Kücklich (2005), Banks and Potts (2010), Hartley *et al.* (2013) and many others.

This finding also advances the observations of Burger-Helmchen and Cohendet (2011), Bhalla (2010), and von Hippel (2007; 2005) that make note of various forms of interaction between customers and a firm, but do not identify the dichotomy between formal and informal user involvement in the process. The use of social software and media described by the former falls into the realm of informal co-creation, while toolkits and company-run programs for lead users can be ascribed to formal forms of co-creation.

Moreover, various customers have different skills and motivations to become involved in NSD and innovation process (van Doorn *et al.*, 2010; Ebner *et al.*, 2009; Franke and Shah, 2003), and the opportunity to assign their involvement to either formal or informal co-creation sheds new light on the characteristics of those co-creating customers. Customers who engage in formal co-creation are likely to be characterized by more reward- and recognition-oriented motives, while customers engaging in informal co-creation are seeking more intrinsic and altruistic incentives such as sharing of knowledge, belonging to a community, or helping others. Literature on customer motivations for co-creation benefits from this evidence, for example Füller (2010) and Roberts *et al.* (2014).

Finally, the observations made in this thesis on formal and informal co-creation expand the classification of O'Hern and Rindfleisch (2010), which identified contribution and selection activities as chief characteristics of co-creation practice. This thesis puts those two activities in the context of organization practices, contributing empirical depth and evidence to O'Hern and Rindfleisch' (2010) work. Furthermore, the literature on co-creation so far has not accounted for formal and informal types of co-creation and does not account for the impact that these two types of co-creation have on organizations – instead, this is among the original contributions of this thesis.

## 7.5 Two main competences for co-creation

There are four competences that affect organization's ability to engage in co-creation with its customers, as well as to subsequently integrate customers' inputs with the internal practices of the firm. The identification of those competences, as well as their ordering by role that they play and the impact that they have on co-creation, is the third main finding of this thesis. It builds on the work by Piller and Ihl (2011), Lichtenthaler and Lichtenthaler, 2009, Zahra and George (2002), as well as Lettl (2007). Furthermore, there is a clear link between those competences and firm's ability to structure the co-creation experience for the customers (Gebauer *et al.*, 2013), contributing to the work of Gangi *et al.* (2010), Kohler *et al.* (2009), Dahlander and Magnusson (2008), as well as Voss and Zomerdijk (2007).

As described in more detail in Chapter 6, there are four competences for co-creation: user involvement, integration, appropriation and disclosure. Out of these, user involvement competence and integration competence are of greater influence on a firm's ability to co-create than the remaining two. User involvement competence describes a firm's ability to understand the community of its customers and of their potential for innovation, as well as the firm's deployment of appropriate interaction patterns in order to tap into their customers' knowledge and skills. This competence has been described in depth by Lettl (2007), and this thesis is confirming empirically his observations. Integration competence on the other hand denotes firm's ability to integrate customer inputs with the internal routines and practices - interestingly enough, some firms have established practices to do that, while others rely more on ad hoc

solutions (Naranjo-Valencia *et al.*, 2011). That is also linked to a firm's use of formal versus informal forms of co-creation, where formal co-creation is likely to be collocated with structured means of processing player inputs, and informal co-creation with ad hoc solutions.

### 7.5.1 DISCUSSION

Overall, open innovation competences have been described by various authors (chief of which are Piller and Ihl, 2011, as well as Lettl, 2007), but they lack specificity to the setting of co-creation, as well as require unification and contextualization in empirical evidence. User involvement competence is particularly well visible in the Case Beta, where the firm deploys various modes of communication and enables a number of methods for customers' providing input to NSD. 5<sup>th</sup> Planet Games devotes approximately 25% of its staff towards community management, showing the emphasis there is on understanding the market and the potential of the customers as co-creators.

On the other hand, CCP uses a large number of channels that enable information flow between the community of customers and the firm – starting with widely adopted ones such as forums, fan gatherings and community updates, all the way to rare and tailored solutions such as player councils and volunteer programs. Similar approaches are visible at case Alpha, where inXile Entertainment uses community's voting systems to better understand the needs, as well as to engage as large portion of community in co-creation as possible. Overall, user involvement competence denotes the communication and market intelligence functions of the firm (Whitla, 2009).

On the other hand, integration competence serves a function that is more than simply conveying customers' knowledge into the organization – it also ensures that there are places within the firm that can respond to that knowledge. Involvement competence concerns more operational aspects of the firm, such as design, quality assurance, support of existing software and community management (Gangi *et al.*, 2008; von Krogh and von Hippel, 2006). Essentially, involvement competence is a reflection of a management practice that has two aspects: that of internal communications and coordination. Those practices are visible for instance in Case Gamma, where Quality Assurance department prepares a weekly digest of most interesting player inputs and suggestions, as well

as sends this digest to selected people within the firm (mostly to team leads, so people who make low- to mid-level NSD decisions). In Case Beta, the firm has established routines within its service development cycle (reflected also by cross-disciplinary team composition) in order to analyse, discuss and act upon player inputs. Elements of communication routines also come into play here – for instance cabal form of organization will enhance the integration competence (Graaf, 2012; Grantham and Kaplinsky, 2005), or dedicated functions in project management software used by the firm (as observed in Case Alpha).

Those two competences combined form a firm's ability to structure and offer a co-creation experience to its customers, for which successful assimilation of customer inputs constitutes a *sine qua non* condition for a positive co-creation experience (Gebauer *et al.*, 2013). The clearest examples of this are visible in Case Beta and Gamma, where the firm treats co-creation as an extension of the service itself (in this example, the service is the videogame). In Case Beta, the unique selling point and capitalization on a market niche are constructed around customers' ability to both co-create the content of the service, as well as productively participate in NSD. In Case Gamma, experience of co-creation is currently the main offering of the firm, as the service itself is still in development. The success of such co-creation experiences hinges on the firm's ability to understand their customers, identify the best interaction patterns with them, as well as realistically and sustainably integrate their inputs with internal NSD practices.

### 7.5.2 CONTRIBUTION

The main contribution pertains to literatures on competences for co-creation. It brings the observations of Piller and Ihl (2011), Chatenier *et al.* (2010), Piller *et al.* (2009), Gangi *et al.* (2008) and Lettl (2007) into the context of co-creation, which is more specific than the nebulous concept of open innovation. To the best of our knowledge, there have been no studies of competences for co-creation in the academic literature. The findings presented in this work attempt to chart that new territory. Our thesis also confirms the findings of existing works on competences by providing extensive empirical evidence to back and illustrate them.

This thesis also brings the competences described by those authors together in a single framework, demonstrating their relative importance and impact that they have on organizations in the context of co-creation. For instance, Dahlander and Magnusson's (2008) three themes of accessing, aligning and assimilating are unified with Gangi *et al.* (2008) user innovation community (UIC) challenges for a firm, and Piller and Ihl's (2011) three competences for open innovation in firms are linked to Lettl's (2007) user involvement competence.

It is also demonstrated that organizations can structure co-creation experiences that have the potential to produce the two outcomes of co-creation outlined in the first finding of this thesis (i.e. customer relationship outcome and NSD-input outcome). Those experiences are seen as the extension, and thus a part of, the service being offered by the firm (especially if that service is experiential in nature, as it is the case for the videogames industry). This expands the literature on co-creation experiences by demonstrating that co-creation experiences take place not only in specifically designated by the firm spaces (such as virtual worlds), but instead they occur (or have the potential to occur) throughout all interactions between the firm and its customers. Literatures by Kohler *et al.* (2011a, b), Kohler *et al.* (2009), as well as Füller and Matzler (2007) and Füller *et al.* (2008) are expanded upon the most.

Nevertheless, the success of these experiences is reliant on the firm's two chief competences for co-creation: user involvement and integration. This is because co-creation works only if the firm understands its customers as co-creators, provides them with appropriate avenues and means of co-creation (or at least enables them to co-create by, for instance, making available the code or other proprietary elements of the service being co-created), and then successfully manages the practice of integrating those external inputs by coordinating them internally with the NSD.

## 7.6 Eight sites within the firm: both the conditions and outcomes of co-creation

Organizations are characterized by structures that enable co-creation, but which also are reshaped by co-creation. This reshaping occurs via practical and process dynamics, and stems from the customers' gaining insight and access to back office processes. Organizational structures, such as communication routines,

coordination and project management processes, and team composition undergo change in response to the opportunities present in co-creation (Bengtsson and Ryzhkova (2015; Sundbo and Toivonen, 2011; Miles, 2008; den Hertog, 2000). Those changes are also linked to the phenomena of participatory culture outlined by Jenkins (2009; 2006), who discusses the customers' increased interest in influencing and shaping the development of their favourite cultural products.

By the means of rich and continuous communications between the customers and individual employees of a firm, customers are given a direct line of influence into the back office processes of the firm (Edvardsson *et al.*, 2012; Voss and Zomerdijs, 2007; den Hertog, 2000). Firms capitalize on that trend as well, noticing both the customer relationship and NSD benefits stemming from it (for the latter, those can include co-creation of innovations, tapping into customers' need knowledge in experiential service development etc.).

Therefore, the same sites within the firm that are transformed by co-creation are also conditions for it, which outline the organizational and institutional circumstances in which co-creation occurs. Those eight sites have been described in detail in Chapter 6. They fall into three broad categories: back-stage design area of experiential service, front stage design area, as well as customers' design area (Voss and Zomerdijs, 2007).

### 7.6.1 DISCUSSION

Across all three cases we observe a pattern within organizations that corresponds to both the impact that co-creation has on firms, as well as that enables the functioning of co-creation in those organizations' context. This pattern is linked to the firm's opening up of its back-office processes and making them visible and accessible by the customers. In various firms this is done differently: devices vary from controlled, officially-sanctioned practices (for instance in Case Alpha we see the weekly official updates on what is going on in the studio, how the works are progressing, what the main production challenges are at the moment etc.), all the way to very organic, free-flowing means of communication between the customers and the firm employees (that is visible in particular in Case Beta, where there are strong interpersonal links between the customers and the employees of the firm, and many details on internal functioning of the firm are shared in the course of that friendship).

With that increased knowledge of what is going inside of the studio, customers have the ability to contribute in new ways – for instance they know the technical specifications of what the firm is working on, or they know which employee is responsible for a given feature of the service, and thus can contact him or her directly (Edvardsson *et al.*, 2012). As we see in Case Gamma, customers can create their inputs to the exact specification of what the firm is working on at a given moment on their own accord, or – as it is demonstrated in Case Alpha – the firm can officially announce those specifications, thus further helping the customers in their co-creation efforts. The release of game design documents, as we see in inXile Entertainment (Case Alpha) is an example of exactly that – making available documents that so far have been the sole domain of the firm and have been considered confidential.

Internal communications are affected by the presence of a new actor in them – in Case Beta and Gamma, new communication routines are established to account for the voice of the players in NSD (Edvardsson *et al.*, 2012). The content of the service is changing fundamentally as well, as the firms now attempt to integrate more room for ‘emergent gameplay’ (i.e. new patterns of interaction with the game innovated by the players) in their services’ design. Changes to service development practices (Sundbo and Toivonen, 2011; Enkel *et al.*, 2005), such as project management are very visible at Amplitude Studios – where slack times are being planned into the task milestones in order to account for unpredictable volume of player inputs and the organizational resources required to assimilate them. Financing and revenue model is also affected (Nenonen and Storbacka, 2010) – in Case Alpha and Gamma we observe players funding the NSD effort, thus become the lifeline of the whole company. Consequently, some of the practices of the firm must be made visible to the customers in order to entice them to back the organization financially by making them feel as factual members of the team.

The changes in the aspects of the organizations mentioned in the paragraph above are also at the same time the factors enabling co-creation to occur in organizations. If it wasn’t for the room for emergent gameplay in the content of the service, the co-creation in that site would probably not happen. If there were no slack times in project management, integration of customer inputs would be

much more difficult and unlikely. If customers were not informed about what the firm is working on and what are the technical specifications of its projects, they would not be able to contribute successfully to them at all. If the firm was unwilling to allow players' insight into some of their internal practices, the crowdfunding approach of raising finance would not be as successful.

It is therefore the eight sites of innovation that demarcate the institutional conditions and space within the organization where the co-creation plays itself out (Bhalla, 2010), and also where its influence is most visible and transformative of the existing firm structures (Kuusisto, 2008; Päällysaho, 2008). The transformation that occurs in the wake of co-creation is pushing the firm deeper into organizational conditions of co-creating with customers, strengthening its ties to the community of customers, integrating players' inputs more and more with its NSD (Sundbo and Toivonen, 2011). Thus co-creation becomes a defining feature of the firm's functioning as far as the eight sites of the firm as concerned (Nenonen and Storbacka, 2010).

#### 7.6.2 CONTRIBUTION

The literatures on organizational conditions for open innovation, as well as on innovation management, benefit from this finding. The observations presented here contextualize and narrow down the typology of fifteen sites of innovation in creative industries' firms proposed by Miles and Green (2008), validating them for the specific setting of co-creation. Empirical evidence illustrates the presence and impact of co-creation in various functions and departments of firms. The findings also confirm and expand on the observations of Edvardsson *et al.* (2012), den Hertog (2000) and Voss and Zomerdijs (2007) pertaining to the increasing influence of customers on back-office processes. More precise typology of possible effects of co-creation on back office processes is proposed by narrowing down of Miles and Green's (2008) model in that context. Worth noting is also relating of Miles and Green's (2008) phenomenon of hidden innovation to co-creation, and observation of co-creation's effect across organizations that result from informal, 'under the radar' co-creation.

Another significant contribution to literature is in the mapping of organizational and institutional circumstances in which co-creation takes place, as well as framing co-creation in firms as a strategy and planned business behaviour. Co-

creation is described as having a transformative effect on some characteristics of a firm (captured as the eight sites) that are pre-existing to it and which relate to its management of innovation practices. That builds on the literatures on management of innovation in service firms, i.e. Sundbo and Toivonen (2011), Miles (2008), Päällysaho (2008), and Kuusisto (2008).

This finding also is related to a number of implications for practitioners. It allows for enhanced understanding of firms of the organizational conditions that need to be in place before successful co-creation to take place. Furthermore, it assists in the anticipation of the transformative outcomes of co-creation on the said organization as well.

## 7.7 Catalysts for co-creation: organizational culture and funding arrangements

Co-creation in firms is not only determined by competences and the organizational conditions for co-creation as described in the findings two and four, respectively. The fifth finding postulates, that there are two more factors, referred to in this thesis as ‘institutional arrangements’: organizational culture and funding arrangements. They significantly influence whether a firm decides to embark on a co-created project. Those factors also influence the characteristics of such an effort. They function on a level different to competences or organizational conditions, as they reflect concepts of strategy and attitude of individuals comprising an organization (Cheng and Huizingh, 2014; Wexler, 2010; Martins and Terblanche, 2003). Nevertheless, although less influential than competences and organizational conditions, they form a palpable (and at times unarticulated within a company) force affecting co-creation in NSD. Their role and impact have been deduced from the empirical evidence and the observation of the practices of firms in the videogames industry.

The organizational culture is defined in this thesis as consisting of the following elements. First of all, strategic orientation (Cheng and Huizingh, 2014; Grant, 2010) – which denotes the organization’s attitude towards its customers as creative and innovative resource. Secondly, history of the firm – what approaches to NSD have allowed it to succeed; what methods and practices are proven, what are the positive and negative NSD experiences of the employees. Thirdly, the attitude of employees – how willing they are to collaborate with the customers,

how they perceive themselves in their professional roles, as well as what is their attitude towards customer community. Insights into the functioning of videogame studios are offered by Grantham and Kaplinsky (2005), Tschang (2007), Malaby (2009), Graaf (2012), and O'Donnell (2014).

On the other hand, funding arrangements are the other strong catalyst for co-creation in organizations. In particular, crowdfunding plays a role here. Crowdfunding is understood in this work as a form of social contract, when future customers, in exchange for their donations, become participants and members of a defined community of 'backers' (Ordanini *et al.*, 2011; Levenshus, 2010; Lipton, 2009). Backers are synonymous to most dedicated and devoted customers, who are characterized by their interest in internal practices of the firm, as well as who seek deeper level of involvement with the service than just consuming it. They wish to be better informed, as well as to be able to influence – in exchange for their trust and financial support – the development and final form of the service. Ordanini *et al.* (2011) provide a theoretical framing of crowdfunding.

#### 7.7.1 DISCUSSION

The impact of organizational culture (Naranjo-Valencia *et al.*, 2011; Martins and Terblanche, 2003; Barney, 1986) on co-creation is visible in all three cases, but in particular in Case Alpha and Gamma. In Case Alpha, strategic orientation of Obsidian Entertainment can be described as resource-oriented, i.e. focused on maximally utilizing the existing resources within the firm's reach (Cheng and Huizingh, 2014). The firm relies on the use of its customers both as sources of funding, as well as positive word of mouth. The relationship with the customers is important, together with sustaining the existing community and its interest. Such an approach promotes co-creation for relationship.

History of the firm acts to stem the adoption of co-creation, as the firm had been successful in the past by sticking to traditional NSD practices (i.e. NSD occurs without any inputs from the players). This is also linked to the employees of the firm, who are industry veterans and long-time game developers (Chatenier *et al.*, 2010). Attitude of those developers is positive towards the community of customers (Wexler, 2010), as they recognize their some of their skills (for instance their literacy in a game genre surpassing that of professionals themselves) as well as respect their fandom (Malaby, 2009). On the other hand,

employees are convinced of players' inability to articulate their needs, as well as their lack of knowledge of worked realities of game development. At inXile Entertainment, the firm employees to some extent adopt a stance of curators of player-generated inputs – an attitude that facilitates the organizational adoption of co-creation.

Case Gamma offers somewhat different perspective on organizational culture. First of all, Cloud Imperium Games is a young company (the current NSD effort is its first project), established and structured around the paradigm of open game development (where internal practices of the firm are visible to the customers). Many of the past successes of the firm's employees, and its leadership in particular, have been linked to establishing close ties to the community of customers (Edvardsson *et al.*, 2012; Saur-Amaral, 2012). The strategic orientation of the firm is marketing-oriented, meaning the primacy and focus on PR and customer acquisition, as well as on relationship-building activities (Cheng and Huizingh, 2014; Gustafsson *et al.*, 2012; Grant, 2010). A lot of emphasis is being placed on the positive and personal exchanges between all employees and the customers. The company is characterized by a strong culture of fostering those exchanges – and all new employees feel it (especially if their previous employer did not place as much focus on those exchanges), and many of them end up adopting it in their work routines.

The customers themselves are seen as valuable partners (Bhalla, 2010; Ebner *et al.*, 2009), thanks to whom the NSD effort exists and can progress (the company is sustained only from monies raised via crowdfunding effort). Their opinion and engagement are actively sought after by the firm via various channels and methods of engaging community of customers. Furthermore, some high production value television-style shows, as well as widely publicized contests for player inputs have been launched by the firm, soliciting customer inputs to NSD. Some top contributing customers have been hired as full time employees, further strengthening the ties between the firm and its customers.

Crowdfunding's impact on co-creation is again best visible in Case Alpha and Gamma (Beta does not use crowdfunding). In case Alpha, co-creation embraced by the firm flows out of the firm's decision to use crowdfunding in order to raise finance, which otherwise was unobtainable. Such a 'forced' crowdfunding effort

had to be accompanied by a degree of co-creation, at least for the relationship outcome (as outlined in the first main finding of this thesis). This is because crowdfunding establishes the expectation of customers to be involved and to have some stake in NSD. Whereas co-creation for NSD is more demanding of the organization and of changes to its organizational conditions, co-creation for relationship outcome is easier to institute organizationally, and has less transformative impact on the organization.

Case Gamma contains similar evidence: we observe how the need to maintain the influx of funds via crowdfunding forces the firm into continuous co-creation for relationship with its customers. Employees throughout the organization are encouraged to interact with customers (Chatenier *et al.*, 2010); the firm has many official channels established for keeping the customers engaged in the NSD effort – albeit more in the role of observers and commentators (providers of feedback on firm-developed new features) rather than factual contributors.

It is in the Case Beta, which does not use crowdfunding, where we see more focus on co-creation for NSD inputs (although the benefits stemming from co-creation to the relationship are also of importance to the firm; Edvardsson *et al.*, 2012; Whitley, 2009). This is linked to more central integration of co-creation in the strategic orientation of the firm, which focuses on entrepreneurship and innovation (Naranjo-Valencia *et al.*, 2011). In other words, this firm has adopted the strategy of fostering its close ties to the community of customers by providing them opportunities of participating in NSD and thus shaping the service to a degree unique to the industry (Sundbo and Toivonen, 2011).

### 7.7.2 CONTRIBUTION

This finding contributes significantly to the literature on NSD in creative industries, and in experiential services in particular, by showing the link between firm's culture and use of crowdfunding on the uptake of co-creation as a viable NSD practice. The impact of crowdfunding on NSD activities in firms has not yet been described in academic literature (the phenomenon of crowdfunding itself has been described by Ordanini *et al.*, 2011, and others). Similarly, putting co-creation together with crowdfunding in a single framework sheds new light on the proximity of those two phenomena and their common elements (which mostly reside in their impact on firm-customers relationships). By providing

empirical insight into the development of videogames, we also contribute to the works of O'Donnell (2014), Graaf (2012), Malaby (2009), Tschang (2007) and Grantham and Kaplinsky (2005).

This finding also relates to the role of firm strategy in shaping co-creation. It builds on the notions of Malaby (2009) about organizational culture in videogame studio, as well as on Cheng and Huizingh's (2014) works on strategic orientation. It demonstrates how co-creation becomes a strategic choice for a firm. Co-creation is not something that happens 'by the way' in firms – it needs to be managed and integrated into company's planning, as we see in all three case studies. That articulation of co-creation in firm's culture is a new addition to the body of knowledge on co-creation in innovation management literature.

## 7.8 Integrating framework

We would like to propose an integrating framework to demonstrate, on the basis of the data collected in this thesis, what the general conditions for co-creation's success or failure could be. Such framework functions most of all as a theoretical exercise, because in order to make it fully reliable much more research into various co-creation practices in different firms would be required. This could also be one of the avenues for future research – to test this framework in broader videogames industry settings, or in other industries (creative or otherwise). Moreover, as there are numerous permutations to the conditions accompanying co-creation in firms, this framework can be expanded and more detail can be added to it (which was outside of the scope or priorities of this thesis). Still, basing on the patterns and tendencies observed, a following framework is put forward (Table 14):

<b>Co-creation competences</b>	<b>Crowdfunding</b>	<b>Organizational culture</b>	<b>In what broader conditions should it be deployed?</b>
<i>All competences strong</i>	Yes	Culture cannot be negative to	When a firm needs the funds to develop its

		customer co-creation.	services and has experience in dealing with customer communities. All forms of co-creation are useful here.
<i>All competences strong</i>	No	Organizational culture should be positive towards co-creation – customers are deeply integrated into firm's functioning. Culture can't be negative.	When a firm wishes to integrate co-creation into its business model and when co-creation is its unique selling point. Use of player councils.
	Yes	Any organizational culture.	Must be formal co-creation, especially if the culture is less inclined towards co-creation. Use of contests and volunteer programs.
<i>Emphasis on involvement and integration</i>			
<i>Emphasis on involvement and integration</i>	No	Positive or neutral organizational culture.	Informal co-creation approaches are recommended, 'on the job' solutions. Target lead users (for

			inputs) and market influencers.
<i>Emphasis on disclosure and appropriation</i>	Yes	Any organizational culture.	Engage customers in late stages of NSD, quality assurance for instance. Formal and clearly defined co-creation channels: use of asset stores for example or release of design documents.
<i>Emphasis on disclosure and appropriation</i>	No	Positive or neutral culture	Use informal methods of co-creation and tap into the lead users, although the community cannot be tapped as a marketing resource.
<i>No competences for co-creation</i>	Yes	Positive culture only	High chance of failure and not delivering any service. Risk of big marketing failure.
<i>No competences for co-creation</i>	No	Positive culture only	High chance of failure and

	severe delays and disruptions to NSD.
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**Table 14.** *Integrating framework clarifying the conditions of co-creation.*

To reduce the number of possible permutations, user involvement and integration competences, as well as disclosure and appropriation competences, have been bundled together. This is because our findings demonstrate that user involvement and integration competence tend to co-occur in organizations strongly engaged in co-creation practices, while disclosure and appropriation competence tend to be second-order, supporting competences in the context of co-creation (but they still remain of consequence on co-creation practice, as reflected in Table 14 and in the case studies).

The above framework is designed to assist industry practitioners in deciding whether to engage in co-creation under particular circumstances. One challenge to its practical implementation will be the self-determination of the firms whether they have the required competences, as well as the ability to describe their own organizational culture in the context of co-creation. We believe nevertheless, that by following this thesis, those concepts are outlined and clarified also in practical terms, thus being of assistance to practitioners also in that dimension. Furthermore, this framework is designed to function with other findings of this study – and with the description of cases in particular. Cases discuss, based on the real-world data, the examples of various permutations of competences and institutional arrangements, and show what kind of co-creation approaches worked for those firms.

As this thesis focuses on the firms engaged in co-creation, it lacks empirical insight into the scenarios described by the two bottom rows of Table 14 – of co-creation failures. As such, those represent only informed guesses about what would happen if co-creation was attempted by a firm with no competences for it (the probability of such scenario actually taking place is another matter altogether). To fill that gap could be an interesting avenue for future research.

### 7.8.1 EFFECT IN VARIOUS SEGMENTS OF THE VIDEOGAMES INDUSTRY

As the sole focus of this thesis was the PC segment of the videogames industry, the effects of various competences, as well as institutional arrangements, on co-creation in other segments (mobile and console) is difficult to establish. In those segments, the software architecture of videogames is significantly more restricted, and users don't have opportunities or modifying the service. Also, due to the nature of the business models, competition, high entry barriers, business relationships and revenue streams (c.f. O'Donnel, 2014; Zackariasson and Wilson, 2012), companies developing games on console and mobile platforms are very reluctant to allow co-creation with their customers (as they follow the mantra of incremental innovations and delivering more of the same with their franchise-based games). For instance, in the console segment the developers are not allowed to have any interactions with the customers – this is done only by the officially designated departments of the publisher firms (so not even the developer firms at all). There also aren't many successful indie developers (see Chapter 3) in that space. Therefore, co-creation is much more scarce in those segments as compared to the PC, and plays less of a role in NSD overall. Still, a potential translation of Table 14 into the context of those other segments would require an additional empirical research and study.

## 7.9 Chapter summary

Co-creation is a unique approach to NSD and to management of innovation in firms, and its impact on organizations must be understood and mapped. Furthermore, organizational conditions for successful co-creation also need to be analysed, in order to help professionals in their strategic decisions on whether to adopt co-creation. Organizations and their relationships with customers are transformed by co-creation on many levels, and only by bringing the literature from various disciplines of academic knowledge together it is possible to account for them all, and to map their interplay.

Videogames industry, despite being the empirical focus of this work, is only one of the creative industries where co-creation is manifesting. In relation to various phenomena that have been discussed in this work so far, the changes to how creative services are produced pertain to settings other than videogames: to broadcasting, digital media, music, film, design... Still, numerous avenues for

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future research remain, most of all linked to the role of customers' community and their competences for co-creation – which remain purposefully unaccounted for in this thesis.

The following chapter offers the conclusions to this thesis, in which its key messages are reiterated, as well as avenues for future research are discussed.

## 8.CONCLUSIONS

We enhanced the understanding of the effects of co-creation on organizations, as well as accounted for the key factors shaping firms' propensity for and style of co-creation. We explored the entirety of organizations in a study that systematises and expanded on innovation scholars' knowledge on co-creation. We offered an insight into the main determinants of co-creation in a firm's NSD, and united differing typologies and taxonomies of that phenomenon.

We have studied thirteen firms in the videogames industry, accounting for various organizational changes, practices and attitudes accompanying co-creation. We conducted detailed case studies of those firm's practices, using methods such as interviews, participant observation, and analysis of documents and cultural artefacts. We observed the online and offline interfaces between firms and their customers, as well as internal affairs of firms – their practices, communication routines, and cultures. We have brought literatures from various schools together – innovation, co-creation, experiential services, crowdfunding, customer communities, as well as creative industries.

We found that firms can be characterized by four competences that determine not only their successful use of co-creation, but also the form of that practice. We identified funding arrangements and organizational culture as moderators of co-creation within firms – either promoting or inhibiting it. Our thesis accounted for the institutional conditions and transformations that accompany co-creation in various functions and sites of the firm, expanding the scope of the theoretical understanding of co-creation. We realized that a large portion of co-creation occurs in the informal interactions between the customers and the firm. Finally, we noticed the two possible outcomes of that practice, which are not mutually exclusive: co-creation can be used for both its value in NSD and innovation, as well as for its role in enhancing the relationship between customers and the firm.

Our findings mean that co-creation now is accounted for in a holistic manner, expanding on the incomplete view of innovation with customers in management literature. Various institutional arrangements, as well as organizational characteristics come together to shape it. Processes beyond innovation and NSD have been demonstrated to be affected and changed by it. This work at its core

demonstrates how co-creation is useful for generating of innovations in NSD by bringing in customers' inputs, but also how it by itself is an innovation in the organizations' functioning. The linking of those two dynamics of co-creation is the focus and the underpinning motif of this thesis.

Therefore, we propose the following representative answers to the research questions that guided our work:

***RQ1. What firm practices reflect its propensity for and style of co-creation?***

These characteristics are four competences for co-creation: user involvement, integration, disclosure and appropriation, as well as two institutional arrangements: organizational culture and funding arrangements. Together, these factors determine how likely the firms are to use co-creation in their strategy, as well as how successful they will be. The style of co-creation is also influenced by these factors – various configurations of competences, use of crowdfunding and organizational culture determine the form of co-creation. Furthermore, style of co-creation is also determined by the outcome of that practice desired by a firm – whether it seeks NSD inputs from customers, or customer relationship gains.

Firms are characterized by structured, semi-structured or loose co-creation practices. Those practices are in turn determined by the competences for co-creation that a particular firm holds. User involvement and integration competences tend to favour loose forms of co-creation, while assimilation and disclosure competence are linked to more structured practices of co-creation. Organizational culture and funding arrangements also are of consequence: crowdfunding shifts co-creation practice closer to structured characteristics, while organizational culture which favours interactions with customers pulls a firm towards more loose co-creation practices.

***RQ2. How do customer inputs contribute to a firm's co-creation practices?***

Customer inputs contribute to a firm's NSD and innovation in both formal and informal ways. An important manifestation of co-creation takes place in the individual relationships and interactions between firms' employees and customers. Ideas seep into the firm's environment that way without official detection. On the other hand, firms do deploy formal means of co-creation as well

– in many instances resembling crowdsourcing approaches. Those are planned and coordinated approaches often involving toolkits, guidelines, as well as legal agreements. These two forms of co-creation are accompanied by either structured, or ad hoc means of internally processing customer inputs by the firm (the integration competence). The way in which those inputs are assimilated determines how a firm's NSD and other characteristics (eight sites of the firm) will be transformed.

Depending on that degree of formality, organizational culture, and competence, co-creation practices of a firm can be of three ideal types: structured, semi-structured, and loose. For each of those types customers' inputs contribute to a firm's co-creation practices in different ways. In loose type, there is a heavy co-location of co-creation with hidden innovation. Semi-structured type displays high integration of co-creation with the business model and overall firm strategy. Structured type is accompanied by fewest organizational transformations and is most compatible with more traditional, 'losed innovation' approaches to NSD (where service consumers and producers are two separate groups).

### ***RQ3. How can we understand the effects of co-creation propensity and style on firms?***

The effects of co-creation are manifested in eight sites of the organization. Those sites have been derived from a framework by Miles and Green (2008), who demonstrate that innovation in creative industries is not just limited to the 'content' of a service, but to the wider functioning of the firm. Customer inputs, despite being intended as contributions to NSD and improvements to the service, have a wider transformative impact on the entirety of an organization. This is because processing those inputs and their assimilation within for example organizational culture and professional identities of employees are significantly different from how firms have functioned thus far. Today, firms develop their services not only *for* their customers, but also *with* their customers' active presence in that process (also as sources of funding). Co-creation frames that widespread organizational transformation. By providing their inputs to NSD, the customers trigger profound organizational transformations, and all

transformations of the firm affect its main function, which is innovation (Teece, 2007; Teece and Pisano, 1994; Cohen and Levinthal, 1990; Schumpeter, 1950).

Funding arrangements and organizational culture are equally transformed by the practice of co-creation in firms. Depending on the strength of various competences for co-creation, how value is generated by a firm is altered. Organizational culture (whether it is inclined positively or negatively towards co-creating customers) catalyses and reacts to those changes simultaneously. Those transformations are different depending on the type of co-creation practice deployed: structured, semi-structured, and loose.

There are activities underway in co-creating firms that need better understanding than what currently is offered in academic literature. Co-creation cannot be looked at as just occurring in the immediate context of NSD within firms – instead, and as we demonstrated in this thesis, its effects are seen across the whole organization. We addressed the weaknesses of existing knowledge on this challenge by linking together the concepts from various fields in a single theoretical framework. This was necessary in order to begin to understand co-creation's influence on organizations, as this influence is holistic, dispersed, and at times difficult to pin-point with traditional concepts and metrics. We also sought to expand on the limited common sense and received wisdom statements about how co-creation should be used in firms, in order to inform industry practitioners.

Co-creation, due to its proximity to hidden innovation, is a phenomenon difficult to study and capture in real world settings. The videogames firms are guarded and distrusting, and don't see the value of letting an observer into their midst. Despite that, we managed to offer an insight into the practices of three major, and a few minor videogames studios in a variety of positions within the industry. We described them using a battery of data collection methods. Their combination produced an account of co-creation from the perspective of all levels of organization, as personnel in various positions have been interviewed throughout this study.

Co-creation, due to its potential in both socio-cultural, as well as market spheres, will only increase in importance. We will observe that in creative industries and

beyond. As organizations learn to share their findings, and as our understanding of co-creation advances (also as organizations shift their practices and commit to co-creation), it will be less of a mystery and risk, and more of a permanent element of ‘doing business as usual’. Nevertheless, before reaching that stage, many firms will try co-creation and fail, inflicting serious damage on their business. Therefore, we must draw lessons from those failures, as well as successes, in order to map out and systematise this practice.

## 8.1 Theoretical contributions

The theoretical contributions of this work pertain to the literature on co-creation and innovation first and foremost. Co-creation is linked to both changes in the patterns of modern media consumption, and rise in the popularity of crowdfunding. Customers desire not just to be consumers of experiences, but also to shape them and to belong to a social network of like-minded individuals. That’s why we move away from technological determinism view of organizations (Jordan, 2008), and seek to account for a wider array of dynamics that shape innovation within it.

This thesis enhances our understanding of experiential services by accounting for the role of customers as co-producers and innovators. By classifying a firm’s propensity for and style of co-creation into four competences, it contributes to literature on co-creation typology and classification. It also contributes to relating co-creation to institutional arrangements of an organization – namely organizational culture and funding arrangements – which has not been done before, thus expanding on the works of Hoyer *et al.* (2010), Banks (2013), Dahlander and Magnusson (2008), O’Hern *et al.* (2011) and others.

We observe customer innovation’s impact on the firm and its structures, strategy and culture. We see what needs to happen within an organization for user inputs to be processed and assimilated into NSD, and how that NSD changes in response to these external inputs. We build on the works of Burger-Helmchen and Cohendet (2011), Jäger *et al.* (2010), Cohendet and Simon (2007), Füller (2010), von Hippel (2005), Voss and Zomerdijs (2007), Sundbo and Toivonen (2011), as well as others.

In creative industries co-creation is a challenging concept because of the content innovation. Few literatures exist that discuss it in detail, and those that do tend to relate it to co-production literature, or fall into the realm of marketing studies (Chathoth *et al.*, 2013; Arvidsson, 2011). Our work contributes to thinking about co-creation, while also accounting for content innovation.

We also draw attention to the fact that co-creation does not only result in NSD inputs and innovations – but that its value also resides in structuring and strengthening the relationship between the firm and its customers along the domains of innovative activity (Abernathy and Clark, 1985).

Very little research has so far focused on the links between customer communities and the firms that develop videogames (Banks, 2013), and almost no attention has been paid to how user involvement plays out inside videogames firms (Graaf, 2009; Malaby, 2009). That internal dynamic of how player inputs are processed, what their role is in firm strategy, as well as what the employee attitudes are is of importance to how those productive interactions are shaped. It also informs the wider literature on service development in other creative industries (O'Donnell, 2014; Zackariasson and Wilson, 2012; Hight and Novak, 2008; Grantham and Kaplinsky, 2005).

This thesis also contributes to innovation literature by identifying the 'hidden' nature of co-creation. A large portion of co-creation occurs on an 'on the job' basis within organizations, and in one-to-one interactions between customers and employees. The classification of co-creation into informal and formal allows for better understanding of co-creation, allowing for its demarcation from open innovation and crowdsourcing. It accents the shift away from the 'call for submission' that a firm issues to its customers (Estelles-Arolas *et al.*, 2012; Saur-Amaral, 2012), and instead underlines the organic and collaborative nature of co-creation.

This thesis also offers some contributions to the literature on firm strategy (Che and Huizingh, 2014) and organizational culture (Naranjo-Valencia *et al.*, 2011; Martins and Terblanche, 2003; Barney, 1986). They provide insights into a videogames firm's functioning in the presence of co-creation (or customer involvement in innovation). These contributions shed some light on the

conditions of firm strategy and organizational culture for stimulation and facilitation of co-creation in organizations providing experiential services. These contributions are of empirical and exploratory nature – demonstrating how firm strategy and culture respond to, and shape, co-creation.

We observe how firm strategy and the decision to use crowdfunding affect co-creation. Inversing that thinking, we can see that when considering crowdfunding as a business strategy, firms do need to reflect on their co-creative competences, as they will likely be needed to successfully carry out a crowdfunding project, without alienating the firm's customer community (Belleflamme et al., 2014; Mollick, 2012; Lehner, 2012; Ordanini et al., 2011).

We make contributions on experiential service development. We accent the role of the participation experience in NSD from the customer standpoint. As co-creation becomes a dominant form of service development, the NSD itself becomes a stage for the experience (Gebauer *et al.*, 2013). Firms must understand that the value customers obtain from participating in the NSD also affects their perceptions of the ready service, as well as its market performance. In other words, the NSD has become an element of the firm's service offering.

## 8.2 Managerial insights

The main practical goal for this research was to inform a firms' co-creation practice, and to enhance their understanding of its outcomes. At its core, we seek to assist industry practitioners in preparing their organizations and predicting the transformations accompanying co-creation. This research's outcomes are meant to inform strategic decision-making, as well as account for the influence of crowdfunding on the NSD.

This thesis proposes a structure for characterizing a firm's ability to co-create. Competences for co-creation, together with funding arrangements and organizational culture constitute tools that can be applied by managers to describe their company. They can then judge the appropriateness of co-creation in their business context and weigh its benefits against its costs.

Our research maps a broad range of outcomes that co-creation may have on innovation within a firm, together with identifying the sites within an organization. Firms can anticipate the changes that co-creation will bring to their

organizations. It helps firms to adjust organizational structures and culture to successfully co-create.

Many firms in creative industries are eager to embrace crowdfunding as ‘the shot’ at financial independence and as a marketing and PR tool. This work demonstrates how crowdfunding is linked to co-creation in the customer-firm relationship. Before using crowdfunding, organizations must understand its effects on the firm and its day-to-day functioning.

This work advances the practical understanding of the relationship with customers. It accents the importance of individual employees’ connections to the customers. It demonstrates that marketing work takes place in individual, day-to-day interactions of employees with customers. Similarly, lack of such interactions, or their negative mood, have detrimental effects on a firm’s service offerings.

Our study has practical implications for the customers. It sheds some light on the firm’s propensity for and style of co-creation; through that customers will understand better when their contribution has a chance of being looked at by firm employees, and integrated with the service. This informs the works of communities of customers producing improvements to services.

Co-creation is problematic and disruptive to many studios, yet it becomes the customers’ expectation for how a firm should be interacting with them. A firm’s ability to expect its outcomes is an advantage in planning and strategizing. It eliminates a degree of uncertainty, as well as prevents potentially catastrophic effects of mismanaged or ill-executed co-creation (to firm-customer relationship, employees’ esprit-de-corps, as well as to organization’s practices, planning, schedules and project management).

### 8.3 Future research

This thesis’ limitation pertains to the fact that there can be factors outside of the ones identified in the course of this research that determine the innovation outcomes stemming from co-creation. They could have to do, for instance, with wider cultural and societal shifts, along the lines of what Potts *et al.* (2008) are suggesting (that co-creation is a result of an industry being in the state of

disequilibrium, and that this state will solidify at some point into some kind of dominant practice).

There is no doubt that more firms need to be studied in order to provide a more complete picture of co-creation, to elaborate on the concepts proposed in this thesis, as well as to confirm (or disprove) the findings of our work. One of the most important aspects of any future research undertaken on the topic would be to develop instruments to measure the extent of co-creation in organizations. What is more, research similar to ours should be undertaken in other industries, both creative and in other sectors. For example, one interesting approach would be to use survey research in order to observe co-creation in a far larger sample of firms.

This is particularly important in the light of expanding the reach of co-creation to new forms of cultural production, services as well as products. Such approaches as gamification (Hamari *et al.*, 2014), and phenomena such as experience economy (Pine and Gilmore, 1998) are changing the roles of firms and their customers in all sectors. One of the key avenues for future research will be more work bridging organizational analysis and user communities. A follow-up study is required to better understand the role of customer communities and their competences and characteristics affecting innovation outcomes stemming from co-creation.

Just as we answered the first research question for organizations in this thesis, the same question still needs addressing for customer communities (What customer community characteristics account for the propensity and style of co-creation?). Factors such as demography and cultural background could be of profound influence to the form of co-creation.

Similar limitations apply to the crowdfunding-related aspects of this thesis. Crowdfunding itself is still a relatively under-researched field, due to the novelty of the phenomenon. As the academic understanding advances, more details and intricacies of this approach to funding will be revealed. Accounting for the ways in which crowdfunding affects organizational outcomes of co-creation, as well as co-creation dynamics overall, will be necessary.

Furthermore, interesting perspectives on the phenomenon of co-creation are offered by the marketing literature (Vargo and Lusch, 2008; Lusch and Vargo, 2006; Vargo and Lusch, 2004). One of the avenues for future work would be to relate the findings presented in this thesis to the discussion in the marketing field. More detailed analysis through the lens of total relationship marketing (Gummesson, 2010; Grönroos, 1994), as well as additional insights from the communication studies field (Gustafsson *et al.*, 2012) would contribute to future studies.

Another avenue for future research is the deepening of our understanding about influence of organizational culture on co-creation. In this work it has been treated on a general level in order to account for the correlation between it and co-creation. It would be worthwhile to understand how various aspects of organizational culture influence co-creation. Future research needs to be more specific about organizational theories, as well as psychological profiles of employees (Chatenier *et al.*, 2010).

Finally, Latin American and Asian videogames markets are also unaccounted for in our work. Significant differences in the influence of organizational culture on co-creation, or different configurations of competences can exist in those settings. Considering the size and importance of those non-Western markets (Marchand and Hennig-Thurau, 2013; O'Donnell, 2012; Zackariasson and Wilson, 2012) and the increasing amount of game development being conducted there, accounting for them is instrumental for complete understanding of co-creation.

## 8.4 Coda

This thesis presents the findings of a study that has been over three years in duration. At times difficult and complicated, it has always been intellectually stimulating. In its course, we have exchanged ideas with many academics as well as industry professionals, forming a network of people with interest in co-creation.

We have had the honour to work in a professional capacity with the videogames firms in North America, putting some of our theoretical ideas to test. Our work has gained the interest of the videogames industry – with a few invitations to

share the insights with the studios and developers in conferences and meetings. We are thankful for all these opportunities.

It has been an exciting journey of self-improvement and self-discovery, a rite of passage of sorts. We would like to acknowledge and express our gratitude to all people who helped us in its course – to professors and faculty, colleagues, videogames professionals, as well as to family and friends.

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