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Starting a Game Studio

KAMK • University
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Abstract

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The purpose of this thesis was to create a theoretical foundation for starting a game studio by researching the game industry and business planning, and to follow the process of starting a game studio in practice all the way from creating a business plan to starting the business.

At first, the global games market was overviewed along with game industry trends of today and tomorrow. Game market generates the biggest revenue in the entertainment industry, and all of its segments are growing. Important trends of the game industry include the rise of indie, games as a service, mobile gaming, customers' role as co-creators of value, and immersive technologies.

Starting a business starts with planning. Business model is a conceptual tool for planning and analyzing businesses. It helps to consider all factors that affect success. Business plan is an all-encompassing plan for a business. An entrepreneur planning their business can ask themselves the following questions: What are we offering? Who are we seeking to serve? How will we interact with our customers? How will we survive against competition? How will we make profit?

Value proposition is the bundle of products and services that the company offers to its the customers. There is more than one way to create value for a game product. New product success depends on providing unique value to customers. Customers are a specific group of people within a specific market that the company seeks to serve. In the game industry, customers can be segmented in many ways. Understanding the needs and wants of the chosen customer segment is vital. Channels are customer touch points for marketing, sales and distribution. Active and successful communication plays an important role in game business. The game industry is extremely competitive. A strategy is a plan that the company uses to create and achieve competitive advantage. Companies can experiment with different strategies and their combinations to maximize their business opportunities. The finances of a company should be planned in a way that the resources available can be directed to the critical factors that make success possible. Financial management of a company includes organizing accounting and taking care of funding. The sources of funding in the game industry include cash-flow financing, entrepreneur's own wealth, public and private funding, early access and crowdfunding. Selecting the most suitable monetization model and optimal pricing are essential for success.

Finally, the thesis followed the process of starting a game studio step by step. It included getting to know the industry and the business world and orienting for entrepreneurship, brainstorming for ideas and creating a business plan, registering the company and opening accounts for it. The conclusion of this thesis was starting a game studio, and the creation of a manual that others who wish to start a game studio can benefit from as well.

Tiivistelmä

Tekijä: Samuel Väänänen

Työn nimi: Pelistudion perustaminen

Tutkintonimike: Tradenomi, tietojenkäsittely

Asiasanat: yrittäjyys, peliala, pelistudio, liiketoimintasuunnitelma, liiketoimintamalli

Työn tarkoitus oli luoda teoreettinen pohja pelistudion perustamiselle tutkimalla pelialaa ja liiketoiminnan suunnittelua, sekä seurata pelistudion perustamisprosessi käytännössä aina liiketoimintasuunnitelman laatimisesta liiketoiminnan aloittamiseen.

Aluksi työssä tehtiin katsaus maailmanlaajuisiin pelimarkkinoihin sekä pelialan tämän päivän ja tulevaisuuden trendeihin. Pelimarkkinat ovat tällä hetkellä kaikista viihdealoista liikevoitoiltaan suurimmat, ja niiden kaikki segmentit ovat kasvussa. Tärkeisiin trendeihin kuuluu indien nousu, pelit palveluna, mobiilipelit, asiakkaiden rooli pelituotteiden arvon yhteiskehittäjinä, sekä immersiiviset teknologiat.

Yrityksen perustaminen alkaa suunnittelusta. Liiketoimintamalli on konseptuaalinen työkalu yritysten suunnitteluun ja analysointiin. Se auttaa ottamaan huomioon kaikki menestykseen vaikuttavat tekijät. Liiketoimintasuunnitelma on kaikenkattava suunnitelma liiketoiminnalle. Liiketoimintaa suunnitteleva yrittäjä voi kysyä itseltään seuraavat kysymykset: Mitä yritys tarjoaa? Keitä se pyrkii palvelemaan? Miten se vuorovaikuttaa asiakkaidensa kanssa? Miten se voittaa kilpailijansa? Miten se tuottaa voittoa?

Arvolupaus määrittelee yrityksen asiakkailleen tarjoamat tuotteet tai palvelut. Pelituotteelle voidaan tuottaa arvoa monella tavalla. Uuden tuotteen menestys perustuu ainutlaatuisen arvon tarjoamiseen asiakkaille. Asiakkaat ovat ryhmä ihmisiä tietyillä markkinoilla, joita yritys pyrkii palvelemaan. Pelialalla asiakkaita voidaan segmentoida monin tavoin. Asiakkaiden tarpeiden ja halujen ymmärtäminen on liiketoiminnalle elintärkeää. Kanavat ovat niitä kosketuspintoja, joiden kautta yritys markkinoi, myy ja jakaa tuotteitaan ja palveluitaan asiakkailleen. Aktiivinen ja menestyksekäs kommunikointi ovat peliliiketoiminnassa tärkeässä roolissa. Pelialalla vallitsee äärimmäisen kova kilpailu. Strategia on suunnitelma, jonka avulla yritys luo ja saavuttaa kilpailuetua. Yritykset voivat kokeilla erilaisia strategioita ja niiden yhdistelmiä maksimoidakseen liiketoimintamahdollisuutensa. Yrityksen raha-asiat tulee suunnitella niin, että käytettävissä olevat resurssit voidaan suunnata menestyksen mahdollistaviin kriittisiin tekijöihin. Yrityksen taloushallintoon kuuluu kirjanpidon järjestäminen ja rahoituksesta huolehtiminen. Pelialalla rahoituksen lähteitä ovat tulorahoitus, yrittäjän omat varat, julkinen ja yksityinen rahoitus, ennakkomyynti ja joukkorahoitus. Mahdollisimman sopivan monetisaatiomallin valinta ja optimaalinen hinnoittelu ovat olennaisia tekijöitä menestyksen kannalta.

Lopuksi työ kävi läpi prosessin, jossa perustettiin pelistudio askel askeleelta. Siihen kuului pelialaan ja liiketoimintaan perehtyminen sekä orientoituminen yrittäjyyteen, liikeidean ideointi ja liiketoimintasuunnitelman laatiminen, sekä yrityksen rekisteröinti ja tilin avaaminen. Opinnäytteen lopputuloksena saavutettiin yrityksen perustaminen, ja samalla syntyi käsikirjamainen kokonaisuus, josta toivottavasti muutkin pelistudion perustamista suunnittelevat voivat hyötyä.

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Glossary

5G: a wireless networking architecture designed to enable fast data communication between wireless local area networks (Techopedia 2016).

AAA: a game developed by a large studio and funded by a massive budget (Määttä & Nuottila 2016).

Augmented reality: a technology that enhances users' real-life experience with computer-generated sensory input (NewZoo 2019a).

Business incubator: a facility that helps new companies to develop by providing services such as affordable office space, management training, marketing support and access to financing (BusinessDictionary).

Cloud gaming: the ability to play a game on any device without having a local copy of the game or owning the physical hardware required to process it (NewZoo 2019a).

Cross-platform: a feature of a product or a system that means it can work across multiple platforms or operating environments (Techopedia 2015).

Crowdfunding: a form of funding where the general public makes donations to provide startup capital and financial backing for new ventures (Steinberg 2012).

Disruptive innovation: a technology that has the potential to alter the market (Ab Rahman, Chin & Hamid 2017).

Early access: a form of funding where players fund a game by purchasing it in advance to play it during pre-release development cycles (Määttä & Nuottila 2016).

Esports: competitive gaming at a professional level and in an organized format (NewZoo 2019a).

Extended reality: immersive technologies that are able to merge the physical world with virtual worlds (Marr 2019).

Game engine: a set of programming modules engineered to generate and develop video games (Techopedia 2012).

Gamer: a person who plays digital games (NewZoo 2019a).

GDP: Gross Domestic Product, the total value of all the goods and services produced in a specific time period (Chappelow 2019).

Hyper-casual: an instantly playable game with clear visuals, simple mechanics and light progression systems (GlobalWebIndex 2019).

Indie: a company that is smaller than and independent of the major companies in the industry (2014 Houghton Mifflin Harcourt Publishing Company 2014).

Influencer: someone who has built a reputation for their expertise and knowledge on a specific topic, making them able to affect the opinions and purchasing decisions of others (Influencer Marketing Hub 2020).

Monetization: the process of turning a product or service into money (Ganti 2019).

Multiplatform: a feature of a software program that means it is developed for multiple operating systems (Christensson 2006).

Platform-agnosticism: products running equally well across multiple platforms (Techopedia 2017).

Value proposition: the bundle of products, services and benefits that a company offers to its customers (Osterwalder & Pigneur 2010, 22).

Viral marketing: a technique that seeks to spread information about a product or service from person to person through social networks, creating exponential growth in the number of its recipients (Kagan 2019).

Virtual reality: a computer-generated simulation of an environment that can be interacted with in a seemingly real or physical way by a user using special electronic equipment (NewZoo 2019a).

Games as service: a business model based on providing game content or access to games and generating continuous revenue from the players (NewZoo 2019a).

1   Introduction

I started my game industry studies at Kajaani University of Applied Sciences in 2017 with one goal in mind: to start my own game studio and create games that I and others would love to play. I have always dreamed of starting my own company, and video games have been my passion since childhood. My studies at Kajaani University of Applied Sciences have prepared me well to pursue my goal. I have worked in multiple multidisciplinary game projects both here at my home university and abroad during my exchange studies, expanded my game industry network, and studied courses in game development and production, information technology, business, entrepreneurship and leadership.

This thesis seeks answers to the following questions: What is the current state of the game industry and what does its future look like? How to plan a business in the game industry? What steps are included in the process of starting a game studio? This thesis aims to become a manual for anyone who plans to start a game studio in 2020 and beyond. It is divided into three major parts. The first one looks at the current state and the future of the game industry. The second part covers business planning from the perspective of the game industry. The third part follows the steps that I take to start my own game studio.

2   Game industry in 2020 and beyond

Some say that we are living in the golden age of video games (Entertainment Software Association, 2019). Games are at the heart of the entertainment industry – they are the world's favorite form of entertainment, generating bigger revenue than all other entertainment industries (Reuters 2018). Every segment of the games market is growing, and the global games market will keep growing in 2020 and beyond (NewZoo 2019a). Around the world, games have become a major part of the social fabric, a driver of consumer technology, and a business that makes up a massive portion of the economy (Cole 2018). They have become a mainstream phenomenon, shifting towards entertainment spectacles, live events and professional athletes. Today's trends of the game industry are shaping the future of digital media. (NewZoo 2019a.)

A game industry entrepreneur must have a clear picture of the industry to maximize their business opportunities. Knowledge and understanding of trends and innovations can be a powerful competitive advantage, a survival weapon against change, and the secret for winning consumers' favor. Since game business is based on hits, investments always involve risk and require insight in each situation about the potential investment targets. Therefore, investors pay attention to entrepreneurs' market understanding. (Määttä & Nuottila 2016, 398.)

In 2019, the global games market reached $120 billion in total revenue (SuperData 2020). NewZoo estimates that the global games market will grow to $196 billion by 2022. Mobile gaming is currently the largest segment, making up 45% of the global games market. Asia-Pacific market area generates the lion's share of the total revenue. By 2022, Latin America is expected to be the fastest-growing market area in the world, driven by improving infrastructure and a growing appetite for games. Figures 1-3 give a general idea of the current global games market and its future direction. Figure 1 shows each segment's share of the global revenue. Figure 2 forecasts global game revenue per segment toward 2022. Figure 3 presents the global revenue share of each market area. (NewZoo 2019a.)
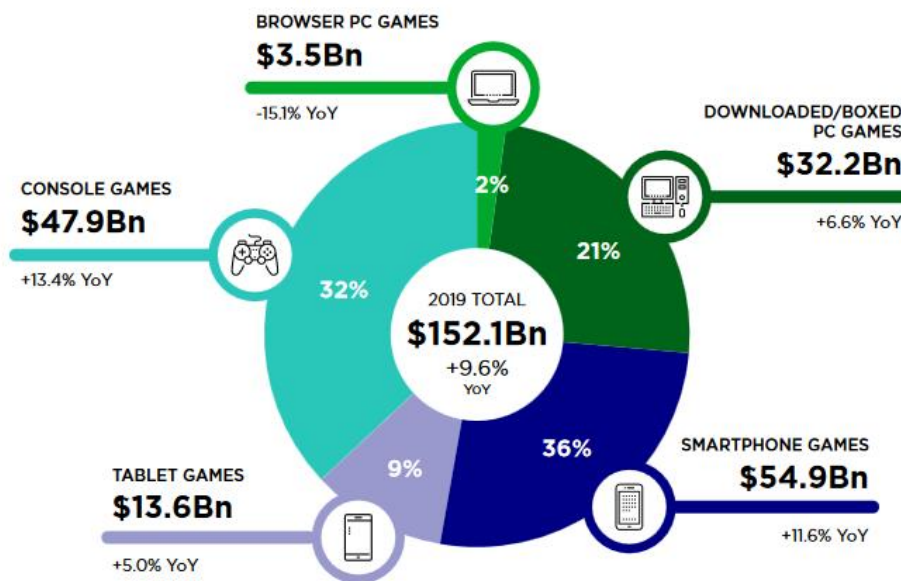
2019 GLOBAL GAMES MARKET
PER SEGMENT

BROWSER PC GAMES
$3.5Bn
-15.1% YoY

DOWNLOADED/BOXED PC GAMES
$32.2Bn
+6.6% YoY

CONSOLE GAMES
$47.9Bn
+13.4% YoY

2%

21%

2019 TOTAL
$152.1Bn
+9.6% YoY

32%

36%

SMARTPHONE GAMES
$54.9Bn
+11.6% YoY

TABLET GAMES
$13.6Bn
+5.0% YoY

9%

Figure 1. Global games market 2019 per segment (NewZoo 2019a)

SEGMENT BREAKDOWN
OF GLOBAL GAME REVENUES
TOWARD 2022

$196.0Bn
$178.2Bn
$164.6Bn
$152.1Bn
$138.7Bn

DOWNLOADED/BOXED PC
BROWSER PC
CONSOLE
TABLET
SMARTPHONE

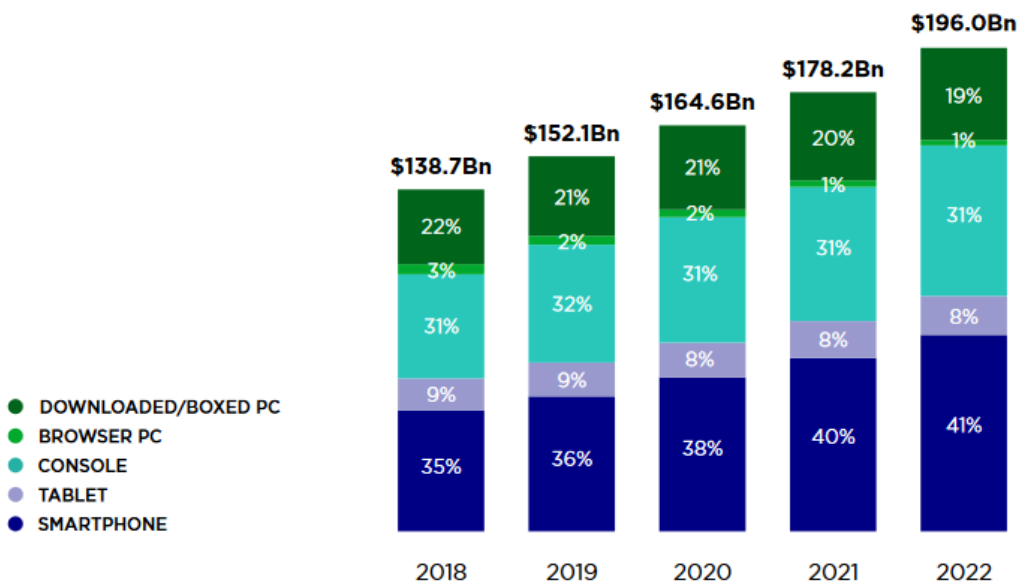|	2018	2019	2020	2021	2022
DOWNLOADED/BOXED PC	22%	21%	21%	20%	19%
BROWSER PC	3%	2%	2%	1%	1%
CONSOLE	31%	32%	31%	31%	31%
TABLET	9%	9%	8%	8%	8%
SMARTPHONE	35%	36%	38%	40%	41%

Figure 2. Global games market forecast toward 2022 per segment (NewZoo 2019a)

2019 GLOBAL GAMES MARKET
PER REGION

EUROPE, MIDDLE EAST, AND AFRICA
$34.7Bn
+11.5% YoY

LATIN AMERICA
$5.6Bn
+11.1% YoY

NORTH AMERICA
$39.6Bn
+11.7% YoY

2019 TOTAL
$152.1Bn
+9.6% YoY
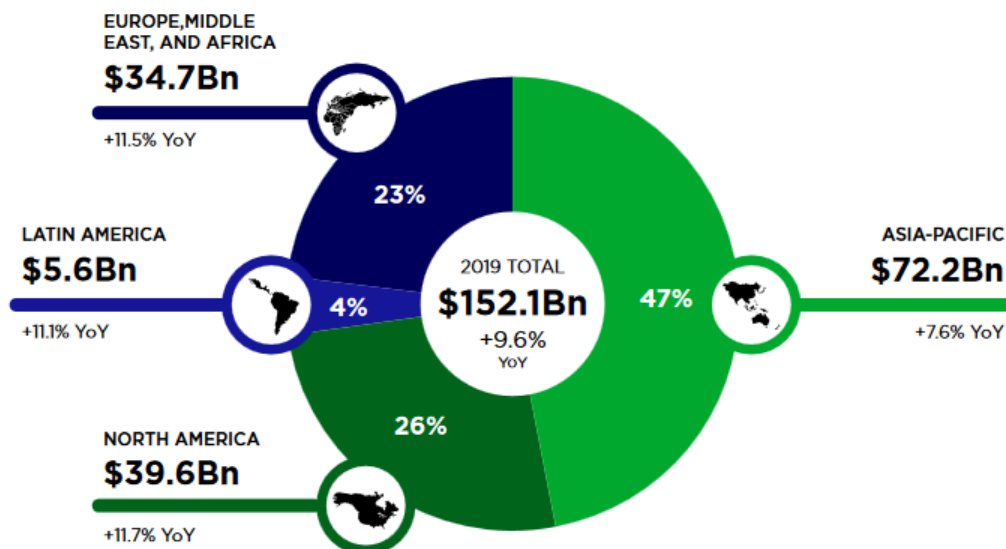
ASIA-PACIFIC
$72.2Bn
+7.6% YoY

23%
4%
47%
26%

Figure 3. Global games market 2019 per region (NewZoo 2019a)

Trends of the game industry include the rise of indie, growing number of gamers, games as service, cloud gaming, platform-agnosticism, hyper-casual mobile games, customer involvement, viral marketing, extended reality, immersive technology, holographic gaming, handheld consoles, wearable gaming gear, nostalgic remakes, advanced and self-learning artificial intelligence, blockchain-based games, legal regulation of games and game companies, accessibility, inclusivity and diversity. This section highlights some of the most significant of these trends. The rise of indie is fueled by free development tools, collaborative communities and digital distribution networks. It is now possible for anyone to create games and enter the market. There is a shift from traditional business models to cloud-based, platform-agnostic subscription services. Mobile is the central nervous system of our connected lives, and smartphones are becoming the primary interface through which we interact with the world around us. We will soon witness the true potential of these gaming devices. Gamers are co-creating value together with the developers. New technology makes it possible to create immersive experiences by generating virtual worlds indistinguishable from reality, and to enhance our experiences of the real world with virtual elements to an extent never seen before.

2.1   Rise of indie

Some of the most successful video games of all time come from humble independent beginnings. There are many indie developers out there releasing games on a weekly basis, and even though their budgets might not be on the same level with big game studios, some of them are highly creative and have the potential to launch movements (Baig 2017). Game industry has witnessed the rise of the indie games, and game business is now anyone's game. Game developers who work alone or in small teams have found new audiences and revenue sources for their work, enabled by the broader penetration of broadband into homes and by the creation of digital distribution networks on major gaming platforms. Some of the independent games, though relatively modest in their origins, have found widespread commercial and critical success. (Heineman 2015, 123.)

Stafford points out that new innovations making it easier to create games are being released all the time (Stafford 2017). There exists a wealth of options when it comes to free developer tools, from game engines to software for creating and editing assets. There are storefronts where users can share assets such as fully animated character models, level generators, artificial intelligence systems and physics-based items with visual effects. Online guides and helpful communities make it possible for anyone to learn game development.

New technologies and business models can change the market fast, threaten the established market leaders and offer newcomers a chance to challenge them (Määttä & Nuottila 2016, 139). Fast and agile adaptation to change is often more challenging for big organizations than for small ones; innovation is often thought to happen in smaller companies that seize new opportunities (Hiltunen & Latva 2013). Quinn points out that small companies that take in outsourced work can often be more objective and flexible about new ideas than big companies, and they have fewer historical barriers to solutions. They must innovate to succeed - or die. (Quinn 2000.)

2.2   Never-ending fun

Games are transforming from blockbuster launches and retail distribution into never-ending services. The game industry is following in the footsteps of other entertainment industries, shifting towards subscription models where the customer pays a regular fee to access a vast library of

content. We have witnessed an increase in the cross-platform capabilities of games, for example in the form of universal accounts and platform-agnostic multiplayer functionality. Advances in computing power, shift to digital space and gaming across devices and platforms have sparked a new wave of innovation and competition and evolved gaming into its newest stage: the switch to subscription services providing gaming as a service through cloud streaming. (Wham 2019.)

Statistically speaking, longer engagement time means bigger revenues (NewZoo 2019b). Players can engage with franchises by playing games, by watching gameplay videos, live streams and es-ports events, and by sharing their own content in their social networks. Nowadays many success-ful games produce new content constantly to keep the players interested. Once a hit has been created, the game and the players will be used to benefit as much as possible, generating cash-flow and viral marketing the product to gain new customers. (Määttä & Nuottila 2016, 18, 144.)

Cloud gaming is the holy grail that gaming companies have chased after for years (Mangalindan 2019). It is a disruptive innovation that will bring us into the platform-agnostic future of gaming. Cloud gaming allows players to play any game anywhere, anytime, on any platform or device without the player having to own the physical hardware required to process the game. It has the potential to expand the game market beyond the current audience, and faster Internet speeds make it feasible in more markets than ever. Some companies are striking when the iron is hot. (NewZoo 2019a.)

2.3   Small screens, big future

According to App Annie, mobile is the central nervous system of our connected lives. The new decade leads us to the next phase of mobile, with smartphones serving as the primary interface through which we interact with the world around us. Consumers choose the small screen; mobile is our go-to device for entertainment. By 2023, the mobile industry is set to contribute $4.8 trillion to global GDP, and by 2025, there will be 25.2 billion connected devices. (App Annie 2020.)

Free entrance to the market has created globally tens of thousands of new game companies that make hundreds of thousands of new games a year, which has made mobile games one of the most competed business areas in the world (Määttä & Nuottila 2016, 21). Mobile gaming ac-counts for a massive portion of the games market, and it will keep growing – driven by advancing technology, improving infrastructure, emerging markets, and the increasing number of

smartphone users (NewZoo 2019a). As smartphones become more advanced, allowing for greater processing powers and higher screen resolutions, we will see the true potential of these gaming devices. It is worth considering the growth prospects and mounting revenue opportunities at hand in the mobile gaming market. (GlobalWebIndex 2019, 10.)

Mobile gaming has witnessed the dawn of hyper-casual games. Hyper-casual games are free-to-play, extremely easy-to-learn and instantly playable mobile games with simple mechanics and clear visuals. They monetize through a mix of different advertisements. This generates relatively low revenue per user, but the mass appeal of the game makes up for it in scale. (GlobalWebIndex 2019, 10.)

For gamers, there exists a wealth of free-to-play games to choose from. For developers, the challenge is to provide compelling content and monetize it (GlobalWebIndex 2019, 10). They are competing against millions of apps available in the storefronts and industry giants who mass produce hyper-casual games with massive budgets. Success in this extreme sport takes luck, massive resources, or disruptive innovation.

2.4   Customer as a co-creator

In the game industry, customers can co-create value for a game product in multiple ways. They can create their own modifications for the game, enhancing existing content or adding new features. Some games have thousands of user-generated modifications that players can download for free to expand and customize their game experience. Customers can entertain each other by sharing content through live streaming, gameplay videos and viral content. They can build communities around the game to bring people together and to provide customer support to each other.

With the game industry dynamically evolving in phase with digital technology breakthroughs, producer-consumer collaborations are bound to take new forms (Gustafsson & Höglund 2016, 27). Game companies are successfully outsourcing parts of their game development processes to digital consumer networks (Arakji & Lang 2007, 2–3). Users of products and services – both companies and individual consumers – are increasingly able to innovate for themselves (Von Hippel

2005, 1). It is becoming more commonly accepted to involve customers in the development process. This might be because studios are focusing on establishing tighter, long-term relationships with their customers. (Zijlstra & Visser 2012, 34.)

Gamers expect more from a game than an enjoyable experience. They want to be involved, create their own content, and share it with the world. Consumers are now entertaining consumers. Reaching millions of people with user-generated content is easier than ever. Since the arrival of open source live streaming tools, the popularity of watching game content has exploded. The most popular content creators, also known as influencers, are the celebrities of today. Many young people sees this as their dream job, and many see esports as their ideal career path. Games that enable creativity or competition generate unique gameplay moments that are shared and viewed by millions of people. (NewZoo 2019b.)

2.5   Evolving immersive experience

New technologies are making new kinds of gaming experiences possible. This means new kinds of business opportunities for game industry entrepreneurs. We can start to expect photorealistic game worlds, virtual reality gear that covers all senses and creates a virtual experience practically indistinguishable from reality, and advanced gadgets that augment and enhance our experience of the real world. Soon we are able to render a convincing reality in real time, using solutions such as radiosity and ray tracing. Games will be authored in 3D, and auto-stereoscopic displays will allow us to experience 3D without 3D glasses. The stereo effect will be improved by head and eye tracking. 3D holographic projectors and augmented displays on contact lenses are already in development. (Hartley 2010.)

2019 was a growth year for extended reality (Marr 2019). Extended reality is an umbrella term for immersive technologies. Virtual reality technology makes the player to become fully immersed in computer-generated environments by wearing a headset. Augmented reality is the integration of digital information with the real environment. Mixed reality merges real and virtual environments to produce new environments where physical and digital objects co-exist and interact in real time. International Data Corporation forecasts worldwide spending on extended reality to reach $18 billion in 2020, an increase of 78.5% over 2019 (International Data Corporation 2019).

The future of virtual reality promises high-quality experiences and better affordability. The main factors blocking mainstream adoption of virtual reality seem to be the lack of compelling content and the need for encumbering equipment. The turning point for this technology could be the ability to have multiple users within the same game, since gaming is becoming increasingly social. More immersive controls, where players interact with their environments without pushing buttons, could change gameplay to the point where new kinds of experiences are possible. Social platforms could push virtual reality toward wider audiences by focusing their attention on virtual reality entertainment. (GlobalWebIndex 2019.)

The technology for augmented reality has immense potential. Large manufacturers have introduced applications which have presented gamers with new ways to interact with the real world, enabling them to scan their local surroundings, create their own virtual tracks and invite their neighbors to play (IMARC Group 2019). The mass adoption of augmented reality smart glasses is on its way. Technological advancements in the smartphone industry will enable next level augmented reality experiences. Holographic projection will allow us to experience augmented reality without headworn or handheld devices. Along with face filters, we will start to world filters. The future of augmented reality will be shaped by new legal regulations and social contracts, driven by growing distrust and fear of the potential dangers of facial recognition and deep fakes. (Emrich 2019.)

3   Masterplan for a game studio

Professional entrepreneur Mark Cuban points out (2017, 47) that in the business world everyone has the desire to win, but only those who have the desire to prepare will win. Pinson claims that one of the principal reasons for business failure is lack of planning (Pinson 2005, 2). Planning the business helps setting realistic and timebound goals for the company. The need for systematic business planning has increased in the game industry. In today's competitive situation, professional business planning can be thought as a requisite for success. There is more than one way to design and execute a successful business in the game industry. (Määttä & Nuottila 2016, 22, 24–25.)

Locke claims that there is a belief in business that not to innovate is to die, and that companies can become successful by having innovative and disruptive business models (Locke 2017, 7). The game industry is developing fast because of new technologies and disruptive innovations. Adaptation to change is a vital survival skill for a game company. It helps to make use of new opportunities and to avoid new threats. (Määttä & Nuottila 2016, 15, 25.)

This section studies the theory behind business planning especially from the perspective of the game industry. An entrepreneur starting the planning of their business can ask themselves the following questions: What am I offering? Who am I seeking to serve? How will I interact with my customers? How will I win against the competition? How will I make profit?

3.1   Business model

Business model is a tool for planning and analyzing a business. It helps to consider all factors that affect success in reaching the desired goal (Määttä & Nuottila 2016, 15). Osterwalder and Pigneur define business model as a conceptual tool that contains a set of elements and their relationships. It expresses the business logic of a specific product, describes the rationale of how an organization creates, delivers, and captures value, and works as a blueprint for a strategy to be implemented through organizational structures, systems and processes. (Osterwalder & Pigneur 2010, 14–15.)

In their book *Business Model Generation*, Osterwalder & Pigneur introduce a framework for business models called the Business Model Canvas. It allows entrepreneurs to describe and think through the business models of their own organizations as well as any other enterprises; it is a shared language for describing, visualizing, assessing, and changing business models. The Business Model Canvas consists of nine building blocks, as demonstrated in figure 4: Customer Segments, Value Proposition, Channels, Customer Relationships, Revenue Streams, Key Resources, Key Activities, Key Partnerships and Cost Structure (Osterwalder & Pigneur 2010, 12, 15–17).
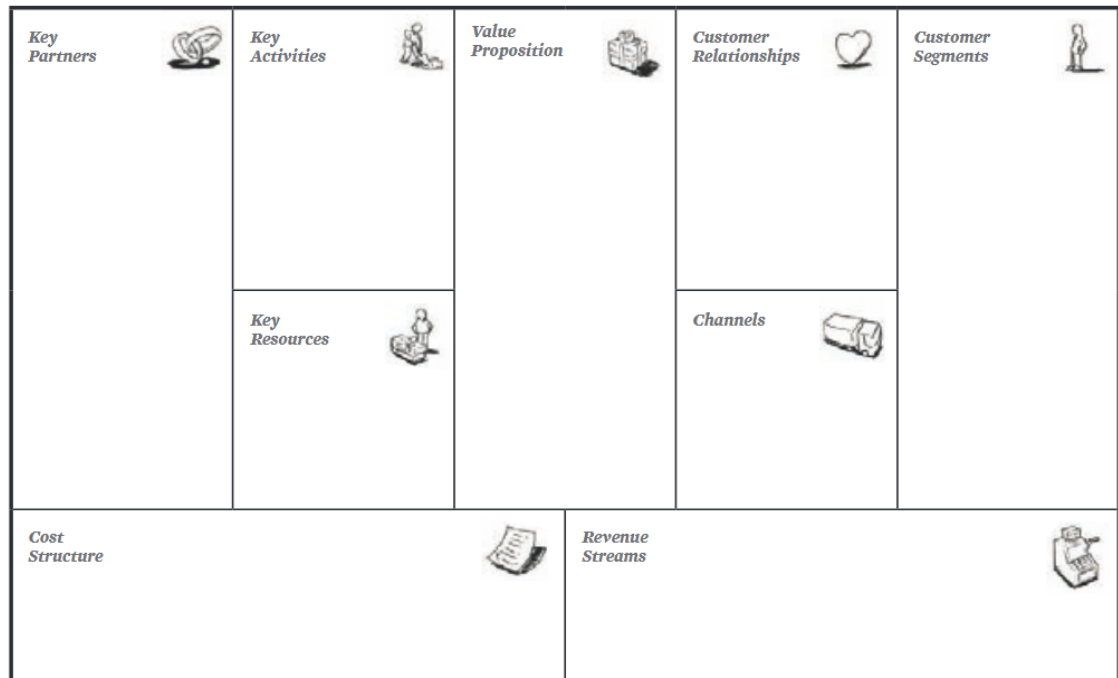

Figure 4. The Business Model Canvas template (Osterwalder & Pigneur 2010)

The Customer Segments building block defines who the company seeks to serve. The Value Proposition building block describes the bundle of products and services that create value for customers. The Channels building block describes how the company reaches and communicates with its customers. The Customer Relationships building block describes the relationships the company establishes with its customers. The Revenue Streams building block represents the cash the company generates from its customers. The Key Resources building block describes the assets required to make the business model work. The Key Activities building block describes the activities the company must carry out to make its business model work. The Key Partnerships building block describes the network of business partners that make the business model work. The Cost Structure building block describes all costs of operating the business model. (Osterwalder & Pigneur 2010, 20–40.)

Rajala, Rossi & Tuunainen point out that a software company has multiple options to structure its product and service proposition, manage its customer relationships and conduct the business as a whole. They found these options to be subject to several dimensions and summed them up to four categories to identify the key characteristics of software businesses that can be of help in distinguishing different business models from each other: Product Strategy, Revenue Logic, Distribution Model and Service and Implementation Model. (Rajala, Rossi & Tuunainen 2003.)

Määttä and Nuottila look at the framework of Rajala, Rossi & Tuunainen (2003) from the perspective of the game industry. Product Strategy describes the goal of game development; the value that the company wants to create for its customers and how the company organizes the development process to be as efficient as possible. Revenue Logic describes how the company generates cash-flow from its customers. Distribution Model includes the channels between the company and its customers. Service and Implementation Model describes how the customer is kept satisfied by high-quality game experience and smooth service. Määttä and Nuottila point out that each factor in a business model affects the overall balance and that all factors affect each other. When planning the business, it is good to analyze the relationships between all factors. (Määttä & Nuottila 2016, 16–19.)

Almér and Eriksson claim that indie game developers innovate and iterate their business models when creating new games; their business models adapt and evolve through each development cycle. It is important to understand how indie developers build their business models throughout this process in order to create an optimal business model. A good business model is a competitive

advantage for a company, and for indie developers that face resource restraints and heavy competition in a constantly evolving industry, any competitive advantage is of high importance. (Almér & Eriksson 2019, 3–4.)

3.2   Business plan

A business plan is an all-encompassing plan for a business (Meretniemi & Ylönen 2008, 24). It is a blueprint of the business that serves as a plan for the entrepreneur, as documentation for financing, and as a tool for analyzing and implementing changes that will make the business more profitable (Pinson 2005, 2). The purpose of the business plan is to explain and elaborate the business idea; with a business plan it is easy to plan, lead and track the business (Meretniemi & Ylönen 2008, 24). Every business will benefit from the preparation of a carefully written business plan. A good business plan provides a realistic picture of the business, expresses the entrepreneur's enthusiasm for the venture, and communicates the company's capabilities and needs. (Pinson 2005, 2.)

A game company's business plan creation involves multiple phases, some of which are simultaneous and some subsequent (Määttä & Nuottila 2016, 25). *Creating a Business Plan*, a book published in 2007 by Harvard Business Press, claims that most business plans contain the following components: Cover Page, Table of Contents, Executive Summary, Business Description, Business Environment Analysis, Industry Background, Competitive Analysis, Market Analysis, Marketing Plan, Operations Plan, Management Summary and Financial Plan. A business plan may combine some elements, add new sections and leave out others, as long as all the important information is included. Changes can always be made to reflect changing circumstances. (Harvard Business Press 2007, 12–13.)

The Cover Page is the first thing that the audience will see. It includes the name of the company and the entrepreneur's contact information. To make a good first impression, it should have a professional appearance and a clean look. The Table of Contents convinces the readers that all important topics are covered and that it is easy to flip through the plan and quickly find specific sections. The Executive Summary is the business plan in a nutshell, a kind of abstract that presents the main points. The Business Description summarizes the business concept. It defines the purpose, the objectives and the key success factors of the company. (Harvard Business Press 2007.)

The Business Environment Analysis identifies the business opportunity; something that solves a real customer problem. The business environment can be analyzed by defining the industry, the market, the competitors and the customers. The Industry Background identifies the industry, including the range of products or services encompassed by the industry, the size and shape of the industry, key trends emerging in the industry and what it takes to enter the industry. The Competitive Analysis defines the company's own competitive advantages and identifies the company's competitors, their strengths and weaknesses, their key success factors, threat levels, market shares and market strategies. The Market Analysis defines and describes the target market. (Harvard Business Press 2007.)

The Marketing Plan incorporates the results of market research and serves as a road map for how the company motivates its customers to buy its products and services. The Operations Plan is a vital guide for the flow of the daily activities of the business and the strategies that support them. It focuses on the critical operating factors that will make the business a success, such as advantages in sourcing materials, technological innovations in the manufacturing process, a favorable geographical location, access to skilled employees or inexpensive labor. Operations are the work of the business; the transforming of ideas and raw materials into products and services. The Management Summary introduces the management team – the people behind the business who make it work. It introduces the team as a unit that works together, and highlights individual team members' qualifications. The Financial Plan shows the current status and future projections of the company's financial performance. It lists the capital requirements of the business and the entrepreneur's best estimates of risk and reward. (Harvard Business Press 2007.)

3.3   Value proposition

The heart of a game business is the game product and its promise of a good player experience (Määttä & Nuottila 2016, 27). Value proposition is a building block of business planning that consists of a set of products and services that cater to the requirements of a specific customer segment; a bundle of benefits that a company offers to its customers. Value proposition solves a customer problem or satisfies a customer need. It is the reason why customers choose a company over another. (Osterwalder & Pigneur 2010, 22.)

Osterwalder and Pigneur list elements that can contribute to the value creation of products and services. Value can be created by satisfying an entirely new set of needs that customers didn't

perceive previously because there was no similar offering, by improving product or service performance, by tailoring products and services to the specific needs of customers, or by helping customers to get certain jobs done. A product may stand out because of its superior design or its imago as a status symbol. A common way to satisfy the needs of price-sensitive customers is to offer value at a lower price than other offerings. (Osterwalder & Pigneur 2010, 23–24.)

Osterwalder's and Pigneur's elements of value creation can be interpreted from the perspective of the game industry. For example, a game product could satisfy a new set of needs by having a new kind of feature, such as an innovative gameplay mechanic or a unique art style. Improving product performance could mean higher-quality assets or better optimization, and improving service performance could mean more stable servers or faster customer support. Tailoring games to the specific needs of customers could mean diverse customization options, in-game settings, modification tools or game design decisions based on player feedback. Games can help players to get certain tasks done as well as possible, such as relaxing after a rough day, escaping real-life problems, building self-esteem by winning challenges, getting in touch with friends, or making new ones. Some people feel that playing or owning a specific game is a part of who they are, and some feel a deep sense of belonging in communities built around their favorite games. Or a game could simply be cheaper than other similar games.

Wesley and Barczak claim that innovation has played a major role in the long-term success of the game industry. New product success depends on providing unique value to customers and being the best at offering them benefits that they value. To achieve this, companies need to have a deep understanding of their customers. (Wesley & Barczak 2010, 3, 212.)

3.4   Customers

Customers are a specific group of people within a specific market that a company seeks to serve. Profitable customers are vital for the survival of a business, and business models should be built on a strong understanding of specific customer needs (Osterwalder & Pigneur 2010, 20). Gamers have significantly benefited from the increasing competition of the game industry; never before have this many people been able to enjoy such a vast amount of high-quality digital games with such a low price (Määttä & Nuottila 2016, 21).

Customer segment is a group of customers with common characteristics. A company should choose which segments in the target market to serve and which one to ignore. Customer groups represent separate segments if their needs require and justify a distinct offer, if they are reached through different distribution channels, if they require different types of relationships, if they have different profitabilities, or if they are willing to pay for different aspects of the offer. (Osterwalder & Pigneur 2010, 20.)

All gamers are not the same; there are clear cultural and motivational differences between them, and a game industry entrepreneur should be well aware of these differences. When selecting a target group for a game, it is recommended to focus on factors that separate the target group from other potential players and explain why gamers choose specific games over other games. Players can be segmented for example by sex, age, location, culture or player motivation. (Määttä & Nuottila 2016, 22, 275.)

Player motivation means the reason to play specific kinds of games. A vast amount of research has been done about reasons for playing and the fans of specific genres. Gamers have different motivations for playing and they expect different experiences from game. This causes them to choose between different types of games by favoring certain genres, since different genres highlight different features and cover different motivations. A player's genre taste is formed based on their gaming experiences and how well different types of games correspond to the features they enjoy in games. The expectations that gamers have for a specific kind of game have a significant effect on their buying choice and their satisfaction when playing the game. (Määttä & Nuottila 2016, 275, 279–280.)

Sherry, Lucas, Greenberg & Lachlan have discovered six reasons for playing: arousal, challenge, competition, diversion, fantasy and social interaction. Arousal means stimulating emotions as a result of fast action and high-quality graphics. Players seeking challenge enjoy playing video games to push themselves to a high level of skill or personal accomplishment. Players motivated by competition strive to display dominance. Diversion means using games to avoid stress or responsibilities. Being motivated by fantasy means enjoying the ability to do things in a game that can't be done in real life. Some play games as a social activity, interacting with other players and learning about each other's personalities. (Sherry, Lucas, Greenberg & Lachlan 2006, 217–218.)

Yee has developed an empirical model of player motivations to provide a foundation for understanding how players differ from one another. His analysis reveals ten motivation subcomponents

that group into three overarching components: Achievement, Social, and Immersion. Achievement component consists of Advancement, Mechanics and Competition subcomponents. Social component consists of Socializing, Relationship and Teamwork subcomponents. Immersion component consists of Discovery, Role-playing, Customization and Escapism subcomponents. (Yee 2006.)

Advancement subcomponent refers to the desire to gain power, progress rapidly and accumulate in-game symbols of wealth or status. Mechanics subcomponent refers to being interested in analyzing the underlying rules and systems in order to optimize character performance. Competition subcomponent refers to the desire to challenge and compete with others. Socializing subcomponent refers to being interested in chatting with other players and helping them. Relationship subcomponent refers to the desire to form meaningful long-term relationships with others. Teamwork subcomponent refers to deriving satisfaction from being part of a group effort. Discovery subcomponent refers to seeking to find and know things that most players haven't found yet or don't know about. Role-playing subcomponent refers to the desire to create a persona with a background story and to interact with other players to create an improvised story. Customization subcomponent refers to being interested in customizing the appearance of the player character. Escapism subcomponent refers to using the game to avoid thinking about real life problems. (Yee 2006.)

Gamers are a multi-dimensional and fragmented group. Playing games, watching content and owning hardware are all essential elements of the gamer culture. The new dimensions of gaming call for a new kind of segmentation that captures all unique types of gamers. NewZoo claims to revolutionize how these unique groups of individuals are approached and understood. NewZoo's Gamer Segmentation divides gamers into eight distinctive gamer segments, as presented in figures 5-6: The Ultimate Gamer, The All-Round Enthusiast, The Cloud Gamer, The Conventional Player, The Hardware Enthusiast, The Popcorn Gamer, The Backseat Viewer and The Time Filler. (NewZoo 2019c.)
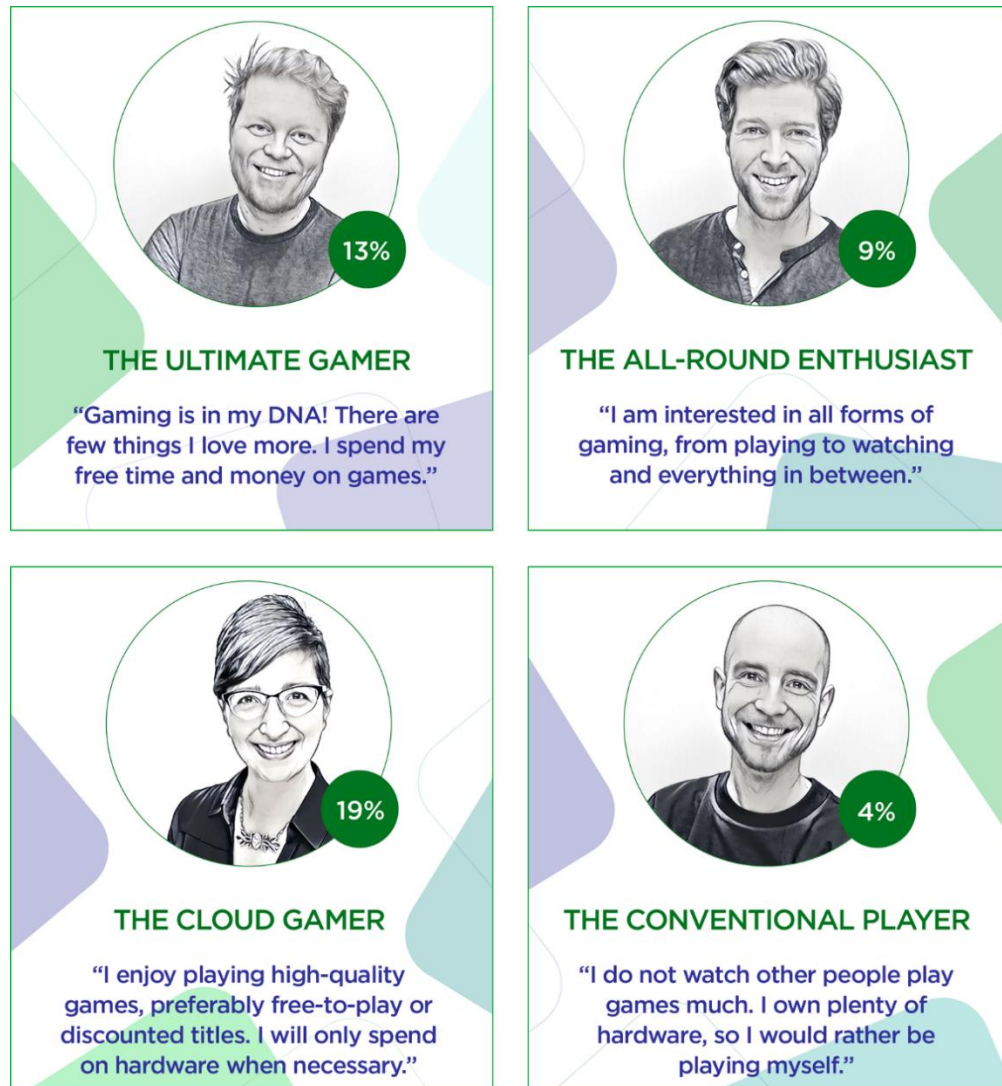
Figure 5. NewZoo's Gamer Segmentation 1/2 (NewZoo 2019c)

Ultimate Gamers enjoy experiencing games across all spectrums of the market. Games are their favorite free-time activity. They are regular watchers of game content and have both the passion and the funds to invest in the newest hardware. All-Round Enthusiasts are enthusiastic gamers who play games, watch content and own hardware as a serious hobby. Cloud Gamers care deeply about playing games but for them it's all about the software; they spend very little money on hardware or nothing at all. They may only buy hardware when necessary or don't buy their hardware with gaming in mind. Conventional Players stay up to date with the latest developments and game releases, and purchase the newest hardware and peripherals, but they only focus on their own gaming. (NewZoo 2019c.)
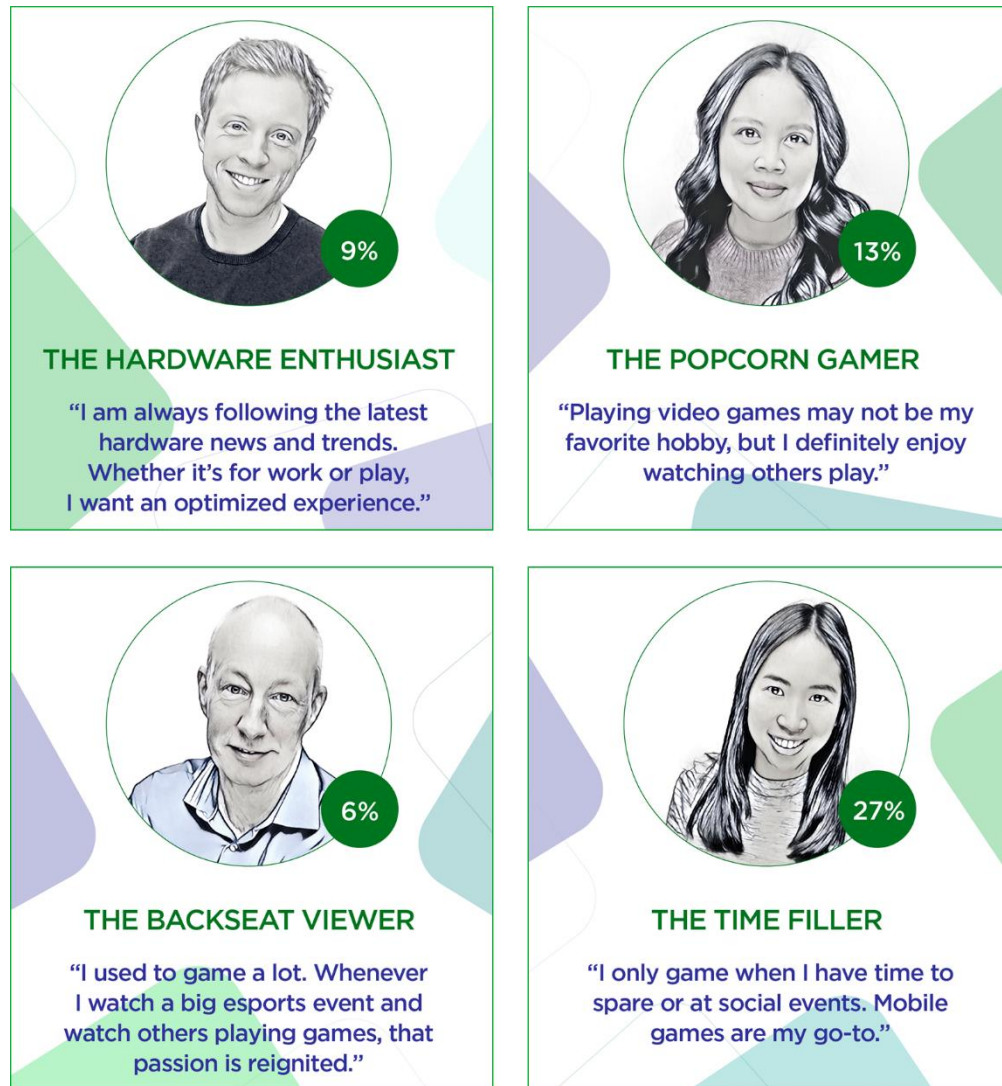
Figure 6. NewZoo's Gamer Segmentation 2/2 (NewZoo 2019c)

Hardware Enthusiasts are casual gamers with a passion for computers, electronics and gadgets that extends beyond gaming. When they play, gaming gear is in a vital role. Popcorn Gamers play casually, but enjoy watching other play more than playing themselves. They prefer enjoying the gaming culture vicariously. Backseat Viewers watch others play but hardly ever play games. Usually they are people who used to play actively but no longer have the time or hardware to play. Time Fillers are casual gamers who don't see games a major part of their lives. They play to pass time, hardware is not relevant to them, and they aren't interested in in watching content. (NewZoo 2019c.)

The target group of a game product can be global or geographically restricted. Digital distribution- and marketing channels make it possible to effectively reach millions of people around the world. People differ culturally in different places. Localization means the preparation of the game product for a new geographical location to meet different local expectations and to satisfy different cultural needs. It includes any changes made to a game, such as translating texts, recording new audio and cutting out or replacing content due to differing cultural sensitivities or local legal requirements. (Määttä & Nuottila 2016, 22, 275.)

Customer relationships can be motivated by customer acquisition, customer retention or boosting sales. They can range from personal to automated. Customer relationships can be divided into categories, which can co-exist in a company's relationship with a customer segment: personal assistance, dedicated personal assistance, self-service, automated services, communities and co-creation. Personal assistance means that the customer is served by a real customer representative during the sales process or after the purchase. Dedicated personal assistance means that a customer representative is dedicated specifically to an individual client. Self-service means that the company doesn't maintain direct relationship with customers but provides the means for them to help themselves. Automated services mixes self-service with automated processes. The company can utilize user communities to involve with customers, and facilitate connections between community members. Co-creation means that the company co-creates value with its customers. (Osterwalder & Pigneur 2010, 28–29.)

The goal is to find a segment where there is a real opportunity to be better than the competitors. The less competition the target market, the better the chances for success. In an ideal situation there is no competition at all; it is possible to find a market that doesn't have any good games on offer, and customers whose needs are not met. (Määttä & Nuottila 2016, 26.)

Selecting a platform makes specific device users into potential customers and leaves out others. It determines the developer tools available for development, the types and amounts of available customers, the revenue potential and the available channels for marketing, distribution and sales. Multi-platform publishing is a cost-effective and synergy-utilizing solution to platform selection, since it decreases the dependency on a single channel and increases revenue potential with low additional production costs. (Määttä & Nuottila 2016, 16, 26, 150.)

The following questions help to consider all important factors when choosing the customers:

- What motivates our target group to play and what experiences are they seeking?

- Which aspects of gaming culture do they care about?

- Where are they located and what culturally specific needs do they have?

- What kinds of relationships will we have with them?

- What is the competitive situation in the target market and how do we deal with it?

- Which platforms will we select and why?

3.5   Channels

Channels comprise a company's interface with its customers. They include channels for marketing, distribution and sales. According to Osterwalder & Pigneur, channels have five distinct phases: awareness, evaluation, purchase, delivery and after sales. Awareness means raising awareness about the company's products and services. Evaluation means helping customers evaluate the company's value proposition. Purchase means allowing customers to purchase specific products and services. Delivery means delivering value propositions to customers. After sales means providing post-purchase customer support. Each channel can cover one or more phases. Channels can be divided into direct channels and indirect ones, or into owned channels and partner channels. The trick is to find the right balance between different channels and integrate them to optimize customer experience and to maximize revenue. (Osterwalder & Pigneur 2010, 26–27.)

Distribution is the process of moving the product from the developer to the end user. Digital distribution channels are essential vendors for game companies. They offer the easiest access to millions of potential customers, but they also take a slice of the revenue for themselves. The masses of customers are found in the established channels controlled by a few big companies. (Määttä & Nuottila 2016, 140.)

Marketing has become an increasingly important competitive weapon in the game industry (Määttä & Nuottila 2016, 18). The game market is overcrowded with thousands of titles released every year. The diffusion of today's technologies has expanded the game market, attracting more customers and increasing the intensity of competition. Game companies need to be fast and flexible to professionalize their business strategies and marketing processes to survive and succeed. (Harding 2019.)

Active and successful communication plays an important role in gaining positive attention for a game. Results in marketing require a goal-directed and systematic approach as well as constant and measurable improvement. Good goals are specific, measurable, attainable, relevant and time-bound. For example, a starting game studio's goal could be reaching a certain number of downloads or website visitors, or appearing in the top three search results of a search engine when a specific kind of game is searched. (Määttä & Nuottila 2016, 302, 305.)

Communication channels can be divided into own, paid, earned and shared media. Each of them has their own role in marketing. Own media is completely controlled by the company, and it plays a key role in creating an image for the company and its products and services. It includes the company's websites, social media pages, devlogs, newsletters and handouts. Paid media means external marketing efforts that involve a paid placement, for example in the form of advertisement, bought visibility or paid downloads. It is a good way to gain attention for a game and to build a brand. Earned media means media activity that is not directly generated by the company or its agents but by other media entities such as journalists, bloggers and influencers. It works as a way to gain good reputation for the company, since third-party opinions of independent agents are often perceived to be relatively objective and therefore trustworthy from the customer's perspective. (Määttä & Nuottila 2016, 18–19, 29, 326.)

Shared media includes social networks, grapevine, user generated content, reviews and recommendations (Määttä & Nuottila 2016, 315–316). Social media has made it possible for games to reach people on a massive scale; games get plenty of visibility and free advertisement as players share their thoughts and experiences online (Bilal 2017). The already acquired customer base can be used as a cost-effective channel for viral marketing. The goal of viral marketing is to get players to market the game on behalf of the company, raising awareness and interest about the game among the potential customers by recommending it to their friends and sharing content with their social networks. Friend recommendations are the most convincing form of communication, so players should be encouraged to invite their friends to play and to share their experiences.

Making use of trends such as new instant message platforms and popular memes can help winning players' favor to reach competitive advantage. (Määttä & Nuottila 2016, 18–19, 29, 353.)

Wats and Hasker (2006) recommend the following strategic solutions for hit-based, creative industries to improve the odds of success in marketing:

1. Increasing the number of bets and decreasing their size. For a game company this means increasing the number of games and decreasing their scope. Instead of using all resources for a big expensive game, the company invests in several smaller games with lower production costs. (Watts & Hasker, 2006.)

2. Focusing on detection, measurement, and feedback of customers. Marketers can tailor their marketing campaigns to the rapidly evolving and unpredictable game market by tracking demand and satisfaction indicators as they emerge, and combining them with separately available sales data. Individual and group reactions to new products can be accurately measured in real time for example through chat rooms and online communities. (Watts & Hasker, 2006.)

3. Keeping the marketing budgets flexible, making it possible to quickly move resources from bad ideas and unsuccessful projects to those with success potential. The company should focus on finding the people who are reacting positively to the product, and direct their resources there. For a game company, a flexible budget could make it possible to seize the opportunities of new disruptive innovations. (Watts & Hasker, 2006.)

4. Exploiting naturally emerging social influence. Marketing can amplify favorable social influence signals by directing the attention of a wider audience toward those who are already like the product. Marketers can create influencers by selectively modifying social influence patterns as they emerge. In the game industry, the best case scenario is the ultimate win-win situation where the game gets positive attention and the influencer gains new followers. (Watts & Hasker, 2006.)

5. Building flexibility into supply chains by designing them to respond rapidly to a growth in demand for some products or services and a drop in demand for others (Watts & Hasker, 2006). Since it is difficult to predict a hit in the game industry, every game should be prepared for success. Digital distribution and cloud services make it possible to supply for an increased demand easily and to utilize server capacity fast. (Määttä & Nuottila 2016, 151.)

All media presence is useful. The marketing of a game should start as early as possible. New players need to be acquired consistently to secure cashflow, and profitable players should be kept playing as long as possible. Keeping players is cheaper than acquiring new ones. Once the game gains popularity, starts climbing the download lists and the player amount is on the desired level, the focus in marketing shifts from acquisition to keeping the players. Marketing never stops – its intensity and target groups just change according to the situation. (Määttä & Nuottila 2016, 313.)

3.6   Strategy

Cuban (2017, 31) has called the business world the toughest kind of sport because of its extremely competitive nature. Companies seeking to grow experiment with different strategies and their combinations to maximize their business opportunities. Strategy is an essential part of business planning (Entrepreneur 2001). A strategy is a plan that a company uses to create and achieve competitive advantage in the selected market by developing its resources and capabilities. Only a few companies can change their environment, so the role for most companies becomes to adapt to change with their strategy. Important changes in the environment include the amount and intensity of competition and the changing needs of customers. They are affected by political, legal, economic and social situations in each market as well as the development of technology and infrastructure. Changes in the environment can be opportunities or threats to a company. (Määttä & Nuottila 2016, 133, 148.)

Strategy should be based on market analysis. Analyzing the market forces the entrepreneur to become familiar with all of its aspects. It makes it possible to define the target market, enables the entrepreneur to establish strategies that will allow their company to become profitable within a competitive environment, helps to position the company to garner its share of sales, and provides an indication of the growth potential within the industry, which allows the entrepreneur to develop their own estimates for the future of their business. Market analysis includes defining the market in terms of size, structure, growth prospects, trends and sales potential. (Entrepreneur 2001.)

Määttä and Nuottila highlight three major competitive factors of the game industry. The first factor is standing out from competition and gaining attention in the game market, where hundreds of new titles are released on a daily basis. The second factor is new technologies and business models. They can change the market fast, cause real threat to established market leaders and

offer newcomers opportunities to challenge them. The third factor is the influence of customers; they can push down prices, demand better products and more service. In a world where an unforeseen amount of game developers compete for their money and attention, and where the Internet provides perfect availability and unlimited access to knowledge, masses of gamers can have a significant influence. (Määttä & Nuottila 2016, 139.)

Määttä and Nuottila look at game business from the perspective of Michael Porter's business theory. Porter's Five Forces Framework is a tool for analyzing competition, and it consists of the following five forces: threat of new entrants, threat of substitutes, bargaining power of customers, bargaining power of suppliers and competitive rivalry. These forces affect the amount of competition as well as the distribution of revenue. Porter's three generic competitive strategies are Cost Leadership, Differentiation and Focus. A company should choose the most suitable strategy and follow it. (Määttä & Nuottila 2016, 134, 141.)

Cost Leadership strategy is based having the lowest cost of operation in the industry; this can be achieved by technology protected by exclusive rights, cheaper labor force or benefits generated by synergy or mass production. In the game industry, a big fanbase and a strong brand can be sources of cost leadership as they cut down marketing costs, the biggest portion of expenses. Differentiation strategy is based on creating something unique in the industry. Focus strategy is based on serving the chosen customer segment as well as possible. This requires that the company knows their customers' desires particularly well. (Määttä & Nuottila 2016, 141–143.)

Määttä and Nuottila highlight strategies to control a game company's ensemble of business areas to maximize profit and balance risks: brand strategy, diversification strategy and genre strategy. Brand strategy is based on building a strong brand and bringing new products to the market under the brand. The company seeks to sell new products to the fans of the brand as sequels, spin-offs and merchandise, and appeal to new users from different segments to be the customers of the company by extending the brand to new product categories. The brand is the central source of synergy in the company's activity. The strategy works well in the long run, creating emotional bonds with the regular customers. Making use of a well-known brand can be the key to gaining consumers' favor. If a company doesn't have their own brand, it can try to get rights to one. (Määttä & Nuottila 2016, 147–148.)

Diversification strategy is based on competing with a big amount of games, with multiple brands in multiple genres. It is used by the strong giant companies of the industry since it takes lots of

resources. The diversification strategy lessens risks, increases revenue by reaching many segments in the market, and decreases marketing costs by synergically benefiting from different brands. Genre strategy is based on maximizing market penetration by focusing on a certain genre. A company can synergically benefit from its knowledge and understanding of the genre. (Määttä & Nuottila 2016, 147–148.)

Osterwalder and Pigneur claim that partnerships are cornerstones of many business models. Companies forge partnerships and create alliances for many reasons; to acquire resources, to reduce risks and to optimize their business models. Osterwalder and Pigneur distinguish between four different types of partnerships: strategic alliances between non-competitors, strategic partnerships between competitors, joint ventures to develop new businesses and buyer-supplier relationships to assure reliable supplies. Partnerships can be motivated by optimization and economy of scale, reduction of risk and uncertainty, or acquisition of particular resources and activities. (Osterwalder & Pigneur 2010, 38–39.)

3.7   Finances

The finances of a company should be planned in such a way that the available resources can be directed to the critical factors that make success possible. The financial management of a game company includes organizing accounting and taking care of funding. Selecting the most suitable monetization model and optimal pricing are keys to cash-flow generation, the lifeblood of the business. (Määttä & Nuottila 2016, 122, 392.)

The costs of a game company are usually made up of personnel-, business premise-, software-, device- and marketing costs (Määttä & Nuottila 2016, 30). Cost structure describes all expenses of operating a business model. Osterwalder and Pigneur distinguish between two broad classes of business model cost structures: cost-driven and value-driven. Cost-driven business models focus on minimizing costs wherever possible, using low-price value propositions, maximum automation or extensive outsourcing. Even though costs should always be minimized, low cost structures are more important to some business models than to others. Value-driven business models focus on value creation instead of being concerned with cost implications. It is common for a business model to fall in between these two extremes. (Osterwalder & Pigneur 2010, 40–41.)

Cost structures can have fixed costs, variable costs, economies of scale and economies of scope. Fixed costs are costs that remain the same regardless of the volume of goods or services produced. Variable costs are costs that depend on the volume of goods or services produced. Economies of scale are cost advantages generated by expanding output. Economies of scope are cost advantages generated by a larger scope of operations. (Osterwalder & Pigneur 2010, 41.)

Määttä and Nuottila encourage starting game companies to weed out from the necessary acquisitions as much as possible and to buy everything used whenever possible. It is possible to acquire equipment mutually or share business premises with other companies. Business incubators often offer cheap premises and equipment along with other support. Many successful game companies have started from a single rental room with flea market equipment. (Määttä & Nuottila 2016, 392–393.)

3.7.1 Financial management

The financial plan of a company can and should be modified whenever situations change (Määttä & Nuottila 2016, 394). Accounting is the process of recording financial transactions and summarizing, analyzing, and reporting them to oversight agencies, regulators, and tax collection entities (Tuovila 2020). Budgeting is a tool for planning and overseeing the finances of a company. A budget is an estimation of expenses and incomes over a specified future period of time. It is compiled and re-evaluated on a periodic basis. If a company lacks financial expertise, it is recommended to outsource bookkeeping to an accounting firm. In small game companies, accounting firms play an important role in financial administration and as advisors of management. (Määttä & Nuottila 2016, 392–394.)

A company's financial health can be measured by financial statements. Financial statements provide an accurate picture of the company's current value; its ability to pay bills and to earn profit. They include cash flow statement, income statement and balance sheet. The income statement is a simple and straightforward report on the cash-generating ability of the company. The cash-flow statement is a schedule of money coming in and going out of the business. The balance sheet reports the company's assets, liabilities and shareholders' equity. (Entrepreneur 2001.)

The sources of funding in the game industry include cash-flow financing, entrepreneur's own wealth, public and private funding, early access and crowdfunding. Figure 7 shows the sources of funding in the game industry in 2020 according to the annual State of the Industry Survey by the Game Developers Conference. The most important source of funding for game companies is internal funding; the cash-flow financing generated by selling products and services. Game companies usually need external funding for starting the business and developing it to reach a globally sufficient level of competitivity. The need for funding depends on the life cycle phase of the company, its growth speed and the volume of its activity. The suitable form of funding depends on its need for funding, the state of the company and the risk-taking capabilities of its owners. The opportunities for funding depend on the potential risks in the business, its growth potential and growth goals. (Määttä & Nuottila 2016, 30, 394, 397, 401.)

Where does your funding come from? (Choose all that apply)

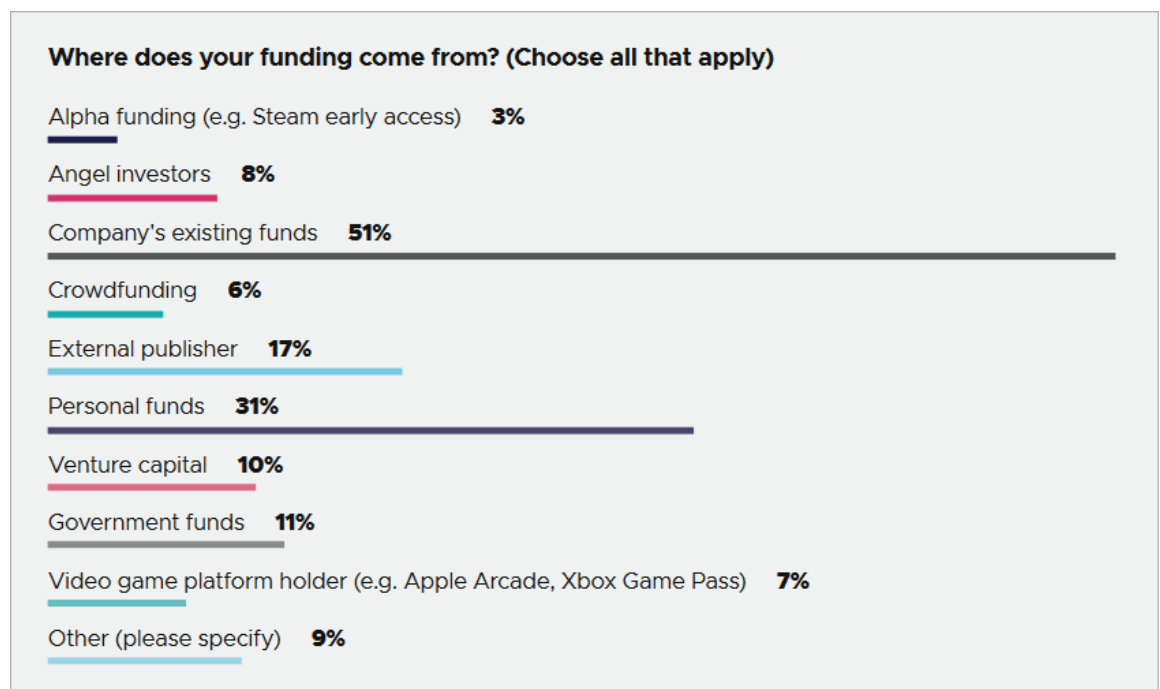| Source	%
Alpha funding (e.g. Steam early access)	3%
Angel investors	8%
Company's existing funds	51%
Crowdfunding	6%
External publisher	17%
Personal funds	31%
Venture capital	10%
Government funds	11%
Video game platform holder (e.g. Apple Arcade, Xbox Game Pass)	7%
Other (please specify)	9%

Figure 7. Sources of funding in the game industry (GDC 2020)

Public funding is sponsored by a government agency or a publicly recognized organization. For example, in Finland a new entrepreneur can apply for startup money – a form of funding provided by the government to secure the entrepreneur's living. An entrepreneur can get a bank loan backed up by a public funding agency. Private funding comes from private corporations or individual investors. Different investors offer capital on different terms: there is borrowed capital, which means loan with interest, and equity, which means funding in exchange for property rights. Business angels and capital investors bring expertise, experience and networks along with their

capital. Because game business is based on hits, investments always involve risk and require in-sight in each market situation about the potential investment targets and the newest trends in the industry. Investors pay attention to new companies' business models, their key persons' experience and market understanding as well as measurable evidence of the success potential of their games. They want to see a clear growth plan that makes significant profits possible if a game becomes a hit. (Määttä & Nuottila 2016, 30, 398–399.)

Publishers are a significant source of funding in the game industry. If the publisher funds the production of the game and pays the developer for royalties in advance after each development cycle phase, the developer's risk is relatively small, but so is the profit if the game becomes a hit. It is common nowadays that the game studio develops the game at their own risk and seeks for a suitable publisher for the finished product. The publisher takes care of marketing, which is a significant source of expenses in the game industry. The developer and the publisher can make a deal about dividing the profits and negotiate about the immaterial property rights. The smaller the risk is for the publisher, the more likely the developer will get a good contract. (Määttä & Nuottila 2016, 30, 400–401.)

Early access means that players can purchase and play the game during pre-release development cycles. The game is being developed with the community's involvement; the company uses its customers' financial support to fund the development and their feedback to assure that the game meets their expectations. A lasting relationship is born between the company and its customers. To succeed in using this form of funding, a company needs to have either a good reputation and a large fanbase or a very good idea. (Määttä & Nuottila 2016, 121–122.)

Crowdfunding is a form of funding where the general public makes donations to provide startup capital and financial backing for new ventures. The entrepreneur can bypass angel investors and venture capitalists and pitch the product or service straight to the general public and potential customers on crowdfunding platforms, gaining early validation of project concepts and projected scope of the target market. Pledges that support their efforts are rewarded with special rewards such as exclusive merchandise, advance access to new releases, or personal incentives. (Steinberg 2012, 3.)

3.7.2 Cash-flow generation

A game company can earn profit in many ways. Monetization model describes how a company generates cash-flow from its customers. The goal of the monetization model is to transform the value experienced by the customer into revenue as efficiently as possible (Määttä & Nuottila 2016, 20, 122.) According to the game industry veteran David Perry, there are at least 29 monetization methods for video games (Lightspeed Venture Partners Blog 2018). There are also hybrids that combine different monetization models (Määttä & Nuottila 2016, 19). Common monetization models in the game industry include premium, free-to-play and subscription. Premium means that the customer pays to download the game and claims permanent ownership by a one-time purchase. Free-to-play games are free to download, but contain advertisement or paid content that enhances or expands the gaming experience. Subscription means that the player pays a fee at regular intervals to play the game; for example, there could be a monthly payment that is billed automatically. Figure 8 shows the monetization models game developers are using in 2020 according to the annual State of the Industry Survey by the Game Developers Conference.
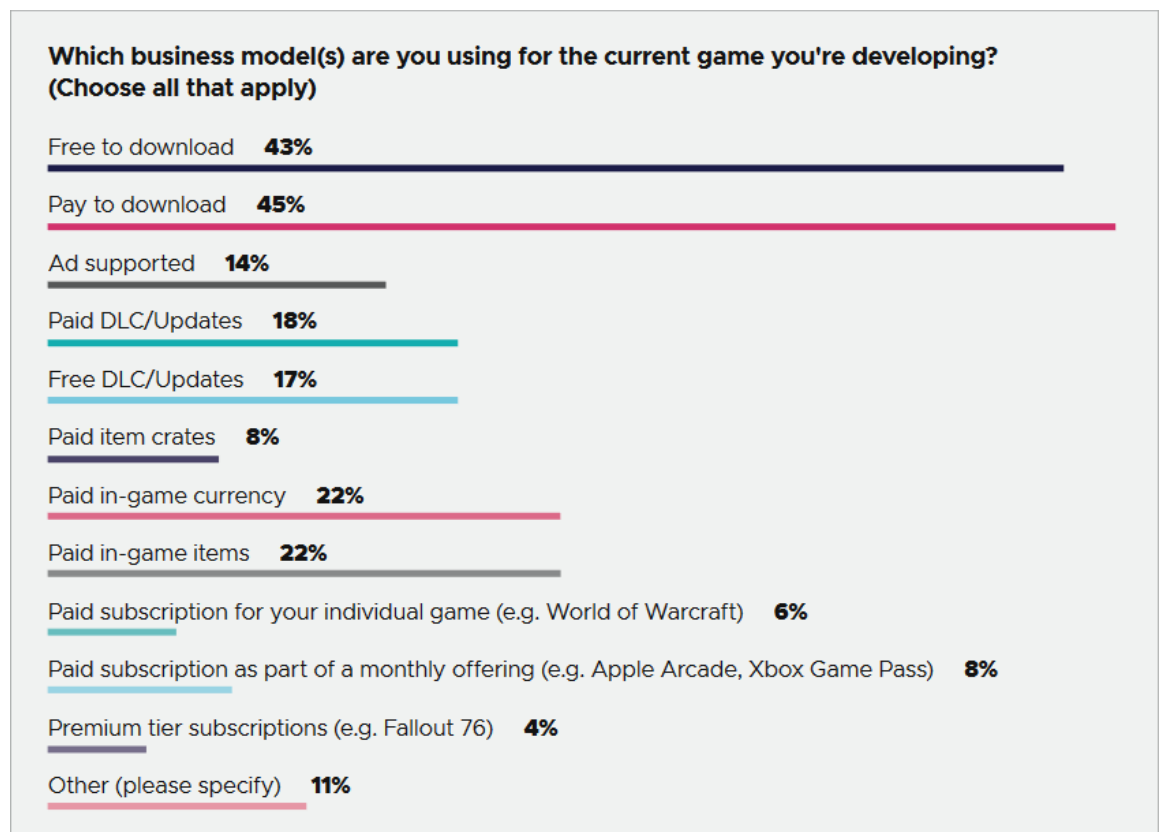

Figure 8. Monetization models in the game industry (GDC 2020)

Sotamaa and Karppi point out that the business logic has shifted from one-time purchases of game products to creating long-term relationships with players where they pay a fee at regular intervals. Since the dynamics of a service-orientated studio are cyclic, iterative, process-orientated and customer-centric, they require a completely different mindset from the traditional project-based thinking. There is a long list of continuous tasks that game companies must manage, such as new content creation, user help, moderation, security fixes and marketing campaigns. Overall, the total effort and costs required to take care of these tasks on a regular basis might exceed effort and costs required to perform one-time project development. (Sotamaa & Karppi 2010, 10–12, 85.)

According to Osterwalder & Pigneur, there are two main types of pricing mechanisms: fixed and dynamic. Fixed pricing means that predefined prices are based on static variables. Fixed pricing mechanisms include list price, product feature dependent price, customer segment dependent price and volume dependent price. List price means fixed prices for value propositions. Product feature dependent price depends on the number or quality of value proposition features. Customer segment dependent price depends on the type and characteristic of a customer segment. Volume dependent price is a function of the quantity purchased. Dynamic pricing means that price changes based on market conditions. Dynamic pricing mechanisms include negotiation, yield management, real-time market and auction. Negotiation means that price is negotiated between two or more partners and depends on their negotiation power and skills. Yield management means that price depends on inventory and time of purchase. Real-time market means that price is established dynamically based on supply and demand. Auction means that price is determined by outcome of competitive bidding. (Osterwalder & Pigneur 2010, 33.)

Määttä and Nuottila claim that price is the prime factor affecting player's choice of game. The key factor in pricing is the game's value to the player. Knowing the motives behind playing and understanding the emotional attachments of players helps a lot in pricing. Prices should be adjusted according to the market. It is always better to lower the price than to raise it when testing the suitable price level. Sometimes just a small adjustment can significantly affect sales. (Määttä & Nuottila 2016, 122–123, 297.)

4   Starting my game studio

This section follows the practical part of my thesis; the process of starting a game studio. I have always dreamed of running my own company. I feel motivated for this project, and I have a wealth of options when it comes to creative ideas ready to be prototyped. The skills and knowledge I have gained in my studies at Kajaani University of Applied Sciences, including the making of this thesis and the support from my network, have prepared me well for entrepreneurship in the game industry.

I started with making a project plan for myself. The plan included a list of tasks to complete in order to start the company. I made sure that everything important was included in the list and that the tasks were in an ideal order by seeking advice from my network and using feedback to develop the project plan into its final form. I divided the tasks under three phases: orienting for entrepreneurship, creating the business plan and registering the company. Orientating for entrepreneurship includes theoretical research, seeking advice, and self-improvement. Creating the business plan includes brainstorming for a business idea, paper prototyping the business model and writing down a real business plan. Registering the company includes sending the registration application and opening addresses and accounts under the name of the company.

I received valuable support and advice from game industry professionals, business advisors, and my fellow students. I want to thank Niklas Saari, the founder of Team Jolly Roger; Veli-Pekka Piirainen, the founder of Critical Force; business legend Kimmo Nikkanen; and the Business Accelerator, a business incubator at Kajaani University of Applied Sciences.

4.1   Orienting for entrepreneurship

The purpose of this step was to gain fresh knowledge and deep understanding of the game industry and the business world in order to see what I was stepping into, and to prepare myself for becoming an entrepreneur. I strongly recommended this step for anyone who plans to start a business. I studied the global games market, the trends of the game industry, game business, game development, gaming culture, entrepreneur's lifestyle, business planning, the process of starting a company and the practical skills needed to run a company. This step includes but is not limited to the making of this thesis and my entire studies at Kajaani University of Applied Sciences.

The learning process included actively following game industry media and business blogs, engaging in discussions at game industry events, interviewing game industry professionals, contacting my network, reading relevant literature, reports and research papers, studying courses at school, going to talks at business events, joining communities, and seeking useful tools, helpful resources and supportive services for entrepreneurs and game developers.

This step included getting into the mindset of an entrepreneur and accepting entrepreneurship as part of my identity. An entrepreneurial mindset is an ability to recognize and develop opportunities and the willingness to take risks. Entrepreneurs use their imagination and creativity to break free from concepts and restraints. I believe it is a good idea to think of entrepreneurship as a lifestyle. An entrepreneur needs to be prepared for independence and responsibility as well as long hours, financial insecurity and high level of uncertainty. I evaluated my life situation, personality traits, strengths and weaknesses, and made changes to my lifestyle that would support my career choice.

4.2   Creating the business plan

The next step was naturally business planning for my own company. In the beginning I brainstormed business ideas. What kind of game I would love to play? What kind of game does the world need, or what does that specific group of people want? What can I do with what I have? How can I make money? I could find something that I like and make it even better, or take good ideas from here and there to create something that is more than its parts. I could focus on an important issue that bothers me in the world and invent a product to solve it. I could analyze the market and calculate the formula for a successful product.

I used business modeling to see my creative ideas from a realistic perspective. What is the value that my product promises? Who wants it? How will I interact with them? Who am I competing against and what is my competitive weapon? How much will this cost and how much money will I make? How will everything work on a daily basis; who is doing the work, what are their activities, how are they doing it, where is it happening and when?

I created a business plan template to see the big picture before writing down the details. It is based on business planning literature and online guides. My template consists of eight sections:

Executive Summary, Business Description, Industry Overview, Competitive Analysis, Market Analysis, Marketing Plan, Operational Plan and Financial Plan. See attachment 1 for the template. I wrote down the details of my business. I also asked for advice and received feedback for refining the business plan.

The Executive Summary summarizes the business plan in one page. It starts with an elevator pitch and captures all of the vital information about the company, defines the value proposition and its unique selling points, describes the key success factors and competitive advantages of the company, provides the most important financial projections and communicates what the company wants from the readers. The Business Description introduces the company, defining its business structure and summarizing the business concept. It introduces the people behind the company, explains what has inspired it and lists the steps that have brought the company to where it is now. It states the purpose of the company, lists the objectives of the business in the order the company seeks to achieve them, and envisions the future of the company. It defines the business environment by overviewing the industry, the market, the customers and the competitors. It defines the business opportunity by identifying the customer problem that the company solves. It defines the value proposition, highlighting the unique features of the company's products and services. It defines the strategy to survive against competition and lists the competitive advantages of the company. It overviews the financial aspects of the business plan.

The Industry Overview defines and describes the industry, and highlights the key trends. The purpose of this section is to introduce the industry to those who don't know it well, and to prove the entrepreneur's proficiency to those who do. The Market Analysis defines the target market and describes the potential customers. It analyzes the market in terms of size, structure, growth prospects, trends and sales potential. The Competitive Analysis overviews the competitive situation in the industry, defines the company's competitive advantages, identifies the competitors, and analyzes their strengths and weaknesses, threat levels, market shares and market strategies.

The Marketing Plan includes the unique selling proposition, describing the unique features of the company's products and services, explaining how they will benefit the customers, and defining what sets their offerings apart from all the rest in the market. It sets measurable goals for marketing, and lists marketing channels and marketing materials. It defines the distribution channels and presents a strategy for sales promotion. The Operational Plan answers the following questions: who, what, how, where and when? It introduces the personnel who are in charge of completing specific tasks, describes the daily activities of the business in each department, lists the

tools and methods used and the resources needed in each department, defines the location where the daily operations are taking place, provides information about the business premises, schedules the production cycle and defines deadlines for tasks and goals. The Financial Plan lists the expenses, including starting and operating costs, and presents an income statement, a cash-flow projection and a balance sheet.

4.3   Registering the company

The planning was done, and it was time to officially register the company. I headed to the official site of The Business Information System to read the instructions for registering a limited company. In Finland, a limited liability company comes into being when it is registered at the Finnish Trade Register. For registration, a start-up notification must be filed. It includes the name of the company, the industry, the duration of the accounting period, the city of residence, and the names and social security numbers of the chief executive officer, the board of directors, and the stock-holders. It is possible to make the notification online. The online service automatically creates articles of association for the company. With the same form, it is possible to register with the VAT Register, Employer Register, and Prepayment Register. It is possible to start a limited company without capital stock, but there is a handling fee for registering a start-up at the Trade Register. Online start-up notification costs 275 euros.

I filled up the form and sent my application. In seven business days, I received a letter confirming that my company was officially registered and that I had received a business ID for my company. It included the articles of association printed on paper. Once the name of my company was confirmed by the official registration, I could safely start registering addresses and opening accounts under the company's name, including an e-mail address, a domain address, social media accounts and a bank account.

4.4   Starting the business

Finally, I started the business. At Kajaani University of Applied Sciences, it is possible to do the practical training part of the studies in your own firm. The practical training is a mandatory part of the studies which includes working full-time for five months under a real company. Since the

internship needs to be supervised by an employer, and an intern cannot be their own supervisor, entrepreneur interns work under the Business Accelerator, the business incubator at school. This means that a staff member from the Business Accelerator supervises the internship. The Business Accelerator provides us consulting, business premises, equipment and hardware. Within the same working space there are many other student companies working. There are weekly meetings where the key persons from each company and the personnel of the incubator – and sometimes special visitors – get together, catching up and sharing support.

I started my internship as the CEO of my own company, Mestariteos Oy, and a game designer and producer in my first game project under the company. My job is to manage the company, to organize the project and to design the game. Our team also has a programmer and an artist. The project lasts for the full length of five months and we are working full-time. The fact that we are free to develop the game without any costs, working on it for months with our living secured, is a significant critical operating factor that can help to make the business a success.

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5   Analysis

Gaming is the world's favorite form of entertainment, a mainstream phenomenon generating massive revenues. Anyone can create games with free developer tools and use digital distribution channels and viral marketing to reach global audiences. Even an indie developer with humble resources can achieve great success. Large companies spend massive resources on mass producing games, but big ideas can come to big and small developers alike. Together these factors make the game industry an interesting opportunity for an entrepreneur. There are many possible ways to plan a successful business for a game company. Thinking outside the box is strongly encouraged. Starting a company is easy in terms concrete tasks and necessary bureaucracy. The real challenge lies in coming up with a good idea and building it into a successful business.

New trends trigger new waves of innovation and competition. The game industry is evolving from blockbuster launches and retail distribution to platform-agnostic, cloud-based subscription services. This means more stable revenue streams for entrepreneurs and investors. Mobile games are one of the most competed business areas in the world; success requires luck, massive resources or disruptive innovation. The new decade leads us to the next phase of mobile, where greater processing powers and higher screen resolutions will make us see the true potential of these gaming devices. Gamers can co-create games with developers, customize their game experiences and produce their own playable content. We could witness a future where average consumers can easily create and share high-quality games and modules that can be transferred from game to game. The golden age of extended reality gaming is coming. It could happen within the lifetime of our generations. There will be gaming gear that allows us to experience virtual reality with all senses. Augmented reality technology will extend to all aspects our lives, enhancing our experiences of the real world, giving birth to new forms of play, and gamifying our everyday activities. Applications will allow us to perceive the world through different kinds of filters. We might even invent new sports where the athletes use their physical bodies together with smart gadgets and virtual content.

New product success depends on providing unique value to customers. Games that facilitate creativity and competition generate unique gameplay moments that player love to share with the world. Many developers create the kinds of games they would love to play themselves. This makes them a part of their target group, helping them to understand their customers' needs. This understanding can be deepened by systematically analyzing the motivations behind playing and

the factors that make the game experience enjoyable. Developing something you love also makes you craft it with passion and is likely to increase your job satisfaction. The best strategic solutions for an indie developer with humble resources in the extremely competitive environment of game business are creating something unique and focusing on serving the chosen customer segment as well as possible. It is recommended for a starting game company to weed out from the necessary acquisitions by buying equipment used and using the services of business incubators. Small companies that lack financial expertise should outsource their bookkeeping to accounting firms. Thanks to free tools, digital distribution and viral marketing, there is a lot that can be done with even a low budget. Some games have been successfully marketed with zero-based budgets.

6 Conclusion

This thesis created a theoretical foundation for starting a game studio by researching the game industry and business planning. Games have become a major part of the social fabric, a driver of consumer technology, and a business that makes up a massive portion of the economy. Some of the most significant trends of the game industry include the rise of indie, games as a service, mobile gaming, customers' role as co-creators of value, and immersive technologies. They lead the game industry into a future where anyone can create and play games anywhere, and where the real world merges with virtual dimensions.

In the game industry, professional business planning can be thought as a requisite for success. An entrepreneur with a business idea can start business planning by developing a business model and creating a business plan. New product success depends on providing unique value to customers. In the game industry, customers can be segmented in many ways. Businesses should be built on a strong understanding of specific customer needs. Digital distribution channels are essential vendors for game companies, and viral marketing has made customers into cost-effective marketers. Companies can experiment with different strategies and their combinations to maximize their business opportunities and to survive against the heavy competition of the industry. The finances of a company should be planned in a way that the resources available can be directed to the critical factors that make success possible.

The thesis followed the process of starting a company in practice. Starting a company is easy in terms concrete tasks and necessary bureaucracy. The process included orienting for entrepreneurship by theoretical research and practical preparation, brainstorming for business ideas and creating the business plan, and registering the company by sending the registration application and opening addresses and accounts under the name of the company. The conclusion of this thesis was starting a game studio and making a manual for anyone who is planning to do the same. But it is good to keep in mind that this thesis merely scratches the surface of the world of game business.

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Attachment 1: Business plan template

Executive Summary

Who we are

Start with an elevator pitch, capturing all of the vital information about your company.

What we offer

Define your value proposition and its unique selling points.

How we differ

Describe your key success factors and competitive advantages.

How much we will make

Provide the most important financial projections.

What we want

Communicate what you want from the readers and why.

Business description

Introduction

Tell the name of the company, define the type of business structure and summarize the business concept. Introduce the people behind the company, explain what has inspired it and list the steps that have brought the company to where it is now.

Mission

State the purpose of your company.

Objectives

List the objectives of your business in the order you wish to achieve them.

Vision

Envision the future of the company.

Business environment

Overview the industry, the market, the customers and the competitors.

Business opportunity

Identify the customer problem that your company solves.

Value proposition

Define your products and services, and highlight their unique features.

Market strategy

Define your strategy to survive against competition and list your competitive advantages.

Financial projections

Provide financial projections and back them up with data if possible.

Industry overview

Industry introduction

Define and describe the industry.

Key trends

Highlight the key trends.

Key assets and skills

List the essential skills and knowledge it takes to enter the industry.

Market analysis

Market definition

Define your market and market segments. Describe your potential customers.

Market size

Assess the market in terms of size and growth.

Market position

Prove that your product or service has a place in the market. Project your position in the market and your market share.

Competitive analysis

Competitive situation

Overview the competitive situation in the industry.

Competitors

Identify competitors, analyze their strengths and weaknesses, threat levels, market shares and market strategies.

Competitive advantage

Define your competitive advantages.

Marketing plan

Unique selling proposition

Describe the unique features of your product or service. Explain how it will benefit your customers. Define what sets your offering apart from all the rest.

Marketing goals

Set measurable goals for marketing.

Marketing channels

List your marketing channels.

Marketing materials

List your marketing materials.

Distribution

Define your distribution channels.

Promotional plan

Present your strategy for sales promotion.

Operational plan

Who

Introduce the personnel who are in charge of completing specific tasks.

What

Describe the daily activities of the business in each department.

How

List the tools and methods used and the resources needed in each department.

Where

Define the location where the daily operations are taking place, and provide information about the business premises.

When

Schedule the production cycle and define deadlines for tasks and goals.

Financial plan

Stock of expenses

List your business expenses, both starting costs and operating costs.

Income statement

Present your revenues, expenses and profit for a particular period.

Cash-flow projection

Make a monthly projection of cash flowing in and out of your business.

Balance sheet

Report your business's net worth. Include assets, liabilities and equity.

Funding request

Specify how much money you are asking for, on what terms, and how you are planning to use it.