

Participate, share, and create

Understanding the creative community in Dutch video game
industry

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Abstract

The game industry plays an increasingly important role in the country's economic development and cultural soft power as it grows. The Dutch game industry is developing steadfastly in its way in several aspects. With more and more new companies being founded and new practitioners being added to the Dutch game industry, how to build a more communicative and connected industry community has become an important topic. A well-connected community has obvious benefits such as enhancing knowledge exchange, generating new ideas, and increasing talent mobility. In addition, a strong industrial community can be used to strengthen lobbying power to influence how the policy regarding the game industry is designated. However, there is scarcity of research on the Dutch gaming industry community. Therefore, in order to fill the gap in this field, this article explored the following research questions: How do Dutch video game practitioners perceive the Dutch video game industry creative community? To answer this question, this study used in-depth interviews to collect data from a total of 10 participants working in the game industry. After the thematic analysis, some very interesting results were obtained. The most prominent comments from Dutch game industry players about the community are openness and looseness. The openness is mainly reflected in the strong willingness of Dutch game industry players to share, especially in the communication between individuals and small groups. On the other hand, the looseness is reflected in the fact that such good communication between individuals can hardly be replicated on a larger scale. The Dutch game industry is currently full of small studios, indie developers, and different sectors with different development outlooks, directly or indirectly leading to a loose community. In addition to this, interviewees mentioned other aspects that are likely to impact the future development of industrial communities, including the operation of industry bodies, entrepreneurship, internationalization, and clustering. It is exciting to see that more and more organizations and industry bodies are making attempts to address these issues and primary results are being achieved. There are many reasons to believe

that the Dutch gaming industry and its community will become even more consolidated in the future.

KEYWORDS: *Dutch game industry, community building, entrepreneurship, applied games, entertainment games*

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1. Introduction

As gaming becomes an integral part of modern life, the gaming industry is flourishing as its audience grows, and the Dutch game industry is no exception. In studies, research on the Dutch game industry is relatively scarce, which creates an obstacle for people who want to have a sentimental perception of the Dutch game industry besides numbers. Therefore, this study attempts to look at the game industry community in the Netherlands, exploring the perceptions of game practitioners on the overall industry environment and peeking into the connections between practitioners and the industry community to, finally, form an overall perception of the Dutch game industry. In 2020, many things happened in the world of games industry that should be remembered. The COVID pandemic brings many difficulties for gaming industry practitioners, but that does not stop the industry from gaining its momentum to move forward (Honorof, 2020; Isaac & Browning, 2020; Statt, 2020; Zhu, 2020). The gaming industry is comprised of a complete value chain (Zackariasson & Wilson, 2014), with nearly 92 million people joining the gaming ecosystem and the global gaming industry achieving a 9.3% revenue growth (Newzoo, 2020).

Many studies have started to shift towards the game industry Kerr, 2012; O'Donnell ,2012 et.al), but there is still very little research on the Dutch game industry, although it has many characteristics that are worth studying (Heslinga, 2019). After the rapid growth of the Dutch video game industry in the previous years, it now has a scale of 575 companies and 3850 jobs. But one of the characteristics of the Dutch game industry is the relatively small size of the companies in general. According to the Dutch Game Garden (2020) Monitor report in 2019, the number of studios with 1-5 employees accounted for 62% of all game studios in the Netherlands. The most detailed overview document on the industry today is only an industry report in 2019 by Dutch Game Garden (2020). Dutch Game Garden is a game incubator and business center that helps the Dutch video game industry in different ways, including the incubator program for small start-ups, the intermediary program for game studios to find publishers, and events or exhibitions to help

socialize and increase the exposure. Many organizations and institutions in the Netherlands contribute to the development of the industry community, similar to Dutch Game Garden, with different sizes, different visions, different clients, and different ways of operation. DGA is another good example, as a representative of the Dutch game industry, currently active in many different areas. The main goal of DGA is to enable a better communication between different sections of the Dutch game industry, in order to form a greater force for the development of the industry altogether. In addition, this article also combines different perspectives to understand the Dutch game industry, including people working in the game industry bodies, game company founders, independent game developers. The two most important branches of the Dutch game industry, entertainment games and applied games, and their relationship to each other are also discussed.

Although this article is about the Dutch game industry and the development of its community, this does not mean that the scope of the study is limited solely to the Netherlands. Before starting the study, research about the history of community building in the game industry from other countries provides a lot of insights for this project. And in the process of constructing the theoretical framework, the experience of building communities in the game industry from other countries and takeaways also contributed a lot to this study. Internationally, many representative organizations are also contributing to the development of the game industry in different ways: Entertainment Software Association (ESA) is a North American trade organization that represents the interests of manufacturers and publishers; there are also regional developer associations such as Georgia Game Developers that actively work with the government to secure practical benefits for developers (tax incentives) and host local professional gatherings, and IGDA, a non-profit organization that provides professional development and a voice for community issues (O'Donnell, 2012). The United Kingdom, which is culturally and geographically closer to the Netherlands, takes an important role and market share in the global game industry. However, with the rise of the Internet and the proliferation of other gaming platforms, the game industry in the United Kingdom slowly lost the leading position it held before, 7 out of

10 households in the UK play video games (TIGA, n.d.). Ukie has played an important role in advancing the development of the gaming industry in the UK. Ukie is the longest-running games trade body in the world. Its role is mainly to advocate for the gaming industry in the UK, provide business support to its members, champion the industry in government and it has currently united over 500 businesses in the industry (Ukie, n.d.). Ukie has also been successful in pursuing tax deductions for game production, similar to those available in the UK for films and animation.

According to HMRC's Fiscal Incentives report, 1,375 video games have been claimed since the deduction was introduced in 2014, accounting for £3.7 billion of UK spending (The Creative Industry, 2021). Besides Ukie, since 2008, the UK game industry associations have also been represented by TIGA (The Independent Game Developers' Association) has been lobbying the government and appealing for more awareness on behalf of the industry players (Kerr, 2012). In terms of geographic clusters, Scotland has three established game development centers and the highly regarded University of Abertay undergraduate video game program. In addition to London and the South East, other gaming hubs are also located in Leamington Spa, Newcastle, Edinburgh, Manchester, and Slough (The Creative Industry, 2021). Yet, it is not enough to look at the developer community in larger economies. Swedish game developers have faced some contradictions and challenges as well: on the one hand, Sweden produces many successful indie games, but on the other hand, the presence of fewer publishers in the country pushes Swedish developers to sell their intellectual properties, which further hinders their position and discourse in the global game industry (Ulf, 2012). The examples of the game industry in all these countries prove that a healthy game industry needs to form a close connection within the industry, which requires game companies' participation, the assistant of the policymakers, a good long-term plan, and the driving role of the industry bodies. There are always conflicts of interest during development, and how to solve these problems is crucial. There are many valuable lessons to be learned from community development in other countries to increase our understanding of the situation here in the Netherlands.

This research looks at the perceptions of the Dutch games industry community from various game industry players, including game company founders, independent game developers, game association board members. After all, the video game industry contains more than one sector (Zackariasson & Wilson, 2014), and the creative community also needs to be examined from multiple perspectives. The purpose of this study is mainly twofold, firstly, to find out how the Dutch game industry players feel about the industry community through in-depth interviews, on a holistic level. Second, it aims to explain how the video game industry community provides an enabling environment for game practitioners and how such a community has been established. Therefore, the following research question was formulated:

How do Dutch video game practitioners perceive the Dutch video game industry creative community?

Sub question:

1. Is internationalization a must for the development of industrial communities?
2. Does more meetups and events equal a more connected community?
3. What can entrepreneurship mean for community building?

For the analysis part, a thematic analysis was deployed. This is because the thematic analysis can be easier to bridge the two datasets collected from both interviews and observations (Braun & Clarke, 2006). To achieve the purpose of the study, the research carried out ten in-depth interviews with game industry workers to collect data. This study is supported by the theoretical framework generated during the review of the related articles. In addition, the research results emphasize the importance of community building in the development of the game industry. Moreover, it also points out that the benefits of building communities for the gaming industry require a sustained effort from various players to achieve.

2. Societal and scientifical relevance

Creative industries are the most dynamic economic division, capable of generating a huge value for the country. Games are one of the fastest-growing industries within this division (Rykala, 2020). In 2012, the Dutch government included the creative industries in the nine top business sectors of the Netherlands. The government introduced a series of measures to help these sectors grow and encourage innovations (Government.nl, 2020). When many industries around the world were stagnated or even declined in 2020 due to the epidemic, the game industry still showed remarkable growth, which is a sign that this industry owns vitality and resilience to risks. The Dutch are generally outgoing, open-minded, and focused on finding solutions (Creative Holland, n.d.). These are also the impressions that many people from other parts of the world have about the Dutch people. The Dutch game industry is promising to become the new icon of the country: an industry that everyone can immediately associate when they think of the Netherlands. Therefore, this industry deserves more attention and participation, whether from game players, scholars, or investors.

In addition, since there is still little research on the Dutch game industry, this study also hopes to provide valuable insights into the Dutch game industry from community building. Game industry workers have the most profound understanding of the industry they work in, and in-depth conversations with them can provide the most valuable information. In this thesis, there is no excessive piling up of numerical and scientific data, but rather a collection of subjective and emotional perceptions stemming from game workers reflecting on what needs to be done if the Dutch game industry wants to become a more united entity in the future. This research is perhaps just the first step to reflect some aspects that cannot be expressed in data or number, which hopefully will help those who wish to study this topic of the Dutch game industry to have a faster and better understanding of it.

3. Research setting

The Dutch gaming industry has a much longer history than most people think. There have been pioneering practices, brilliant successes, and gloomy failures throughout history (Beeldengeluid, n.d.). The company Philips played a vital role in the early days of the Dutch consumer electronics sector. Philips's appliances used to be a computer manufacturing brand in the 1970s, and the computer industry was a prerequisite for the emergence of the gaming industry or software industry, which also saw the emergence of an early amateur hacker community in the Netherlands due to the popularity of computers (Geerts, 2016). The Dutch government's tax subsidies for home electronics have also largely incentivized the adoption of digital infrastructure in the Netherlands. As a result, the Netherlands is perennially among the top European countries regarding Internet and broadband penetration (European Commission, 2019). The compact disc people are familiar with was also invented by Philips and Sony together in 1982. Philips also released an interactive multimedia device: CD-i, because Philips believes that CD as a data storage medium should not only be used for music format storage but should be used for more multimedia formats, including, of course, games.

The Netherlands is a world leader in applied games. Events related or specifically designed for applied games, such as Games for Health Europe, Control Conference, and INDIGO, are the best arenas for the Dutch game industry to showcase its talent. Training games, simulations, advergaming, and other branches of serious games are the genres that Dutch game studios have always been good at (Control Magazine, 2012). One of the largest serious game development companies in the Netherlands is IjsFontein Studios, whose projects cover staff training, interactive experiences, and gamification (Ijsfontein, 2021). The development of entertainment games in the Netherlands in recent years cannot be overlooked. The large studio Guerilla not only developed many well-known titles, such as Horizon: Zero Dawn; Killzone Franchise, but also developed its game engine Decima, which was used by the famous game producer Hideo Kojima, who also works for Sony, to

create the highly praised game "Death Stranding" (Maessen, 2021). As you can see, the Dutch game industry is experiencing rapid development. It has a bright future, and the importance of building a more integrated industry community is becoming more and more prominent.

The next chapter will present the concepts related to game industry communities by analyzing and discussing the academic articles related to industrial communities, creative cities, industrial clustering, internationalization, and more.

4. Theoretical framework

4.1 It all started from the Demoscene culture

Arjan Brussee, one of the founders of Guerilla and considered the godfather of Dutch game development, met and initially connected with North American company Epic Games founders/employees through Demoscene events. He was the first person to work for Epic Games as a demo programmer (Heslinga, 2016). In the 1990s, when home computers were not yet fully accessible to the majority of people, a trend of Demoscene emerged in the Nordic countries. Simply speaking, Demoscene is an underground movement, a community or a form of artistic expression that uses software cracking technic to demonstrate their coding skills (Polgár, 2005). The most common approach is to change the intro screen of the game, replacing it with the name of the demoscene group's developers, also called adding a "signature," or using other methods and elements to inform others that they were the first to crack the software (Jørgensen, Sandqvist & Sotamaa, 2015, Heikkilä, 2009; Reunanen, 2014). The Demoscene coders are seen as elites. The Demoscene is also considered a generic term for a cluster of "subcultures," commonly described as avant-garde, fame-seeking, underground, crafty, artistic, and self-expressive. An advanced programming skill developed in the Demoscene is a form of expressing digital literacy (Bogost, 2008), and Demoscene arguably accidentally nurtured the first batch of Dutch game development talent.

The Demoscene was the earliest type of video game developer community, and in the early days of the Demoscene, demoscene groups were already organizing events of all sorts and sizes. According to Polgár (2005), in Europe, where the Demoscene first flourished, copyparties started to thrive in the nineties, when software crackers, programmers, or even regular gamers would gather exchange pirated game flop disks, also known as Warez. Unlike music or other media formats, where the quality of pirated versions decreases with each duplication, the game codes remain the same no matter how many times they were copied, and the anti-piracy laws in many countries were not entirely well developed at the time, which

allowed Warez to flourish. Today, demoparties are still organizing contests worldwide, most of which are concentrated in northern Europe, the birthplace of the Demoscene (demoparty.net, 2021). As a combination of technology and art (Demoscene the art of coding, n.d), Demoscene has undergone four decades of change in a fully autonomous environment and still has a vibrant community and engaged participants. This illustrates the vitality and diversity of culture. Even without the government and industrial leaders leading the way, game developers can still refine their skills and absorb knowledge in self-organized communities. This requires researchers who want to study the industry communities to look beyond the traditional meaning of the word community and consider a large number of game talents are willing to express themselves and socialize in informal community settings. Jakob and van Heur (2015) have highlighted the contribution of informal, special and subtle places such as artist collectives, galleries, or bars to creativity in their research, and we will focus on this concept in the following paragraphs.

4.2 Industrial cluster

A geographically close group of interconnected companies and related institutions in a particular field, linked by commonalities and complementarities is the definition given by Potter (2000) in his article on industry clusters. Throughout the Dutch game industry history, the industry went through a fragmented and amateur phase at the beginning of its development (Nieborg & de Kloet, 2016). However, a loose coalition of amateur developers and enthusiasts was formed at that time. Their approach undoubtedly laid the foundation for the later development of the game industry, sending the message to the government and educational institutions that the game industry had a bright future (Nieborg & de Kloet, 2016).

The community concept is distinct from the industry cluster. The term industry cluster is defined as firms or organizations in similar areas and the same geographic region; however, Potter (1998) defines geographic range very loosely, from a city to a country or even a continent, all of which can be described as being in the same geographic region. The development of an industry is not only an extended process, but also involves numerous factors such as government policies (including

infrastructure, mentoring, incentives, and so on), industrial environment, market competition, talent incubation, and investment by domestic and foreign companies (Jan, Chan & Teng, 2012).

Economic geographers traditionally interpret firms' spatial clustering as localized externalities resulting from the co-location of firms within the same or related industries (De Vaan et al. 2013). In urban geography, there are several terms to describe why industries come together in specific urban areas and, with regard to creative industries, there are Grandadam et al. (2013) creative milieu, and De Propis and Hypponen's (2008) creative clusters. Creative milieu is considered a vague concept (Coll-Martínez & Arauzo-Carod, 2017), as it mainly talks about the high-level skilled workers who are attracted into an environment that is suitable for creative works because that area has already gathered a considerable amount of technologies and talents (Markusen, 2006). The concept of creative cluster refers to the gathering of creative industries in the city. In their article Chapain et al. (2010) examine which sectors in the UK formed creative clusters and what the role of these creative clusters was in the innovation system in which they were embedded. Basically, all these terminologies are used for the phenomenon of aggregation of a certain industry (especially creative industry) in spatial geography, so in many cases, these terms can be used interchangeably.

A derivative feature of many sectors of the new economy is their tendency to have a distinct geographic expression, i.e., to emerge in local clusters. Examples of this phenomenon abound, such as Silicon Valley, Hollywood, the City of London, Sentier in Paris, the Third Industrial District in Italy, and so on (Darchen, 2015). One of the key conclusions of cluster theory is that clustered firms are expected to perform better and survive longer than firms located outside the cluster area, although this conclusion has since been challenged by other researchers (Coe, 2001; De Vaan et al., 2013). Bathelt et al. (2004) summarize the main arguments in favor of clustering of firms in terms of geographic space: This communication depends on the spatial distance between the actors involved, when the knowledge involved for exchange is dispersed and tacit. This more subtle form of information can only be

exchanged if both parties are in the same geographical environment and meet multiple times. And this is considered to be the main mechanism by which spatial aggregation brings benefits to businesses. Meanwhile, there are many more examples in the literature that illustrate the benefits of being part of an industry cluster in space, such as the opportunity to interact and network with successful industry leaders (Darchen, 2015). However, the main counterevidence comes from traditional industries, and for project-based industries like video games, there is no substantial evidence that industry clusters are ineffective (Bathelt et al, 2004; Lange & Schüssler, 2018).

When examining the Dutch video game industry using the concept of an industrial cluster, there is no clear evidence to suggest that the Dutch game industry has some of the basic characteristics of an industrial cluster, such as a spatial aggregation of similar economic activities, local linkages due to activities such as competition or cooperation, or a sense of self-awareness among cluster participants and some joint policy actions (Malmberg & Power, 2006). If we want to really understand which specific type of aggregation the Dutch game industry belongs to, we should use similar industry examples from other countries for analysis. A considerable number of Dutch gaming companies are clustered in Amsterdam and Utrecht, with Amsterdam accounting for 1,037 of the total 3,856 gaming-related jobs across the Netherlands and Utrecht following closely behind with 486 jobs (Dutch Game Garden, 2019). Perhaps to a certain extent these two cities can be described as clusters of gaming companies, but this article aims to study the community of gaming companies in the Netherlands as a whole, so it is not rigorous enough to apply the clustering of companies in these two cities as a general situation to the rest of the Netherlands.

Darchen (2015) introduces the term networked communities in his study on the agglomeration of video game companies in Australia, which analyzes two gaming agglomerations located in Brisbane and Melbourne, respectively. However, the author believes that none of them can be considered a "creative cluster". One of the major reasons is that, in both cases, no solid "middleground" can be found, which results in the lack of cross-fertilization between creative ideas or between creative

ideas and other fields. Therefore, talent with potential for growth or ideas with business prospects do not reach the upperground. The emergence of middleground is spatially and historically constrained; it can be bottom-up or top-down, but both require large-scale industrial participants for and active organization and guidance as a prerequisite (Lange & Schüßler, 2018). If the Dutch game industry does not form industry clusters or creative clusters in the traditional sense, what are the forces that bring Dutch game companies together? The next section will use the concept of creative middleground as a possible answer to how the Dutch game industry community is organized and maintained.

4.3 Creative Middleground - why do they gather

Creative industries will approach each other based on their complementary nature (De Propis et al., 2009), and when creative industries are studied through the lens of creative clusters, the promotion of strategically meaningful connections, spillovers and externalities is a major challenge (Davis, Creutzberg & Arthurs, 2009). In his article, Hutton (2008) also explains that creative industries cluster due to the availability of facilitated knowledge exchange in an inner-city urban environment. The concept of creative middleground allows us to deepen the understanding of how knowledge exchange and communication happens in the creative industry.

The concept of creative industries was first introduced by the UK Department of Culture, Media, and Sports (DCMS) in the late 1990s. Today, creative production and consumption have become an important cornerstone of contemporary national and urban economies (Lange & Schüßler, 2018). Creative industries like video games are often more challenging to convince people of the intrinsic value of their existence than other economic entities because of its ambiguous nature, so creative industry practitioners need to make more costly efforts, which requires creating a common knowledge system and raising awareness of its creative dynamics (Grandadam et al., 2013).

In the same article, the authors also mention how cities' physical spaces and places play a role in the local diffusion of knowledge assets (Grandadam et al., 2013). The city's creative dynamics approach is generally considered to be divided

into underground and upperground (Caves, 2000; Hartley, 2005; Aoyama & Izushi, 2003; Arvidsson, 2007; Florida, 2008). There is another layer between the formal community represented by the upperground and the informal community represented by the underground, the middleground. By understanding how creative products are generated, it is more likely to understand the three layers that exist in a physical space, here we are going to go through we are the three layers mean.

Upperground refers to companies or institutions that market ideas and creativity, which are formal and organized (Caves, 2000; Hartley, 2005; Aoyama & Izushi, 2003; Arvidsson, 2007; Florida, 2008). Underground is made up of creative individuals who are not constrained by the commercial and industrial world (Aoyama & Izushi, 2003). But how can the individual creative workers, who are outside of the commercial and institutional world, and the companies with marketable capabilities be integrated? The middleground is the link between the two layers. The creative middleground can be explained as market forces that shape a shared pool of resources that allow partners and competitors to build a common identity, increase skills, share knowledge, and ultimately increase creativity (Grandadam et al. 2013). This explains how the creative product in this model is finally realized through the communication between the layers, and the whole process can be further simplified as: The underground layer provides a wealth of unpolished creativity and ideas, and the upperground offers the opportunity to commercialize and monetize them, but without the middleground catalyzing the interaction between the two layers, the exchange of such ideas would be sluggish and difficult.

For the formation of the middleground, Grandadam et al. (2013) argue that it is premised with the existence of intermediate groups and communities, that is, one of the manifestations of the middleground is the community. The middleground's knowledge sharing mechanism follows two main paths: Exploration and exploitation, which can be further divided into epistemic communities and practice communities if subdivided. Simply put, one is responsible for building the knowledge framework and rules that can be followed by all the players in the industry, while the other is responsible for implementing the plan into a product, such as cooperation projects

(Cohendet et al. 2001). However, these two different types of communities are not independent of each other, they are also intertwined (Grandadam et al. 2013).

Middleground plays the role of an intermediary agent and likewise sets the rules and codes of conduct in the community. It also fosters the creation of innovations, as the producers of ideas need to be constantly reminded and spurred on by others (Lange & Schüßler, 2018). Therefore, a dynamic middle ground can play several functions: a) a means of continuous improvement of individual capabilities (personal development); b). building a resource base (knowledge); and c) building a common structure of the same code of conduct (allowing ideas to emerge freely from underground upwards).

However, Lange & Schüßler (2018) have a different view on the formation of the middleground. In their study on the spatial dynamics of the design field in Berlin, Germany, they argue that a productive middleground does not necessarily require industry leaders to act as anchor firms (Cohendet et al., 2010, 2011; Grandadam et al., 2013), or the "bottom-up" approach mentioned in the earlier paragraph. It can also be initiated by entrepreneurs or individuals, starting from the "street-style" (underground) to mobilize people, gathering an audience, creating local buzz, and finally connecting with the upperground. However, each theory affirms the important role of the middleground in the creative city. The next paragraph will focus on how the exchange of knowledge is conducted within the scope of Middleground.

Physical space and place are important in determining the middleground quality and that there is a need for a set of valuable places and spaces in cities that can allow knowledge assets to be disseminated at different levels of the local environment (Grandadam et al., 2013). Montreal, Canada is an important video game producing region in the world, and the development of the Montreal game industry relies heavily on the meeting and knowledge exchange between the creative upper echelon (companies and industry leaders) and the creative lower echelon (individual talent) in the middleground (Grandadam et al., 2013). Many other articles have explored the game industry's development (Dyer-Witheford & Sharman, 2005;) and creative clusters in Montreal (Legault, Marie-Josée, & Weststar, Johanna, 2015;

Darchen, S., & Tremblay, 2014; Della Rocca, 2012). The community in the middleground plays a role in promoting the exchange of talents and knowledge of creative activities in the city. For the company, such creative avenues are delegated to the employees to explore by themselves. The creative ideas acquired by the employees' free exploration can generate value for the company; for the individual talents, such exchanges help build their own community identity. The constant cognitive mediation between underground and upperground provided by the middle ground helps generate creative externalities, which means the players in the same industrial creative environment would benefit from the prosperity of the middleground (Grandadam et al. 2013)

The video game industry, as a part of the creative industry, relies heavily on the exchange of tacit knowledge and the video game creator community is now becoming more inclusive and organized. The International Game Development Association of Australia (IGDA) brings together game developers, students, and other game industry professionals on a monthly basis for industry knowledge exchange or training or mini lectures, such as tips and techniques on marketing and financing (Darchen, 2015). However, as mentioned above, the middleground activities in Brisbane and Melbourne are basically organized by the game industry entrepreneurs themselves, lacking a real well-organized middleground space to provide opportunities for the full integration and exchange of underground and upperground knowledge (Lange & Schüßler, 2018). For this reason, although the Australian games industry is often considered to be spatially clustered in Brisbane and Melbourne, the author believes that the term networked community is more appropriate to describe this phenomenon (Darchen, 2015).

Geographic, cognitive, and social forms of proximity are easily developed in the creative field, and numerous articles have emphasized the positive effects of geographic proximity in counteracting uncertainty and mobility in the creative field (Hutter, 2011; Pratt, 2002; Rychen & Zimmermann, 2008). Jakob & van Heur (2015) summarized recent research findings in the creative economy field, in which they mentioned the participation and contribution of intermediaries, including cultural

centers, policy networks, artist collectives, galleries and bars. There are many countries where the gaming industry has developed remarkably well over the past decades. Many studies can provide useful information for this article and help build theoretical systems. In addition to Montreal as a good example, the game industry development models in Melbourne, Brisbane, Australia (Darchen, 2017), Japan (Martin, 2013), China (Kim & Kang, 2021), and Sweden (Chaminade et al. 2020) are all highly informative for this study.

4.4 Building the global pipeline

The flow of knowledge and connections within the local creative industries through the middleground between the upperground and the underground has shown that building well-established networked communities can enhance the creativity and productivity of the city and the industries (Darchen, 2015; Grandadam et al, 2010; Grandadam et al, 2013; Lange & Schüßler, 2018). In the context of globalization, the relationship with external companies, in addition to companies within local clusters, is becoming more and more important for the success of the companies given the popularity and affordability of communication technologies today (Loh & Xiao'en, 2019). The new knowledge sharing model under the current globalization trend can be better understood outside the boundaries of local communication. Just as knowledge and creativities can circulate vertically from top-down or from bottom-up in cities, they can also circulate knowledge transfer horizontally between firms. This channel that allows horizontal inter-company communication across regions is called a pipeline (Bathelt et al, 2004; Owen-Smith & Powell, 2004). Because mutual trust is necessary for the establishment of a pipeline, small transactions with less risk and tacit knowledge exchanges can also be used to build initial trust in order to eliminate the unfamiliarity caused by uncertainty and geographical distance (Bathelt et al, 2004). Once the pipelines are built, the knowledge flow across firms gives greater incentives for development of innovation (Owen-Smith & Powell, 2004). The argument is that if more cluster companies join in building the pipeline to the outside world, more industry information, news and publicity will be injected back into the

local cluster, and local industry practitioners will benefit as a consequence (Murdoch, 1995).

In contrast to the concept of a pipeline, “buzz” refers to the information and communication ecology created by the face-to-face contact, co-presence and co-location of people and businesses within the same industry, location or region (Bathelt et al, 2004). This local buzz is mostly characterized by the following: decentralized, high-frequency, widespread, and spontaneous; in contrast, building a global pipeline with new potential partners outside of the community for collaboration requires a conscious and systematic effort to establish new trust. This trust-building process takes time and costs (Harrison, 1992), and the establishment and management of a global pipeline involves considerable uncertainty and high levels of investment (Gertler, 2001). Therefore, at this point, if there is an organization that can lead the process it can significantly reduce the cost and barriers for each company to go out and build connections individually.

Establishing a global pipeline is particularly important in creative industries because cutting-edge knowledge is ever-changing and new production processes and product concepts are constantly emerging. If an effective set of common institutions can be established, companies linked with the same pipeline can operate more efficiently (Bathelt et al, 2004). However, the article by Bathelt et al (2004) does not neglect the role of local communities, but proposes a theoretical hypothesis to illustrate what happens after the pipeline connection is built: First, knowledge can never be self-sufficient, especially in terms of advanced knowledge creation, and second, once some local company or organization is connected to non-local clusters, the information received through this pipeline will be broadcast and amplified through the local buzz, forming resonance and ultimately spill over to other companies in the local community.

The above paragraphs describe how knowledge can circulate first between local and outside clusters in the form of pipelines, and then being amplified and disseminated through local buzz (Bathelt et al, 2004; Owen-Smith & Powell, 2004). However, does not mention how the pipelines are being presented in reality. Maskell,

Bathelt, and Malmberg (2007) provide us with a concrete image of a pipeline: international trade fair. People meet regularly at trade fairs to get a glimpse of leading-edge technology, to facilitate informal or formal networking or to reach business partnerships. The establishment of such trans-local relationships is considered as temporary clustering. In newer studies, scholars have similarly examined the role of exhibitions in local innovation knowledge networks. MWCS is the industry's annual world-class international trade exhibition held in Shanghai (Zhu, Bathelt & Zeng, 2019) and is an opportunity to examine whether participation in the trade show has a positive impact on or is associated with local innovation knowledge networks. The article found that the local companies that participated in the fair were more innovative and other companies. They preferred to use these networking opportunities provided by the shows to further differentiate themselves locally and thus gain access to international markets (Rinallo & Golfetto, 2011). In addition, the study identifies the potential positive effects of knowledge gained from participation in trade shows on local economic activity. The article also specifically mentions the key role of policy makers, which includes close cooperation and planning with exhibition event planners to determine which events can provide the most support to the local industries. Besides that, incentives should also be considered provided to encourage local companies to leverage the exhibitions as platforms to connect with international markets. More video game industry related cases are, for example, international conferences that provide a discursive venue for researchers and developers to meet and discuss the future prospects for the application of technology in gaming (Stapleton, 2004); Although the epoch-making computer scientists like Alan Turing were born in Britain, the development of video game industry is slightly lagged behind compared with America and Japan. The pioneers of the video game in the UK were 'bedroom coders', who were self-trained programmers and conducted their business in their own bedrooms (Izushi & Aoyama, 2006). These bedroom coders were initially connected by a variety of loose networking channels to share information and skills, but trade shows and conferences have provided another,

broader venue for them to communicate, and programmers have become more connected to each other (Izushi & Aoyama, 2006).

4.5 Insight from other countries' game industry communities

Based on the fact that the Dutch game industry is relatively small, there is a need to learn from the experiences of other countries or regions with similarly sized game industries in terms of building their industry communities. The game industry in Poland has been growing spectacularly in the past few years, there are many high-quality video game development companies such as CDPR, 11-bit company, Flying Wild Hog. Poland's number of game companies reaches more than 400, and more than 100 Polish games are entering the international market every year (Koper & Kahn, 2020). According to data from The Game Industry of Poland - Report (2020), 9710 people are currently working in the development of video games in Poland, and the revenue of the industry amounts to 479 million Euros (European Games Developer Federation, 2020). The Polish game industry's booming is inseparable from the government's support, as Polish Game Association calls the industry "the source of national pride." At the same time, the development of video games is also included in the overall national development plan: National Intelligent Specialization (Musielak, 2021). Polish game developer 11-bits has developed a series of high quality and internationally acclaimed games, such as This War Of Mine and Frostpunk. Another game developer CDPR (CD Projekt Red), has developed titles such as The Witcher series and Cyberpunk 2077, which are well known in the international market (Damian, 2017). World-renowned big studios can contribute to attracting foreign talent, which can boost the industry and have a significant positive effect on the internationalization of the industry community. Small and medium-sized companies are also thriving in Poland. The New Connect Market, an equity exchange market explicitly designed for small companies by the Warsaw Stock Exchange, has made it easier for many small gaming companies to raise capital and expand (Szedlak, 2021). In 2020, a year of challenges, the Polish game industry has hit a milestone, as the Warsaw Stock Exchange has more game companies than the Tokyo Stock Exchange and the WIG.Games index has risen 125% since 2019, which

has greatly stimulated investors' enthusiasm for investing in the game industry (Đorđević, 2021).

The development of the Swedish game industry in recent years, as mentioned earlier, can also provide valuable insights for the Dutch game industry. The two countries are geographically close to each other and, more importantly, Sweden is one of the main origins of the Demoscene --the initial driving force of the Dutch game industry (Polgár, 2005; Ulf, 2012). Because Sweden's domestic market is relatively tiny, Swedish game developers have targeted the global market directly from the early stages of the industry's development. Sweden has built a solid ecosystem to nurture new game developers, with some of the best game development schools in the world located in Sweden and several incubators. The negative effect of being in the global tide is the sacrifice of discourse power and autonomy of the Swedish gaming companies, from the outflow of game developers to other European countries in the 1980s, later deals made with major Japanese and American publishers, to then increasingly being acquired by major foreign game companies, Sweden's relationship with the international game production system has become increasingly complex and intertwined (Ulf, 2012). The low profitability is a major concern for the Swedish gaming industry, in contrast to the glamorous and booming industry portrayed in the media. The fall of game company Starbreeze, which was once able to represent the most glorious era of Swedish gaming, also confirms this situation from the side (Yin-Poole, 2019). But besides that, the Swedish game industry has been very thriving in recent years in terms of building the industry clusters for game companies and tighten the bond of the community. Arctic Game Lab, East Sweden Game, Science Park Gotland, The Great Journey are some of the representatives of the fastest growing clusters of game development companies in Sweden, and there are many events and gatherings held in these clusters, such as Arctic Game Week , game camps and other regular lectures, initiatives, meetups (Alexander, Christian & Nayomi, 2020), These game industry communities and clusters across Sweden provide a constant supply of creativity and talent for the industry itself.

Given that many jurisdictions are becoming aware of the economic growth potential of the gaming industry, few regional governments have a "video game mindset" that truly understands the video game industry and culture. Prince Edward Island, Canada, has launched the Gameplan Initiative (Gameplan, n.d.). Prince Edward Island is a very small geographical area, so the video game companies on the island are considered "packaged" or "bundled" and will go to trade shows and other events. The series of government tax incentive schemes also demonstrates the regional government's commitment to game support. However, such incentives are sometimes not perfectly balanced and not particularly friendly to smaller companies. And the success and sustainability of the video game companies need to support the local social, cultural, and economic context from where the companies are located. In conclusion, while these regional strategies are important in shaping the foundations of new media and gaming efforts, they are also not the determining factor responsible for the rise and sustainability of the gaming industry in this region in general (Pottie-Sherman & Lynch, 2019).

To summarize the findings mentioned in this chapter, the geographical clustering of firms in cities is attributed to the association of complementarities and similarities between them (Potter, 2000), and a number of scholars have since developed other theories describing the spatial clustering of firms based on that (Darchen, 2015; De Propis and Hypponen, 2008; Grandadam, Cohendet & Simon, 2013). There are many suggestions that firms clustered together can perform better than those outside the cluster (Bathelt et al, 2004; Darchen, 2015), but researchers have questioned this idea and argued that it is subject to further testing in non-traditional industries (Coe, 2001; De Vaan et al., 2013). However, the Dutch video games industry does not display an apparent clustering of industries. We need to continue investigating how the Dutch video games industry community is formed and how it maintains the connections between companies in the industry. Darchen (2015) provided us with a new perspective to understand this issue, that is, the networked community, and based on this, we further explored what a creative middleground is and how knowledge and information circulate through the middleground between upper and

undergrounds within an industry (Cohendet et al., 2010, 2011; Grandadam et al, 2010, 2013; Lange & Schüßler, 2018).

However, one factor that cannot be ignored at present that affects the development of the global economy is globalization. Since knowledge, especially advanced knowledge, cannot be self-sufficient (Bathelt et al, 2004), it is necessary to link up with clusters outside of the local business to increase local firms' competitiveness in the international markets. A pipeline is a channel that allows knowledge to flow horizontally between clusters, bridging local and external industrial clusters. However, as building trust with companies located outside the region is a time-consuming and costly exercise, there is also a limit on the number of pipelines that each company can establish at the same time (Gertler, 2001; Harrison, 1992). Subsequently, we also discussed what approaches could help to build pipelines between local and foreign clusters, and international trade fairs were one of the answers (Bathelt et al, 2007; Zhu, Bathelt & Zeng, 2019). International trade fairs can also be seen as a temporary clustering to empower local industries and local economies. Meanwhile, even though trade fairs, shows, and exhibitions can be considered as temporary clustering, the role of local buzz cannot be overlooked. As a conduit for knowledge to be injected into the local cluster from the outside, the pipeline cannot always remain in place, and most of the time, communication between local firms is still essential. The local buzz is the way to pass on and amplify the message internally (Bathelt et al, 2004). Finally, by studying the landscape of game industry communities in other countries, some substantial issues were recognized. Including the way, the game industry operates in small geographic regions, the support from the jurisdictions for the industry, implications of going public and investment for game companies, the imbalance of discourse brought by globalization, and the contradiction between the high-risk attributes of the small game companies and the risk aversion tendency of investors.

5. Validity and Reliability

All research have to demonstrate their quality. Validity is particularly important for qualitative research because it detects whether the study has investigated the intended subjects (Golafshani, 2003). Therefore, validity in qualitative research may be different from the terminology used in quantitative research. In qualitative research, credibility is essentially achieved through credibility, authenticity, transferability, dependability, and confirmability (Cope, 2014). In order to obtain higher validity, this research managed to tackle the two biases that threaten validity: respondent bias and researcher bias (Robson, 2002). Researcher bias refers to respondents not giving real answers for some reasons. In this study, this bias may occur when a respondent feels that certain issues may affect his reputation or relationships within the Dutch gaming industry community, as giving opinions of other companies or industry bodies may cause unwanted dispute. To solve this problem, anonymization is one of the answers. In addition, trust-building is already started during the recruitment process. For example, the interview invitations sent to the interviewees showed sincerity and modesty to the greatest extent possible. If a common trust was established, the correspondent bias could also be resolved to some extent. The researcher bias occurs when some of the researcher's own assumptions are taken into account in the research process. The solution to this bias is triangulation, especially about the theory, as the findings emerge, constantly compare them with previous theories, trying to remain objective and independent.

6. Ethnic Considerations

Ethical considerations are essential for qualitative research, and such considerations should be the basis for everything throughout the study (Arifin, 2018). Because interpersonal communication is the way to obtaining data in qualitative research, ethical dilemmas often arise in this process that researchers have not encountered before (Orb et al. 2001). Therefore, some principles of ethics were followed in this study. This study followed the principles of anonymity and voluntariness, with the most important consideration regarding protecting the interviewees' privacy. Each interviewee was emailed a consent form before the interview, and the interviewees responded to it by giving their consent either verbally or signing the document. For the recordings, interviewees were explicitly told that the recordings would not be used for any purpose other than transcription. In addition, the privacy of the respondents was protected by anonymizing their names and their companies or organizations. Therefore, the names of interviewees mentioned in this research are pseudonyms (taken from the most popular Greek male names). The names of the organizations they work for have been renamed for non-traceability.

7. Methodology

7.1 Research design

To answer the research question How do Dutch video game practitioners perceive the Dutch video game industry creative community, a qualitative study is necessary. Qualitative research uses texts as empirical material rather than numbers. It is valuable for exploring both the daily practices and participants' perceptions, starting from real phenomena that occur in society (Flick, 2008). The sample size is as important in qualitative research as it is in quantitative research. The determining factor is saturation as well as information power. The concept of information power refers to the strength of the relevant information carried by each sample - the greater the information power per sample, the fewer samples are needed to reach data saturation (Malterud at al, 2016). Therefore, finding a sample with greater relevance to the topic becomes critical, which is why this study did not use focus groups, but instead opted for in-depth interviews. Focus groups have fewer interviewer descriptions comparing to interviews and focus more on observing the changing perspectives in the conversation (Rabiee, 2004). It also reduces the information power for each interviewee and lowers down the efficiency of the data collection. Therefore, the research successfully conducted ten in-depth interviews. Thus, the understanding of the subject can be realized from the latest acquired data (Gubrium, 2012)

To summarize, this study used semi-structured in-depth interviews to obtain data. This method best reflects the respondents' thoughts on the Dutch gaming industry and its community, which is the question that this research tries to answer. The process of sampling is described in the next paragraph.

7.2 Sampling

To get as much depth and power of information as possible, good sampling is critical. This study used a purposive mixed sampling method: snowball and convenience. Snowball enables to contact potential interviewees through participants who have been participated in the study (Flick, 2019), and convenience sampling

here reduces the difficulty of recruitment tremendously since it targets the most "approachable" sources of data for the researchers (Lavrakas, 2008). The specific sampling process and justification will be explained in more detail in the following paragraphs.

Purposive sampling was used because respondents are expected to meet the following criteria: to be involved in the Dutch game industry and have been engaged in some form of involvement in the game industry community. Additionally, the study participants included three independent game developers whose insights into the Dutch game industry and community are also important. Therefore, the purposive sampling method is necessary because it is the only way to select participants with the required knowledge. It also shows that researchers can define the sample according to the areas they want to explore to achieve faster data saturation (Cote & G. Raz, 2015). When recruiting the participants, attending lectures and online meetups related to the Dutch game industry were the means to build the first connection, get to know people before sending the messages to the speakers, and send invitations to confirm the interviews. However, the convenience sampling method is feasible but time consuming, so in addition to that, snowballing was also used to gain more opportunities to make acquaintances with participants. If an invited participant were unavailable to participate for some reasons, such as a tight schedule, they would voluntarily give the contact information of other possible respondents. Out of ten respondents who participated in the study, four were contacted through direct messaging on social media or emails, and six were reached out by snowballing. In terms of gender, the gender of all respondents was male. However, gender diversity was not the primary goal that this research was going to achieve. According to Dutch Game Garden's data on the gender distribution of employees in the Dutch gaming industry in 2018, the percentage of male employees was 81% (Dutch Game Garden, 2019).

The age range of the respondents in this study is (23-56). Although there was no requirement on the respondents' nationality at the time of sampling, it was not surprising that eight out of ten respondents were Dutch (one of them was mixed

Dutch and Danish origin and another one is German) as the subject of the study was the Dutch gaming industry. To clarify the industry's branch, five people from the entertainment game sector, three people from the applied game sector, and two people from game-related organizations. Appendix A contains the information of the interviewees can be found at the end of the article. The sampling process and data collection are carried out simultaneously, and the next section will elaborate on the data collection steps.

7.3 Operationalization

The questions were designed with open endings to guide respondents to answer the questions in multiple ways and encourage them to describe in detail (Cote & G. Raz, 2015). Appendix C at the end of the article included the complete question list with probes. Before the interview began, interviewees were asked if there was anything unclear about the interview and asked for permission to record the conversation. The interview questions were made from simple to complex to allow the interviewees to express their ideas about the Dutch game industry and its community more freely, and to establish rapport with the interviewee better to be able to obtain more information in the following interview (Cote & G. Raz, 2015). The interview started from demographic information and personal stories, gradually moving to the opinion questions. Subsequently, the questions related to the four aspects summarized in the previous section in the theoretical framework are asked. Questions about participation in community activities are asked first because it is relatively easy to be answered. Minor adjustments were made to the question according to the interviewee's position in the company. For example, questions for event organizers (such as the initiator of the game jam or the board member of DGA) were about the experience of organizing these activities, the difficulties encountered, the feedback received from the participants. Questions for event participants (such as game company CEOs and indie game producers) are about the purpose of their participation in these events, the experience, and takeaways.

Regarding the role of the community as a middleground, the questions focused on whether they had reached out to people from other levels through community

activities. Similarly, the questions were adapted to the specific identity of the respondent. For instance, interviewees from both applied and entertainment game companies responded to their perceptions of each other respectively.

Internationalization is another main topic developed from the theoretical framework discussions. Regarding this topic, question relates to whether the industrial community has contributed to the international expansion of the company and the opportunities and challenges that globalization presents to the company. Moreover, the questions also covered the interviewees' outlook on the Dutch gaming industry and their expectations for the future direction. Finally, the respondents were offered the opportunity to ask any questions or add anything that was not previously mentioned.

After the first few rounds of interviews, some new questions emerged, such as the entrepreneurial spirit of Dutch entrepreneurs, which was mentioned by many interviewees, and the issue of personality, which may also be a factor affecting the building of the Dutch game industry community. So, in the following interviews, questions such as "Did you have a clear goal at the beginning of your business to see how big your company would become?" Or "Do you feel that Dutch game developers have an introverted personality?" were included.

7.4 Data Collection and analysis

As talked about above, semi-structured interviews were used for data collection in this study. To understand each interviewee's perspective on the overall environment and community of the Dutch gaming industry, it is inevitable to discuss personal insights and first-hand experiences as a practitioner, so the semi-structured interviews also add flexibility to the in-depth dialogue (Brennen, 2012). In addition, the benefit of the interview is the depth of information. People are more likely to feel relaxed in a one-on-one setting compared to a focus group, especially after the researcher has established a good rapport with the participants (Morgan, 1997). The entire collection process lasted two months, from the first interview on March 26th to the last one on May 26th. The interviews were mostly conducted online, using remote video call platforms such as Zoom, Google Meets, and Microsoft Teams. On the one

hand, remote interviews were to meet the new coronavirus protection and maintain social distance. On the other hand, to make the data collection more convenient, with the interviewees located in different parts of the Netherlands, the use of remote interviews saves time spent on travel by both parties. Video interviews are also the closest form of face-to-face interviews regarding material richness and capturing vocal and phenotypic information (Cote & G. Raz, 2015). The only exception was that one of the interviewees offered to record the interview in video or podcast format, so a face-to-face interview at the interviewee's office was chosen for that particular interview. All interviewees provided written or verbal consent prior to the start of the interview. The interviews were recorded in entirety with the permission of the interviewees and later transcribed verbatim using iflyrec. After transcription, the data was encoded using Atlas.ti.

The study used thematic analysis to analyze the in-depth semi-structured interviews. Thematic analysis was chosen because it has been one of the most common analytical methods in qualitative research, Braun and Clarke (2006) state that the focus in the thematic analysis is on examining and transforming the research data to identified patterns, the 'themes' indicates are important in how the context, situation or phenomenon are described and how these are related to the research questions. The purpose of thematic analysis is not to derive a theory but rather to describe and understand how people feel, think, and behave in relation to the proposed research question in a particular context (Guest, MacQueen & Namey, 2011), which coincides with the intent of this study. The coding process also followed the three-step rule: open coding, axial coding, and selective coding (Gioia, Corley, & Hamilton, 2013). First, the initial codes were discovered after the immersive reading. In this stage, about 147 initial codes were established. After the sorting, the axial codes were refined, and finally, the final themes were established under the guidance of the theoretical framework. The specific coding tree can be found in the appendix C (Open/ initial codes, axial codes, and themes). The themes will be used to paint a complete picture of the Dutch game industry and its communities perceived by the

practitioners. The following paragraphs will focus on elaborating the specific findings derived from each theme.

8. Analysis and Discussion

After analyzing the ten in-depth interviews, seven main themes were developed. These themes were extracted from 148 open coding sessions, combined, and finally summarized from more than 20 axial codes and are meaningful for answering the research questions. The complete coding tree can be found in the end of the document (Appendix B). Here in the table down below shows the main themes and their axial codes:

Themes	Axial Codes
Openness	Willing to share Overall solidarity People are easy to work with
Little sector crossing	Do not understand each other Difference between different industry sectors Applied game seduces people to play through game mechanisms
Organization	Not very influential Lack of international orientation of the DGA
Internationalization	What the bodies are doing Opportunity Challenges Culture difference is hard for serious game
Entrepreneurship	Have little vision about the future in long term Dutch people love playfulness Visions Indie developers want to work in a small team with confident people, and doing project that is fun
Events	More big shows? Purpose of attending Events organizing
Clustering	helps to build ecosystem increase the talents mobility reduces communication cost They are political show-offs creative industry together

Table 1: Overall of themes axial codes

The data analysis for this research is based on a literature discussion to reveal meaningful connections that emerged throughout the analysis. Before presenting all the details of the study's findings, it is necessary to have an overall impression of the Dutch game industry community: The best word to summarize the Dutch gaming industry community at this moment is looseness. This word reflects two important characteristics of the community: one is the Dutch game industry has many small-sized studios; another is that the segmentation within the industry is obvious. The lack of cohesion is a problem that most respondents pointed out about the game industry community. In addition, the results also revealed other concerns regarding the building of the community in the Dutch game industry, including investment, internationalization, event holding, entrepreneurship, and more. In the next paragraph, we will discuss in detail how these seven themes answer the research question of "How do Dutch video game practitioners perceive the Dutch video game industry creative community?"

8.1 Openness

Openness is the impression most respondents had about the Dutch game industry community. This impression is mainly reflected because there are not many hurdles for individuals to communicate with one another, and there is mutual help in business. The openness shown in the Dutch game industry is related to the underground layer communication in creative cities, as described by Aoyama and Izushi (2003). The underground is not restricted by many commercial considerations and is relatively loose. Such openness has the characteristics of including informal, small group gatherings. This view can be confirmed from the conversation with Kyros. Kyros has organized several Dutch Game Jams and is the founder of Game Bakery. Game Bakery is a cooperative organization of freelance game developers who join and work on the same project. The project is decided democratically within the company; Game Jam, on the other hand, is an annual event where participants take part in teams of 4-6 people and are required to make a game over a weekend, it is an enjoyable competition. It's also a way to make connections (Kyros, Personal

communication, March 29, 2021). Plus, many great game concepts are made during this process and later discovered by investors. Kyros shared his personal experience in organizing Game Jam events:

"We used to organize meetings every month or so. We did it with a cooperative. There was food, there were drinks, there was a start time and then time, right? You could come by, and it worked really well. And then we went to Utrecht, where there was a more informal meeting, and we have to find those people in the back of some local bar. We didn't even recognize them at first, and they didn't know who we were." (Kyros, Personal communication, March 29, 2021)

From his experience in organizing meetings, it is clear that a decentralized industry structure can cause high communication costs for event organizers. However, it is very gratifying to see that people also desire to share and are very willing to help others. JobKyros (Personal communication, March 29, 2021) talked about the openness of people in the industrial community, "I say so, once you get to know them... they're willing to share.", even though he also says that being a complete outsider can be difficult at first. The openness of the Dutch game industry community is also shown by the mutual assistance in business, where even competitors in the market help introduce business to other companies in the serious game industry. This also proved that the local Dutch market has a high demand for serious games. The reciprocal phenomenon has occurred because serious game companies generally have better financial situations than entertainment game studios. This precisely emphasized the role that a middleground can play in such reciprocal activities, as the example showed that applied game companies maintain a good relationship with each other. Still, it is conceivable that such reciprocal behavior would be amplified if there is a middleground formed. As a result, more players would benefit from the creative environment (Grandadam et al., 2013). But that doesn't mean entertainment game companies are not helping each other, And it is good to see that attempts to build a powerful middleground can be found. The establishment

of MidgameFund is a good example: MidgameFund is a group of Dutch game developers and startup game companies that provide funding, experience, and networking. More than 25 experienced game developers have joined the investor team (Handrahan, 2021), proving that there are already many good game developers in the Netherlands who can help the industry by investing in other independent game development projects. Konstantinos (personal communication, May 17, 2021) highlighted the significance of MidgameFund for the Dutch gaming industry. He said: "that's also a good example of the fact that people are bonding together a bit more right now."

Thus, the above analysis leads to the following conclusion: the Dutch game industry exhibits an openness, mainly between individuals and small groups, and in the words of Aoyama and Izushi (2003), such exchanges reflect a vibrant underground in a creative environment. But the establishment of the middleground is allowing this reciprocal behavior to be further enhanced. This result is most consistent with the theoretical framework, where applied game companies represent the upperground, and freelancers participating in Game jams represent the underground, each communicating in their respective domains. If a layer of middleground is missing, these communications can become very inefficient (Aoyama & Izushi, 2003; Grandadam et al. 2013; Lange & Schüßler, 2018).

8.2 Very little industry crossing

The second main finding of this study is that the Dutch game industry has a clear boundary between different sectors, which makes it even harder for the already small Dutch game industry to have more power as a whole. This finding confirms that establishing a middleground requires a long and substantial effort (Grandadam et al., 2013). The way each sector operates and the differences in the mindset are why further communication is hindered. According to the Dutch Game Association, the industry can be divided into four different sections: serious games/applied games, entertainment games, game education, and game research (Dutch Game Association, n.d.). But a challenging task is how to tighten the communication between these sectors further. George currently serves on the Dutch Game Library

as the board member of the applied games division, and he mentioned some positive things about cross-section communication. The Dutch Game Library's mission is to create a better ecosystem for the game industry, with "regular board meetings, network breakfasts or network events before the covid" (Rob, personal communication, April 16, 2021). In some fields, such as "serious game and game research" and "game research and education," are more closely related because of the similarities and intrinsic links (Yiannis, personal communication, April 15, 2021). But the two most prominent sectors of the Dutch game industry, entertainment and applied games are not very connected. According to Dutch Game Garden 2018 data, 114 applied game companies registered in the Netherlands and have become a significant force to be reckoned with in the industry (Dutch Game Garden, 2019).

There are enough reasons that these two sectors should have a closer connection and interaction: they share the same talents and have much to learn from each other. Yiannis also pointed out that the roots of applied games were borrowed from entertainment games. Applied games espouse "playfulness," "We do a lot of playful things.", "When we do it digitally, we use a lot of game-related protocols. We have a lot of protocols underneath that you have for entertainment games" (Yiannis, personal communication, April 15, 2021). The difference in the way they operate is one reason why the two sectors have not formed a stronger link. Work for hire is still a frequently used business model in applied game studios, as described by George (personal communication, April 16, 2021). "So, we've done a project for at the school, or a at a health institute. And then someone else sees it, and they say I also want something like that." It is easy to see that the operation model of applied game companies is simple, straightforward, and robust. But at the same time, how the entertainment game companies work is more complex. Usually, they need to contact publishers for distribution after the project is completed; get investment from investors before the project takes shape. Making an entertainment game is a process full of uncertainty. Differences in doing business make the two sectors lack a better understanding of each other, thus hindering further communication. Suppose this barrier needs to be torn down. In that case, there is an inevitable need for an

organization to integrate the players in the industry. Combined with the example of the creative network elaborated by Darchen (2015) in the theoretical framework, community building in the Dutch game industry currently lacks cross-fertilization between creative ideas or between creative ideas and other fields. The other fields here can be seen as the different sections of the industry, which in the case of the Dutch game industry are entertainment games and applied games. Middleground is difficult to create without the active participation of industry players and the guideline provided by the industry bodies (Lange & Schüßler, 2018). Thus, the operation of the Dutch game industry organization is essential.

8.3 Operation of the game related organizations

As discussed previously, the middleground cannot be established without guidance, either bottom-up or top-down (Lange & Schüßler, 2018). A community is the most visible manifestation of the middleground, playing the role of agent rule-norm setter (Grandadam et al., 2013). A well-organized middleground can greatly enhance tacit and other types of communication between the upperground and the underground (Darchen, 2015; Lange & Schüßler, 2018). The best implementers of this well-organized middleground are game-related organizations. The Dutch game-related industry organizations and institutions involved in this study are Dutch Game Garden, Dutch Game Organization, Game Bakery, Game Jam, and MidgameFund. They contribute to building the Dutch gaming industry community in different ways. Dutch Game Garden is dedicated to helping startup game companies incubate and grow financially (Dutch Game Garden, n.d.) and has experimented with company clustering.

Game studios are invited to locate themselves on the same floor of the building that Dutch Game Garden offers. Attending the monthly Lunch Meeting organized by Dutch Game Garden has become a tradition for many regular participants. INDIGO has also become the most popular game event in the Netherlands and grows every year. The Dutch Game Association has a bigger plan of creating a better game ecosystem and increasing the influence of the Dutch game industry in the country and the world. Some seemingly small but meaningful actions have also been carried.

The Dutch Game Industry Slack Group is an informal place for everyone to talk about anything digitally without spatial and time restrictions. Christos from Paladin studio stated that the Dutch game industry needs such an attempt at the moment: "I think that's a very small seed, but might turn into a beautiful flower." (Christos, personal communication, May 28, 2021). MidgameFund, on the other hand, tackles the most challenging funding problems and provides angel investment for good projects or companies. But regardless of the type of organization or its vision or purpose, only more members can keep the organization sustainable and have enough influence to fulfill its commitments. Nikolaos commented on the Dutch Game Association and said:

"Those games association isn't very influential at the moment yet. We only joined a few years ago and a lot of people haven't joined yet, and they don't have a lot of budget. So, they're working on becoming a more influential group in the Netherlands, but they are not there yet." (Nikolaos, personal communication, April 28, 2021)

George stated that the biggest difficulty in the growth of the organization right now is that people don't realize the power of getting together:

"Part of it is because we cannot explain or we should explain better about the benefits of getting organized, but part of the reason is that there is no value like it's for the better goods, it's for like all the greater goods. And it's not like that tomorrow, if you become a member, you're not helping yourself tomorrow, but you're helping the whole industry like in 5 years or so. That's the goal. And that's all we cannot explain it. It's correct, or they don't understand. It's like, something in between." (George, personal communication, April 16, 2021)

Although the Dutch game industry community is getting stronger with the efforts of many people, the problem is still noticeable. The only way to expand the

organization's influence is to have more people willing to join it, which requires everyone to have a similar outlook for the future. Yiannis (personal communication, April 15, 2021) stated that the Dutch game industry community right now needs "a good concept", which not only shows that organizers need to give the organization a mission that everyone can quickly understand and agree on, but also requires that all game industry players need to have a longer-term vision in order to be interested in this mission, or in other word, the concept.

Combined with the previously mentioned theories, industry bodies or other game-related organizations may largely accelerate the construction of middleground (Darchen, 2015; Grandadam et al. 2013; Lange & Schüßler, 2018). This study supported this theory, as the Dutch gaming industry community is growing along with organizations.

8.4 Entrepreneurship

As mentioned earlier, the small size of companies is one of the characteristics of the Dutch gaming industry (Dutch Game Garden, 2020). This shows that the Dutch game industry is not only rapidly growing but also a dynamic industry. While on the other hand, it also shows that maybe some reasons prevent small and micro game studios from scaling up. Before the interview began, it was suggested by the previous research that the reason why many Dutch game companies did not choose to expand is due to historical reasons, as the roots of the Demoscene led the Dutch game industry in the category of subculture for a long time (Bogost, 2008; Jakob and van Heur, 2015; Polgár, 2005). However, the analysis showed that entrepreneurship is the main reason that prevents Dutch game companies from expanding. After that, the reflection on the entrepreneurship of Dutch game companies led to other questions about investment, government subsidies, and sustainability. The following paragraphs will explain these findings in detail.

Too many small studios will inevitably bring difficulties to communication or reduce communication efficiency within the industry. Then, understanding the operating situation of the small game studios in the Netherlands and their views on growing their business becomes vital. Dutch Game Garden (2019) has surveyed on

this topic. 87% of all startup companies are interested in developing their company, 74% of all experienced companies are interested in growing their business. In terms of interest in obtaining funds, startup companies are most interested in developing by their means (80%) but are also interested in leveraging venture capital (40%) as an investment opportunity. Experienced companies are primarily interested in growing through their means (87%). They are also interested in financing through venture capital (38%), publishers (27%), and subsidies (36%). These data provide very valuable information about the entrepreneurial spirit of Dutch entrepreneurs and their attitude towards funding. Nikolaos founded Nimo studio while he was still in college. When asked about the reason for starting the studio, he replied: "I had very little vision back then. My vision was mostly I want to have fun. That's my basic idea was, if you start a game company, the only cost you have is your own cost of living." In addition, he added that he started his business without much financial pressure.

"I was still living with my mom at the time, and I figured, well, I'm allowed to keep living with her for a couple of years. So basically, if I start a game company, that means that I won't be able to move out of my mom's house because I don't have any money. But if it fails, then I won't have any debt or anything." (Nikolaos, personal communication, April 28, 2021)

The Netherlands, as a relatively wealthy developed country, gives entrepreneurs more opportunities to try new things because the well-developed social security system allows entrepreneurs to potentially willing to take more risks. It can be considered the protection of the entrepreneurial spirit, giving entrepreneurs more creative freedom to manage their businesses and make business decisions at their own pace. Dimitris made a similar statement about the purpose of his entrepreneurship: "But I didn't have a vision. My vision was like, build a really cool game studio, studio with about 30 people, where we create a space, a company, and environments were created people could survive." (Dimitris, personal communication, May 12, 2021) It is clear from the text above that commercial success is not the first

consideration that Dutch game entrepreneurs make, but getting a comfortable environment to work or a passion for game making is what drives them to start the business. When it comes to the question regarding investment, the respondents of the interviewees harmonize the findings of Dutch Game Garden's report (2019), that is, people have a relatively conservative attitude towards external funding. Most entrepreneurs prefer to remain "independent" and want less "pressure" and see "no need" to seek external investment, preferring to grow on their own. There is no right or wrong in entrepreneurship, and obviously, no one can comment on how other people run their studios and what kind of vision they have. But the real question is, what kind of entrepreneurship can make more game studios sustainable and ultimately positively impact the Dutch game industry community? Konstantinos founded Meeting Planner, Meeting Planner is a matchmaking platform service provider from the Netherlands that allows event attendees to plan and schedule meetings in advance, optimize the time spent on the event, and increase the success rate of getting the meeting. A company that focuses on matchmaking between game investors, publishers, and developers, and Konstantinos is also an investor in MidgameFund. His extensive experience in the investment and game industry made him believe that currently, Dutch game studios should look more for more equity funding:

"I think they should have a longer view in the future of how to sustain their company. But simultaneously, they are not looking for equity investments. They're more looking to project investment... So if you're looking for project funding... a publisher that gives you money for developing that that project is purely for development, so whenever the development is done, then the game is given to the publisher. And then everybody's like hoping for the best that there is more money coming in because of the revenue of the sales of the actual game. When that's not the case, then you have a problem. Whereas with equity investors, those investors are not investing in your company because you're going to make one great game. They're investing in your company because you

have a vision on what you would like to do, one game, two games, three games, with the entire community that you build around your game. And I think that's a next level, next step of maturity." (Konstantinos, personal communication, May 17, 2021)

Investing in a project is relatively easy to compare to investing in a company, but it can also put the company in a financial situation due to a lack of sustainability. In contrast, equity funding allows entrepreneurs to have a longer-term plan for the company's development, but it also requires investors to see that there is great potential in the company. However, how many people are willing to give equity funding to startups is another question, especially when investing in games is a high-risk activity.

Although the results of the study indicated different reasons account for the small scale of the Dutch game industry that differed from the previously mentioned theories, but it is very good to see that new perspectives can be summarized to examine the development of the industry and contribute to the enrichment of the community theory of the Dutch game industry.

8.5 Dutch game companies in the international market

As Ulf (2012) states in his paper on the development of the Swedish game industry, internationalization is important for the development of the game industry, but it also takes the price. Moreover, as a small country, connecting too closely to the international industry often entails sacrificing the discourse. So how do Dutch game industry workers think about internationalization? What benefits can internationalization attempts bring to the building of the industry community? The following paragraphs will elaborate on this question.

The international outlook is something that no one should be missing in the game industry in any region. The Dutch game industry is also constantly trying to communicate with industry bodies in other countries to increase international communication. For example, Dutch Game Space has close cooperation with game industry organizations in Denmark, Sweden, Germany, and the UK (Jonas, personal

communication, March 26, 2021). In fact, in the opinion of Dutch game industry workers, Dutch games are very competitive on the international stage. In terms of talent, the Netherlands has put a lot of effort into the training of game talents, and in terms of creativity, the Netherlands has never been short of creative ideas, said Konstantinos:

"I think what we're doing very right is to come up with new concepts. I think our creativeness, like Dutch design, it can be designed in visuals. It can be designed in level design, gameplay mechanics. That is something we do well."

(Konstantinos, personal communication, May 17, 2021)

On a national level, the Netherlands is a safe and wealthy country, which is also essential for attracting external talent. Dimitris commented on this issue as follows:

"Maybe for some people could be a step back as well (Moving to the Netherlands to work). But I think for the people that value the quality of life and don't mind that the cities are a little bit smaller, this is great option, definitely."

(Dimitris, personal communication, May 12, 2021)

But for applied game companies, the attitude towards internationalization is a little different from that of entertainment game companies. For example, George (personal communication, April 16, 2021) indicated that the proportion of clients from the Netherlands is estimated at "90%" of all Raccoon studio's clients. On the other hand, Panagiotis, who founded Proactive, stated that he doesn't have many plans to go international, he is currently more "focused in the Netherlands" because "the Dutch market is already big enough" (Panagiotis, personal communication, April 16, 2021); Yiannis (personal communication, April 15, 2021) put it frankly that the internationalization of applied games "is hard" and that it is more of a "culture thing."

G4, a consortium consisting of four representative Dutch applied game companies (Ranj, IJsfontein, Little Chicken Game Company, and Grendel Games),

was an attempt to internationalize and expand the influence of applied games of the Netherlands in the world. Yiannis had the following to say about the G4 defeat: "I said that we are the biggest students (among) serious game companies, but it's too small, only four is not enough." Besides the small size of the consortium, which did not give enough influence to the applied game world to go internationally, the most prominent issue was the cultural problem mentioned before. Applied games faced a lot of challenges on the road to internationalization, mainly due to the different attitudes towards "playfulness" in different countries. The culture and history of the Netherlands have prepared this country more to embrace the playful mindset, which is the root of applied games. So, the success of Dutch applied games is hard to be replicated in other countries or regions.

However, there is no doubt that the international market is vast and full of potential for both applied games and entertainment games. The interviewees confirmed the importance of internationalization for the development of the Dutch game industry. As mentioned in the theoretical framework chapter, events, especially holding international events, are essential for establishing the global pipe (Bathelt et al., 2004). But in fact, the situation of the Dutch game industry is more complicated. Because applied game companies make up an important part of the Dutch game industry, their international demand may not be as high as expected. As the fail of G4, four companies joining was not enough. Still, the deeper reason was that many applied game companies did not have a real need to internationalize and thus did not motivate to join the organization or other industry bodies. In the next chapter, we will review the interviewees' opinions on game-related events. This topic also relates somewhat to internationalization but will focus more on the role of communities in strengthening networking and pipe building (Bathelt et al., 2004).

8.6 About event

As mentioned in the previous paragraphs, connecting with non-local industries is essential to a company's growth. the global pipe means a horizontal bridge between different regions, but establishing such a communication bridge requires a lot of effort, investment, and mutual trust. (Gertler, 2001; Harrison, 1992; Loh & Xiao'en,

2019; Murdoch, 1995). Bathelt and Malmberg (2007) believe that international trading fairs are the best manifestation of the global pipelines, or in other words, the events. Event is an exciting topic for most interviewees. In this study, the interviewees were asked about game-related events in three main aspects, 1. The purpose and feeling of participating in the game event. 2. Difficulties and experiences of organizing events as an organizer 3. the opinion on the current game events and holding larger events in the Netherlands. The purpose of attending to the events is pretty apparent, increasing the company's exposure or project, establishing contacts with companies in other branches of the industry, or networking. Jonas, the current director of Dutch Gaming Space, mentioned a noteworthy issue: "Holland has very few publishers. If you went to publishers, you'd have to go outside of the country to meet them" (personal communication, March 26, 2021). Coincidentally, this is exactly what the Meeting Planner platform is trying to. Meeting Planner has worked well with many game events and shows. Said Konstantinos:

"What we do is we promote their events to the network that we have been building up in the past 12 years well. Moreover, we are also inviting the buyer side of the industry. So publishers and investors to participate in their events."

(Konstantinos, personal communication, May 17, 2021)

According to these interviewees, it is clear that attending game events is a good way for game studios to expand their network and increase their visibility, but this does not mean that events are the only way to achieve these goals. Small gatherings or informal meetups can also reach the results. By looking at the sheer number, the gathering or meetups in the Dutch game industry may not be as many as Sweden, Germany, and other countries. However, Konstantinos stated a critical and often overlooked fact that the Dutch game industry is small in size. Therefore having too many gatherings could be redundant:

"And secondly, our industry is also not that big. So for example, if you would do a Berlin get-together or Oslo get-together for the Nordic. There are more game developers there. If you organize a get-together, you invite a thousand people, whereas here you invite a hundred people. If 10 % show up, they have the thousand you have under people that's a big gathering out of 100. You have ten people together or maybe five... It's not so easy to just do a monthly get together and know already that a lot of people are going to turn up, actually hard work to make it a gathering with not continuously the same people showing up that shows from variety." (Konstantinos, personal communication, May 17, 2021)

In most cases, large events automatically equate to more media attention, which equates to more benefits for developing the game industry in the host country. When asked, "Does the Netherlands need a major gaming event of the magnitude of Gamescom or Tokyo Game Show?" the respondents expressed different views on this question. Interviewees who believe that the Netherlands needs large events believe that large events are important means to increase international influence. The Netherlands is in dire need of such a platform to "show the world what we have" (Yiannis, personal communication, April 15, 2021). But the more pragmatic thinking is that the current size of the Dutch gaming industry is not large enough to support hosting an event of this size. From the above views, it can be summarized that 1. Not everyone needs it. As mentioned before, the volume of the whole Dutch game industry cannot hold large exhibitions, and the primary purpose of the shows or events is to enter the international market, get investment, and meet publishers. At the same time, most studios have not developed to a particular scale, and these platforms are not necessary for them. 2. There is one right next door. It is undeniable that many game companies in the Netherlands are looking for international connections right now. The demand can be fulfilled by other events for these entrepreneurs, either by choosing to go to other countries for the show or attending small but specialized local events. In contrast to the previous theory, this research confirmed the role of events in getting connected (Gertler, 2001; Harrison, 1992; Loh

& Xiao'en, 2019; Murdoch, 1995). In addition, the analysis found some often overlooked problems encountered during the development of the Dutch game industry community. Hopefully, these new perspectives will contribute to future community building.

8.7 Clustering of the industry

The phenomenon of industry clusters, as mentioned earlier, is not very evident in the Dutch game industry. A brief recap of the theory on industry clustering: It describes the phenomenon of similar industries are clustered geographically, and in the case of the Netherlands, it seems that the term networked community is more compatible with reality (Darchen, 2015; Potter, 2000). In this research, Respondents provided their views on the clustering of the game companies, a lot of insightful ideas have been collected. First, a general understanding of the importance of geographic clustering is observed. People can recognize what can such an attempt brings to the industry. JPJonas (personal communication, March 26, 2021) mentioned that clustering has a significant effect in reducing communication costs and can often create "informal contacts" : "We would have had more informal contact. Share the cup of coffee. I think digitally, that's one of the biggest challenges is the informal meetings. Sometimes leads to surprising new things that you don't plan." This finding is in line with the statement made by Bathelt et al. (2004) that community enhances the exchange of tacit knowledge. Secondly, the interviews showed that respondents did not think that the spatial distance needs to be very close to create such closeness. The companies do not have to be in the same city, as long as they are in the same region.

"And it definitely doesn't need to be the same city. Like if you're in Rotterdam, then you can work in Amsterdam. That's fine, it is in the same region, but if you're in Rotterdam, you cannot work in Groningen. You gonna move there. Once you get a little bit older, if you have kids than moving isn't so easy all right."

(Nikolaos, personal communication, April 28, 2021)

Nikolaos also mentioned that the purpose of clustering is to enhance the exchange of knowledge and talent. "If you have a lot of companies, then there's also a lot of skilled workers who can move from company to company. Many people can learn things and start a new company and take the knowledge that they learn things like that. You get a real ecosystem" A truly healthy industry ecosystem should have more companies of similar size that allow talent and knowledge to have more mobility. Clustering does have several benefits that make communication easier. However, few respondents still expressed resistance to close spatial clustering, "Getting too close" can be stressful, and it's better to have some proper distance. There was also an opinion that denies the function of clustering, saying that it is no more than just a "politicians' show."

"A big studio can act as a model (in knowledge exchange and keeping talents) and can actually be more effective than a cluster made up of small studios or startups. Because big studios can grow very well because they have excellent management, many talents, very free working environment, these are the things that industrial clusters tried to do but often failed." (Michael, personal communication, April 20, 2021)

From the opinion above, it can be seen that the respondents have a reserved attitude towards the geographical clustering of the game companies. On this question, Dimitris suggested that clustering should bring game studios and other studios from the creative industry to build a "creative industry clustering" since the cooperation between these industries is even closer. He gave the following example Palace:

"But I found, for example, with Palace, that was sometimes quite nice that we were in a cluster of creative companies. So that's not just game company but also creative industry so that you have left developers and designers and company writers next door. It's a different energy, some different insights."

(Dimitris, personal communication, May 12, 2021)

9. Conclusion

A qualitative study of 10 in-depth semi-structured was conducted. After analyzing the collected data and interpreting the themes, seven findings of Dutch game industry practitioners on the industry communities were generalized. First, the openness of the Dutch game industry is something that every interviewee agrees on. People are willing to share knowledge, help each other in business, and even show inclusiveness. This openness is comparable to the communication in the underground creative environment, as suggested by Aoyama and Izushi (2003). This study confirms that the Dutch game industry community is vibrant in the underground layer. But at the same time, openness or inclusiveness is only shown on a smaller scale. In other words, the communication between individuals and between groups is rather good. Still, if we zoom out the lens to the whole Dutch game industry perspective, it is easy to find that the industry as a whole has not yet formed a true cohesiveness.

This lack of cohesiveness may be due to the very little industry crossing, which is markedly present in the two most important sectors of the industry: entertainment and applied games, which are not understood by each other, or rather, there is not a lot of willingness to get to know each other, even though they are deeply connected. This is because the two sectors operate in different ways, with different target groups and different visions. And such inter-industry communication needs to be led by an influential enough industry body. The research also confirmed that the guidance of industry bodies plays a decisive role in constructing middleground, as elaborated by Lange and Schüßler (2018). The Dutch Game Association is making efforts in this matter, and they are starting to show results. Speaking of industry organizations, which is also one of the objects of this study, it is a fascinating question how the practitioners evaluate the operation of game industry organizations. The role of industry bodies in creating a more connected community as industry agents and as rules maker cannot be more emphasized (Darchen, 2015; Grandadam et al. 2013;

Lange & Schüßler, 2018), and that leads to the third finding of the research:

Operation of the game-related organizations.

There are many institutions and organizations in the Netherlands that are pushing the development of the Dutch game industry in their way, but they also face many practical difficulties, such as funding, lack of staff, and expanding their influence further. In the Dutch Game Association case, the main difficulty is that there are not enough members to join the board yet, with too few members, so it is hard to develop a long-term plan that will benefit the Dutch gaming industry as a whole. One interviewee said that the Dutch game industry needs a "concept" so that game workers know what they can get from joining this organization in the future. Many interviewees perceive entrepreneurship as something much needed for the industry's long-term development. The Dutch game industry is currently full of small businesses and indie developers (Dutch Game Garden, 2020). Such fragmented industry is not favorable for community building and forming cohesiveness. The interest of entrepreneurs in investing and expanding business validates this finding, as many of them do not have a long-term plan at the beginning of their entrepreneurship but are motivated by pure interest and love for game making. This finding on entrepreneurship represents a new perspective on examining the Dutch game industry community. Therefore, no previous relevant research literature was available for comparison, but we still think this finding is important, especially when it directly impacts community building. Besides, the research also found that game company in different sectors or development stages have different attitudes towards internationalization. Connecting with international markets and facing a larger and more potential customer base is essential for the industry to grow. This is what many scholars think about the internationalization of game companies (Bathelt et al., 2004), and the results of this research did not disagree with this theory, but the results show that the Dutch game industry is in a particular situation and that all industry players do not have the same internationalization agenda. The market for entertainment games is international oriented, but applied game companies, because of the business model, culture, and historical reasons, have most of their clients in the

Netherlands, so the demand for internationalization is not as high as entertainment companies and is generally more complex. It also levels up the difficulty of community building because of the disparity between demand and vision. Organizing events is a good way to strengthen communication within the industry (Gertler, 2001; Harrison, 1992; Loh & Xiao'en, 2019; Murdoch, 1995). The study shows that the respondents are satisfied with the number and quality of the Dutch game industry events. Respondents expressed different views on the organization of internationalized large-scale events, depending on their positions and needs.

Finally, Dutch game industry practitioners expressed different views on industry clustering. This research confirms that the idea that community can enhance tacit knowledge, as described by Bathelt et al. Moreover, most respondents believe that the benefits provided by industry clusters are limited and would prefer to see more large companies play a role in uniting the industry and setting industry models.

To conclude, the Dutch game industry workers who participated in this study gave a neutral perception of the industry community. Although various shortcomings in the current industrial community were pointed, they are still open to give advice on different aspects for further development. The efforts made by different organizations in the industry to build a closer community were greatly acknowledged. Unfortunately, many of the attempts being made right now do not show the results immediately, but these very attempts give us reasons to believe that the Dutch game industry community will have a very bright future.

10. Limitation

This study has a couple of limitations. First, the limitations of the sampling method led to the absence of female industry practitioners' perspectives in this study. As mentioned earlier, the interviewee recruitment was carried out through personal networks and snowballing, as a result, no female interviewers were approached in this interview. Female game workers account for 20% of the Dutch game industry (Dutch Game Garden, 2019), thus, the neglect of the female perspective is one of the biggest drawbacks of this study. Secondly, the Dutch gaming industry is divided into four sectors: Entertainment games, applied or serious games, education, and game research. However, only personnel from entertainment and applied games companies were interviewed for this study, which means no game educators or researchers were involved in this research. It is very possible that they have a different view of the game community, or that they have other contributions to the building of the game community, and none of this should be ignored because they are included in the Dutch game industry as well. Without their participation, it made the research more about the Dutch game developer community rather than the Dutch game industry community in general.

11. Further research

Although this study has made some contributions to the understanding of the Dutch game industry community, there are still many research topics that can be explored in more depth in the future. After the epidemic that swept the world in 2020, many companies have adopted new ways of operating. Remote working and work from home are becoming the new options. This changes the way game studio functions and brings new challenges and opportunities to the construction of the communities. Do more and more online events and gatherings equal stronger bonds? Can online clusters replace offline ones? Should we continue doing the online event even after the covid because it is more convenient and less costly? These new questions have great research value for future researchers who are interested in this field. In addition, there are many new attempts in the Dutch game industry to help to build the community, such as the Midgame Fund, INDIGO showcase, as mentioned before. In the future, more in-depth research can be done on one of the events or initiative, which will greatly promote the development of the industry and give some guidance to the organizers. One topic that has been repeatedly mentioned in this study is government subsidies for the game industry. Respondents were generally agreed that governmental support for the Dutch gaming industry could be better. The fact now is the industry bodies, and some of the studios are struggling with financial issues in the Netherlands. Governmental support may be the answer to this problem. But the more important question for researchers is, how should the subsidies be given? Which organizations should be the most eligible for receiving? After all, the game industry is a high-investment risk industry and should be treated with caution in terms of funding. If relevant studies are conducted, it might prompt the government to introduce relevant policies more quickly.

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Appendix A: List of interviewees

Number	Name of the company	Position	Name
1	Dutch Gaming Space	Director	Jonas
2	N. A	Freelancer	Kyros
3	Raccoon	CEO	George
4	Icecream	Operational manager	Yiannis
5	Proactive	Founder	Panagiotis
6	N. A	Freelancer	Nikolaos
7	Dutch Game Library	Chairman	Dimitris
8	N. A	Freelancer	Michael
9	Meeting Planner	Co-founder	Konstantinos
10	Palace	CEO	Christos

Appendix B: Coding Tree

Openness	Willing to share	Help each other to get clients
		Competitors are open to each other
		Small companies help each other
	Overall solidarity	MidgameFund is the prove
		Just give them a call
		Many informal small scaled meetups
	People are easy to work with	People are hard to get to know in the first place but once you know them, it's good communication
		Rather to work with a couple of good friends
		Game Bakery, come together to work on the project
Little sector crossing	Do not understand each other	Game industry is a bubbled industry
		Not many crosses between entertainment and applied, the two biggest sections in the NL
		See the game world as a separate community.
		People do not like to step out of their circles People do not like to step out of their circles
		Serious game and entertainment game are in different world
	Difference between different industry sectors	Different perspectives in different sectors
		Developing entertainment game has more uncertainty

		The monetization model is relatively homogeneous (premium, free-to-play,etc)
		Service company like serious game do not need capital, only one client at a time
		Service oriented company, not thinking too much about expanding
		Mindset differences make them turn their backs to each other
	Applied game seduces people to play through game mechanisms	Serious game use entertainment game protocol to change people's behavior
		Serious games may be increasingly valued
Organization	Not very influential	G4's failure was because it was too small
		Hard to maintain organization
		Build the ecosystem need all different players
		More people should see the benefit of getting together
	Lack of international orientation of the DGA	The organization is lack of fund
		The attempts the organization is doing is basic
	What the bodies are doing	Try to increase the lobbying power
		DGG's clustering attempt
		Help with the startups (DGG)
		Dutch game industry slack group
Internationalization	Opportunity	Connect with other European game associations

		International collaboration of DGG
		Nederland is een rijk en veilig land, de ondernemeren zijn bereid de risico's te nemen
		Exporting Soft power
		Large talent pool
		International competitiveness is come up with new ideas
	Challenges	Serious games are little known
		Poland started as a outsourcing country for labor and projects, NL cannot be like that, labor here is not cheap
	Culture difference is hard for serious game	Serious game clients from NL, 90%
		Serious game companies focus in the NL
		Serious game the Dutch market is big enough
Entrepreneurship	Have little vision about the future in long term	The vision was to have fun
		Very little ondernemer can take care of their project and have a longer vision at the same time
		Basic need for a company to survive is the vision
		Ambition is small but pragmatic
	Dutch people love playfulness	Holland is historically extremely well prepared to embrace serious games
		Dutch people do not like hierarchy
		The power distance is smaller in Holland

	Visions	Try to create a environment that makes the employees happy
		Build a cool company
		No necessarily to get investment for a lot of companies
		Contradiction between artisan mindset and commercial consideration
		In a lot of cases, Dutch companies choose fun and creativity over business
	Indie developers want to work in a small team with confident people, and doing project that is fun (the reason for not growing)	It is hard to get everyone to the same direction
		It is fun to together in the beginning
		Mobile industry allows small companies to survive
		Indie developers soon find out that each one has his own direction
		No single direction for Game Bakery
Events	More big shows?	we need a Gamescom in Amsterdam to show the world what we have now
		There are some occasionally events and meetups, but it is not enough
		To show the world what we have
		Not everyone is aiming to expand internationally
		Matchmaking efficiency is harder than organizing the event

		If there is a need, just go to GamesCom
		We do not need big event because there is no need for it, the reality is most of people do not need big event to get attention, to get funding, because they do not want it
	Purpose of attending	The need of networking
		Visibility is the key to the survival of the entertainment game studios
		Physical events are more important
		Meeting Planner is more than a platform, but network
		We need conference to connect with the international market
	Events organizing	Small companies in the early time, informal gatherings
		Success of the lunching meeting shows that the people are keen to communicate.
		Based on the number and scale that the Dutch game industry has, we are not doing less events and gathering than other countries
		Meeting with different purposes
Clustering		helps to build ecosystem
		increase the talents mobility
		reduces communication cost
		They are political show-offs

Appendix C: Question list

[Thank you so much for being participate in this research. (more greateing)]

[I'm pretty sure that you have read the document that I send you yesterday, about the terms and rights and some other things, so, do you agree with that's written in there?

If you do not have any other questions about that consent form, I think we can start!]

[If you don't mind, I'm going to record this conversation for the transcription later (recording)]

1. Background information about the interviewee

- Name, Nationality(place to live), education,
- How did you get into gaming as a hobby and as a profession?
- Are you a gamer? What was the game that influenced you the most?

2. About events

- **【O】** What do you think is the biggest difficulty you encountered when organizing the event?
Probe: how did you solve the problem?
- **【O】** How do you usually promote your events, or the organization in general?
Probe: Will you try to collaborate with other organizations to increase the exposure

- What is the purpose of you going to those events?
Probe: What is the best or worst experience?
- do you think in the Netherlands we have enough gatherings or meetups?

Probe: What do you think about the quality of these meetups and gatherings?

- What do you think about big events? Do we need it here in the Netherlands?

Probe: Why do you think we need/do not need them?

- 【O】 experience when organizing the events?

3. Entrepreneurship

- 【E】 I am very curious about what kind of mentality you had as a young entrepreneur at that time, did you like have a very big vision that's the company is going to be like, or you just take one step at a time and to see what happens?
- Many people say that the Dutch game developers are introverted, so they do not like to socialize that much, do you think that is the case?
- What do you think about the playfulness that many entrepreneurs have in their minds?
- what's their attitudes towards investments?
- What was the biggest difficulty you have faced in the early stage of your entrepreneurship?
- Do you think it is hard to get funded as a game developer in the Netherlands? I know there are a lot of things or factors in the process that could be determining. But if we look at the big picture we look at the big environment do you see there is a difference between the Netherlands and other countries when it comes to the difficulties of getting funded?

4. Internationalization

- Do you think Dutch game companies are competitive in the international market? If so, what are the advantages we have here?
- What kind of culture that the dutch produced games are trying to show to the world?

5. Intercommunication of the industry

- How's your relationship with the other players in the industry?
- what do you think about them?
- How much do you know about them?
- I think it is quite common for senior talent to move between firms within a industry, there is much less movement in a smaller hub. especially when everyone literally knows everyone, sometimes it could be awkward, what do you think about it?
- what do you think is the most important quality that a good industry community should have?
- besides ___, is your company in any other game association or organization?

6. Closing questions

- What kind of talents are the most needed here right now?
- Do you think the clustering can help the development of the industry?
- What do you think about the support from the government?
- What would you most likely to see in the Dutch game industry community in the next 5 years?

(The questions are highly customized for the interviewee, specifically on how to arrange the questions, what kind of probes are raised. The specialties they have are considered. However, even though there are differences in the way the questions are asked, they are all generated in the same theoretical framework)

Appendix D: Consent form

CONSENT REQUEST FOR PARTICIPATING IN RESEARCH

FOR QUESTIONS ABOUT THE STUDY, CONTACT:

Wang Junyun,
Admiraliteitskade 40, 3063 ED Rotterdam
0629466341

DESCRIPTION

You are invited to participate in a research about the video game industry in the Netherlands. The purpose of the study is to understand the creative communities in the industry and how do people perceive them.

Your acceptance to participate in this study means that you accept to be interviewed. In general terms,

- the questions of the interview will be related to your experience and feelings of organizing or participating the events and activities that arranged by the creative video game communities.

Unless you prefer that no recordings are made, I will use a recorder for the interview for subsequent transcription.

You are always free not to answer any particular question, and/or stop participating at any point.

RISKS AND BENEFITS [alternatives A and B are presented below, but there may be further variations]

A. As far as I can tell, there are no risks associated with participating in this research. Yet, you are free to decide whether I should use your name or other identifying information [such as XXX] not in the study. If you prefer, I will make sure that you cannot be identified, by [measures that will be taken: pseudonym, general identification only mentioning age and gender, etc.].

B. I am aware that the possibility of identifying the people who participate in this study may involve risks for ... [Explain potential risks for the participant's reputation, help, social relations, etc.]. For that reason—unless you prefer to be identified fully (first name, last name, occupation, etc.)—I will not keep any information that may lead to the identification of those involved in the study. I will only use pseudonyms to identify participants.

I will use the material from the interviews exclusively for academic work, such as further research, academic meetings and publications.

TIME INVOLVEMENT

Your participation in this study will take around 45 mins. You may interrupt your participation at any time.

PAYMENTS

There will be no monetary compensation for your participation.

PARTICIPANTS' RIGHTS

If you have decided to accept to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. You have the right to refuse to answer particular questions. If you prefer, your identity will be made known in all written data resulting from the study. Otherwise, your individual privacy will be maintained in all published and written data resulting from the study.

CONTACTS AND QUESTIONS

If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact –anonymously, if you wish— Leandro Borges Lima, Erasmus School of History, Culture and Communication, borgeslima@eshcc.eur.nl

SIGNING THE CONSENT FORM

If you sign this consent form, your signature will be the only documentation of your identity. Thus, you DO NOT NEED to sign this form. In order to minimize risks and protect your identity, you may prefer to consent orally. Your oral consent is sufficient.

I give consent to be audiotaped during this study:

Name	Signature	Date
------	-----------	------

I prefer my identity to be revealed in all written data resulting from this study

Name	Signature	Date
------	-----------	------

This copy of the consent form is for you to keep.

