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CO-CREATING GAMES WITH CUSTOMERS: A STUDY OF ONLINE COMMUNITIES AND LIVE-STREAMING IMPLICATIONS FOR VIDEO GAME COMPANIES

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Abstract

Over the past decades, the implications associated with the development of new technologies has thoroughly affected businesses. With the rise in popularity of live-streaming, newer changes are being noticed in both customers and businesses behaviors. Due to the close ties that the live-streaming platform Twitch.tv shares with video game companies, the associated implications of live-streaming in this context are questioned. Therefore, this thesis aims at assessing the impact of live-streaming on the notions of customer involvement, online communities and value co-creation in video game companies. To study this phenomenon, the following research question was formulated:
What is the importance of customer involvement, community building and live-streaming in the context of video game development, and how relevant is it for video game companies?

In order to answer this research question, the thesis followed qualitative research methods. The formation of the theoretical framework was done through extensive literature review of previous relevant academic articles, aiming at providing an accurate overview of the concepts central to the study. Online communities, value co-creation and relevant surrounding theories were thusly described. The empirical data of the study was collected through semi-structured interviews with employees and managers of video game companies. The data was analyzed thematically in order to assess, recognize, define and elaborate the essential elements and challenges relating to the phenomenon studied.

Based on the theoretical and empirical data, video game companies were found to be aware and familiar with the central concepts of this thesis. An important part of the insights from the theoretical framework utilized and conceptualized in this thesis were confirmed by the analysis of the empirical data. Moreover, extensive evidence of both theoretical and managerial implications for video game companies were highlighted. These effects could be noticed on the ways in which companies plan and conduct their business, or even on how they are organized and structured. Live-streaming was found to be relevant for video game companies both within the context of live-streams conducted by external parties, through paid sponsorships for example, but also from the possibilities for companies to organize and conduct live-streaming sessions by themselves.

The main finding achieved through this thesis is thus twofold. On one hand, the implications of customer involvement and online communities in video games companies were thoroughly demonstrated. On the other hand, the role of live-streaming in this context was elucidated, and so was the connection between live-streaming, customer involvement and online communities. The results of this thesis can thus be utilized by video game companies as a framework to understand the environment in which they are operating and to evaluate the degree to which their company processes integrate the key elements identified by this research. Additionally, this thesis provides suggestions for future research about the implications of live-streaming in other contexts.

Keywords Customer involvement, Online community, Value co-creation, Video game industry, Live-streaming
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1   INTRODUCTION

Recent technological developments have significantly changed the consumption of digital content. The growing importance of social media has affected how companies design, produce, sell and advertise their goods and services (Tuten, 2020, pp. 17–19). This is furthermore explained by the arrival and the popularization of streaming services such as Netflix which have been concurrently having a negative impact on the popularity of TV and of print media like newspapers, or books (Iqbal, 2021; Deloitte, 2015a; Udenze 2018; Cherian, 2015). For instance, studies from Horrigan and Duggan (2015), Deloitte (2015b), Nielsen (2018), Iqbal (2020), Spilker and Colbjørsen (2020), and Budzinski, Gänßle and Lindstädt-Dreusicke (2020) further demonstrate that the consumption of video content by young adults and younger audiences, in particular, is moving from traditional medias to newer digital medias. In doing so, the aforementioned age groups thus have been and still are the key agents of this behavioural change in media consumption as they are the ones most prone to utilize these still emerging digital ways.

In light of the changes brought by newer technologies, businesses have similarly evolved and developed. As the role and importance of customers has grown, their involvement is increasingly sought after and fostered by firms. Consequently, this thesis will investigate the extent of the relationship between online communities, customer involvement and live-streaming from the specific perspective of video game companies. Therefore, the theoretical framework of this thesis encompasses these elements and discusses the relationships that connect them. In doing so, the thesis uncovers the potential implications that such notions have on video game development and how the management of businesses are thusly impacted.

1.1   Background and context of the study

In addition to the growing interest towards streaming services, these changes have been made further obvious by the inception of live-streaming and associated platforms, such as Twitch.tv, and of their consequential tremendous popularity (Iqbal, 2020; Twitchtracker, 2021; May, 2021). Live-streaming is the act of broadcasting video to an audience in real time, the video recording is uploaded and broadcasted on the

internet simultaneously as it is being filmed by the video maker, which in this context is generally referred to as a streamer (Taylor, 2018, p.10). Although internet live-streaming technology has existed and has been used for more than 20 years, its nowadays widespread usage is explained by the progress made in technology and the general familiarity of users towards it (Smith, Obrist & Wright, 2013).

Live-streaming is used for sharing content of all kinds, such as art, music, sports or just chatting. However, what initially drove the emergence and the development of live-streaming are video games (Richards, 2020; Khalid, 2019). As stated by Johnson and Woodcock (2018), live-streaming has been and is revolutionizing the video game industry. The growing popularity of live-streaming, and the emergence of live-streaming professionals are but examples that highlight the profound changes brought forth by this phenomenon. Johnson and Woodcock (2018) additionally highlight that the video game industry is more familiar with how it can interact with live-streaming, and the associated opportunities, than any other industry due to the bond that they share. Edge (2013) further presents the intertwinement of live-streaming and the video game industry, and specifically the role of the video game industry in the emergence and consequential development of online communities through live-streaming.

Moreover, Nascimento, Ribeiro, Cerf, Cesario, Kaytoue, Raïssi, Vasconcelos and Meira Jr. (2014) detail the simultaneous growth of live-streaming and the video game industry, and mention the heterogeneity of the video games displayed on live-streaming platforms, which they describe as ranging from games made by independent developers and small studios to massive international video games competitions. Identifying the impact of real-time broadcasting on viewers and streamers is indeed central in order to evaluate the business opportunities associated with live-streaming. Due to its ties with live-streaming, the necessity to take into consideration those concerns are further exacerbated in the video game industry. Furthermore, because of its popularity and its history, Twitch.tv is, in this context, the live-streaming platform that is the most prone to be the place where such business opportunities can be harnessed. Indeed, through its website and its application, Twitch.tv accounts for 65.8% of the overall live stream hours watched (May, 2021).

In a similar fashion as live-streaming in general, Twitch.tv has experienced steady growth in viewership over the years, as can be illustrated by the growth of average concurrent viewers on Twitch.tv by figure 1 (Twitchtracker, 2021; Stephen, 2020; Kavanagh, 2019). Furthermore, the number of streamers has significantly increased due to growing interest towards live-streaming and the ease with which the necessary material is progressively becoming more accessible to use and easier to obtain (Smith et al., 2013). Additionally, this growth was significantly catalysed by the COVID-19 pandemic, which led to an even more vivid increase in the number of viewers (Epstein, 2020; Iqbal, 2020; Twitchtracker, 2021). Overall, Twitch.tv, and live-streaming in general, thus appear as a new media of significant importance for companies as a mean of reaching and connecting with their customers.
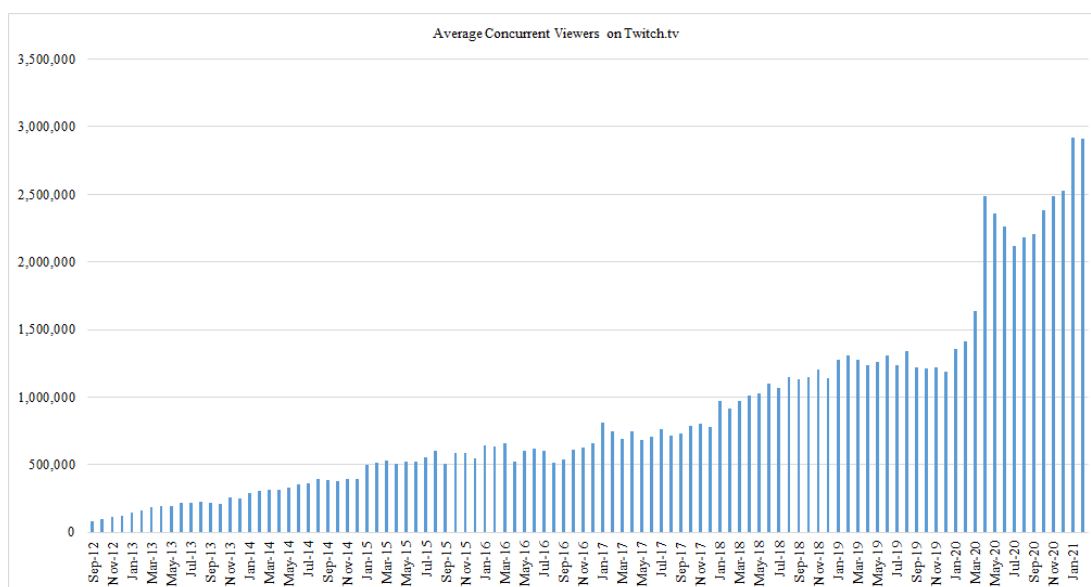
Figure 1. Average concurrent viewers on Twitch.tv (Twitchtracker, 2021).

Moreover, the interaction between firms and communities of users have been the object of previous academic studies, such as the one from Burger-Helmchen and Cohendet (2011). In the past bound and limited by physical proximity, the role of communities has been strengthened by the increasing degree of connectivity that newer technologies brought between customers, allowing and facilitating online exchanges and interactions. Burger-Helmchen and Cohendet (2011) have identified the potential for such communities to create values for firms in several ways and have highlighted how important the relationship between firms and communities have

become, particularly in the video game industry. The recently bolstered role of customers has further amplified the implications and potential of customer involvements endeavours and is thus an important concern for businesses (O'hern & Rindfleisch, 2010). Indeed, customer involvement has previously been studied, and frameworks such as value co-creation extensively depicts the business opportunities associated with such involvement (Banks & Potts, 2010; Ranjan & Read, 2017).

1.2 Research problem and purpose of the study

While other social media platforms have been the focus of previous studies, such as the one by Burgess and Green (2018) on Youtube and De Veirman, Cauberghe and Hudders (2017) on Instagram, the business implications of customer involvement and online communities in the context of Twitch.tv or in live-streaming have only been scarcely studied. As can be highlighted by the development of community hubs through various software and websites, such as Steam, Discord, Reddit, or concepts such as game early access, interactivity between video game businesses and their customers is omnipresent. Twitch.tv, a live-streaming website and application, is another medium through which such interactions manifest themselves, and is particularly popular in the context of video games. Furthermore, evidence of co-creation in companies from the video game industry has been revealed (Green & Jenkins, 2009; Lowthorpe, Taylor & White, 2013).

Therefore, the lack of research covering the implications of live-streaming, especially from the companies' perspective, highlights a discrepancy between the academic knowledge and the practical reality of video game companies, and therefore calls for additional research to fill this gap. Indeed, the perspective of the live-streaming viewers and of the live-streaming professionals have been the object of previous studies, such as the ones from Smith et al. (2013), Edge (2013) and Johnson and Woodcock (2018). However, previous academic literature does not thoroughly investigate the relationship between live-streaming and customer involvement from a business perspective. Moreover, the effects of community building and the relationship between companies and customers have been the focal point of previous academic business literature, however online communities built around live-streaming

professionals and the business possibilities coming from that collaboration have not been comprehensively studied, especially in the context of video game development.

The particular phenomenon that this research problem tackles is thus the extent to which the involvement of communities affects video game businesses, and the role that communities and live-streaming occupy in this context. The phenomenon is studied from the perspective of video game businesses. The goal of the thesis is thus to extend the understanding of business opportunities related to community building and customer involvement through live-streaming in the context of video game development. In order to achieve this goal, this paper studies the role of communities in game development through the point of view of video game companies, and thus strives at describing the opportunities and challenges associated with such endeavours. The implications of the phenomenon on the way in which video game businesses operate is central to the study.

This study provides new insights to the current theoretical framework from multiple viewpoints. The study finds particular relevance in the context of community building and live-streaming and how video game developers can utilize the knowledge and feedback from these communities. Furthermore, the study connects the existing theories together and provides an overview of the academic literature for future research on this topic. Additionally, the thesis discusses the potential limitations of these methods and further elaborates on associated managerial implications.

1.3   Research question and methods

The objective of this thesis is to analyse the implications of community building and customer involvement for companies in the context of video game development and to evaluate the role of live-streaming in this endeavour. To study this phenomenon, the following main research question was formulated:

What is the importance of customer involvement, community building and live-streaming in the context of video game development, and how relevant is it for video game companies?

In order to answer the main research question and permit a detailed analysis of the phenomenon, the more specific sub-questions were designed:

SQ1: What is known about live-streaming, customer involvement and community building in the context of video game development?

SQ2: What are the opportunities and challenges associated with customer involvement, online communities and live-streaming for companies in the video game industry?

The first sub-question aims at specifying the current understanding of the relevant notions and concepts that are studied, both from a theoretical standpoint and also from the point of view of video game companies. Its goal is to examine how does the theoretical understanding of these notions reflect itself in the way video game companies act. The second sub-question aims to further deepen this understanding by thoroughly studying the opportunities and challenges associated with customer involvement, community building and live-streaming for companies in the video game industry.

To answer the research questions, the study follows qualitative research methods. The formation of the theoretical framework is done through extensive literature review of previous studies and relevant academic articles, aiming at providing an accurate overview of the concepts central to the study. The empirical data of the study is collected through semi-structured interviews with companies from the video game industry. The data is analysed thematically in order to assess, recognize, define and elaborate the essential elements and challenges relating to the phenomenon studied. Section 3 of the thesis justifies and further details the methodological approach of the study.

1.4   Structure of the thesis

The thesis starts with an introductive section, which presents the background and context of the study. Moreover, this part introduces the goal and the main research questions of the study, and presents the research gap and problem in detail.

The section following the introduction describes the theoretical framework utilized in the conduction of the study. It provides a description of the central theoretical concepts and further details their importance and their connection with the overall framework. The section furthermore presents a definition of online communities and of uses and gratifications and sense of community theories, which are instrumental in understanding the dynamics of online communities. Moreover, the notion of value co-creation is detailed through its implications within online communities and video game companies. Additionally, the role of transparency and inclusion within customer involvement and the associated challenges, as well as impression management, are also developed in this section. Lastly, through the elaboration of a concept map, the links and connection between the different notions encompassed in the theoretical framework of this study is further reinforced. The overall section presents the aforementioned concepts within the perspective of video game companies, as this thesis aims at understanding the implications that affect them.

The methods section details the research methods used in this study. In presenting the qualitative research methods, the section will further describe the processes of gathering the research data and of writing the study. It moreover addresses the methodology relating to the data analysis and discusses the validity and reliability of the study. In the fourth section, the empirical data is analysed and the most important findings of the study are detailed. Lastly, the conclusions and discussion section summarizes the main aspects of the study and presents limitations and future research ideas.

2   COMMUNITIES AND CUSTOMER INVOLVEMENT IN VIDEO GAME COMPANIES

This section of the study will present the theoretical framework surrounding the key concepts that are central to the study. The different notions constitutive of this theoretical framework will be introduced, their relevance explained, and their connections with one another highlighted. This section will thus present communities and customer involvement and their associated dynamics and opportunities within the context of video game companies.

2.1   Online communities

The phenomenon that this study focuses on is the involvement of customer and communities in the context of video game companies, and of the importance of Twitch.tv in this endeavour. In this particular context, this thesis envisions communities from an online perspective, due to the close bonds that unite both Twitch.tv and video game companies to the Internet.

2.1.1   Definition of online communities and online community building

Online communities are defined as a group of voluntary users who interact with each other. In lieu of face-to-face exchanges, they distinguish themselves by the online nature that characterizes their interactions. They are labelled as online communities because their interactions are conducted through computer-mediated services, such as a software or a website. The term online community is sometimes used interchangeably with the notion of virtual community. Although both notions are close in their meaning, members of online communities are aware that they belong in a community. The observation of this knowledge and awareness is the basis upon which online communities can thus be considered as real communities. Moreover, as the purpose of online communities is not to coerce its members into acting in a particular manner, online communities are highly dependent on the voluntary participation of its members. (Kindsmüller, Melzer & Mentler, 2009, pp. 2899–2900.)

Online communities are more thoroughly defined through Preece's (2000, p. 3) conceptualization which stipulates the four following elements as essential constituents of an online community:

- Social interactions conducted by members of the community in quest of the satisfaction of their personal needs,
- The existence of a need, interest or purpose shared by the community, which provides the basis for its members to cooperate with one another,
- A set of rules or practices that encompasses the expected behaviour of the community's members,
- Social interactions within the community are mediated by a technical system.

According to Kindsmüller et al. (2009), members of online communities often display active participation in their behaviour towards the development of the community. It has furthermore been observed that frequently, within online communities, a relatively small number of users are responsible for the vast majority of the contributions in the interactions and efforts of the community. Consequently, an important number of so called "lurkers" have been noticed in online communities. Lurkers are members of the community that do not actively contribute to it, adopting instead a more passive and observative behaviour. They are still considered as members of the community due to their ability to perceive the usefulness and significance of the community despite their overall low active contribution. (Kindsmüller et al., 2009, pp. 2900–2901.)

Kindsmüller et al. (2009) present five different roles of users in online communities, ranging from visitors to elders. The individual role that users take may change as they spend more time as members of the community. Visitors are people whose proactive involvement in the community is inexistent. Novices are new members in the process of getting acquainted with the community's specificities. Regulars are more experienced members who display frequent participation. Leaders are the pillars of the community, they keep the community alive and running. Lastly, elders are long-time members who take a more instructive approach in their behaviour, by helping newer members or by communicating the community culture for example. (Kindsmüller et al., 2009, p. 2901.)

Technological developments are affecting businesses of all kinds and online communities is a contributing factor to that phenomenon. Indeed, newer technologies are enabling the formation of online communities in a growing array of sectors and industries, thus emphasizing that, despite their inherently virtual and intangible nature, online communities have important business implications. (Kindsmüller et al., 2009, pp. 2903–2904.) Furthermore, Bacon (2012, p. xx) highlights that communities can be monitored and measured by companies, and that adequate company actions may foster or improve the likelihood of success of community projects. Understanding communities is thus an important concern for businesses. In the context of the phenomenon studied in this thesis, namely the involvement of customers and communities in video game companies and of the role of live-streaming in such endeavours, online communities inherently constitute an important part of the theoretical framework.

2.1.2   Uses and gratifications theory

Finding its origin in the field of communication, uses and gratifications theory focuses on social communication and media. According to the theory, media consumers or users are actively choosing one or several specific medias based on their needs. Therefore, in the scope of the uses and gratifications theory, the primal role of media is to seek the fulfilments of the needs and of the motivation of its users. Through this framework, several user needs are identified and the amount of satisfaction that a user obtains from media consumption is in direct correlation with the number of needs that are satisfied through the consumption of the given media. The two central concerns that uses and gratifications theory addresses are thus on one hand why is a particular media sought by people and on the other hand what kind of satisfaction is provided by media to its users. (Mehrad & Taier, 2016.)

Generally, the needs that are central to the framework of uses and gratifications theory are categorized under five different types, based on their distinctive characteristics. These five categories of needs are the following: cognitive needs, affective needs, integrative needs, social integrative needs and tension-release needs. Table 1 presents a further description of these five needs. (Katz, Gurevitch & Haas, 1973; West & Turner, 2010, p. 398.)

Table 1. Needs gratified by the media (adapted from West & Turner, 2010, p. 398).

Need type	Description	Examples
Cognitive needs	Obtaining information, knowledge, awareness	News on television, educational videos, documentaries
Affective needs	Enjoyable, emotional, aesthetic experience	Movies, sitcoms, soap operas
Personal integrative needs	Strengthen status, credibility and confidence	Videos to practice social skills
Social integrative needs	Strengthen connection with family, friends and the world	Email, chat room, instant messaging
Tension-release needs	Needs related to escape or tension-release	Television, videos, movies, radio, internet

Consequently, uses and gratifications theory proposes a paradigm shift in the conceptualization of media consumption, explaining that individuals are not passively consuming media based on the ones that they are exposed to, but instead supporting the idea that individuals proactively seek out media that they enjoy. Uses and gratifications theory thus underlines the role of active audience, meaning that media users will seek out the media of their choice, instead of the opposite. (Katz, Blumler & Gurevitch, 1973.) Uses and gratifications theory farther highlighted that one of the motivational factors associated with playing video games is the social aspect that it often encompasses, especially for younger audiences, and furthermore established the applicability of the uses and gratifications theory to video games (Sherry, Lucas, Greenberg & Lachlan, 2006). In the context of Twitch.tv, of its myriad of different channels and of its embeddedness in the video game industry, people are thus prone to search not only for content, but also for the associated communities that might be linked to such content, which can be composed of like-minded individuals.

By developing the intrinsic motivations that drives users to join and participate in communities, uses and gratifications theory broadens the understanding of communities developed in the theoretical framework of this study. Furthermore, as this thesis aims at understanding the implications of live-streaming in the specific context of the video game industry, and as live-streaming is by nature a form of media, the uses and gratifications theory provides a basis upon which media users' motivations and actions may be analysed by companies in this context.

2.1.3 Sense of community

McMillan and Chavis (1986) describe the sense of community as the feeling of belongingness, reciprocal importance to one another and common expectation for the fulfilment of their needs that members of a community experience. Furthermore, McMillan and Chavis' (1986) framework details that sense of community encompasses four elements: membership, influence, integration and fulfilment of needs and shared emotional connection.

Membership is described as the feeling that an individual has through which they believe they have a right to belong because of the personal investment that they have dedicated. The concept of influence is conceptualized through the reciprocal nature of the interaction between a member and a group. On one hand, the member is attracted to the group through the influence they feel they possess over the group. On the other hand, a similarly contradictory phenomenon is observed through the apparent cohesiveness of a group, which is characteristic of the ability of said group to exert influence on each individual member. Sense of community's framework furthermore incorporate the element of integration and fulfilment of needs. This element is achieved through the sentiment of togetherness that a group may present and through which the individual members may experience satisfaction or feel rewarded. The fourth and final key element of the sense of belonging is the shared emotional connection that members of a group experience with one another and to which they identify with. This shared emotional connection can find its origin in the history of the group, although it is not necessary for its members to have experienced it directly in order to still identify with it. (McMillan & Chavis, 1986.)

Table 2. Sense of community (McMillan & Chavis, 1986).

Element	Description	Examples
Membership	Emotional safety, sense of belonging, personal investment	Participating in community practices
Influence	Reciprocal influence of members and group on one another	Participation in voluntary associations or in government programs
Integration and fulfilment of needs	Sentiment of togetherness and rewarding experience	Group sharing knowledge about a common interest
Shared emotional connection	Shared history that members identify with	Similar background of group members, past events within the group

Although the sense of community framework was originally focusing on offline communities, the development of technology, the rise of social medial and of live-streaming has significantly changed the conceptualization of communities. Indeed, with the emergence of online communities, research was questioning whether, and to what degree, the sense of community framework is fitting this newer type of communities. In light of the discrepancies that can be identified between offline and online communities, namely the lack of face-to-face communications of the latter and the necessity for synchronicity and geographical proximity that characterize the former, studies have identified that despite those differences and the contrast in practices that they entail, the sense of community framework and of the additional research that surrounds the topic still finds relevance in the context of virtual or online communities. (Abfalter, Zaglia & Mueller, 2012; Chiu, Hsu & Wang, 2006; Majewski, Usoro & Khan, 2011.)

Moreover, through Carlson, Suter and Brown's (2008) framework, consumers have been perceived as feeling a sense of community with other users from a social perspective, but also from a psychological perspective. Through the psychological perspective, customers can feel as though they are part of a community even in the absence of social interaction within the community. Although social interaction may foster or increase the sense of community of its members, it is thus not a requirement to its inception. Furthermore, academic research has highlighted the positive effects associated with sense of community, such as additional commitment and loyalty to the product or firm the community is linked to. Carlson et al. (2008) thus highlight the importance of integrating this psychological dimension to the sense of community in companies' efforts relating to community building. (Carlson et al., 2008.)

Further implications that communities can have for businesses have been identified by literature. The development of communities is linked to the incentivisation of value creation, cost reduction, ease and effectiveness of communication and advertisement, help in product development and testing (Strauss & Buss, 2009, pp. 4–26). Romero and Molina (2011) have furthermore stated that organisations have recognized the potential linked to the discussions generated inside of online communities on product design, marketing or other important business processes. Spaulding (2010) indeed states that companies may aim to promote and foster online customer communities due

to the alleviating effect that they might have on many business functions such as product support for example.

2.2 Value co-creation

This chapter discusses and details the dynamics and implications that customer involvement implies through the concept of value co-creation. In particular, value co-creation is investigated from a theoretical perspective in the context of online communities and of video game companies.

2.2.1 Value co-creation and online communities

As can be inferred by the growing interest and increasing audience numbers in live-streaming, customers are becoming increasingly informed and connected, and the democratization of other relatively new technologies such as social medias further reinforces this state of affairs (Smith et al., 2013). The rise of those new platforms and of the interactivity that is so deeply embedded in their core has consequently developed into an important way for customers to express their opinions in a manner that can have significant impact, empowering them in an unprecedented fashion and also enabling direct dialogue with companies (Ramaswamy, 2008; Romero & Molina, 2011). As a consequence of the customers' arrival to this worldwide online marketplace, companies are becoming increasingly exposed to the fierce global competition that exists on this market (Romero & Molina, 2011). In light of this recent empowerment of customers, research has been investigating the effect it can have on businesses and how they could adapt their modus operandi in order to adjust to this newfound role of customers. The power of customers is farther amplified in online communities, which foster interactions between their members and the sharing of experiences and evaluations about companies' product and services. As a result, other customers are being influenced in their purchasing intentions and behaviours by the recommendations and reviews of their community peers. (Romero & Molina, 2011.)

The notion of value was defined by Porter (1985) as "the amount buyers are willing to pay for what a firm provides them" (Porter, 1985, p. 38). Value was thus in this traditional approach envisioned as being created solely by companies (Grönroos,

Strandvik & Heinonen, 2015). The concept of value is furthermore described as an important concern of the field of management. It is further defined as the reflection of the buyers' willingness to acquire a product. The value of a product is thus understood as the ratio of its function to its cost. (Neap & Celik, 1999.) Research has further highlighted the existence of several sources of value, such as policy choices, integration, scale or innovation for example (Porter & Millar, 1985). The process of creating value has furthermore been studied in different business contexts, as Amit and Zott (2001) have for example explored the importance of information technology in the value creation of e-businesses. In the wake of research about value creation, the concept of value co-creation, and its impact upon previous assumptions and literature about some of capitalist economies' important notions, has been thoroughly researched (Ramirez, 1999).

Prahalad and Ramaswamy (2000) introduced the notion of value co-creation, expanding the conceptualization of value creation to include the active role that consumers can have in this endeavour. Co-creation appears as a complex notion which possesses a plethora of definition and approaches. The various conceptualizations of value co-creation converse about the circumstances in which co-creation happens. As authors debate whether value is always co-created, and whether value creation is always based on interactions, co-creation is thus defined through the amalgamation of the myriads of approaches that tackle the concept (Grönroos, 2006; Grönroos et al., 2015; Heinonen & Strandvik, 2015; Vargo & Lusch, 2008). Through the framework of value co-creation, customers and firms are thus perceived as interacting with each other in a way that can influence the way businesses are operating (Galvagno & Dalli, 2014).

In the co-creation process, customers play a particularly active role. Keys (2015, p. 67) highlights that co-creation may involve customers in a thorough manner, that for example ranges from innovation to consumption experience, or can even affect the business model of the company. Value co-creation is thus conceptualized as an active, creative and social process (Hidayati & Novani, 2015; Novani & Kijima, 2012). Through dialogue, companies can integrate the knowledge, skills and the shear diversity of their customers and of their communities into the firm's value creation process. The concept of co-creation thus strongly emphasizes the role of the customer,

and in doing so, represent a deepening of the understanding of the origin of value (Prahalad & Ramaswamy, 2004; Vargo & Lusch, 2004). The involvement of consumers through the process of co-creation can manifest in different aspects, thus depicting the potential impact of value co-creation not only on the daily operations of the firm, but also on its strategy, or in the firm's innovation process for example. (Kristensson, Matthing & Johansson, 2008; Schau, Muñiz & Arnould, 2009).

Co-Production   Value-In-Use

Knowledge   Experience

Equity   Value Co-Creation   Personalization

Interaction   Relationship
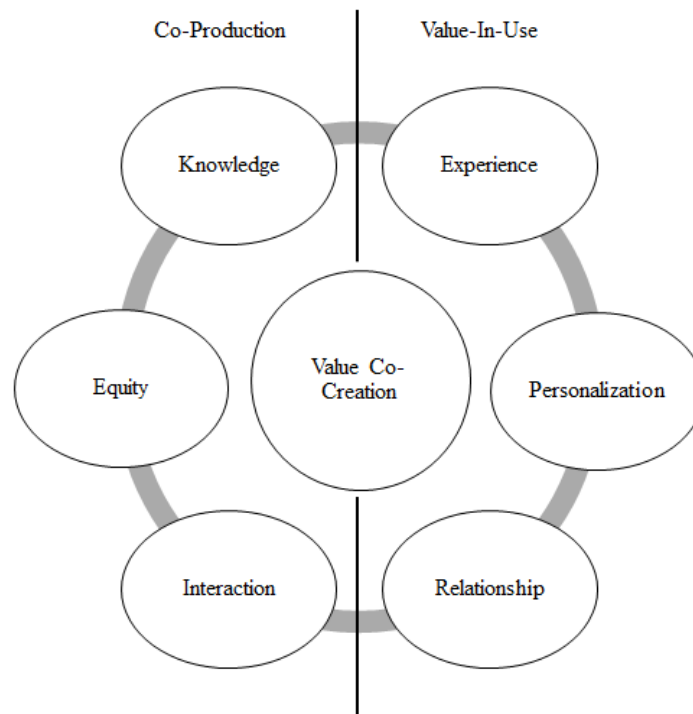
Figure 2. The six faces of value co-creation (adapted from Ranjan & Read, 2017).

Ranjan and Read (2017) describe two successive stages of value co-creation, starting with co-production and then advancing to value-in-use and encompassing six faces (see figure 2). In the co-production stage, conjoint creation is accomplished between customers and firms. In the context of co-production, value co-creation is achieved through a plethora of different activities, such as understanding customers' needs or how to develop and produce new products or services. The second stage, value-in-use, focuses on value co-creation after the products or services are made available and is particularly centred on the ways in which value co-creation actors behave in this context. (Ranjan & Read, 2017.)

Six faces of value co-creation are further described by Ranjan and Read (2017), with co-production and value-in-use each encompassing three of those faces. In the co-production stage customers and firms are working together to achieve product or service design through three different elements: Knowledge, Equity and Interaction. In this context, Knowledge refers to the way in which the customers' knowledge, ideas and creativity is shared with the company, whether in a direct or indirect manner. Equity refers to the customers' perceived impact and sense of ownership within the context of value co-creation, and is thus realised through including, empowering and sharing control with customers. Interaction is defined by the communications and exchanges with customers. Discussion between the firms and customers is essential to this element as it enables understanding and sharing with one another, through discussion, both firms and customers are able to realise the value that they are co-creating together. (Ranjan & Read, 2017.)

In the value-in-use stage, the three elements of Experience, Personalization and Relationship are identified by Ranjan and Read (2017). Experience is defined by the evaluation that customers develop through emotional and memorable interactions with the product or service when it comes to attributes that extend beyond the primarily functions that the product or service seeks to fulfil. Through Personalization, customers develop and associate with the usage of the product or service a particular identity that is unique to their own individualities or to the peculiarity with which they are using the product or service, and from which value is thusly co-created. Lastly, repeated reciprocal interactions with customers may develop their identity by forming Relationships with other customers or the company, from which they are able to derive greater enjoyment of the service or product, and thus co-create value. (Ranjan & Read, 2017.)

Pongsakornrungsilp and Schroeder (2011) have elucidated the role and importance of consumers and communities in the process of value co-creation. The involvement of customers in the value creation activities may allow companies both to design new products or to modify existing ones in order to ensure that companies' offerings are as close as they can possibly be to satisfying the needs of customers. Romero and Molina (2011) therefore argue that value creation is not to be conceptualized as linear, but rather as a collaborative process that results from the relationship between companies,

their partners and their customers, and through which value is thus co-created. Through this interactive process the different participants are meant to share their ideas, skills, knowledge and capabilities in order to collectively improve existing products or create new ones. Products or services thusly co-created are consequently better equipped to accommodate with certain peculiar needs of customers that may otherwise be elusive or difficult to grasp for companies. (Romero & Molina, 2011.)

As co-creation is an interactive process, it by nature requires the active involvement of the firm and of its employees and managers with other co-creators of value, i.e. the customers. Therefore, co-creation carries thorough implications for the way in which companies operate if they want to foster such a phenomenon. (Ramaswamy, 2009.) Co-creation may involve both customers and firms in all creative activities, its aim is to utilize these interactions in order to achieve a greater level of value for the product or service that it the outcome of the process. The interactivity that is as the very core of value co-creation implies that constant attention should be given to the process, and that in order to keep their strategic goal in mind, companies should regularly re-evaluate the relationships that are the driving force of co-creation and strive to strengthen the adequation between companies' capabilities and customers' needs (Normann & Ramirez, 1993). By collaborating with their customer communities, and applying the related implications on a strategic level, customer involvement might constitute for companies a way of maintaining their competitive advantage (Romero & Molina, 2011).

Nambisan (2002) highlights the different implication that customer involvement can have in the design process of a product. Indeed, through the framework of value co-creation, customers can also be visualized as a resource, by gathering their ideas, companies may gain insight about new products or new features that could be developed (Nambisan, 2002). The potential of online customer communities through the framework of co-creation has additionally been deemed as an opportunity for companies to learn more about their customers. In doing so, firms are able to identify what might be some of their customers' latent needs, or benefit from exploring innovative ideas submitted by their customers, which may in turn allow the firms to enjoy a lasting competitive advantage against their competitors who might lack such

detailed understanding of the customers. (Hagel, 1999; Kristensson, Magnusson & Matthing, 2002; Matthing, Sandén & Edvardsson, 2004).

Moreover, in their involvement in product design and development activities through co-creation, customers may feel rewarded by their perceived impact on the final product. Companies further benefit from the involvement of their customer by being able to validate their design choices and achieving a better prioritization of product features and development process. By testing products and providing companies with feedback about their potential flaws or their most enticing aspects, customers are further able to achieve co-creation with companies in a meaningful way, which may for example spare the necessity for companies to redesign their products. The diversity of individuals that typically composes online communities moreover allow such testing to be conducted by a wide array of users, which provides companies with richer insight about their products. Such feedback, reinforced by the additional customer to customer interactive aspects of online communities, also provides a basis upon which product support can be conducted by the customers. (Nambisan, 2002.)

2.2.2 Value co-creation in video game companies

The particular importance of co-creation in the video game industry has been highlighted by Banks and Potts (2010). Indeed, due to the previously elucidated linkage between video game industry and live-streaming, and to a wider extent, the internet, a wide array of particularly vocal online customer communities thrives at this crossroads. Green and Jenkins (2009) highlight how important and central is the concern of the integration of the collective intelligence of communities in the processes and strategies of companies of the Web 2.0 era. The Web 2.0 era, which is based on notions such as user generated content or the culture of participation and interaction, is not only particularly representative of the current state of the internet, but furthermore also perfectly fits the framework of this study.

Moreover, Banks and Potts (2010) emphasized in their research the commercial success of video games whose gameplay mechanics and core ideas relied heavily on the notion of user-generated or user-created content, with examples such as Spore and Little Big Planet. The emergence and consequential important success of so-called

"sandbox" video games, of which one of the most prominent examples might be Minecraft, and in which the player is given the ability to interact with the game world, design and create their own projects, further reinforces the idea that the video game industry possesses strong resources in the context of co-creation. Additionally, the popularity of online video games and particularly of Massively Multiplayer Online Games (MMOG) or game-related websites and platforms, of which live-streaming, and thus Twitch.tv, is a prime example, once over underlines the aforementioned capabilities.

Such capabilities are indeed highlighted by previous research, which found evidence of co-creation in the video game industry and underlined its potential. Lowthorpe, Taylor and White's (2013) study demonstrate an example of value co-creation in video game development with the aim of minimizing risk and production of features that will not be used in the finalised version of the product. Through customer involvement, the case company of the study validated some of its game's concepts before proceeding to develop them fully, thus aiming at creating a product that not only fits the needs and expectations of the customer but is also developed in a way that is as sustainable and financially sound as possible (Lowthorpe et al., 2013).

Similarly, Banks (2007, pp. 143–150) describes the efforts of value co-creation conducted by the company Auran in the development process of several of their games, such as Ultimate Trainz Collection and Trainz Railroad Simulator 2004, which included consumer-created content. Banks (2007, pp 143–150) further states that the co-creation process was so primal in the case of Auran, that the last sequel in the company's Trainz video game series, would have been a terminated project were it not for the impressive continuing participation of the community in its development. Indeed, the company determined that the projected sales were not sufficient to cover the development, marketing and distribution cost of this project. The significant involvement of the customers was thus harnessed by the company through managerial actions that incentivized and channelled this involvement which was the driving force that carried the project to completion. The development efforts of the customer were therefore in this case not only supplementing the development team of the firm, but were also a way of ensuring that the game design was aligned with the expectations of

the customer base, since this very customer base was itself actively involved in the development process. (Banks, 2007, pp. 143–150.)
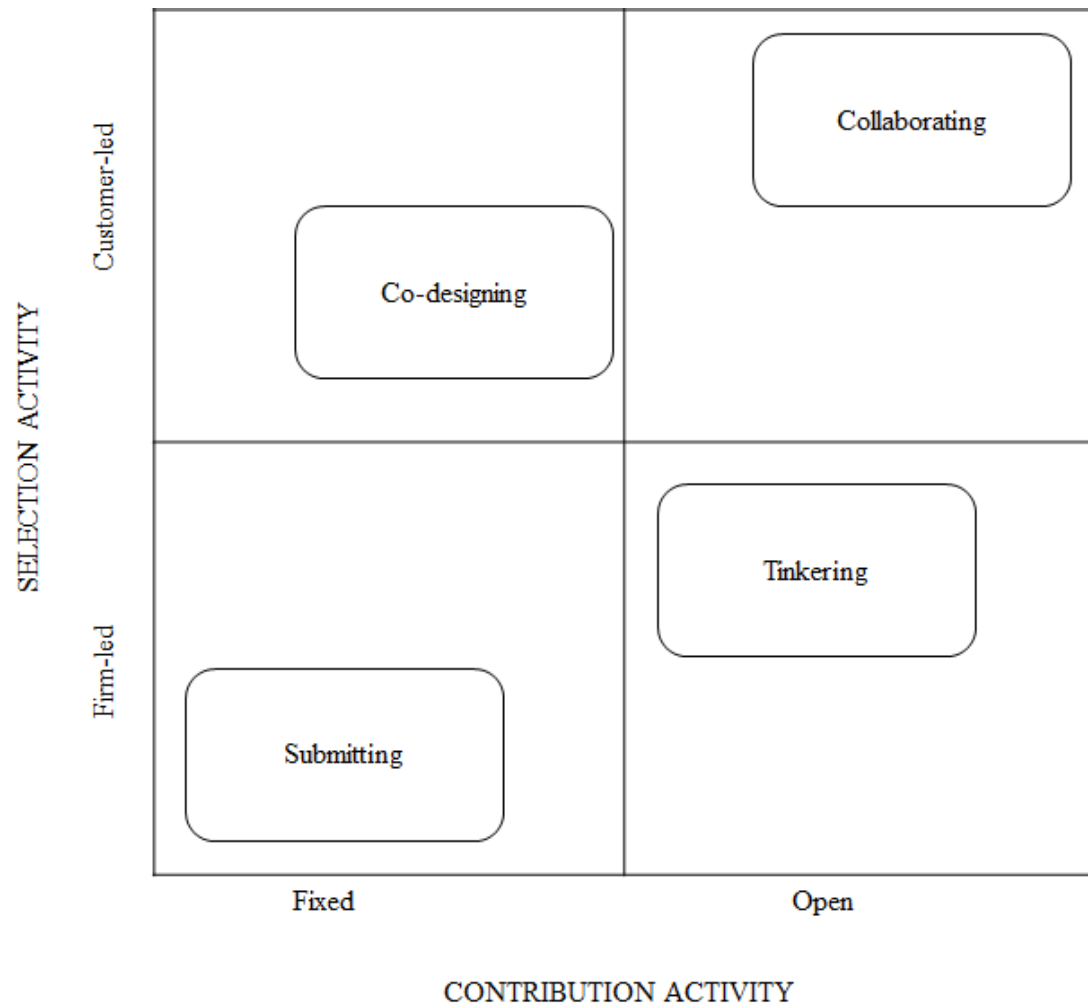
Figure 3. Four types of customer co-creation (adapted from O'Hern & Rindfleisch, 2010, p. 91).

Additional value co-creation research finds particular relevance in the context of the video game industry. Indeed, through their framework, O'Hern and Rindfleisch (2010), envision the implications of co-creation through four different types of interactions, as illustrated in figure 3. Submitting is the process through which customers provide ideas either for new products or new features for existing products. However, the process of submitting is envisioned as more than a mere suggestion but rather as an elaborate, engaging and thorough form of customer inquiry, which demands an important effort from customers in order to express their ideas in a clear and tangible manner. Ultimately, the decision of whether to integrate such ideas, and

the manner and extent of doing so, rests in the firm's hands, hence why submitting is considered as a fixed and firm-led activity in this framework. The benefits of such an approach are linked to potentially significantly shorter development time, increased innovativeness and customer relationships. For example, the video game company Paradox Interactive has created a page on its website dedicated to such submissions. (O'Hern and Rindfleisch 2010; Paradox Interactive, 2021.)

Tinkering is another co-creation process in which modifications or additions are made by customers to a product already released by a company and such modifications are later included into next products or updates released by the company. The activity of tinkering is firm-led in the sense that although firms have no control on the modifications originally being developed by their customers, they have however complete control over which ones they decide to implement as part of their new products or updates. O'Hern and Rindfleisch (2010) emphasize how the tinkering activity in particular is intensively represented in the video game industry. This so-called "mod" culture was furthermore recognized by Green and Jenkins (2009), through which customer design and create additional content for their favourite games and share them with fellow players, thus enhancing the shelf life or the quality of the original products, and which constitute a prime example of value co-creation and of its benefits in the video game industry. The popularity of the Nexus mods website, which hosts more than 300,000 "mods" for over 1,000 different video games farther highlight this phenomenon (Nexus mods, 2021). In the context of the video game industry, tinkering can thus be visualized as the integration of such "mods" to updates or products, an example of such activity can be found in the video game called Ark: Survival Evolved, developed by Studio Wildcard, which integrated several such mods directly to the game through update, such as a mod called "The Center" which featured an entirely new game area for players to experience. (Ark community forums, 2016; O'Hern & Rindfleisch, 2010.)

Co-designing is the process through which a single customer or a small group of customers provides a company with design ideas which are then curated by larger customers groups. Ultimately, based on the votes or evaluations and the popularity of the ideas, companies decide whether they desire to implement it to their product. Co-designing may thus seem close to the concept of tinkering, it however differs in the

range of possible ideas that customers may have, indeed, tinkering imposes no restrictions upon such ideas, whereas co-designing aims at solving specific concerns and therefore often set detailed guidelines. The video game Warframe, by Digital Extremes host a feature that is the perfect embodiment of co-designing, through which customers can design cosmetic assets for the game for which the firm provides clear and extremely detailed guidelines. Other customers can then vote to express which of such designs they like and based on those votes, Digital Extremes may pick and implement some into the game. If a customer-made design is added into the game, all players can then purchase it if they desire so, and the revenue is split between the designer of the asset (i.e., a customer) and Digital Extremes (i.e. the company), thus highlighting the clear existence of value co-creation. (O'Hern & Rindfleisch 2010; Warframe.com, 2021; Warframe community forum, 2015.)

Lastly, collaborating is envisioned through O'Hern's and Rindfleisch's (2010) framework as the co-creation activity in which customers are the most in control of the outcome. Collaborating implies that companies provide their customers with the necessary tools for them to develop and improve the product's core offerings and place such activity at the centre of their product's development. For example, Tabletop Simulator, a video game developed by Berserk Games, includes classic tabletop games such as Chess as its core elements. However, Tabletop Simulator's focus and interest revolves mostly around the high degree of importance that is dedicated to the user-generated content. By providing their customers with tools to develop and integrate additional games to their product, Tabletop Simulator aims more at being a canvas for its customers' creativity that other users can then experience rather than a complete product on its own, thus once again constituting a strong example of value co-creation in the video game industry. (O'Hern & Rindfleisch 2010; Tabletop Simulator, 2021.)

The question of customer involvement, and more specifically why do customers participate in co-creation activity, has also been the object of academic studies. O'Hern and Rindfleisch (2010) have underlined how only some of the customers who participate in co-creation activities are doing so expecting to obtain recognition or enhance their status or career opportunities for example. O'Hern and Rindfleisch (2010) instead explain that most of the customers who participate in such activities do so because they perceive importance in what they do and because they derive

enjoyment from the sharing of their ideas and efforts. This phenomenon has furthermore been elucidated by other research, which described the existence of a gift-society in the video games, through which customers work on such projects driven mostly by their will to contribute to the community (Banks & Potts, 2010).

Green and Jenkins (2009) described the great extents that the commitment of customers can reach in co-creation processes, emphasizing their ability to dedicate their skills, time and knowledge, or pointing out their conjoint self-organization capabilities in face of complex tasks. Such self-organization in customer communities may be reinforced by the use of communication tools, whether in-game or otherwise (e.g. WhatsApp groups, Discord channels, Twitch.tv channels and chat rooms...) which allow customers to leverage their emotional relationship, born out of interaction with a game and its other players, into co-creation activities (Cardoso, Batista, da Silva, Gaspar, Costa & de Magalhães, 2018). Cardoso et al. (2018) highlight that due to their nature, multiplayer video games further incentivize and exacerbate not only the participation of customers in co-creation, but also the benefits that companies can harness from such practices, especially if they manage to develop a long-term relationship with their customers.

The theories previously discussed in this have thus elucidated not only the importance of value co-creation for businesses, but has also explicated the particular implications and significance of this phenomenon in the video game industry and how communities may induce and catalyse this process. Although the existence and the potential benefits of value co-creation have thusly been highlighted, the implications on business organization and the concerns that surround them are fittingly significant, and therefore similarly require careful examination. Indeed, literature elucidate the need for companies who wish to partake in co-creation to thoroughly plan their course of action, or even, their overall business strategy. Grönroos et al. (2015) enunciate several important questions that companies might want to address when trying to foster co-creation and incorporate it in their operations. Such concerns range from considering what should be the object of co-creation, how and when it should be conducted, and who should be involved, to the need for engineering analytical tools, methods and procedures to encompass and evaluate the entire process (Grönross et al., 2015).

Additionally, illustrating this phenomenon through the example of the company Auran and its interaction with the customers of its video game Trainz, and of the necessity to thoroughly reorganize the project that such involvement engendered, Banks (2007) suggests that the ad hoc form that customer involvement often dons could be strenuous to integrate into corporate processes. Banks and Potts (2010) and Green and Jenkins (2009) further observe the difficulties associated with handling such interactions and of fusing them into business' operations by detailing examples such as the important attention that customers may require in the co-creation process or how customers may find difficult to understand or comply with the company's schedule.

Although co-creation can present important opportunities for companies, it thus also appears as a process that necessitates careful surveillance, active monitoring, and thorough involvement from the company, its managers and employees. Strategic planning of the company needs to focus on creating opportunities of co-creation and managing the process that consequentially ensue from such an aim. As co-creation implies the involvement of customers and communities, companies may want to carefully examine and try to understand the individuals and groups with whom they are interacting, in doing so, they might have to periodically re-evaluate their understanding, such process if facilitated if strong interfaces with customers exist. (Cardoso et al., 2018.)

Similarly, Green and Jenkins (2009) detail the importance of constantly re-evaluating the effectiveness of how the company handles co-creation through the example of the multiplayer video game Star Wars Galaxies. In its early stages, the developing company, Sony Online Entertainment, involved the customers in the design process, which was greatly appreciated. However, this involvement created power struggles and internal conflict within the company, hoping to fix these issues and expand its market, the game underwent significant changes which disappointed most of the customer base, and was considered by many players as failing to achieve its purpose. This example thus not only highlights how co-creation may be difficult to implement and sustain, but it also demonstrates the constant attention that it requires. (Green & Jenkins, 2009.)

Further concerns relating to co-creation include the potential loss of control that co-creation may entail. Indeed, if the role of customers takes too much precedence over the role of the company in the co-creation process, the firm may feel as its products is straying too far from its original idea. On the other hand, if the company exerts too strict of a control or guidance over the involvement of its customers, it may impede the realisation of the full potential of co-creation. Finding the balance may thus prove to be a tricky endeavour, especially when the number of participants in the process of co-creation is important (Green and Jenkins, 2009). Consequently, as inferred by Lowthorpe et al. (2013), there does not seem to be a general solution or process that is applicable without necessity of adaptation to each particular situation in the context of co-creation, farther highlighting the essential role of careful managerial consideration in such activities. In light of these frameworks and examples, and of the associated difficulties faced by companies in such situations, the necessity of understanding the implications of live-streaming and online communities in the value co-creation process of video games is thus farther emphasized.

2.3   Transparency, inclusion and customer involvement

Customer involvement thus appears to be a difficult process to incorporate in companies' operations or strategic concerns. In particular, thoroughly involving customers may thus create power struggles and therefore constitutes a dilemmatic situation, where finding balance between inclusion and control can be extremely challenging. Open Strategy theory focuses on inclusion of stakeholders from the strategic point of view, similarly to value co-creation theories, dilemmatic situations of the same nature are thus equally central to this framework. Therefore, the notions of transparency and inclusion and the particular way in which Open Strategy explains and describes the dilemmas relating to customer involvement finds relevance in the theoretical framework surrounding the phenomenon studied by this thesis, namely the involvement of customers and communities in video games companies and of the importance of live-streaming in this context. Consequently, drawing these notions from the framework of Open Strategy and integrating them into the theoretical framework of this thesis provides additional concepts on which to rely in order to strengthen the understanding of the effects on business management relating to the phenomenon studied.

2.3.1 The five dilemmas of Open Strategy

Open Strategy is defined by the dynamic process through which companies focus on more acute transparency and inclusion of internal and external stakeholders alike. As inferred, transparency and inclusion are considered through this framework even towards strategic issues. Both internal and external actors are thus granted through this framework a more vivid and accurate strategic transparency, and may accordingly be granted with more inclusion in this regard. In Open Strategy theory, transparency is measured through the accessibility and visibility of a company's strategy, both from an internal and an external point of view. Inclusion refers to the degree to which internal and external actors' contributions are solicited and integrated in the strategy-making process of a company. (Whittington, Cailluet & Yakis-Douglas, 2011.)

Open Strategy is thus conceptualized as a constantly varying process through which its two dimensions, transparency and inclusion, are continuously at the centre of dilemmas born out of the discrepant forces that internal and external concerns may exert on the company. Therefore, and although Open Strategy presents a wide array of benefits for companies, the inherent dilemmatic nature that it harbours is far from exempting risks and costs. Figure 4 presents the different dilemmas that characterize Open Strategy as per Hautz, Seidl and Whittington's (2017) conceptualization. (Hautz et al., 2017.)
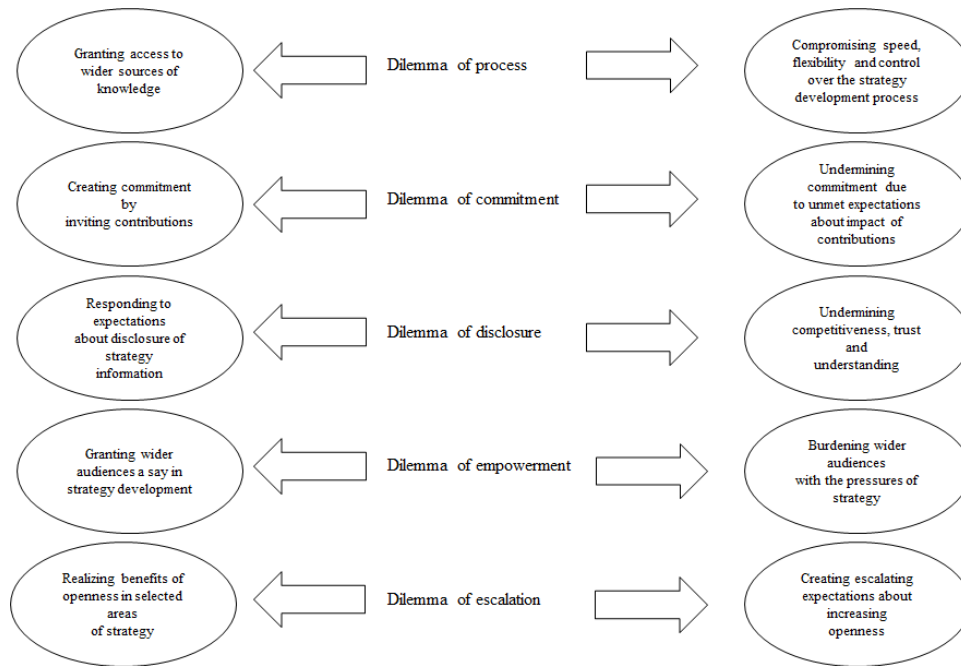
Figure 4. Five central dilemmas of Open Strategy (adapted from Hautz et al., 2017).

The first dilemma presented is the dilemma of process, which addresses the inherent issue that companies may face when more people are included in shaping their strategic decisions. Although wider inclusiveness is depicted as prone to foster the emergence of strategic decision of greater quality, this inclusiveness may also be a source of hindrance and additional obstacles that may result in slower, less controlled or less agile strategic processes and may in its most extreme manifestations lead to the inability for the company to formulate or undertake any strategic decision. Inclusion of a wide audience in decisions as crucial as strategic ones may also exert a lot of pressure on the company's resources to accommodate with the growing variety and occurrences of inquiries that such endeavour implies. (Hautz et al., 2017; Malhotra, Majchrzak & Niemiec, 2017.)

Open Strategy effects can affect the commitment to the company's strategy both positively and negatively. The dilemma of commitment thus stipulates that although the involvement of a wider audience has inherent beneficial effects on morale, the potentially overwhelming practicalities of organizing such greater involvement are highly correlated with possibilities of undermining the chances of attaining those beneficial effects. (Hautz et al., 2017; Stieger, Matzler, Chatterjee & Ladstaetter-Fussenegger, 2012.)

The notion of transparency presents an inherent conflicting concern. Indeed, transparency implies the disclosure of information which may therefore negatively affect the competitive advantage that the company might have been able to leverage out of its secrecy. However, increased transparency is also highly correlated with positive effects on the company's image or legitimacy and may facilitate processes that require a higher degree of knowledge and understanding from their participants. It is thus in this particular predicament that the roots of the dilemma of disclosure find their origin. (Hautz et al., 2017; Appleyard & Chesbrough, 2017.)

The dilemma of empowerment tackles the inherent issues associated with the inclusion of a wider range of participants in the strategic decisions of company in regard to the supplementary efforts that strategic decision making implies and of the associated burden that it bestows upon the participants. The newly found power that agents included in strategic processes therefore enjoy comes at the cost of requiring a greater investment of their time, skills and knowledge towards this specific endeavours. (Hautz et al., 2017; Luedicke, Husemann, Furnari & Ladstaetter, 2017.)

The fifth and final dilemma is the dilemma of escalation. This particular concern addressed the extent to which Open Strategy is conducted and specifically tackles the issues that starting to undertake such an approach may inflict upon other operations or domains of the company. Indeed, establishing such measure creates precedence and thus a basis that actors may rely upon to justify their claim for other issues to be treated in an equal fashion. In the context of the dilemma, the balance to be found concerns the areas that could benefit from Open Strategy, a company might greatly benefit from such an approach for a specific part of its strategic process, while another segment of it may be greatly hindered or immobilized by similar practices. Exercising restraint and operating at first on a smaller scale before progressively intensifying the efforts might be a way to circumvent this dilemma, but the time that such a progressive approach may imply could also be an unnecessary measure that therefore slows the overall process and the emergence of its potential benefits. (Hautz et al., 2017; Baptista, Wilson, Galliers & Bynghall, 2017.)

Ketokivi and Castañer (2004) demonstrate that initiating participative strategic planning contributes to reducing or attenuating position bias and are thus able to limit

conflicts of interdepartmental or hierarchical nature. Hutter, Nketia and Füller (2017), additionally highlights the fostering role that Open Strategy can have towards the development of sense of virtual community as well as organizational sense of community in companies which utilize such practices. Therefore, Open Strategy has been linked to increased commitment towards the strategic objectives of the company. (Hautz et al., 2017.) As detailed by the dilemmas above, and despite the possible downsides that they also demonstrate, Open Strategy thus appears as a source of potential benefits for companies. The beneficial effects that the inclusion of a wider audience of agents and actors implies on creativity has been illustrated by academic research and found to be able to increase commitment, enable joint sense making and institute favourable impression management.

2.3.2   Impression management

The theoretical concept of Open Strategy has moreover been associated with its favourable impression management capabilities. Impression management aims at influencing the perception of the company by audiences external to the company in a positive manner. In an effort to highlight the proactive impression management strategies, Gegenhuber and Dobusch (2017) conceptualize broadcasting, dialoguing and including as three modes of Open Strategy which they present as effective in the context of impression management and thus in positively impacting the perception that external audiences have of the company. Through this lens, broadcasting consist of the communication of relevant strategic information to external audiences. Dialoguing is conceptualized as the act of communicating similar strategic information while also conversing with external audiences. Lastly, including is the organization of democratic systems in order to incentivize the participation of external audiences. Gegenhuber and Dobusch (2017) furthermore detail the relation of these three Open Strategy modes based on four impression management strategies: exemplification, supplication, self-promotion and ingratiation (see table 3). (Gegenhuber & Dobusch, 2017.)

Table 3. Open Strategy modes (Gegenhuber & Dobusch, 2017).

Modes	Description	Impression management strategies
Broadcasting	Revealing relevant strategic information to external audiences	Exemplification Supplication Self-promotion
Dialoguing	Reveal strategic information while simultaneously soliciting opinions and engaging external audiences in an open conversation	Ingratiation Self-promotion
Including	External audiences' participation in decision-making through democratic mechanisms	Ingratiation

In the framework of impression management, exemplification is understood as the efforts of companies to engage in actions that demonstrate their commitment towards better standards of moral or ethics. Ingratiation aims at strengthening the image of the company through collaboration or by conforming to external stakeholders. Self-promotion is the impression management strategy through which the company aims at depicting itself as particularly competent by showcasing its achievements or the specific qualities of its products. Finally, supplication is the act through which a company exposes its shortcomings and in doing so aims at incentivizing the creation of empathy or sympathy in the minds of external stakeholders, or in receiving help from them. The relation between the three open strategy modes as conceptualized by Gegenhuber and Dobusch (2017) and the four impression management strategies is illustrated by the table above. (Gegenhuber & Dobusch, 2017.)

In light of this framework, Gegenhuber and Dobusch (2017) concluded that proactive actions towards transparency could be beneficial for businesses. The overall framework of Open Strategy was thus a particularly relevant basis from which companies can find inspiration when conducting impression management. Additionally, Hautz et al. (2017) highlighted that recent research on information technology was emphasizing the instrumental role that social media can play in companies' efforts towards transparency. Hautz et al. (2017) moreover stated that information technology was also likely to promote inclusion, in part due to the facilitation of communication that it implies, thus further reinforcing the potential impact of this particular tool in the context of Open Strategy. Through this explicated link between impression management and information technology, impression management appears to find particular relevance in the context of the phenomenon

studied in this thesis. Indeed, online communities, video games and live-streaming are inherently linked with information technology due to the fact that they are an expression of recent progress and developments in that field.

2.4 Theoretical concept map of the study

The phenomenon that this thesis studies relates to the implications of community building and customer involvement for companies in the context of video game development and to evaluate the role of live-streaming in this endeavour. Therefore, this study aims at understanding the nature and extent of the relationship between the three different elements that are at its core: live-streaming, online communities and video game companies. Through the description of the background surrounding the study in the introduction section of this thesis, the importance of live-streaming and Twitch.tv was developed. Furthermore, throughout the elaboration of the theoretical framework and the collection of previous research, connections were established between live-streaming and the other core concepts of the study.
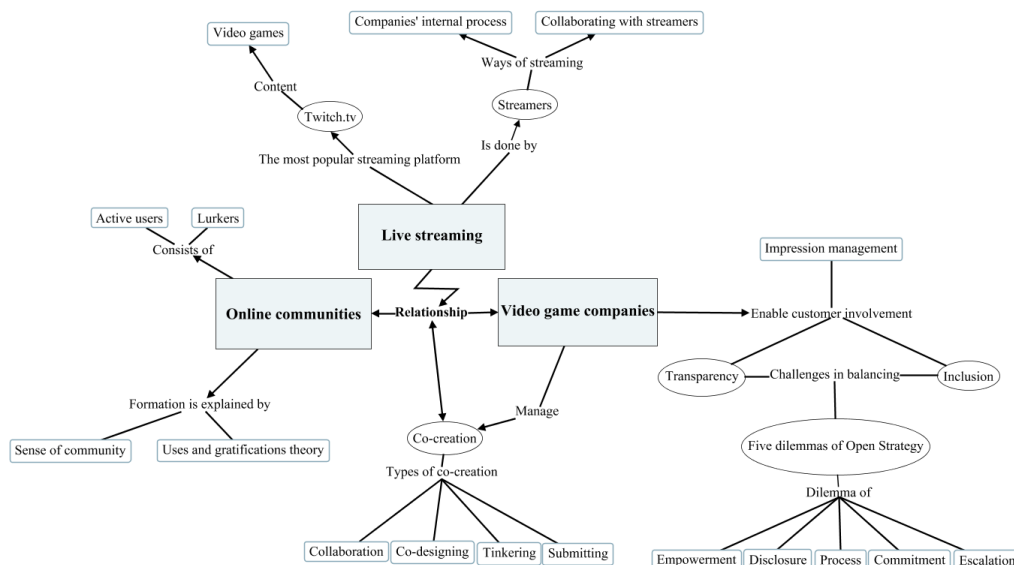
Figure 5. Theoretical concept map of the study

The theoretical framework of this study moreover explains the formation and development of online communities through the uses and gratifications and sense of

community theories, and further discusses the different kind of activities and members central to the notion of online communities. Through value co-creation and notions such as inclusion, transparency and of the dilemmas that result in balancing those elements, the implications for video game companies, which are central to this study, are further discussed from a theoretical perspective. Consequently, the overall context of the study and theoretical framework utilized in the process of conducting this study is illustrated through Figure 5.

3   METHODOLOGY

This section provides an overview of the methodology used in the study. The intention of this section is to provide the reader a detailed description on how the data was gathered and analysed, and justification and motivation of the chosen research methods.

3.1   Research approach and justification

The theoretical part of this study aims at presenting the diverse concepts and notions tackled in the research from a theoretical perspective, and provides the basis and the scope through which the empirical data is later considered. In order to establish this understanding, a theoretical framework is developed, which serves as a support upon which the entirety of the thesis rests. It therefore provides a clear and thorough description of the approach taken by the researchers and relies on selected theories and concepts that are understandable, appropriate and relevant to the conceptualization and the understanding of the topics considered prior to the analysis of the empirical data. The theoretical framework thus also functions as a declaration of intent that is given to the research by its authors. (Grant & Osanloo, 2015.)

The theoretical section of the study focuses on implications of value co-creation in the video game industry and online community involvement in the context of game development. Moreover, the theory further highlights the aspects of live-streaming in the process of online community building and enhancing the company transparency. The study carefully analyses existing literature on the topic and interprets the aspects of community building and managerial importance in the company strategy development process. Additionally, the literature review presents previous research concluded on the topic and aims to find general information about the elements relevant to the study.

According to Ghauri, Grønhaug and Strange (2005, pp. 96–98) qualitative research methods are used when the emphasis of the study is to provide a detailed description of the phenomenon from a specific point of view. Qualitative research does not aim at testing the validity or applicability of theories, but rather aims at deepening the

understanding of particular phenomena and at discovering new insights about the research subject. Qualitative research thus strives at establishing a holistic understanding of the topic studied. The importance of the phenomena surrounding the object of research are not determined by the researchers' own interests or point of view, but rather by what research highlights as the most relevant processes or findings. Furthermore, a concern that is characteristic of qualitative research is the existence of a flexible and adaptive research plan that can change as research progresses in order to best accommodate the overall context of the study. (Hirsjärvi, Remes & Sajavaara, 2009, pp. 161, 164, 181.)

For the purpose of this study, the empirical data was gathered throughout semi-structured interviews with employees and managers from video game companies. Due to the inherent flexibility that is born out of the conversational aspect of interviews, interviewing is a common and efficient form of data collection. Moreover, semi-structured interviews are a form of in-depth interviews, and are thus in compliance with qualitative research methods. Interviews allow for active and meaningful interaction between the interviewer and the interviewee. This form of data collection not only renders possible the gathering of information, but also enables clarification, justification or exemplification of the interviewees' answers when needed. The direct interaction that is central to the concept of interviews additionally minimizes the risk of misunderstandings and allows the highlighting of the motives behind the answers of the interviewees. (Hennink, Hutter & Bailey, 2020, p. 17; Hirsjärvi & Hurme, 2008, pp. 34–35.)

The overarching goal that semi-structured interviews aim to accomplish is the drawing of reliable conclusions based on the interview data relating to the studied phenomena. Taking into account the research problem and questions, as well as the theoretical framework surrounding the study, is thus essential in the preparation of the interviews. Adequate interview planning therefore requires the researchers to acquaint themselves with the relating relevant theories and research data. Such concerns should furthermore occupy a central role during the interviews themselves. Topics to be addressed during the interviews are centred around a generalized conceptualization of the themes surrounding the phenomena studied, but tackle the particular problems within those themes from a more detailed and advanced perspective. As the semi-structured

interview framework revolves around conversational themes rather than following a series of pre-planned questions in a sequential manner, those themes guide the interviewers rather than predetermining a set and order of questions to be asked. (Adams, 2015, p. 493; Hirsjärvi & Hurme, 2008, pp. 66–67.)

Preparing an interview outline in the context of semi-structured interviews aims at accomplishing a twofold goal. On one hand, it aims at ensuring that all necessary and important questions are addressed and on the other hand, it strives at rendering the conduction of the interviews as fluid as possible. Several concerns must be taken into account when preparing for semi-structured interviews. The form, the type, the order and the quantity of questions all need to be considered. Semi-structured interviews by nature encourage the usage of open-ended questions, allowing the interviewees to elaborate and express their own point of view in a detailed manner. The interviewers should strive at ensuring that the interviewees feel comfortable in answering the questions. From carefully considering how to start the interview or which questions to ask first, the interviewer aims at establishing an atmosphere in which the interviewees feel confident to discuss the subject at hand. The interviewer moreover strives at maintaining such an atmosphere for the entirety of the interview. Similarly, as the duration of a semi-structured interview is typically around 1-2 hours, interviewers should be wary about the number of questions included in their interview plan. (Adams, 2015, pp. 496–501; Koskinen, Alasuutari & Peltonen, 2005, pp. 108–110.)

The theoretical framework of the study was instrumental in the elaboration of the central themes that were chosen for the interview plan. Consequently, the themes were the following: live-streaming, online communities, community involvement and customer interaction. The interview plan approached those themes with the intention of exploring the business implications of such concerns for the companies interviewed. Moreover, as one of the goals of the interviews was to develop a detailed and thorough understanding of the phenomena studied, questions were elaborated previous to the conduction of the interviews. Furthermore, a practice interview was done prior to the first interview with the respondents, to ensure that the questions were fitting the interview plan both in quantity, so that all the questions could be answered within the time frame of the interview; and that the interviewee would have the opportunity to elaborate sufficiently each of their answers. Consequently, the interview plan was

narrowed down to contain 19 questions, this interview outline can be found in the appendix section of the thesis (appendix 1).

For the purpose of the study, the interviewee selection was done based on several criteria, the overarching goal was to ensure the relevance of the companies contacted within the scope of the research and the ability of the interviewee to answer the interview question in an educated and relevant manner. The basic criteria included the following points: first, the company operates in the video game industry and produces game either for computer or console platforms; second, in order to accommodate the researchers' languages capabilities, the company or at least its representant is able to understand and speak at least one of the three following languages: Finnish, French or English. No particular criteria were established regarding the size of the companies contacted, however most of the companies contacted were SMEs due to the relatively high number of such companies in comparison to bigger corporation operating in the video game industry.

Companies were initially contacted through several methods depending on the availability of their contact details. Although an e-mail invitation was the preferred method, some companies were contacted via contact forms on their respective websites or through direct message on one of their respective accounts on social media platforms. The invitation letters can be found attached to this study, see appendix 2 and 3. Based on the nationality of the companies, the invitations were sent either in English, by default, or in French in the case of French companies. For the invitations sent in French, the option was given to the respondents to conduct the interview in English or in French, depending on their preference. In total, 222 invitations were sent throughout the different aforementioned channels, to which 10 companies replied positively and agreed to participate to an interview.

To accommodate with the situations in which the respondents were willing to participate but a meeting was unable to be arranged, two interviews were conducted via emails exchanges. The interviews were conducted between 10th of May 2021, and 21st of June 2021, the specific dates and duration can be found in table 4. The interviewees occupied various roles within their respective companies which had close ties with either community management (e.g. community manager, communications

manager) or video game development (e.g. developer, lead developer). Some of the interviewees were furthermore owners or co-owners of their respective companies. Most of the respondents were part of relatively small-sized companies of a few employees. Some of the interviewees however were part of international companies who had over 50 employees.

Table 4. List of interviews.

Company	Role	Date	Duration
Company A	Communications manager	10.05.2021	54 minutes
Company B	Business manager	15.05.2021	Emails
Company C	Game developer	19.05.2021	43 minutes
Company D	Community manager	19.05.2021	37 minutes
Company E	Community manager	28.05.2021	1h 18minutes
Company F	Game developer / co-owner	02.06.2021	54 minutes
Company G	Business manager / game developer	08.06.2021	1h 4 minutes
Company H	Game developer / co-owner	08.06.2021	Emails
Company I	Business manager / co-owner	15.06.2021	45 minutes
Company J	Business manager	21.06.2021	51 minutes

Given the consequential geographical distance that separated the researchers from the interviewees, and the additional logistical difficulties that the COVID-19 pandemic implied at the moment of the research, the interviews were conducted online via the use of the software Zoom. As can be inferred by the invitation, each individual interview was conducted within a one-hour timeframe. Similarly, some of the interviews were conducted in English, while some were conducted in French based on the respective nationality of the companies. To facilitate the interpretation and handling of the data collected by both authors, the interview notes were translated into English. Distractions and potential nuisances were minimized by careful planning and tests done before the interviews to ensure the optimal functionality of the hardware and software utilized.

Prior to the interviews, the interviewees were informed through the invitation about how the data collected will be handled and used, and confidentiality issues were addressed. For the purpose of this research, all data relating to the interviewees' identity and the relating companies or video games were anonymized. The data was furthermore collected, stored and handled with utmost care by the authors, through private communication channels. All interview recordings were transcribed for the purpose of writing this research and were then deleted once the research was

completed. Additional questions or concerns of the interviewees, prior to or after the interviews, were also addressed.

3.2   Gathering research data and writing process

Originating from the researchers' profound interest in both live-streaming and the video game industry, the study began in September 2020. The researchers proceeded to familiarize themselves with the theory surrounding the topics and themes of the study by reading previous research. Due to the nascent aspect of live-streaming and the will of the researcher to conduct a study that was as relevant as possible in the context that was contemporary to the study, recent sources were privileged. In an effort to ensure the reliability and the relevance of the sources used, research efforts vastly focused towards references of academic nature, with particular preference for original sources. This was rendered possible by online research through academic research databases, such as EBSCO, ABI/INFORM, Scopus, Web of Science, ResearchGate, JSTOR, ScienceDirect. Key words used were, for example, "live-streaming", "co-creation", "community", "online community", "game design", "video game industry", when relevant, key words were combined together in order to obtain more accurate results. Additional websites and online search engines were also used within the scope of this research, in the researchers' efforts to familiarize and acquire knowledge about the context and the actuality surrounding the topics tackled, amongst which figure Google and Google Scholar, Twitch.tv. Through the use of the University of Oulu's library services, relevant books were also studied. The lack of previous research that is addressing the specific concerns and concepts that this study tackle, especially from a business perspective or through a managerial lens, further reinforced the motivation of the researchers to conduct the study.

In the initial steps of the research, the researchers created a Discord server in which several text channels were organized to allow the quick categorization and the further ease of access of the information gathered. This Discord server was furthermore used throughout the entirety of the writing process of this research as a means of communication between the two authors, whether it be through the different text channels, or through more direct communication during the writing sessions via the use of a voice channel. The permanent discussion and clear communication that was

ensured through the use of Discord was instrumental to the writing process of this research. Furthermore, a Microsoft OneDrive folder, shared between the authors, was also created to allow the simultaneous access and modification of several documents relating to the research, for both authors. The thesis and all the other documents that were produced in the context of this study, such as the elaboration of the questionnaire or of the invitation to the interview, were thusly created through Microsoft OneDrive services. The shared folder was additionally subdivided in different topics, such as presentation, interview. The use of this tool not only facilitated the organisation of the research but was moreover instrumental in clear exchanges and communication between the authors and thus greatly benefited the overall writing process. The writing of the thesis was achieved section by section, and tasks were divided evenly between the authors. The division of work was done to accommodate the strengths and skills of each author in order to write the thesis as effectively and efficiently as possible. The writing process was furthermore shaped by the University of Oulu Master's Thesis programme, which included seminars through which feedback sessions with the thesis supervisor and peer reviews were organised. An outline of the overall writing process of this research can be summarized by the figure 6.

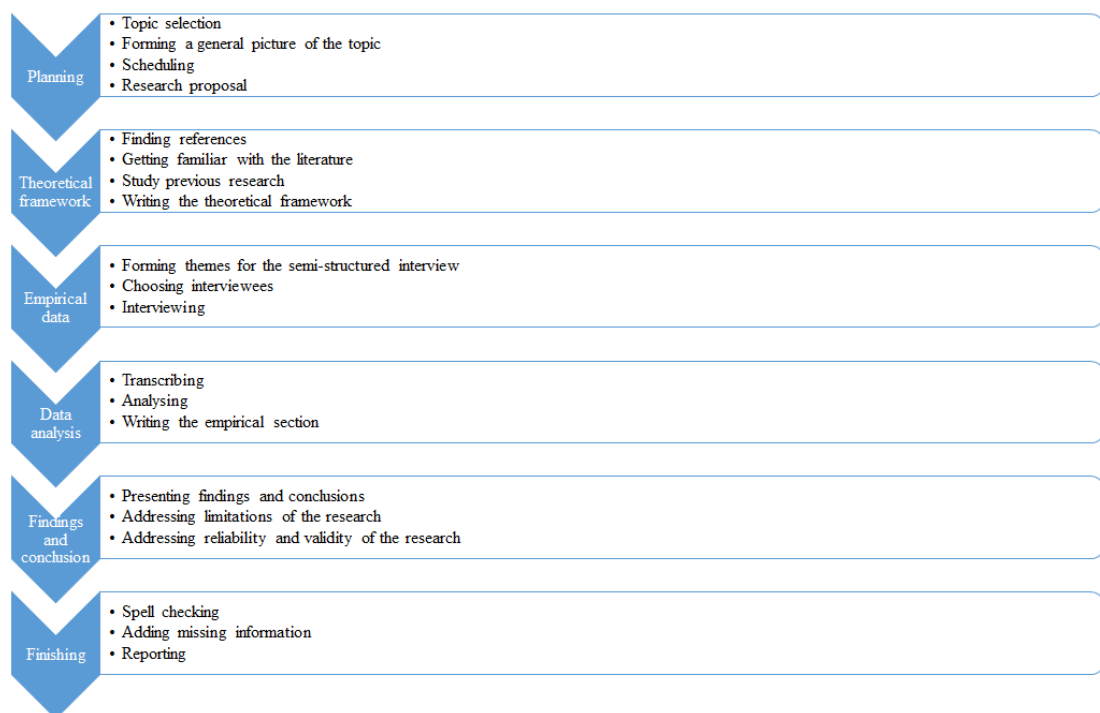| Planning	• Topic selection • Forming a general picture of the topic • Scheduling • Research proposal
Theoretical framework	• Finding references • Getting familiar with the literature • Study previous research • Writing the theoretical framework
Empirical data	• Forming themes for the semi-structured interview • Choosing interviewees • Interviewing
Data analysis	• Transcribing • Analysing • Writing the empirical section
Findings and conclusion	• Presenting findings and conclusions • Addressing limitations of the research • Addressing reliability and validity of the research
Finishing	• Spell checking • Adding missing information • Reporting

Figure 6. Thesis writing process

3.3 Data analysis

Qualitative research is by its nature an extensive endeavour of which the results are complex and multi-faceted, and thus prone to create surprise in the researcher. It is therefore necessary for the authors to decide, when analysing the collected data, what should be the particular focus of the analysis and what should be discarded. This decision and choice is a complex endeavour that compels the researcher to consider the data from the perspective of the research problem and of the research goal, in order to decide what elements of the data are the most relevant and prone to bring elements of understanding to these concerns. There are several ways to analyse the research data, of which Tuomi and Sarajärvi (2009) provide several examples. Data can therefore be regrouped under themes based on the topic they tackled, or it can be categorized based on the common characteristic that different elements share together and through which generalizations can be observed. As the theoretical framework provide the necessary basis in understanding the phenomena studied, it may also influence the way in which the data is analysed. Data analysis can rely on the theoretical framework to varying extents, being either extremely dependent, guided by it, or almost entirely separate. (Tuomi & Sarajärvi 2009, pp. 92–99; Cohen, Manion & Morrison, 2007, pp. 468–474.)

In order to facilitate the analysis of the data collected during the interviews, the interviews were recorded and then transcribed. As the authors were conjointly conducting the interviews, an initial form of transcription was achieved through the taking of notes. An initial form of transcription was done during the interviews, as one of the authors was leading the interview, the other one was able to take notes. These two roles were assumed by the same person in cases where the interview was conducted by only one interviewer. This process was instrumental in the emergence of pertinent follow-up questions. All of the interviews were then transcribed from the recording, either on the same day that each individual interview was conducted, or the day after. In the process of transcribing, a general level of transcription, excluding for example filler words or the specification of the tone on which the words were spoken, was deemed to be of sufficient accuracy to thoroughly account for a clear depiction of the content of the interview. As two of the interviews were conducted throughout e-

mail discussions, the emails themselves were in that case used in place of any transcription.

The data collected during the interviews was separated and grouped on the basis of theory-based themes that were central both in the elaboration of the theoretical framework and in the planning of the interviews. This categorization under themes of live-streaming, online communities, value co-creation and customer involvement allowed for clear compartmentalization of the data and thus rendered possible the discovery of similarities and also the highlighting of relevant discrepancies. The data was thus analysed thematically by both authors individually and was thus categorized under themes according to a colour code. In order to limit bias, this process was made complete by a second analysis during which the data and its categorization was discussed in a meeting by both authors conjointly. The overarching aim was not only for the authors to develop a joint comprehensive understanding of the phenomena based on the interview answers, but also to ensure triangulation, as described by Cohen, Manion and Morrison (2007, p. 143).

4   EMPIRICAL STUDY

In this section of the study, the data gathered throughout the interview is discussed, thoroughly analysed and explained. The structure of this section is organised around the different themes and key concepts that constitute the theoretical framework of the study, namely online communities and value co-creation. In order to provide elements of understanding to the phenomenon studied and the research question of this thesis, the implication of live-streaming on those key concepts is also thoroughly scrutinized.

4.1   Live-streaming in video game companies

4.1.1   Existence of live-streaming and effects on video game companies

In the analysis of the interview data, one of the central aspects is to build an understanding of the familiarity of the respondents with the concept of live-streaming in general. The familiarity of the respondents with live-streaming was thus assessed both from their personal understanding, but also from the point of view of the company in which they work, namely in how the employees are familiar with live-streaming and how important live-streaming is in the business context. In this regard, all of the respondents expressed their awareness of the concept to varying extents. Some respondents demonstrated a more acute understanding of live-streaming, whether through more frequent consumption of live-streams or through the organisation of live-streams themselves for example.

Multiple companies interviewed reported having conducted live-streams on different platforms, such as YouTube Live, Steam and Twitch.tv. Due to Steam's role as an important platform on which video games are sold, its importance was emphasized by most of the interviewees. However, Twitch.tv was the respondents' preferred platform for the purpose of live-streaming based on the popularity of the platform and of the ties between Twitch.tv and video games. Additionally, live-streaming was generally perceived by the interviewees to be useful and potentially beneficial for their respective businesses, from which effects such as increases in employee motivation, team building or business growth can possibly be derived.

Most of the respondents reported either having previous experience of conducting sponsorships with streamers or interacting with them in the context of their business operations, either through paid sponsorships, giving them copies of the video games or contacting them for business purposes. The interviewees however had varying opinions about the accessibility of live-streaming for them from a business perspective. Indeed, several respondents highlighted that live-streaming was an affordable medium through which sponsorships for advertisement purposes can be conducted, even for small companies, due to the associated relatively low costs in comparison with other means of advertisement such as TV ads or extensive marketing campaigns.

> "Live streamers or YouTubers are extremely important for the studio, even more so because it is quite a small studio, so we do not have enough budget for big ads. [...] Sponsored streams are still not too expensive so if we use that it works with our budget." (Company A interviewee)

However, other respondents harboured less enthusiasm towards live-streaming in the context of conducting paid advertisement, explaining that such sponsorships, with popular streamers in particular, were beyond what the companies could respectively afford.

> "Live-streaming and content creation has become a business in itself, and to be featured by an influencer with a large subscriber/follower base costs significant amount of money. Money indie game development studios do not have." (Company B interviewee)

Surprisingly, as most of the companies interviewed were of a relatively similar size, this concern did not seem to be correlated to company size. Overall, the accessibility of live-streaming was therefore a notion on which the respondents had diverging opinions. This divergence finds elements of explanation in the diversity of conceptualization and expectations relating to live-streaming that the companies interviewed have. Indeed, while some companies preferred collaborating with streamers with a relatively small or medium-sized followership, and thus cheaper to collaborate with, other companies envision that focusing on collaboration with more popular streamers would be preferable and are thus discouraged by the cost associated with such collaborations.

Based on the answers provided by the interviewees, responding companies that had little to no previous experience of advertised live-streams were found to be inclined to question the profitability and return-on-investment of such collaborations. However, evaluation of the return-on-investments of such endeavours was questioned by multiple respondents who also highlighted that it was sometimes difficult to track the direct effects of live-streams on sales for example.

> "[...]just by looking at sales numbers, my guess is that someone decently popular ran a live stream three days ago." (Company G interviewee)

While one of the respondents reported that no noticeable effect had been detected on their game sales in spite of being featured in several popular streamers' broadcasts, the interviewee still underlined the importance of live-streaming.

> "Our games have been streamed by some of the biggest streamers in the world, and there's no discernible correlation that they converted into sales at all. [...] We would never live stream ourselves, but see streaming as a very useful marketing tool, and an unavoidable part of the online landscape " (Company H interviewee)

Nevertheless, several respondents also suggested that unusual peaks in sales could be linked to recent live-streams or YouTube videos. In one particular case, a respondent was able to directly notice the effect of this phenomenon, reporting that when a popular streamer released video content about the company's video game, an unprecedented spectacular increase in sales was observed.

> "A popular streamer noticed the game and made a live stream on Twitch, after that we gained visibility and several streamers live-streamed the game over a couple of months. [...] We have noticed spikes in wish listing and sales, matching with live-streams and video releases. [...] In the case of the popular streamer, he first made a live-stream which caused a spike in sales [...] and then again when he released the video on YouTube. " (Company F interviewee)

Multiple interviewees also reported having experiences of live-streaming sessions conducted by their respective companies. Four respondents specified that live-streams were regularly organized by the company, one interviewee in particular expressed that the company was planning on dedicating a part of the company's premises for the purpose of live-streaming. Furthermore, two respondents highlighted and emphasized

the crucial role that live-streaming occupied in the definition and the development of the company's identity.

> "Live-streaming is definitely a team building or bonding type of thing. [...] I think it has become part of our identity anyways, if we were to stop doing it, for six months or something, we would probably feel both financial impact and community impact, I really think it has become part of our identity." (Company G interviewee)

From the interview data, it is thus clear that the existence of live-streaming is affecting the companies interviewed. It was thus found that these concepts affect the companies' structure and the way in which they plan and conduct business. Due to the existence of live-streaming, companies have thusly adapted their values, vision and identity to incorporate the implications generated by this technology and its popularity. This evidence supports the idea that live-streaming finds resonance in the theoretical framework of this study, thus highlighting its intertwinement with notions such as customer involvement or online communities. Live-streaming was indeed discovered throughout this research as being a potentially effective tool in companies' endeavours relating to these notions.

4.1.2 Live-streaming and game development

Thorough analysis of the data collected throughout the interviews moreover revealed implications of live-streaming in the context of game development, thus further emphasizing its importance for video game companies. Indeed, on top of the potential effects that live-streaming can have on exposure, publicity and sales, the respondents also emphasized a myriad of implications for game development.

The influence of the existence of live-streaming appears to affect the mind-set in which games are created. The video game companies interviewed indeed underline their growing consideration of several factors when designing their games. The interviewee from company I for example described the existence of a "streamer mode" option in their latest video game. Similarly, companies tend to carefully consider game design and features in order to render their video games easy to be spectated. A plethora of game elements are examined through this lens, such as the timing of interactions with

the game, the pacing, and the overall ease with which viewers can follow and understand the gameplay.

"In one of the earliest versions of the game, […] we didn't have any feedback that a button was being held, so the player knew that it was being held because they were the ones holding it, but there was nothing on screen. […] So we do try to think about stuff like that. Like is the game readable and understandable for someone who is just watching it? And then we also did some other stuff in the settings, there's a checkbox for streamer-mode, which is something that we put in the game, and that just makes sure that if they defocus the game, […] it doesn't pause or minimize, it just keeps running. So they can be focused on the chat or something else entirely and still be playing the game." (Company I interviewee)

Moreover, the respondent from company A highlighted that the pacing of their latest video game was being scrutinized and that potential changes were considered in the form of small breaks in the otherwise fast-paced gameplay, which would provide streamers with easier opportunities to read and interact with their live chat. Based on empirical data, impacts of live-streaming on customer involvement and game design were made evident. Thus highlighting a shift in companies' focus and demonstrates that growing attention is being dedicated by businesses towards this concern.

The terms of service of Twitch.tv were also mentioned by several interviewees as a concern in the design of their future games. Twitch.tv sanctions the use of copyrighted music without the appropriate rights or authority to do so. For example, two respondents explicated that their games featured a soundtrack specifically created for the purpose of the respective video games. The companies could thus allow streamers to play their games with the original soundtrack without risking the streamers running into terms of service infringement issues. The interviewees furthermore mentioned that this specific concern would be kept in mind in potential upcoming games due to the benefits associated with it.

"We got some custom music for our game, composed just for our game, which is nice because that will never be affected by DMCA, so streamers can freely use it, youtubers can freely use it, which is really really great, a lot of videos actually use the base game music." (Company G interviewee)

Overall, the entirety of the respondents expressed that the existence and popularity of live-streaming dictated some of the design choices of their video games, either directly

or indirectly. More particularly, Twitch.tv was at the centre of some of these design concerns, with features such as Twitch.tv-specific extensions being examined by interviewees. Additionally, more than half of the interviewees said they would consider live-streaming more in the design of their potential new releases or upcoming updates. Analysis of the empirical data therefore demonstrates that companies are in the process of developing their knowledge about Twitch.tv and live-streaming and general, and that the associated implications are progressively learned by companies. The particular impact of Twitch.tv on game design exacerbates the urge for companies to integrate these considerations in their activities. As changes that take place on the platform also affect companies, linkage between Twitch.tv and video game companies is further reinforced and the necessity for companies to take into account these potential evolutions.

Although all of the interviewees recognized the importance of live-streaming in video game development, their opinions diverged concerning the extent to which these implications should be considered. While some of the companies interviewed placed live-streaming as a central concern and a driving force of game development, others focused on delivering their vision of the game, feeling that live-streaming popularity was not necessarily driven by live-streaming specific features, but instead by the intrinsic gameplay qualities of the video game. Based on analysis of the interview data, specifically designing a video game with live-streaming concerns as central was found to not necessarily equate to live-streaming popularity. Similarly, video games that do not possess any particularly favourable features for live-streaming can still potentially experience success on live-streaming platforms, if they are featured by a popular streamer for example.

Therefore, in addition to live-streaming itself, the importance of streamers was also elucidated by the interviewees. One of the central implications emphasized was indeed the potential for the development of business relationships between companies and streamers. The involvement of streamers with game development or specific streamer-related content in the game was highlighted by one interviewee in particular as a potential source of relationship building that the interviewee linked to business growth possibilities. Other interviewees moreover formulated similar thoughts towards streamers and the associated potential for building relationships. The relationship

thusly created could also be beneficial in future releases. With popular streamers in particular, this relationship would therefore further help the company in developing their customer base and their community, as the company could indirectly reach and communicate with the streamer's follower base. Relationships were also a focal point for some interviewees not only with streamers but also more directly with players and communities. Several interviewees indeed heavily accentuated that relationships with players could be fostered through live-streaming, identifying live-streaming as a channel to have privileged, direct and reciprocal interactions with their audience.

> Live-streaming provides the ability to create relationships with the players over time through private jokes for example. […] Live-streaming provides the ability to interact with and answer the questions of the players. […] Streaming is a way of reinforcing the relationships with the players and of creating "moments" with the players, memories, and to share them with the community. […] Streaming is good for having real moments of interaction and exchange. (Company A interviewee)

These reciprocal interactions were moreover reported to be useful for getting valuable feedback from their most active and involved customers, especially when releasing a new video game or new content for an existing game. The live chat associated with live-streams was also often utilized by the respondents to communicate with their player base and inquire about what content would the audience be the most interested in to be part of the upcoming games or updates. Seven respondents gave multiple examples of such feedback that was later implemented into gameplay features, thus farther highlighting the importance of this notion.

Multiple companies that were familiar with conducting live-streams themselves underlined the ease of gathering feedback in this context, and the swiftness that was indissociable of it. The inherently interactive nature bound to live-streams was moreover identified by the respondent as a particularly fitting outlet to handle criticism and negative feedback, as dialogue could be established in a more fluent manner, which lead to insightful discussions. Nonetheless, a majority of the respondent also nuanced their opinion by detailing that negative elements and characteristics were also tied to such form of communication. Indeed, companies reported often being faced with members of the audience who were unable to clearly and accurately express their

concerns or ideas, which sometimes rendered conversations tedious and the process laborious.

Based on the analysis of the interview data, multiple intricately nuanced elements were found to affect the implications and effects of live-streaming from a business perspective. On the one hand, the genre of the game was mentioned by the interviewees as one of the determining factors of this concept. This can be explained by the overall popularity of specific video games genres on Twitch.tv, such as FPS or MOBA games for examples, while other genres, typically catering to more niche audiences, experience on average lower viewership. On the other hand, several interviewees expressed a diametrically different opinion in this regard, indeed they argued that the genre of the game was not necessarily a determining factor, and that other elements, such as streamer personality, were equally or potentially significantly more important. Two respondents in particular emphasized that what they perceive as a significant part of the viewership, especially for popular streamers, was likely to watch live-streams of their favourite streamers regardless of the video game he or she plays. Thus, although some genres are statistically more popular than others on live-streams, evidence from the interviews demonstrate that other games genres are also affected by live-streaming and its implications, and that streamers' individualities have the potential to actively affect the live-streaming popularity of a video game.

Whether the companies interviewed conducted live-streams personally, all of the respondents reported having had some degree of experience of their video games being live-streamed. This denotes that live-streaming is a concern for video game businesses and that it affects their product design, the structure of their company and its organisation, their overall operations and even potentially their strategic decisions. The analysis of the interview data provides evidence that regardless of whether companies decide to pro-actively engage in live-streaming, by conducting it themselves or through sponsorships with streamers, due to the large number of users and channels on Twitch.tv, it is highly probable that their game will be streamed anyways. It was thus revealed that in face of the growing popularity of live-streaming, the integration of the associated opportunities and challenges that surround such a medium are consequently becoming more important. These findings further support the previously discussed business concerns regarding live-streaming and customer involvement.

4.2 Online communities and value co-creation in video game companies

4.2.1 Online communities and video game companies

The analysis of the empirical data revealed clear connections between the theoretical framework of this study and the respondents' business preoccupations. Indeed, the role of communities was highlighted by all of the respondents, online communities were especially emphasized as important by the interviewees due to the strong bond that links video games and internet. Moreover, based on the respondents' answers, the attention that communities required and the potential impact they can have on companies was found to be affecting the management of companies.

Overall, interviewee's answers strongly suggests that communities exist regardless of the genre of the video game, thus depicting a concern that is global to all of companies of the sector. The extent of these implications appears to be partly based on the size of such communities. Popular game genres may thus draw more members because of the popularity of the associated games. However, less popular game genres were also found by interviewees to harbour particularly active online communities, that the interviewees described as extremely involved.

> "We make games that are linked to some very strong communities […] where early access is common and the community is used in getting involved into game development." (Company A interviewee)

Interviewees highlighted that several communities were related to their video games, indeed, there are different communities and sub-communities, large ones might encompass an entire game genre while more private ones may only focus around a specific video game. Uses and gratifications theory provided elements of understanding of the formation of these communities and sub-communities. Indeed, in the pursuit of the satisfaction of different needs, customers seek different channels for different purposes. In this context, several interviewees reported a similar behaviour in their company communication endeavours. One interviewee for example highlighted that the company used Twitter solely for communicating information about their game, while live-streaming was deemed to be a fitting outlet for more informal communications. In this particular example, and within the context of uses

and gratifications theory, the cognitive needs of customers are thus satisfied through the information available on Twitter, while the tension-release needs are addressed through live-streaming. Uses and gratifications theory thus partly explains the existence and distinctiveness of sub-communities, as different sub-communities might address different needs.

The vast majority of the respondents expressed some degree of concern relating to interactions with player and communities, detailing their consistent efforts made in order to convey a positive image of the company. Elements such as honesty, transparency or careful choice of tone were for example mentioned by the respondents as important in this context. This concern finds relevance within the framework of impression management, as both this this framework and the interviewees' answers suggested that pro-active actions towards communication and transparency could be beneficial for business. More precisely, the perceived potentially devastating effects associated with failure in addressing customers with an adequate mind-set were detailed by several companies, which thus expressed the important consideration they were giving to communications with communities. Interview data analysis highlights that pro-active actions are generally conducted by companies in order to appear as close to the community and reachable by the players.

Moreover, through the interview data, the existence of sense of community was revealed in communities associated with the respondents' companies. Based on the analysis of this data, elements of sense of community were identified in the communities. Sense of community was found to affect not only the members of the community but also in several cases the companies themselves, thus suggesting that companies were in fact members of those communities as well. Therefore, the active role that companies may have in the context of online communities is emphasized. By fostering and involving themselves with communities, companies can thus further benefit from the associated implications. One implication in particular was highlighted by the majority of the respondents, explaining that their involvement with players and communities was a great source from which motivation could be derived.

> "Whenever you develop a unique game and you prototype for a long time, team morale is a big problem […] There is no external factor to touch the internal

team, the team can be strong as a unit but there are always points in time, especially if it's a hard journey, where this unit is sometimes weakened. […] Before the launch, we were going through a lot of tough builds and the game's stability was a big question, having this community to come and play the game, test, send bugs reports, give feedback boosted morale and fixed so many issues." (Company J interviewee)

"The community not only helps in shaping the game to be the best it could be, but their enthusiasm can help lend itself to some organic marketing; and most importantly, provides motivational support to the team." (Company B interviewee)

Furthermore, the empirical data demonstrates clear evidence of the existence of different roles taken by members of online communities in manner particularly similar as the one described in the theoretical framework of this study. Interviewees indeed recognized the existence of passive community members, which were in most cases accounting for the vast majority of the community. Despite the lack of active participation that they might display, these members were still identified by several interviewees as important because they participated in increasing the size of communities. Due to their important number, and despite their relative discretion, several companies interviewed reported that taking into consideration these members and their expectations was a necessity when addressing the community in general.

"Anytime you are answering in public place, whether it's forum, Reddit, even answering YouTube comments […] a lot of what you are doing, is really sales for the people that will view it in the future but are not going to participate in the discussion ever. Because I believe that that's the vast majority of people, so it's almost more important to respond to stuff not because of the guy that posted the question or pitched, it's for the other thousand people that are going to read it, that aren't going to post and they don't yet own the game." (Company G interviewee)

Regularly and particularly active members of communities were also mentioned during the interviews and their role within the context of customer involvement was found to be one of the most prominent driving forces of this notion. During the interviews, regularly active members of communities were often mentioned by the respondents, and their central role within the context of customer involvement was furthermore thoroughly underlined. In fact, the vast majority of the respondents explained that such active users constitute the paramount driving force of customer involvement and community management. The respondents explained that these users

were often involved in discussions within the community, and linked them to business benefits, explaining that such users were able to save time and resources for the companies.

Indeed, due to their higher familiarity with the respective video games or the companies, active users are able to answer questions or concerns of other members of the community, which would otherwise be addressed by the companies themselves. The importance of those community members and of the relationship that the interviewed companies had developed with them was farther highlighted as the companies expressed their intent of involving these members in the testing or development processes of future updates or video game releases. The respondents additionally underlined the value that they tied to the feedback given by such community members, detailing its trustworthiness, reliability and accuracy as important factors of this value.

Based on the interview data, the high degree of commitment that active community users can demonstrate was unequivocally found to be affecting the way in which the interviewed video game companies conduct business, and similarly identified by the respondents as an indubitable possible source of business opportunities and benefits. For example, one of the interviewees explained that their latest video game had been translated into multiple languages through the efforts of the community. The existence of active and dedicated community members thus appears as instrumental in enabling value co-creation in the context of video game businesses. In this peculiar context, these findings thus support the existence of a connection between the theoretical concepts of online communities and value co-creation.

> "One thing that is important is community localization, our game has probably more than 20 languages translated by community, people can translate different words and are able to chat and write different suggestions of translations. It also boosts our sales too because now people can play in German or French" (Company C interviewee)

4.2.2   Customer involvement and value co-creation in video game companies.

Indeed, a plethora of examples of value co-creation through the involvement of customers was found in the interviewees' answers. The business opportunities and potential benefits that involving players in the process of game development were detailed by all of the respondents. The involvement of customers was thus found, based on the data collected within the context of this thesis, to encompass all of the phases of a video game's life cycle, ranging from innovation, initial design and game development phases up to update and maintenance phases after product release. The respondent from company C reported that most of the features of their latest video game were suggested and made in collaboration with players.

The empirical data thus provides additional evidence and understanding of value co-creation in video game companies. Indeed, the framework of customer co-creation described in the section 2.2.2 of this thesis found particular relevance during the analysis of the interview data, highlighting the complex and multi-faceted aspect associated with value co-creation. Based on the data collected, two types of value co-creation with customers were found to be more popular. Two companies reported have instituted processes that allow players and communities to provide feedback and to highlight the feedback given by other players that they deem important. Co-designing was thusly more elaborately developed by one of the responding companies, which used such a process to let their community democratically designate the features that it considered the most important to be added to the game. Even in the absence of such particular processes, similar phenomena could be observed in other companies. Indeed, receiving the same feedback or suggestions from a wide array of players was for multiple company an important determinant in assessing the potential for success, the important and the relevance of envisaged developments to their products.

Moreover, examples of tinkering were also illustrated by many interviewees. In particular, the importance of "mods" was discussed. One interviewee specifically explained that support for mods had been enabled in their latest video game, which allowed players to create modifications to the game and share it with other players. Mods can be used to change certain game elements or features, or to add new content to video games for example. This respondent additionally emphasized that the

company was looking forward to seeing what kind of mods the players would create, and expressed their intention of showcasing these mods, notably during some of the live-streaming sessions organized by the company. Several other respondents discussed similar experiences and harboured matching enthusiasm towards "mods" and, more broadly, towards user-generated content, envisioning them as a way to add value to video games. Tinkering was found to be inherently tied to particular actions and choices that companies can make, which particularly incentivize tinkering, such as allowing players to easily share their creations in-game or with the community.

Two companies interviewed furthermore expressed that content created by users was of paramount importance in the context of their video games. The analysis of the empirical data revealed that those companies heavily relied on value co-creation due to the central role that collaborating with customers occupied in the development and longevity of the game. The genre and nature of the games produced by these two companies differed from the video games developed by the other interviewees, and thus explains why they did rely so extensively on value co-creation through collaboration. Indeed, in the video games of these companies, elements such as planning, designing or achieving projects are at the core of the gameplay, which thus inherently incentivize creation in players' behaviour.

Lastly, value co-creation through submitting was only seldom observed or reported by the respondents. Submitting is reliant on extensive, detailed and technical feedback provided by customers to companies. This high degree of complexity can therefore partly account for the scarcity of this type of value co-creation. Nonetheless, multiple companies provided examples of such developed yet comprehensible feedback. In the context of those examples, the key users involved in this peculiar form of value co-creation were typically active members of communities.

Inclusion and transparency were furthermore important concerns within the phenomenon of customer involvement in video game development studied by this thesis. Some degree of inclusion was indeed mentioned by interviewees as necessary in order to bolster the active participation of customers. This was particularly noticeable during the development phase of video games. The interviewees indeed often reported actively soliciting the participation of customers in such process.

Companies' solicitations of customers were highlighted by the interviewees as an overall successful process in the sense that their player base or relating communities were overall particularly responsive. Facilitating the involvement of customers and their inclusion in order to ease processes relating to value co-creation were therefore found, based on data analysis, to be dependent on the company's integration of the solicited or freely given feedback and suggestions provided by communities. In this context, inclusion was achieved through communication, which often lead the responding companies to openly share detailed information about the current state of the development of a video game or the plans for the following steps and the overall strategic vision conceptualized by the companies. Several interviewees highlighted the importance that transparency and honesty have, and the primal place that it occupies in their communications practices.

Therefore, the companies interviewed overall identified the benefits of transparency and the involvement of customers. However, several respondents expressed the difficulties and challenges associated with the inclusion of customers in the business processes. Interviewees for example reported that finding the balance between the company's vision of the product and the players' vision was often tedious. On one hand, plenty of potential benefits and opportunities for business growth were emphasized by the interviewed companies but on the other hand the respondents also underlined the existence of associated difficulties and hurdles in attaining and realizing those opportunities. Consequently, and in resonance with the section 2.3.1 of this thesis, dilemmas were thus identified from the analysis of the empirical data within the context of customer involvement and value co-creation in video game companies. In particular, dilemmas relating to the balance of transparency, open and honest communication, and inclusion, involving the customers in the companies' processes, are perceptible and significant. During the interviews, issues relating to these notions, and suggestions in how to handle them, were discussed by companies.

For example, dilemmatic situations were in this context linked with the involvement of a too vast number of participants in value co-creation processes. This dilemma of process puts pressure on the companies' resources due to the sheer amount of information and actions to be undertaken that the involvement of a vast number of customers implies. One interviewee in particular reported that interacting and

managing all of the implicated users on an individual level would be a task way too arduous for any company, and thus instead decided to focus their efforts on maintaining direct and fluid communications with a few key users, who typically are representants or renowned members of online communities. These representants were able to communicate ideas and participate on behalf of a large number of people, thus saving the company valuable time and resources by delivering accurate and reliable feedback in a more direct manner. Based on empirical analysis, it can be inferred that the involvement of those key users is eased by friendly communication and relationship building with them. Dedicating particular attention to prominently active members of online communities thus appears as an outlet to not only facilitate customer involvement but also potentially increased its efficiency.

Similarly, customer involvement requires supplementary efforts from the participants, which thus concerns not only the customers themselves but also the companies and their employees. Consequently, handling this newfound customer empowerment, from which they benefit through their inclusion in the companies' processes, was identified by several interviewees as a painstaking process. In the particular case of smaller companies, interviewees reported that these concerns were impeding or disrupting other business processes. Therefore, some companies had dedicated community managers, had specifically recruited for this purpose or planned to do so.

It is evident from the analysis of the data collected that video game companies have integrated live-streaming in the conduction of their business, both from an operational and daily point of view, but also from a long-term and strategic perspective. Furthermore, live-streaming and Twitch.tv especially, were found to be important concerns for the interviewees' businesses, particularly for the purposes of community building and communication with online communities. Multiple interviewees also highlighted that live-streaming could be a tool in evaluating the success of a video game. One interviewee especially explained that the live-streaming popularity of their game was a monitored and used as part of their metrics to assess the success of product or update release.

> "Twitch is valuable, because instead of waiting to figure out whether you hate my game now or not, I can just involve you in the development process. I'm

> guaranteed that you will get a good product if I listen to your feedback."
> (Company D interviewee)

The findings of this thesis thus revealed the far-reaching implications of customer involvement in a plethora of different aspects of businesses, and can be linked to opportunities in market testing, advertisement, game development and updates or even recruitment possibilities. However, customer involvement was within the context of this thesis also undeniably associated with challenges. In involving customers, the interviewed companies were faced with complex situations and nuanced implications. In face of this complexity, companies' endeavours were often found to focus in addressing and handling customer involvement and the resulting dilemmas to the best of their ability, taking into account their respective size and available resources. Therefore, based on the interview data, companies utilized different processes and tools to deal with those dilemmatic issues. The success of these endeavours appeared to be highly situation dependent and reliant upon the particularities of their games, online communities and players. Consequently, no generalized best practice could be highlighted.

Nevertheless, empirical analysis determined that constant dedication to customer involvement was a major business concern for the vast majority of the responding companies. Consequently, the results of this thesis highlight the necessity of long-term commitment to customer involvement and the importance of long-term relationships with customers and key members of online communities thus appeared to be central not only to the efficiency of customer involvement but also to its sustainability. It can be inferred from the empirical data that in order to more extensively harness the potential of value co-creation, customer involvements efforts need to be consistent and conducted over a long period of time. The complexity of the notions and concepts central to the studied phenomenon of customer involvement, online communities and value co-creation in video game businesses, and of the significance and effects of live-streaming in this context, therefore highlights the thorough implications for businesses. Based on the results of this thesis, these different theoretical elements are not only unequivocally linked but also deeply intertwined with one another in this particular context.

5   CONCLUSIONS AND DISCUSSION

The concluding section of this thesis aims at presenting an overview of the results relating to the phenomenon studied, namely the involvement of customers and online communities in value co-creation in video game businesses and the role that live-streaming occupies in this context. The main findings and key results of the research will thus be presented from the perspective of video game businesses, and their connections with the research questions of the study will be thoroughly elucidated. The theoretical and managerial implications of the thesis will then be presented. Lastly, the limitations of the thesis will be described, and potential for future research will be discussed.

5.1   Findings and key results

Due to the rapid development of information technology, a myriad of new tools has affected the ways businesses are conducted. Social media platforms, such as Facebook and Instagram have changed the ways firms design, produce, sell and advertise their goods and services (Tuten, 2020, pp. 17–19). Younger generations are found to be less interested in traditional medias, such as cable or satellite TV services. Thus, new ways of conduction business have emerged, and video streaming has experienced a rapid growth. Moreover, these changes have further been catalysed by changes in customer behaviour (Horrigan & Duggan, 2015; Stephen, 2020). Moreover, websites Twitch.tv or YouTube Live have significant impacts on the current live-streaming market (Taylor, 2018, p.10).

Due to the plethora of streamers and users populating Twitch.tv, any video game is likely to be live streamed at some point, regardless of whether companies pro-actively interact with the live-streaming platform. Therefore, given the particular importance of Twitch.tv in the video game industry, live-streaming seems to present opportunities to benefit companies of this sector through several ways. The background surrounding video game businesses, and the close ties identified between video game and live-streaming thus formed the motivation to conduct this research.

Consequently, the main goal of this thesis is to determine the extent to which online communities, customer involvement and value co-creation affects the management of video game companies, and to assess the role of live-streaming, and Twitch.tv in particular, in this context. To achieve this goal, qualitative research methods were chosen, a relevant theoretical framework was built, and interviews were conducted with video game companies, the data collected proves instrumental in answering the research question of this thesis.

The research question was the following:

What is the importance of customer involvement, community building and live-streaming in the context of video game development, and how relevant is it for video game companies?

This main research question was divided into the following sub-research questions:

SQ1: What is known about live-streaming, customer involvement and community building in the context of video game development?

SQ2: What are the opportunities and challenges associated with customer involvement, online communities and live-streaming for companies in the video game industry?

Based on the theoretical and empirical data, video game companies were found to be aware and familiar with these concepts. Extensive evidence of the implications of live-streaming on video game companies was particularly highlighted. Indeed, these effects could be noticed on the ways in which companies plan and conduct their business, or even on how they organize and structure the company, and devise their strategies. Live-streaming implications were furthermore noticed in the context of companies' identity and values, as it was perceived as a medium through which not only developing, but also sharing such values and identity with customers was possible.

This study underlines the sizeable importance of live-streaming within the context of video games through the description of the inexorability associated with live-

streaming. The growing popularity of Twitch.tv further amplifies this phenomenon. Indeed, the vast plethora of streamers and users that populate live-streaming platforms, and Twitch.tv in particular, constitutes an amalgamation of considerably varying opinions and interests. This impressive variety leads to astounding numbers of diverse video games being simultaneously live-streamed and followed by audience of differing sizes. Consequently, regardless of whether companies actively conduct or incentivize live-streams, it was found to be likely that their products would get featured through such platforms, and through Twitch.tv especially, due to the sheer amount of users that characterize this platform. Live-streaming was therefore found to be relevant for video game companies both within the context of live-streams conducted by external parties, such as through paid sponsorships for example, and also from the possibilities for companies to organize and conduct live-streaming sessions by themselves.

Moreover, the importance of online communities was also emphasized throughout the thesis. Through analysis, the empirical data was found to be in accordance with the conceptualization of online communities developed throughout the theoretical framework of the study. Communities were found to be an extremely important potential source of benefits for companies, specifically through the facilitation of customer involvement that active online communities permitted. The role of active users in online communities was underlined to be instrumental in this context.

Consequently, customer involvement was found to be extremely useful for video game companies and was additionally identified as frequently and widely used. Although challenges were revealed within this context, the possible benefits were found to largely outweigh those difficulties. Indeed, based on the empirical data, customer involvement appeared to be a central concern for the vast majority of video game companies. Furthermore, the process of customer involvement was noticed in several different phases of companies and products' life cycle, presenting thorough implications throughout the early innovation steps, the main development phases and also during updates and maintenance stages.

Involving customer through communities was additionally depicted as a long-term concern for companies, indicating that relationships with members of communities

could be built in order to further facilitate the following iterations of customer involvement by identifying key users within companies who are able to display a greater degree of nuance and detail in their participation. Customer involvement was conducted through different tools and processes, and was found to be reliant on software or systems that integrated online interactions between their members. Live-streaming was consequently found to be a potential facilitator both for online community building and customer involvement purposes, thus highlighting the implications that live-streaming has on the other concepts central to this thesis.

Nevertheless, empirical analysis determined that constant dedication to customer involvement was a major business concern for the vast majority of the responding companies. The necessity of long-term commitment to customer involvement and the importance of long-term relationships with customers and key members of online communities thus appeared to be central not only to the efficiency of customer involvement but also to its sustainability. It can be inferred from the empirical data that in order to more extensively harness the potential of value co-creation, customer involvements efforts need to be consistent and conducted over a long period of time. The complexity of the notions and concepts central to the studied phenomenon of customer involvement, online communities and value co-creation in video game businesses, and of the significance and effects of live-streaming in this context, therefore highlights the thorough implications for businesses.

The main finding achieved through this thesis is twofold. On one hand, the implications of customer involvement and online communities in video games companies were thoroughly demonstrated. On the other hand, the role of live-streaming in this context was elucidated, and so was the connection between live-streaming, customer involvement and online communities. The understanding of the business implications relating to these concepts was furthermore deepened. Indeed, on top of the marketing and promotional purposes identified by previous research in this context, these concepts were demonstrated as also affecting the core business operations of video game companies.

5.2 Theoretical and managerial implications

Live-streaming was found to promote and facilitate communication and interaction with the audience. This was explained by the inherently interactive nature that is at the core of live-streaming. Indeed, live-streaming allows the audience to react in real time to the content that they are watching and can communicate those reactions through the use of the live chat function. Live-streaming was thus associated with clarity and ease of communication, which was associated to positive effect in company reputation, consistently with findings from Leitch and Richardson (2003), Einwiller and Will (2002) and Muzellec and Lambkin (2006).

Similarly, the discussive nature of live-streaming interaction, in contrast with some other mediums through which feedback can be gathered, was connected to opportunities of developing a greater understanding of customers and of their needs, which thus finds relevance throughout the lens of frameworks such as the ones described by Kristensson, Magnusson and Matthing (2002), Matthing, Sandén and Edvardsson (2004), Ramaswamy (2008), Romero and Molina (2011), Hatch and Schultz (2003), Harris and de Chernatony (2001) and Sen and Bhattacharya (2001).

Previous research from Flores-Saviaga, Hammer, Flores, Seering, Reeves and Savage (2020) demonstrated that live chat is a tool that can be used by streamers and viewers to create a bond, through which a community can be created. Empirical findings confirmed these results and further exacerbated that live-streaming was also linked not only to the creation of community, but also to the organisation of events or as a locus of interactions which were elucidated as having a potential impact on online communities' longevity and activity.

Consistently with McGuire and Jenkins (2009, pp. 25–27) observations, live-streaming's implications in advertisement were justified by the findings of this thesis, and its affordability and accessibility within this context, especially for smaller companies who typically cannot afford more expensive advertisement mediums, was further confirmed. However, the empirical data gathered in this study shed light on the concerns associated with the difficulty of assessing the effectiveness of such advertisement, expressing that it could be difficult to reliably correlate live-streams

and increase in sales. This view was nevertheless nuanced by other situations in which this correlation could not only be established but was also particularly consequential.

As similarly highlighted by previous research, transparency was identified as beneficial for businesses as it is for example likely to reduce the sensitivity to price of the customer, to make the company appear as more trustworthy or to limit the spreading of negative or false information about the company or its products (Chang, Chiang & Han, 2015; Chu & Kim, 2011; Goldsmith & Clark, 2008; Merlo, Auh, Eisingerich & Levstek, 2018). The results from this thesis further elaborate on the fact that in the context of video games, streamers can appear as trustworthy in the eyes of their audience, whether because of their proficiency at the game that they are playing or by the emotional attachment that they are able to create with their audience through repeated interactions. Additionally, this thesis considers the notion of transparency within the context of customer involvement and value co-creation, and thus discusses the associated challenges in balancing inclusion and transparency.

Furthermore, the necessity for commitment and long-term planning that was associated with online communities and customer involvement in the empirical results of this thesis deepens the field understanding of the phenomenon studied. This particular implication was extremely strong, as the empirical data suggests that video game companies identify such efforts as almost essential in order to achieve success. This leads companies to integrate such concerns in their overall business process, and has particularly thorough implications about product design and development, as customer involvement was found to crucially impact these phases. Although the manifestation of these concerns was most present during game development, their far-reaching implications were further highlighted through the revealed impact and potential business opportunities regarding market testing or recruiting.

Furthermore, this thesis elaborates the importance of live-streaming in the context of video game development. It is evident from the empirical data, that video game companies have implemented and integrated solution to their core business that accommodate the current situation and popularity of live-streaming. These implications were found to affect video game companies on both short and long term, therefore influencing both their daily operations but also their company identity or

even their overall strategy. The multi-faceted aspect of the impact of live-streaming further denotes the thorough managerial implications that it is associated with.

An important part of the insights from the theoretical framework utilized and conceptualized in this thesis were confirmed by the analysis of the empirical data. The different concepts central to the study were defined by the interviewees in a fashion displaying close resemblance with theory. However, this thesis findings differ from related studies due to the linkage that is accurately drawn and detailed between the different key concepts.

Moreover, the research has highlighted the importance of its key concepts, namely live-streaming, communities and customer involvement in the video game industry. Through the empirical data, the managerial implications of these notions were made apparent. Companies have reported that their interactions with players are not limited to promotional or marketing purpose but have far more reaching implications as players, their ideas and their feedback is both solicited and integrated by companies of the video game industry in the design, development and update processes of their products. The results of this study may thus be utilized by companies from the video game industry as a framework to better understand the relative importance of the different stakeholders that are characteristic of the environment in which they are operating. Similarly, the managerial implications detailed in this chapter can be examined by companies and serve as reference in evaluating which processes are or may be integrated in their operations.

5.3   Limitations

There are some limitations to this study. The numbers of companies interviewed during this research is relatively small in comparison to the plethora of companies that exist in the video game industry. Therefore, the degree to which the companies interviewed are representative of the overall industry or the applicability of the findings of this research to the entirety of the industry may be difficult to evaluate and could legitimately be questioned. Nevertheless, the consistency of the interviewees' answers and the data saturation that was observed by the researchers during the gathering of the empirical data seem to depict clear trends and thus provides basis to

justify that the findings of this research carry relevance in the context of video game companies in general.

Furthermore, as mentioned in the empirical analysis of this thesis, the profitability of customer involvement, value co-creation and live-streaming related business endeavours was difficult to measure through traditional financial metrics. Therefore, although the implications of such concepts were demonstrated as being important in the context of video game companies, it was particularly difficult to quantify the potential gains, or expenses, from such implications. This can be partly explained by the inherently interactive and relationship-building focused approach of the key concepts of this study, or by the qualitative research methods employed.

Lastly, language and cultural barriers constitute another limitation of this study. Indeed, the data collection and writing processes were conducted mostly in English, despite not being the mother tongue of the researchers. Similarly, English was a secondary language for several of the respondents. Some interviews were conducted in French, thus implying that the data had to be translated in order to be analysed and compared with other interviews. Cultural differences were also noticed, which sometimes lead to difficulties in understanding certain ways of expression or figures of speech used by interviewees that the researchers were not familiar with and vice versa.

5.4   Suggestions for future research

This research may be utilized as a basis for future research. Indeed, future academic research could address with more details the importance of specific tools, software or platforms that were not the focal point of this study, such as Discord or Steam for example. Additionally, a similar study could be conducted in countries in which Twitch.tv is not accessible, such as in China for example. Such research could deepen the understanding of the respective importance of the different tools utilized by companies within this context.

Moreover, future research could attempt to tackle one of the limitations tackled in the previous chapter of this thesis, namely the profitability of live-streaming. Quantitative

research methods may be preferred in this endeavour, as they could provide a generalized understanding of this specific notion. Case studies could also fulfil this goal by rigorously documenting the expenses and actions undertaken by companies within this context and thoroughly assessing the results of these endeavours.

Additionally, a similar framework as the one described through this thesis could be applied in a different context and industry than that of video games. Such research could use Twitch.tv as a focal platform or choose another live-streaming platform that may be more closely tied to the industry that this future research would address. Such research could explore the same key concepts as this thesis, and could thus conduct extensive comparisons between industries or live-streaming platforms.

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Appendix 1

Outline of the semi-structured interview

Thesis title: Co-creating games with customers: a study of online communities and live-streaming implications for video game companies.

1.   Background information

• Could you introduce yourself, the company you are working in and your position in the company?

• How long have you been working in the company?

• What games has the company developed?

• Is the company currently working on releasing a new game, or new content for an existing game?

2.   Live-streaming

• How familiar are you with live-streaming, and with Twitch.tv In particular?

• How familiar is the company with either conducting live streams or working with streamers?

• From a business perspective, what do you think about live-streaming?

• In your experience, how does the existence of live-streaming affect game design, development and features? Are there any particular concerns that appear important to you in that regard? (e.g. Streaming platforms' terms of service, music copyright issues etc.)

3.   Communities

• How important would you say that customer involvement is to the business? (i.e. customers interacting with the company and each other.)

• In your opinion, how can live-streaming act as a tool or facilitator in this particular process?

• How and when do you interact with the player base? (During development, after game/patch release, through which channels?)

• Through which actions would you say that player communities are created and kept active? What efforts or actions do you dedicate to fostering player communities?

• In your opinion, what are important considerations to take into account when interacting with players and communities?

- How impactful are player communities and their discussions on game development?

4. Managerial implications

- Could you tell us about the process through which you gather and handle feedback? Which channels are used, how are questions or concerns filtered, and then addressed?

- How important do you consider live stream to be in gathering feedback and interacting with the player base?

- In game development, how do you balance your company's vision of the game and the vision that the players might have?

- What benefits are in your opinion linked with involving players in game development?

- What are the main obstacles and difficulties that might hinder such activities?

Email invitation letter

Subject: Master's thesis research interview invitation

Dear recipient,

Greetings from the cold north!

We are two students in International Business Management at the University of Oulu, Finland. In the process of writing our master's thesis, we are conducting interviews to increase our understanding of the implications that live-streaming and community involvement can have on companies from the video game industry.

As video games are not only the object of our study, but also a hobby that
we have both been enjoying for many years, we would be extremely interested in hearing your opinion on this matter and in getting to know the gaming industry better.

The interview takes around 60 minutes and is conducted online through Zoom. If you prefer, we can also use another similar software of your choice. All data relating to the interview will be anonymized, handled confidentially, and deleted once the study is completed and published.

If you are interested in participating, please let us know at your earliest convenience a date and time that would suit you to conduct the interview. We will do our best to accommodate your suggestion. In case you have any questions or concerns, please do not hesitate to contact us.

Thank you for your time and consideration,

Mikko Greus and Mickaël Magnan

Email invitation letter in French

Objet: Thèse de Master: invitation à une Interview

Cher destinataire,

Salutations de Finlande,

Nous sommes 2 étudiants en International Business Management
à l'université d'Oulu en Finlande. Dans le cadre de la rédaction de notre thèse de Master,
nous cherchons à réaliser des interviews dans le but d'accroître notre compréhension vis-à-
vis des implications que le live-streaming et les communautés en ligne peuvent avoir pour
les sociétés de l'industrie du jeu-vidéo.

Étant donné que les jeux-
vidéos sont non seulement l'objet de notre étude, mais également une passion que
nous entretenons depuis de nombreuses années,
nous serions extrêmement intéressés et honorés d'entendre votre opinion
sur ce sujet et d'en apprendre plus sur les jeux-vidéos et leur industrie.

L'interview durerait environ 60 minutes et sera réalisée via Zoom. Selon vos préférences,
nous pourrions également utiliser un autre logiciel similaire. La langue
dans laquelle l'interview sera organisée serait, selon votre choix, l'anglais ou le français.
Toutes les données liées à l'interview seront rendues anonymes dans notre thèse et seront
supprimées une fois la thèse complétée et publiée.

Si vous souhaitez participer, nous vous prions de nous
faire parvenir en réponse à ce mail une date
et une heure vous convenant pour l'interview. En cas de questions, n'hésitez pas à
nous contacter.

Merci pour votre temps et votre considération,

Mikko Greus et Mickaël Magnan