The Dutch Games Industry

FACTS & FIGURES

TASK FORCE
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Contents.

COLOPHON

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Introduction

We proudly present this first international edition of the Dutch Games Monitor. With this monitor we would like to offer a broader view of the state of affairs in the Dutch games industry. This Games Monitor is not a summary of all the quality games developed by Dutch companies; for that we would like to direct readers to the existing publication 'Dutch Games Go Global' (www.dutchgamesgoglobal.nl).

In the second half of 2012, a number of Dutch partners combined efforts and several methods of research to attain that goal of a complete overview of the games industry. We would like to use this opportunity to again give our heartfelt thanks to our partners and the cooperating game companies for their commitment. A mix of figures, interviews and survey results was used to conduct this, the most complete investigation into this young sector, yet. An international comparison has also been included. The document is divided into six chapters presenting the results of our research.

We encourage you to join the discussion on the growth and development of the games industry. Hopefully this look into the Dutch situation will stimulate other countries conducting their own in-depth research. We would like to be able to improve a next edition of the Games Monitor with a more thorough international comparison. Please do not hesitate to contact us if you can make a contribution.

>> **Monique Roso &**
Christel van Grinsven
Task Force Innovation
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Overview:
The future of the Dutch games industry

>> Evelien Boshove and Monique Roso, Taskforce Innovation Utrecht Region


Munch Time ▪ Gamistry

Digital distribution of games is a big focus of Dutch businesses

Gaming is a hot topic in The Netherlands. Dutch consumers make up the most active online gaming market in Europe. The Dutch games industry is a young and dynamic sector that has a lot of potential. There are roughly 330 games companies in The Netherlands that together account for 3,000 jobs. The turnover of the games industry in 2011 is an estimated 150-225 million euros. These figures show considerable growth compared to earlier research into the Dutch games industry. While there is a clear focus on entertainment gaming worldwide, strikingly, the Dutch industry shows an almost fifty-fifty split between entertainment and applied gaming. On the varied Dutch market, small independent (indie) developers, innovative applied gaming developers and developers of entertainment games are all represented. Digital distribution of games is a big focus of Dutch businesses, with more than half of the companies distributing games through their own websites or platforms such as Steam or the App Store. A large number of companies are active in mobile games.

International comparison

The games industry is largest in the United States, where it directly employs more than 31,000. With indirect employment included, the numbers even add up to over 120,000. Canada, in part due to an extensive stimulation program, also has a sizable sector of almost 16,000 game developers. Several countries have a games industry roughly the same size as that of The Netherlands. The United Kingdom has about the same number of businesses, but there the number of jobs involved is considerably smaller. The French industry is also similar in size to the Dutch, with around 3,000 jobs. The Scandinavian countries have smaller industries in absolute numbers, but, interestingly, in Sweden, Finland and Iceland the number of employees in gaming per 100,000 inhabitants is significantly higher. What is also remarkable is that there are relatively as many game developers in The Netherlands as there are in Japan, while the latter has a much longer standing in games.
It shows that in The Netherlands the games industry is doing comparatively well. What also stands out is that the Dutch industry is not as centered on producing the 'classic' games in boxes, but rather focusing on digital distribution and on applied games. Because of that, the Dutch sector seems less sensitive to the effects of sales and publishing trends in games. There is also great international potential for upscaling and rollout to new and broader markets.

Ecosystem

The rise of the games industry has led to initiatives and partnerships arising to support the growing sector. Sectoral platforms such as industry associations, specialized events and media have firmly established themselves over the last few years. The industry holds them in high esteem and overall they are seen as necessary for continuing growth. Game entrepreneurs also seem to be realizing that business development is impossible without professional services. For the successful development and exploitation of games, thorough knowledge of the field, intellectual property management, proper financing, business models and market expertise are essential. The Dutch gaming ecosystem is still in its developing stages. The system does have the potential to grow into maturity and deliver companies that are both nationally and internationally successful. For this next step to fulfillment, support for small and medium-sized businesses in their second stage is essential. Network meetings, workshops, pitch events and incubator/accelerator programs could offer the necessary support.

Research and education

Collaborations with centers of knowledge such as universities and research institutes are already being sought. These collaborations pave a way for further intensification of research into the effects of games for the development of the industry. Up till now, researchers have mostly concerned themselves with applied gaming, while for businesses in the field of entertainment games, research into the effects of their games and user experience would also be very useful. This kind of information could aid in the development of business models, games, tools and engines. Close ties do exist between game companies and institutes of higher education. Half of the businesses in the survey regularly work together with a university or other institution, interns being an important link between the two. The Netherlands now has 44 game-related study programs on offer. These, at this time, have over 8,000 registered students between them.

Financing

Out of all the game companies in our survey, over 90% mention to have growth ambition. The vast majority intends to achieve this ambition by using their own funds. The amounts available to be invested back into companies are on average not very high, meaning that for many game businesses, matching external funds will remain a necessity. Furthermore there are chances to arrange clever matches between entrepreneurs that are skilled game developers and others that have a feel for (new) markets and organization.

In closing

All in all, the Dutch games industry is in a good position for further growth. The rise of (mobile) online gaming has been a clear advantage to the Dutch industry, which is characterized by smaller developers. Internationally, Dutch games are widely praised for their mix of creativity and gameplay. In recent years, investments into research on the field of serious gaming have helped create a games industry that can operate on both the entertainment and applied games market. However, serious games are still often bound to a single client and a single market. This means that there are chances for international expansion. Lastly, new investments into interdisciplinary research on the effects of games and gameplay could make future commercial propositions stronger with more theoretical backing. This validation would improve applied games propositions and could aid in the development of business models for entertainment games.

Out of all the game companies in our survey, over 90% mention to have growth ambition.

KILLZONE ▪ GUERRILLA GAMES

The Dutch games industry **facts and figures**

2

>> **Olaf Koops en Thomas Bachet, TNO**

Dancepad ▪ Triangle Studios

In the past five years, the worldwide games industry has seen some considerable growth, with an average growth percentage of 11.2 percent a year. This strong growth over the last couple of years has made gaming an important domain within the content and media industry. It now ranks in size between the music industry (± 39 billion euros) and the film industry (± 66 billion euros) (PwC, 2012).

The Netherlands stands out because it has the most active online gaming market in Europe. Gaming is seen as an interesting sector with a lot of potential for growth. The increasing number of students at university games programs is a rich breeding ground for developers and artists. Policy makers have also discovered the sector and its potential. In 2011, the Dutch government started a new policy focusing on nine priority sectors that were selected for their strong market and export position, knowledge base, intensive collaboration between entrepreneurs and educational institutions and the potential of offering innovative answers to challenges in society. One of the top sectors selected was the creative industry, and within that sector, gaming will receive specific attention as an area with much innovation potential.

Much remains unclear, however, about the economic scope of the Dutch games industry, mostly because we are dealing with a young sector, showing dynamics (startups, moves, bankruptcies) and fast-growing companies. A moving target is hard to get hold of. There is also a statistical reason. Gaming, and game development especially, is not clearly defined in the standard classification of economic activities (in the SBI, the Dutch version of the European NACE classification). Because of this lack of distinctiveness, the Dutch games industry has to be approached in a bottom-up manner, using company lists owned by games trade journal 'Control' and the Dutch Games Association.

A definition for the games industry

In order to set game companies apart and to be able to measure their economic scope, we first need a proper definition of what a game company exactly is.

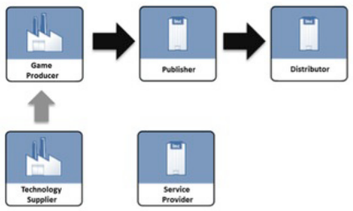
The OECD (2009) defines the content and media industry as follows: **"Content and media industries are engaged in the production, publishing and/or electronic distribution of content products"**. Gaming clearly fits this description and can, consequently, be seen as a specific branch within the broader media industry. A branch consisting of companies that occupy themselves with the development, production, distribution and facilitation of electronic games.

This definition, then, makes the 'games industry':

> **"all companies that have as one of their core activities the development, production, publication, facilitation and/or distribution of electronic games."**

After a strict selection, based upon the definition of the games industry mentioned above, 330 companies and independent professionals were identified. For further information on the approach and research method see Appendix, page 31.

The core definition of the games industry



In this report, we try to set a clear definition of the games industry. Whenever the report mentions businesses in the games industry, we mean companies that develop games that appear digitally. The parties involved in the production chain are: game producer, game technology supplier, service provider, publisher and distributor.

IJsfontein ▪ Museum Game

- With games we are referring to electronic games alone. Companies that are involved in the development and publication of physical games such as board and card games are excluded from this definition.
- The development of games, by this definition, has to be one of the company's core activities. A significant part of the company's turnover (at least a third of the total earnings) should come from the development, production, publication, facilitation and/or distribution of electronic games. This has consequences for many parties (clients, educational institutions) involved in applied gaming. Clients in this field can range from advertising agencies and the Ministry of Defense, to several other public authorities and training agencies. For these companies, gaming is not a core activity but they do often employ a department or a group of people primarily occupied with applied gaming. The latter have been excluded from the core definition of the games industry.

Results

Business size

By 2012, the Dutch games industry consists of approximately 330 companies. These companies together account for 3,000 jobs. The industry's turnover for the year 2011 was reported at 150-225 million euros. Three quarters of the companies and a little over half of the number of jobs fall under the 'game producer' or 'game developer' category. The average size of a game production company is relatively small compared to businesses in the other categories like distributors and technology suppliers. Specialized companies in the field of arts and sound design have also been included under game producers.

Table 2: Key economic figures Games Sector 2011

Valuechain	**Turnover (in mln euros)**	JOBS	ESTABLISHMENTS	JOBS PER ESTABLISHMENT
GAME PRODUCER	**80 - 100**	**1590**	**250**	**6.2**
GAME PRODUCER / PUBLISHER	**20 - 30**	**360**	**5**	**116.7**
PUBLISHER	**20 - 30**	**380**	**30**	**12.7**
DISTRIBUTOR	**10 - 20**	**200**	**10**	**16.8**
TECHNOLOGY SUPPLIER	**15 - 30**	**340**	**10**	**38.0**
SERVICE PROVIDER	**5 - 15**	**130**	**25**	**5.1**
GAMING	**150 - 225**	**3000**	**330**	**9.1**

Source: TNO, data from CONTROL MAGAZINE/LISA/CBS research

In terms of employment, publishers and technology suppliers are important categories for the Dutch games industry, supplying 380 and 340 jobs respectively. Examples of such companies are Ubisoft, Playlogic and UnitedGames. Technology suppliers are relatively large companies, which in 2011 together filled 340 positions. Parties developing technology and tools for the production of games were also included in this category, for example Vtech, Xsens and Ex Machina. Distributors and service providers are relatively small in The Netherlands. The group of distributors consists mainly of the Dutch branches of console games publishers like Sega and Nintendo. With service providers we mean those offering specialized services for the production and publication of games (such as localization). This category also includes specialized press, events and Dutch trade organization DGA. Together they employ 130 and the companies are relatively small. In game development, there are four Dutch cities that matter, being Amsterdam, Hilversum, Utrecht and Rotterdam.

Applied gaming and entertainment gaming are equal in size

While worldwide there is a clear focus on entertainment gaming, strikingly, the Dutch industry shows an almost fifty-fifty split between entertainment and applied gaming. When looking at the number of companies, serious gaming is slightly ahead. Looking at the number of jobs, entertainment gaming takes the lead, due to bigger

> A game start-up is usually made up of two or three founders

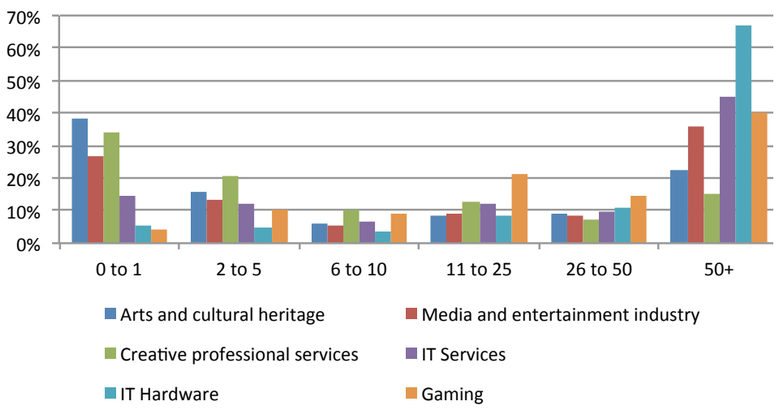
players such as Spil Games and Guerrilla Games.
What should be noted is that for this research on the applied games sector, figures concerning the clients and knowledge institutes involved have been left out of the results. They are often large organizations like the Ministry of Defense and research institute TNO that have separate departments working on applied games, but the development of games is not a core activity of these companies. Including clients in the survey would give Dutch applied gaming a larger market share than is shown here.

Few independent professionals, many team startups

In the LISA database (the national database for employment information on business level, up to 5-digit NACE) many game companies are registered as either software agency or advertising agency. There are a number of characteristics typical to the games industry. Relatively few independent professionals operate next to a large number of medium-sized companies. Game companies use a mix of entrepreneurship, technological know-how and creativity in developing and marketing their games. In other branches of the creative industry, often a gap is perceived between the artistic value of a product and its economic value; Roso (2005) for instance discusses the missing link between commerce and creation in fashion design. While focused on the creation of artistically sound products, other sectors of the industry can lack entrepreneurial skill and professionalized management, which in part accounts for the large number of independent professionals in the creative industry.

Game companies are strongly focused on the development and marketing of products. A game start-up is usually made up of two or three founders, working together on the realization of a product. Companies of a size of 11-25 employees are relatively more common in the games industry than in other creative fields, with a share of approximately 20%. Companies with 6-10 and 26-50 employees also appear more often. The games industry does, on the other hand, have fewer independent professionals and small companies (2-5 jobs) than the other five subsectors of the creative industry and IT sector. The share of large businesses (over 50 employed) is comparable to that of the IT service sector and the media and entertainment industry.

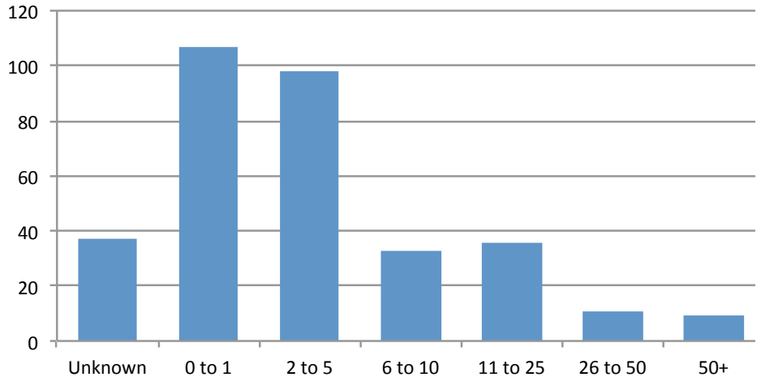
Figure 1: Employment in the games industry in 2011 by business size, compared to five subsectors from the Cross Media Monitor.



Source: TNO, data from Control/LISA

When looking at the number of companies, the small scale of the Dutch game industry is clearly visible. Figure 2 shows the 331 game companies organized by size category. Out of all the companies of which the size is known, 70% has 5 employees or less (107 independent professionals and 98 companies of 2-5 employees). Fewer than 100 companies employ 5 people or more, most falling into the medium-sized businesses category of 6-10 or 11-25 employees. Fewer than 10 companies have over 50 employees.

Figure 2: Number of companies in the games industry in 2011 by business size.



Source: TNO, data from Control/LISA

Ship Simulator ▪ VStep

Companies lay their **cards on the table**

>> Eric Bartelson and Matthijs Dierckx, Control Magazine
Evelien Boshove and Monique Roso, Taskforce Innovation Utrecht Region

One third of the respondents develops both applied and entertainment games

For this report, we invited 160 game companies to take part in an extensive survey. We would like to thank the 88 companies that responded for their participation. Part of the results will be presented in this chapter; other parts have been instrumental in supporting or validating the contents of other chapters.

On representativeness and definitions used

Before we go into the analysis two remarks have to be made, first on the representativeness of the survey and then getting definitions straight. Albeit growing rapidly, the Dutch games industry for now does not hold thousands of companies. This means that for some very specific questions the number of answers was quite low. We will not claim that all the results represent the entire games industry, but they can serve as an indication.

Because companies in applied and entertainment games can differ significantly, the survey was divided into two separate segments. Out of the 88 companies that completed the survey, 37% works exclusively on entertainment games, 37% develops both applied and entertainment games and 26% produces only applied games. This means a third of the respondents is active in both segments: these companies can operate freely on both markets.

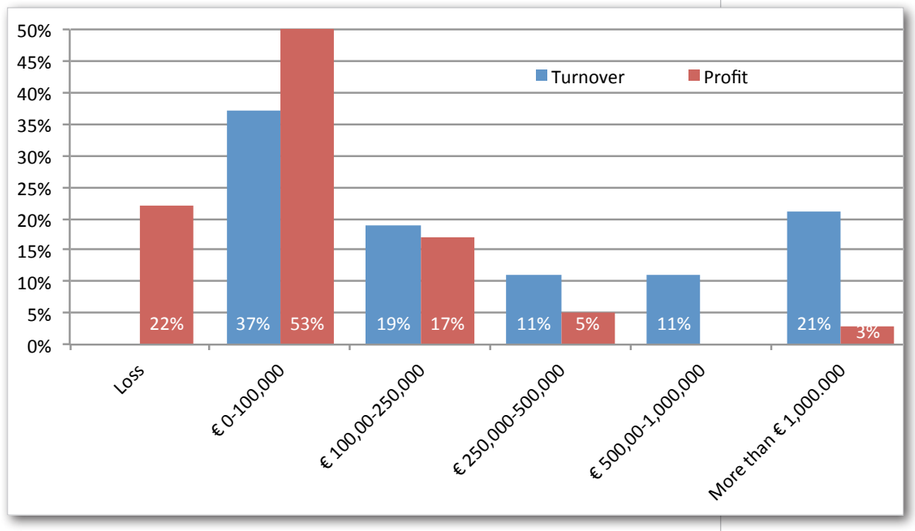
Results

The results from the survey show that boxed games are becoming 'outdated'. Only one in five of the companies in the survey still produce games sold 'in boxes'. Downloadable games, by contrast, are highly popular, with 60% developing downloadable games for PC and/or consoles. Steam and the Mac App Store are entertainment studios' most popular channels. Applied game developers often use their own websites for the distribution of their games. Out of the other platforms, iOS is by far the most popular: more than 60% of the surveyed companies develop games for it, putting the platform on par with PC. Android follows not far behind. Still, among developers, Google's mobile operating system is not nearly as popular as the number of sold devices would suggest: worldwide, actually more Android than iOS devices were sold. The developers' preference for iOS is attributed to Android's greater diversity of machines and versions (meaning less standardization), Android's users being found less willing to pay for features than iOS users and the Android app store not functioning as well as Apple's.

Developing games is an in-house matter for most studios. A staggering 95% of applied game companies, 87% of entertainment companies and 74% of mixed companies produce their own games from start to finish. They do make use of freelance professionals, especially for art, audio & music and animation. What is remarkable is the large percentage of studios also hiring external programmers (42%). A possible explanation for this high percentage could be the small number of programmers available, and – partially for exactly that reason – them being too expensive for a full-time position. Even though there have been many shifts and changes in the industry over the past years, the number of women in the games industry is still very low. Game companies say that, on average, 13.5% of their employees (permanent and freelance) is female. For now, the games industry is still very much a man's world.

Which category best represents your annual turnover?
Which category best represents your net profit (turnover minus costs)?

The companies in the survey also provided us with an indication of their turnover and profits. A fifth of the interviewed indicate their annual turnover was over a million euros. For profit, the percentage is much lower: only 3.4% of all the studios make a profit of a million euros or more. Over 90% of the game companies want to grow;



most intend to achieve this by their own means. This seems to be at odds with the moderate profits we have seen: most of the game companies make only modest profits (0-100,000 euro) and a fifth of the businesses is even making a loss. There appears to be a mismatch of ambition and financing.

Collaborations

A total of 45% of the surveyed game companies claims to have foreign business partners. Applied game companies do not have foreign partners as often as entertainment companies do. Over 80% of the companies with foreign business partners say they have European partners and within Europe, the large majority of partnerships are with Germany, the United Kingdom and France. Seventy percent of all the game companies have business partners in North America, partnerships also occur with Asia, Africa and Oceania but to a lesser degree. The collaborations across borders seem mostly to concern development and publishing, to a lesser extent also sales.

Collaborations also exist in the field of research and education. More than half of the surveyed game companies claim to work with Dutch research institutions or institutes of higher education. These Dutch pairings of game companies and research and/or educational institutions seem mostly geared towards education. For applied game companies, collaborations with research and/or educational institutions is often focused on developing tools. Collaborations with foreign schools and research institutes are most often aimed at concept development. The latter only concern applied game companies. The large majority of foreign research or educational partners is either European or American.

IBB & OBB ▪ SPARPWEED

The games industry in The Netherlands: **collaboration & development**

>> Evelien Boshove and Monique Roso, Taskforce Innovation Utrecht Region

> The ecosystem surrounding the Dutch games industry is in its developing stages

This chapter describes the Dutch games industry ecosystem. Questions like 'How has the games industry in The Netherlands developed over the last few years?", 'Which collaborative partnerships have been developed?', 'Which problems were encountered?" and 'Which needs exist?" will be answered. To this end, 20 in-depth interviews were conducted between July and September of 2012, among managers of Dutch game companies, consultants and institutes of higher education. The outcome of these interviews was put up in a roundtable discussion with companies and organizations. Feedback sessions were also held.

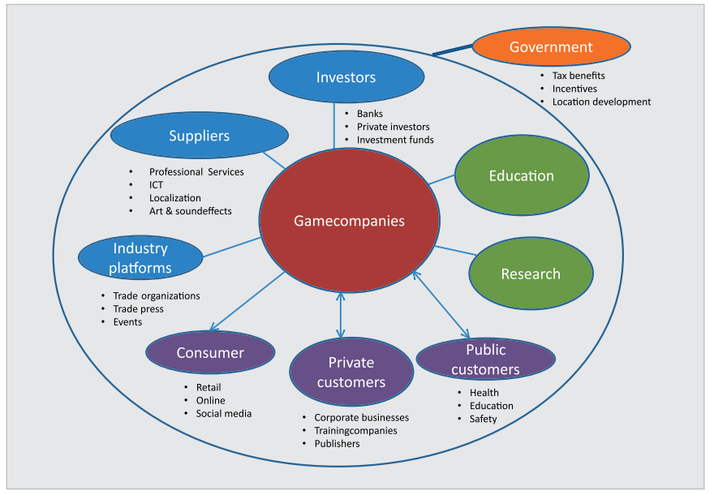
The companies and organizations that were interviewed agree the ecosystem surrounding the Dutch games industry is clearly still in its developing stages: the industry is not fully grown yet. There are many people within the sector that have a strong intrinsic drive: they want to create beautiful products, games that work well and look good. Real entrepreneurs are less prevalent, people from the games industry itself emerging as talented and successful managers and entrepreneurs. People who see opportunities and build bridges between (new) markets for games and their applications, who can create a stable company structure, arrange financing and be the 'heroes' startups can look up to.
Big differences exist between Dutch game companies; the country is home to many independent (indie) developers, innovative applied game developers and some larger developers of triple-A entertainment games. The Netherlands accommodates few publishers. Because of this, Dutch game developers have had less chance to connect to the traditional money flows from larger media groups. The rise of casual games for smartphone and tablet has therefore benefited the Dutch market: their production does not require as much prior investment, lower the bar for market entrance.

Internationally, the entertainment games segment has some very strong competition. In the past, Dutch companies delivered a number of successful entertainment games (f.e. Overlord from Triumph Studios and Awesomenauts from Ronimo Games), while others developed successful international entertainment game platforms that have become major online traffic hubs. Companies, however, say themselves that for more durable success internationally, further growth of the Dutch gaming sector is desirable. Most applied game developers have so far exclusively aimed their work at the domestic market, their games and simulations usually being developed 1-on-1 with a client. Still, developers do see international potential through upscaling and rollout to new and broader markets.

> Networks are of vital importance to a successful game company

Ecosystem

Figure 1: Ties between game companies and other sectors



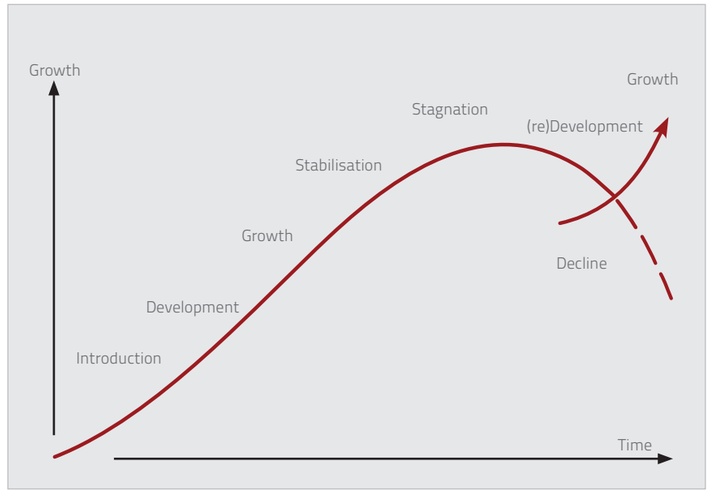
The rise of the games industry has led to initiatives and partnerships arising to support the growing sector. Sectoral platforms such as industry associations, specialized events and media have firmly established themselves over the last few years. The industry holds them in high esteem and overall they are seen as necessary for continuing growth. The 'circle of clients' within the ecosystem is made up of consumers and public and private organizations. Consumers make more and more use of the internet to find their games and traditional retailers start disappearing from the chain; publisher- and developer-owned platforms, app stores, game platforms and social media are the go-to places. Applied games often have public and private organizations as clients. Public parties are also influential in shaping the ecosystem, for example through fiscal incentives or investing in incubators. Higher education and research institutions, finally, also play an important role in the games industry ecosystem.

Networks are of vital importance

Companies in the games industry cooperate almost automatically because the process of development, production and marketing of games requires it. Developing and exploiting games demands a tailor-made combination of design, technology and commercial insight. Networks are of vital importance to a successful game company. They are built up through study careers, job switches, events, collaborations and seminars. What stands out is that there is a lot of international collaboration. Foreign partners and networks are especially important for developers and publishers in the entertainment gaming segment, indicating entertainment gaming is a business across borders. Working together with partners and customers abroad is essential.

Company growth cycle

Figure 2: Company growth cycle



The game companies in the survey can roughly be classified within the following four categories: fast growing companies, those that 'climb', companies in doubt and the deliberately small. This characterization was based upon the company's position in the growth cycle (figure 2), their management and future ambitions.

- Fast growing companies have been through considerable (intended) growth, both of staff and turnover. They usually have a clear product-market combination and are strong in sales and marketing.
- The 'climbing' companies have phases of development, both intentional and unplanned. In every new phase, the company takes a new direction, for instance switching from pure product development to setting up a proper marketing and sales strategy.
- Companies in doubt have been through a positive first phase but have come to a point where they are not sure if they want to continue growing and how they should give shape to their development.
- The deliberately small are small game companies that have no plans for growth. These companies are focused firmly on their content and have no intention of growing in size.

The Dutch games industry ecosystem has a few companies with deliberate growth strategies. More companies seem to be 'climbing' and grow almost accidentally, or doubt whether they want to grow or not – and if so, how to go about it. These companies just need a little nudge in the direction of growth for them to take the next step. This little nudge could be financial backing, strategic advice, coaching and/or support in forming new partnerships.

Financing and crossovers

Entrepreneurs themselves indicate that a strategic approach to growth is usually lacking. They prefer to focus on finishing their game; once a studio has managed to actually produce a very successful game, they are rarely able to make a good follow-up. Being aware of this is a first step towards a solution. It demands the arranging of clever matches between entrepreneurs that are skilled game developers and others that have a feel for (new) markets and organization but also, importantly, for the process of developing creative products and services. So-called game jams are already being organized, which match games students and students from commercially oriented curriculums, creating mixed teams able to approach questions from a broader perspective. This appears to be a successful approach: game developers get

> Entrepreneurs themselves indicate that a strategic approach to growth is usually lacking

Source: derived from Anderson & Zeitheiml, 1984

DUTCH GAME AWARDS

a reality check on the spot and commercial students develop a feel for the creative process and the possible applications for games.

Education

There are close ties between game companies and educational institutions. Interns are an important link between the two. Many companies and independent entrepreneurs also offer courses and guest lectures, with the aim of making study programs match with the reality of the sector. The Netherlands now has 44 game-related study programs on offer (full-time vocational training, applied science and university level programs, plus some minors and extra courses other curriculums offer) in the areas of interaction design, game design, game development, game art design and media technology. These, at this moment, have over 8,000 registered students between them.

The amount of game programs and interns has reached a point where companies can pick only the best out of the bunch. They do, however, voice their concerns about the size of their field – only 330 companies – and whether it will have the capacity to take on the following batches of game students and graduates. For an increase in absorbency, the growth of existing companies and a reinforcement of entrepreneurial competences is essential.

> The government should act as a 'launching customer'.

Government influence

Some interviewees referred to the situation in other countries, where government schemes support and facilitate game companies (the international comparison elsewhere in this document also shows this). In some cases an optimal business climate is created with strong financial incentives (tax holidays, lowering of costs for development, testing and housing). Sometimes the government itself plays an active role as a launching customer purchasing innovative game concepts. If the government really values the development of a healthy games industry it should set the right example, so many companies believe. The government should act as a 'launching customer'.

Research

Mostly in applied gaming, collaborations with centers of knowledge such as universities and research institutes are already well established. Government stimulation programs, too, are usually aimed at applied games. Collaborations between applied game studios and research institutes usually center on the topics of artificial intelligence, group behavior and behavioral changes. There are possibilities for broader application of games and simulations in public sectors like healthcare, education and security.

Up till now, knowledge networks, also internationally, were mainly developed around the applied games field. Opportunities, however, also exist for partnerships between entertainment game companies and research institutes. Research into game behavior and the effects of gaming are still in very early stages. Effect research/user research especially seems to be a blank spot in research programs, while that kind of information could aid in the development of business models, games, tools and engines. Further intensification of research into the effects of games seems a necessary condition for the development of the industry, so potential clients can better estimate the costs and benefits of investing in gamification and game applications. The same goes for applications with education and training purposes: the effectiveness of game applications needs to be properly supported for a broader acceptance of gaming solutions to become possible. Research into the effects of gaming as a communication tool could therefore be a great help in updating business models, both in the fields of applied and entertainment gaming.

> Research into the effects of gaming as a communication tool could be a great help

Tasks

The ecosystem is at a crucial stage of its development. The system has the potential to grow into maturity and deliver companies that are both nationally and internationally successful in entertainment and/or applied gaming. For the next step to adulthood and fulfillment of potential in the sector, a number of tasks can be identified for the sector, for the short and medium term:

1. Second stage support for small and medium-sized businesses
2. Better access to financing
3. More research into the effects of games
4. In study programs, more attention should go to entrepreneurial competences and crossovers
5. More government support


Gluddle ▪ Creative Heroes

NUCLEAR DAWN ▪ INTERWAVE STUDIOS

The Dutch games industry: **from lagging behind to leading the way**

>> Eric Bartelson and Matthijs Dierckx, Control Magazine

> The Netherlands has relatively the same number of game developers as Japan

How does the Dutch games industry compare to that of other countries? That is the central question of this chapter and getting to the answer is not a straightforward matter. Many countries' data about the size of the industry are hard to find and when they exist, the definitions that were used might not match. It is as American research agency DFC Intelligence pointed out in 2010:

> **"It is exceedingly difficult to measure the size of the worldwide game industry, since no single entity collects data on all parts of the market worldwide. DFC Intelligence has to make educated guesses on the actual size of the worldwide market."**

Based upon as many sources as possible, that not infrequently contradict each other, this chapter makes a comparison between the Dutch and that other games industries in a number of European countries, the US and Canada. The selection was based upon the importance of the chosen markets on a worldwide scale, the availability of trustworthy data and the possibility of comparing them with The Netherlands. The differences and similarities are highlighted using the following topics: degree of organization, size of the industry per country, government support & tax credits, publishing and Dutch developers.

Degree of organization

In The Netherlands, developers and publishers often have the same interests. For this reason there is just one comprehensive trade organization, called the DGA (Dutch Games Association). The mission of the DGA is to create a healthy ecosystem for the Dutch games industry. The DGA tries to achieve this mission by stimulating entrepreneurship and collaborations, both national as international. The DGA for instance facilitates Holland Pavillions on international fairs and expositions. The DGA also has a directing role as a lobby organization. Many (Dutch) game developers and publishers are member of the DGA. On the other hand, local branches and distributors of international publishers are more often connected to NVPI Interactive (The Dutch Association of Producers and Importers of image- and sound carriers). NVPI Interactive is concerned with the entire entertainment industry and represents most of the Dutch record companies, video distributors and game-software distributors. Therefore, the NVPI is more focused at the physical sale of games via Dutch retail chains, while the DGA acts as a Dutch trade organization for the entire games industry. Next to the DGA and NVPI Interactive there are smaller groups that represent a variety of game-related companies and organizations in the Netherlands. They are niche-organizations like DSSH (Dutch Society for Simulation in Healthcare).

Size of the games industry per country

The following lists were put together using a variety of sources (see references, page 30).

Game companies					
COUNTRY	STUDIOS	PUBLISHERS	STUD+PUBL	REMAINING	TOTAL
NETHERLANDS	250	35	285	45	330
DENMARK	80				
FINLAND	65				
ICELAND	11				
NORWAY	25				
SWEDEN	104				
NORDIC TOTAL	285				
FRANCE	150				300
GERMANY			275	475	750
UK	300				

Game employees					
COUNTRY	STUDIOS	PUBLISHERS	STUD+PUBL	REMAINING	TOTAL
NETHERLANDS	1590	740	2330	670	3000
DENMARK	552				
FINLAND	1147				
ICELAND	550				
NORWAY	300				
SWEDEN	1353				
NORDIC TOTAL	3902				
FRANCE	2500				5000
GERMANY	2900		6000		10000
UK	9900				
EUROPE	**22000**				
CANADA	**10500**		16000	11000	
JAPAN	**13000**				
US			31598		120008

It is difficult to get a clear view per country of the size and composition of the development side of the games industry. European organizations like EGDF and ISFA publish data on developments and trends in the industry, but they do not have an exhaustive list of active developers in Europe. The most complete list is that of the number of studios per country. With its number of game employees per 100,000 inhabitants, The Netherlands ends up more or less in the middle of the list.

The Netherlands shows up average on 'studio density'

What is striking is that The Netherlands has relatively the same number of game developers as Japan, a country with a much longer standing in games. What is also remarkable is Canada's relatively large population of studio employees; this high number can be traced back to the Canadian government's active stimulation policy.

Iceland also has an extremely large development community, almost completely made up of one successful studio: CCP (annuals 2009).

Government support & tax credits

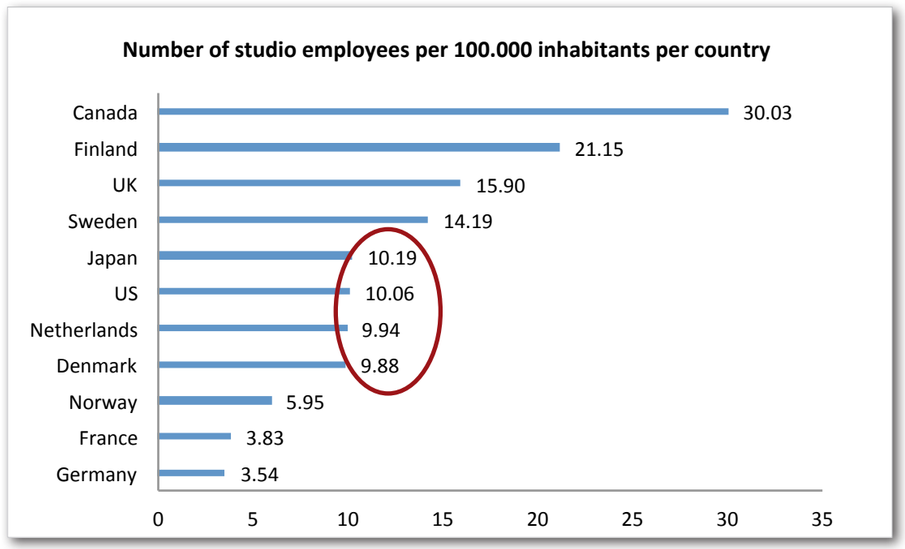
Governments can support their national games industries in various ways. Subsidizing (cultural) game projects, supporting infrastructure and creating tax benefits for the games industry are all valid options. In The Netherlands, several public authorities support the games industry in different ways, but there is not one national, coordinated approach. On a provincial level, Utrecht has been active giving financial contributions to congresses and towards the organization of the incubator Dutch Game Garden. On a national level, many starting game developers till 2012 made use of the benefit program for graduates from art academies. With the rise of game curriculums outside of art academies and the growing number of games graduates that have no background in the arts, the benefit programs came to be used less for initial startup capital. Moreover, many studios also made use of the benefit from law enabling income tax reductions for employees involved in research & development. In 2013, the reduction is 38% for turnovers up to 200.000 euros and even 50% for starting developers.

Tax shelters: Canada is alluring with its substantial tax benefits

The Canadian government, both through national and provincial legislation, offers very liberal tax benefits to game studios. Direct subsidies come added to the fiscal advantages. There are direct financial contributions from the many media funds of Canada (some private) and the country has a very advantageous investment climate. This has convinced large publishers – even those with a stable home base in France or the UK – to take most of their development business to Canada. Because of that, France and the UK now have strong advocates for similar tax shelter strategies.

Direct support for game projects through games funds

Other types of government support to the games industry in Germany, France and the UK run almost exclusively through (media) funds, mostly consisting of loans. In France and Germany they are usually linked to specific regions, which is comparable to the Dutch situation where different regions are given room to support the games industry as they see it. Governments of Nordic countries picked a different approach: direct support of game projects. Through the Nordic Game Program, Sweden, Finland, Norway, Denmark and Iceland have invested about 8 million euros in the games industry. This among other things led to the Nordic Game congress being established and helped finance Nordic Pavilions around the world. A striking difference between theirs and the Dutch situation is the direct way of contributing to game developments.



Dutch studios excel in original games with striking designs

Dutch focus on applied gaming

What stands out about most countries' contributions to the games industry is that the development of entertainment games is a focal point. In The Netherlands there is a relatively large serious games sector and here we also see a larger contribution to the applied side of the industry. An example would be the Dutch M&ICT program that ended in 2009, 'working towards an answer for mobility, education, safety and healthcare issues in society through better use of IT". In many other countries, these types of subsidy programs contributing to the development of a serious game on such a scale and so directly are very rare. Game research programs, in many shapes and sizes, are more common, yet there The Netherlands also stands out with the GATE (Game research for training and entertainment) scheme, which ended in April 2012. The current Dutch subsidy arrangements – through the Top Sector policy – are all focused on (compulsory) collaborations between game studios and research institutes.

Publishing

The process of publishing games has changed dramatically over the last couple of years. New distribution channels, the fading influence of retail and the rise of mobile, social and free-to-play games force publishers to adapt quickly or perish. The old-fashioned type of publisher, the one making 'games in boxes' (the big triple-A games, now starting to become available as downloads), never really existed in The Netherlands. The first and the last one to try on a large scale was Amsterdam publisher Playlogic, and indirectly, Japanese Sony Computer Entertainment is present on the Dutch market as the owner and publisher of Guerilla Games, creators of the Killzone series. The influence of these large publishers on the Dutch game industry is therefore very small in comparison. The traditional model, which has a publisher take care of the (pre-) financing, distribution and marketing of the product has been supplanted by alternative ways of (self-) publishing over the last couple of years. In The Netherlands, there are about ten small to medium-sized publishers left that are still more or less traditional in their approach, though even they went through changes necessary to stay relevant on an ever-developing market with physical sales of games going ever down and the scope moving to digital distribution. Digital distribution channels (such as App Store and Steam) have moved one of the main tasks publishers had – bringing a game to the consumers – firmly into the hands of developers.

Small to medium-sized entertainment businesses: success is in the volume

There is one large game developer in The Netherlands and that is Guerilla Games, owned by Sony. Another bigger player, Spil Games from Hilversum, is one of the largest online casual game platforms in the world. The Netherlands relatively has a large number of small, independent game studios. This group especially has been able to benefit from the rise of mobile phones as a game and download platform. The games these studios produce are relatively small projects: games (depending on the platform) in a price range of 0.79 to 15 euros. Take the iOS AppStore as an example. Platform owner Apple takes a 30% cut of sales and any publisher involved would take a share of whatever amount is left. With a situation like that and the low prices involved, it is essential to sell large amounts. That not an easy task, considering the iOS App Store has more than 128,000 games available. Still, several Dutch developers have managed, over the last couple of years, to get through to the top 20 and top 10 of best-sold games in the Store. Recent examples are Game Oven's Fingle and Munch Time by Gamistry.

Dutch studios excel in orginal games with striking designs. Capitalizing on these ideas is a bit more worrying, it seems. Even when a game turns into a success, few studios are able to produce a follow-up. Whether this is because of their astonishment at the success of their product and consequent lack of a follow-up strategy or because of a certain hesitancy to exploit a successful game, fact is that neither Fingle nor Munch Time has a 'part 2' on the market or is even making plans. Dutch developers miss out on opportunities. The biggest mobile game success story of recent history has without a doubt been Angry Birds, developed by Finnish company Rovio. Angry Birds is constantly being added to with new special editions.

Another striking point is that Dutch studios rarely, if ever, make use of other capitalization strategies. A widely popular way of making money from games is creating a free-to-play. A game is offered to the consumer for free; he or she can keep on playing it for free, or pay small amounts to increase development speed, build up a character, get new content or reach more levels. More and more games are being offered in this way, but few Dutch studios seem to catch up. The size of the studios is a partial explanation for this, as a decent free-to-play title calls for a virtual shop and a large amount of content. It could be a useful area for future development.

The Netherlands has a strong indie scene. Dutch independent games are popular with the international indie games scene, a separate movement within gaming which has been very much on the rise in recent years with an ever-growing group of followers, producers and players. The indie scene for a long time existed next to the commercial games market, dominated by large publishers and (console) releases with big budgets, and was fiercely against the world of the big bucks and constant sequels. Indies were well aware of the 'big' games that appeared but the average 'commercial' gamer hardly knew indie games existed. That situation has changed: consoles are no longer the exclusive terrain of large publishers and developers and online channels (PSN, XBLA, WiiWare, DSiWare) gave indie developers a place to market their games.

Applied gaming: Dutch specialty with potential

Serious (or applied) games are on the rise. The idea that games and game technology can be instrumental in teaching or informing people is becoming more accepted. The Netherlands is well represented in the segment; about half of all the Dutch studios develop serious games. In other countries, the emphasis lies much more on entertainment games. Serious games can be used for several goals: training, simulation, healthcare, recruitment, marketing and education have all been tried and tested. Dutch studios work on all terrains. Vstep and Esemble for instance create training and simulation games, both companies specializing in disaster and calamity training of emergency services. Vstep has also taken a step towards consumer games with their Ship Simulator. Advergames are another area of expertise for Dutch studios. Little Chicken Game Studio and Sticky Studios have a strong international reputation in this area. Healthcare, recruitment and education are the field of Ranj Serious Games, IJsfontein and Grendel Games, among others.

The Dutch games industry compared internationally

Internationally, the relative size of the Dutch games industry is comparable to that of Japan, which has a much longer standing in the games industry and a much larger influence of technology suppliers and publishers. The absence of publishers especially has had consequences for the character of Dutch game companies. Firstly, we have to mention the focus of the Dutch games industry. Where other countries are geared towards entertainment gaming, in The Netherlands entertainment and applied gaming have developed at an equal pace. Applied gaming has also been stimulated by Dutch subsidies for projects and programs. A second characteristic would be the absence of large companies. For a long time, the goal was for Dutch developers to join in with the development of large console games. The rise of online and mobile platforms for games, however, has been of advantage to the country's many small and medium-sized developers and platform owners.

The Dutch independent scene is also acclaimed worldwide, often receiving awards as well. The other side of the coin of the absence of large companies is that an influential lobby is missing of companies demanding large-scale investments to create a healthy business climate. The tax benefits of 40% that Canada offers are something The Netherlands cannot compete with. The Dutch games industry can offer a creative breeding ground in full swing, attitude and a willingness to experiment. It does need a better revenue model.

Serious (or applied) games are on the rise

Mapping the European **Applied Games Industry**

>> Jurriaan van Rijswijk & Alex Gekker, Monpellier Venture

What happens when a hospital is a client of a Serious Games company?

Lost in Time:
A historic location based Serious Game by Tempeest, which has players run around a city with iPads in their hands.

This chapter aims to increase knowledge about the serious games industry (abbreviated as SG industry) as an emerging independent field within the greater creative industries sector. By performing an extensive literature review followed by surveying and interviewing multiple organizations affiliated with SG, we provide a both quantitative and qualitative account of the industry. This chapter is divided into three parts. In the first, we contextualize and position SG within the current debate. The second part presents our results, specifically the breakdown of approximately 300 organizations found that are involved in SG production, as well as in-depth profiles of the main companies surveyed. The final part presents insights gained from our research and conclusions about the future of (Dutch) SG manufacturers.

Serious games

In 1970 engineer, social scientist and educator Clark Abt published a book, entitled 'Serious Games'. In his book, Abt suggested ways of using games as the motivating force for education and training. The book listed manners of harnessing the playful aspects of human nature into 'serious' tasks and managed to popularize the method in certain circles. Yet the idea of using games for training, especially for business and corporate purposes, can be traced back as early as the 1960s. Abt's ideas did not, however, reach fruition until the widespread penetration of computer games and related technologies created the opportunity to develop software products blending gameplay entertainment and instructional content.

In 2002, the 'Serious Games Initiative' was launched by Woodrow Wilson International Center for Scholars, aimed at addressing policy issues. Two years later the initiative started the more specific 'Games for Health' project, which has been promoting SG development and annual conferences ever since. In 2011 a European offshoot was founded, aiming to provide support for the European health game landscape. In 2005 Abt's term 'serious games' was reappropriated by game designer Mike Zyda, and defined as "a mental contest, played with a computer in accordance with specific rules that uses entertainment to further government or corporate training, education, health, public policy, and strategic communication objectives". Since then, the spread of online media consumption has led to advertising and digital agencies adding games to their web campaigns for marketing uses and raising awareness.

Consulting company IDATE carried out a thorough study of the SG field in 2008, with a second edition follow-up of the report in 2010. Combining economic data with company surveys, they present an elaborate picture of the serious games market. Here are some of the data gathered from both reports which relates to our own findings:

- By 2008 in the US, 40% of e-learning employed SG technologies, the advergames (SG for advertising) market was estimated at $262 million, the health games market rose from $100 to $225 million between 2005 and 2007.

- The 2008 report lists the profiles of 10 SG companies and Nintendo (as an ex-ergaming and brain fitness developer). Discarding Nintendo and another company that did not list their number of employees, the average SG company size was 30.2 employees (median = 17).
- SG market generated approximately €1.5 billion worldwide, with an expected annual growth of 47% by 2015, which will result in an estimated €10.2 billion, especially due to small and medium enterprises beginning to use SG instead of only larger organizations.
- 84% of SG are distributed by electronic means rather than through physical media.
- Only one of the projects surveyed in 2010 was an iPad game. Although the authors are fully aware of the transformative possibilities of mobile technologies and are doing a commendable job in highlighting its potential, the smartphones and tablets scene changed drastically since then. This has also led to a huge increase of smaller scale (indie) game design studios primarily targeting those platforms.

Gamification

Another transformative aspect is the trend of gamification, or "the use of game-design elements in non-game contexts". Gamification is spreading, both as a design paradigm in systems for human engagement and as a (buzz-abundant) field with its own evangelists, conferences and revenue streams. Gamification allows existing businesses to incorporate game-design elements into their overall strategy for tasks as varied as improving customer satisfaction and maintaining high in-company productivity. Many SG companies find themselves in the unique position of being able to use their know-how in combining the fun and playful elements of games with purposeful content for the benefit of gamification, rather than full-fledged development. Analysts predict that by 2014, 70% of the top 2000 global companies will have used at least one gamified process; by 2015, 25% of global business will employ gamification strategies, a trend that will result in a $2,8 billion industry by 2016.

Methodology

In this research we did not limit ourselves only to for-profit companies employed in the production of SG, but we included non-profits, academic research projects and also the organizations that use or order SG. We have made a clear distinction in the analysis between those producing games and all other organizations involved. To this end, we have made individual companies our unit of analysis, trying to position them within greater networks of organizations, in an approach known as Actor- Network Theory (ANT). The assumption behind ANT is that processes can be described as complex chains of associations between both human and non-human participants, aimed at achieving certain goals. The social and the technological environments are equally important for describing SG as an industry, so this is why we performed a differentiated analysis of the companies in question.

First, by surveying existing databases, such as the initial information from the Games for Health Europe foundation and the greater Games for Health project, game classification and websites of conferences related to SG, we arrived at a large database of potential actors within the serious gaming field. Next, we performed a qualitative and quantitative analysis of those actors, aiming on the primary level to assess the location of the organization, their composition and founding date. In some cases, provided the actors were interesting and cooperative, we used a questionnaire to gain additional data. Following the initial results, we examined the information provided and carried out interviews with some of the respondents, while focusing the research on the organizations themselves, not the games they produce. This turned out to be a challenge, as we encountered a lack of relevant literature, with previous research focusing more strongly on the games than on the institutions that produce them. We attempted to create a coherent map of 'who's-who' in the health game scene.

In the upcoming section we elaborate on the results of the 177 primary actors, of which 116 were defined as SG developers and publishers, the rest comprising institutions and bodies utilizing SG or partners in their production. In addition, 63 more secondary contacts were charted with partial information, serving as additional verification on the span of this industry. Additionally, 31 of the companies who provided complete answers to the questionnaire and were deemed relevant, were selected for the in-depth analysis section.

Results

By positioning the addresses of the SG producers on a geographical layout we were able to produce a comprehensive view of gaming innovations. The map (figure 1) shows that Denmark, France, Netherlands and the UK are leaders in SG. Please note that due to the zoom level, some dots are aggregated and thus the Regions of London-Coventry, Paris, Utrecht-The Hague, Copenhagen and Cologne are far more populated than is visible here.

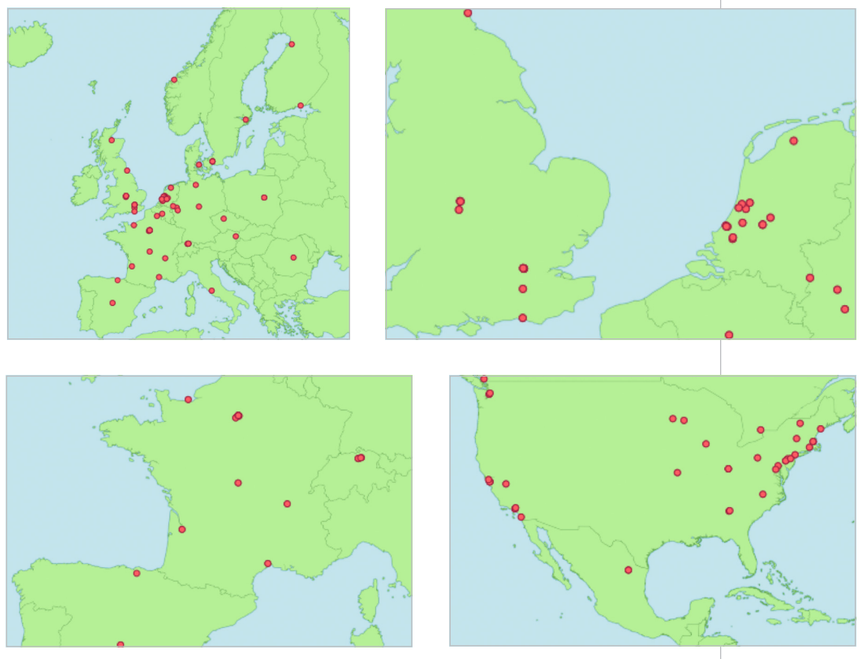


Figure 1: SG companies concentration map

Commercial SG companies can be traced from roughly two separate origins. On the one hand, we see the edutainment-based or simulation-based companies who tend to treat games as traditional software products and thus often create more complex games that appeal to a wider market, and then re-use games' assets to try and find additional clients. The other group of digital agencies has a more project-oriented approach to SG, and tends to create shorter scale, simpler, but more specific games. In recent years an additional category has been added: that of the small scale developers, aiming primarily at the smartphone/tablet platforms, usually coming out of universities (or other higher education institutions) be it as graduating students or following participation in research projects.

In this report, we have also examined in-depth data received from selected organizations, and compared that to previous research. The average size of a SG organization is 36.28 employees (median=20), while IDATE's 2008 sample of 9 companies showed an average of 30.2 employees (median = 17). Only 15 out of 32 (46.8%) surveyed define themselves primarily as SG producers. This validates our initial hypothesis of the difficulty to correctly define and trace the industry.

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Chapter 3

On behalf of chapter 3, an extensive survey on the Dutch game industry was conducted among 160 game companies, 88 game companies have completed the survey.

Chapter 4
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Chapter 5

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France: France government
Nordics: Nordic Game Program, the Nordic Game Facts Reviewed 2011

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- www. healthgameresearch.org
- www. seriousgames.org
- On behalf of chapter 6, an extensive literature review was conducted, additionally multiple SG organizations were surveyed and interviewed for an in-depth analysis.

For more information on the list of retrieved sources see the Dutch Gamesmonitor 2012: www.control-online.nl/gamesmonitor/

Conclusion

- As a rule, the major hubs of SG are tightly integrated with institutes of higher education. Indeed, the most often referred to and recurring actor was Danish Serious Games Interactive, a spinoff from the Copenhagen IT University's Game Center for Computer Games Research. The same goes for Utrecht University and School of the Arts and Coventry University. Though it is not surprising, especially in fields that require a lot of technical know-how, higher education clearly shows up and stays a major contributing factor to success of the serious games industry around it.
- Actors with a background in education and/or software development tend to have a greater number of partners, usually non-commercial, while actors coming from digital agencies seem to work more with temporary clients. This opens up interesting venues of examining different business models within the SG industry and suggests looking into practices of research funds as game development funding and the effect it has on those development cycles.
- The median year of establishment (2005) of developer organizations correlates to the state of the Dutch games industry as a whole (half of the existing companies were established after 2005). This shows how competitive the Dutch games industry has been in the greater SG market.
- The SG industry has a value chain that differs both from gaming and educational software. There are few, if any, publishers present and most of the developers market their own games. Traditional game value chains have developer studios producing games while publishers distribute them. Traditional games are B2C products, therefore, with publishers acting as gatekeepers and mediators between the audience and developers. The fact that most of the surveyed actors of our research displayed or spoke of permanent clients and partners, the SG model is far closer to the B2B model, aiming to work towards the pre-defined goals of the partners in question, rather than targeting a potential market segment. The high percentage of permanent clients indicates that SG industry is still highly reliant on long-term links, and suggests that it still has much growth potential.
- Though we were focused on the organization rather than the games themselves, an interesting characteristic kept appearing: the small number of titles SG organizations offer and their tendency to be standalone projects. SG lack 'branched serialization', that has become the mainstay (and revenue model) for triple- A titles. Branched serialization relates to the way game companies supplement their main products and keep the fan base engaged with a steady flow of digitally distributed content such as free and paid Downloadable Content packs and User Generated Content. SG also rarely features more traditional game expansions. The only serial aspect of SG is the occasional series of titles, such as Nintendo's Dr. Kawashima's training series. None of the companies surveyed, interviewed or described in previous research currently has a distribution strategy which goes beyond the single title they were working on, nor do the companies employ strategies of freemium or in-game purchases, especially since, as we have found out, the two clearest origins of SG companies (edutainment / digital agency) are geared towards one-off projects.
- All of the companies which define themselves primarily as a producer of games, have a staff of less than 40 employees. Out of those, all companies that are commercial SG producers have less than 10 employees. This bodes well with the recent developments in the gaming world, where mobile devices became popular gaming platforms and led to the rise of independent (indie) game studios, consisting of a few people only. Such organizations can greatly take advantage of this fact and move into the SG field with smaller, more agile companies.
- The SG industry is decentralized and dispersed. Despite our assumption, not many actors stood out on the global scale. Organizations referred to each other on the regional (and rarely national) scale, but tracing the links usually opened new SG clusters, rather than led back to known ones. This indicates that the market has not been consolidated yet and thus provides great opportunities for companies to become global leaders.

Appendix
Approach and research method

Trade journal 'Control' and the Dutch Games Association made their network lists available for use in this investigation, allowing us to create a very complete list of companies. These files listed approximately 1,200 people, companies, independent professionals and organizations that have some kind of interest in gaming. The list for applied gaming was supplemented with TNO's network. We worked towards creating a list as complete as possible and considering the status and expertise Control, DGA and TFI have in and of the sector, we can safely say at least 95% of the game companies in The Netherlands has been represented.

After a strict selection process a list was conducted, containing 322 companies and independent professionals. The criteria of our selection led to exclusion for the following.

- With games we are referring to electronic games alone. Companies that are involved in the development and publication of physical games such as board and card games are excluded from the definition.
- The development of games, by this definition, has to be one of the company's core activities. A significant part of the company's turnover (at least a third of the total earnings) should come from the development, production, publication, facilitation and/or distribution of electronic games. This has consequences for many parties (clients, educational institutions) involved in applied gaming. Clients in this field can range from advertising agencies and the Ministry of Defense, to several other public authorities and training agencies. For these companies, gaming is not a core activity but they do often employ a department or a group of people primarily occupied with applied gaming. The latter have been excluded from the core definition of the games industry.
- Public authorities and governments (be they national, regional, sectoral) and educational institutions do operate in the games industry ecosystem, but have not been included in the definition.
- In the case of service providers for the games industry, two criteria were important for inclusion. First of all, service providers contribute to the primary process (or the actual content) of game development. This leaves specialized business service providers (such as specialized lawyers or marketing agencies) out of the count, while they do belong to the industry's ecosystem. The second condition is that a significant part of the service provider's turnover has to come from the game industry.
- Companies and independent professionals that are known to have quit the industry in 2012 have not been included in the selection.
- Retail was left out of this survey completely.
- Online gambling is not considered part of the industry.

These companies were identified as businesses, using their address, in the LISA register of employment files. LISA is a database with information on every location in The Netherlands where paid work is carried out. The data stored on every establishment consists of physical address information and socio-economical data (on employment and economic activity). A number of companies appear to have more than a single registration in LISA, attributed to the same address; they were all included in the count as separate entities (9 in total, 7 accounts of 2 companies registered, 2 of 3 companies). It should also be noted that some companies have more than one branch, which have all been added to the game company count (if located in The Netherlands). Foreign branches of Dutch companies were excluded from the list. There were 9 extra additions and this made 331 the final number of companies.

For employment data we use LISA's conception of the term. LISA lists all full and part-time jobs (12 hours per week minimum) for every registered address. Large companies (20 or more employees) are surveyed yearly on employment size; smaller companies receive the questionnaire once every three years. This means recent developments may not be visible in LISA files.
Matching Control's files with those of LISA led to a successful pair for 232 companies, which make up 70%. LISA's employment data was included for these companies. In similar research into architectural firms and high-tech instrumentation, higher matching percentages came out (85-90%). This means that existing registers do not always have up-to-date files, due to the speed of development in the games industry.

The missing 99 companies (30%) had to be identified, using two sources: the company's website and/or the surveys they filled out for Control in the summer of 2012 (the results of which have also been added to this document). The company websites usually also provide information on the number of employees. This stage led to another 62 complete entries. The size of the other 37 companies (11.1%) has been estimated on the base of average game company sizes per category.
This adds up to a total of 3.000 employees for the Dutch games industry in 2011.
Based upon this employment information, it becomes possible to make an estimate of the company's turnover. We refer to the CBS 'National accounts of The Netherlands' for the year 2011 (provisional figures).

The Dutch Games Industry

FACTS & FIGURES

Control. TNO DGA Dutch Games Association MV Montpellier Venture iMMovator cross media network Dutch Game Garden Task Force Innovation Utrecht Region