Technical support to elaborate a radiography of the videogame sector in the Canary Islands

Diagnostic report

June 2020

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0.1. Fieldwork results

The following techniques of consultation, compilation or collection of information and analysis were used to prepare this report:

Online surveys: surveys were sent to the agents identified, both companies and associations, in order to analyse the current state of the video game sector in the Canary Islands.

Interviews: A total of 7 telephone interviews were conducted with some of the agents identified in order to learn more about their opinion on the development of the sector as well as its main advantages and shortcomings.

Based on the answers obtained, the following SWOT analysis which including the weaknesses, threats, strengths and opportunities of the video game sector in the Canary Island has been elaborated:

Weaknessess

- Shortage of direct public aid
- Lack of knowledge of the tax benefits available in the Canary Islands
- Lack of private funding
- Lack of information on the size and benefits of the sector
- High barriers to entry due to the scarcity of start-up aid involving large investments
- Limited specialized educational offer

Threats

- Being an outermost region could mean a difficulty for the transit of profiles
- More visibility is being given to other sectors at the expense of video games
- Lack of support for the sector
- Competition with other international companies that have a higher development level
- Lack of qualified personnel

Strengths

- Tax benefits for being an outermost region, such as those related to the ZEC zone
- Geographical location of the Canary Islands which is among some of the potential markets
- The small number of professionals who can be found are highly talented

Opportunitiess

- The quality of life on the islands can be an advantage to attract professionals and companies from other countries
- New technologies can be used to reach a larger number of consumers
- It is a young high-growth industry with an increasing market share.

0 | EXECUTIVE SUMMARY

0.2. Benchmark analysis

Both at European and global level, there are countries that already apply the incentive for audio-visual productions to the video game industry, such as France, the United Kingdom and Canada.

In this analysis, detailed information is presented for each of these countries, analysing the main characteristics of their incentives, as well as the positive results derived from their implementation.

United Kingdom		
Video Games Tax Relief (VGTR)		
Description		
Companies subject to UK corporate tax that produce qualifying video games may claim tax relief for expenditure on goods and services used or consumed in the UK to the value of 20% of the production budget. No more than 80% of the production budget may be deducted in addition.		
Major benefits obtained		
Between 2016 and 2019 the number of companies increased by 8.4%	In 2016, the VGTR generated 9,240 jobs	For every £1 invested in the video game industry, £4 in GDP is generated

France		
Crédit d'Impôt Jeu Vidéo		
Description		
The Video Game Tax Credit is intended for companies engaged in the development of video games located in France. Under certain conditions, it offers a tax exemption equivalent to 30% of the total expenditure directly allocated to the creation of a video game.		
Major benefits obtained		
The number of companies has grown over the years, reaching 1130 companies in 2019	As from 2013, the average number of employees of French companies has been 26,94.	Sector turnover has grown by 77,8% since 2013, standing at 4,8 billion in 2019

0 | EXECUTIVE SUMMARY

0.2. Benchmark analysis

Canada

Several federal and provincial inentives

Description

There are currently multiple incentives applicable to the video game industry in Canada.

- At the federal level there is the Scientific Research and Experimental Development (SR&ED) incentive, for which companies receive US$3 million.
- At provincial scale, Alberta, Ontario, Quebec, British Columbia, Manitoba, New Scotia and Newfoundland and Labrador have created their own tax credits ranging from 17,5% to 40% depending on certain expenditures.

Major benefits obtained

Between 2017 and 2019 the number of companies increased by 16.1%	The industry directly employed approximately 27,700 people in 2019, this is a growth of 27.6% over 2017	In 2019, the industry's impact on GDP increased by 19.7 % compared to the impact in 2017

As we have seen throughout the analysis of Canada, France and the United Kingdom, all of them currently apply very advantageous tax benefits for video game companies.

All of them have both differences and similarities in their configuration, but in all cases their application has brought significant economic benefits both for the companies themselves and for the economy of their countries.

As we have seen during the analysis the deductions in France and UK initially corresponded to 20% of budget expenditures, while in 2017 France increased this percentage to 30%. In the case of Canada depending on the province the incentives range from 17.5% to 40%, representing a higher percentage than the European incentives.

The main deductible expenses usually coincide, in the case of Canada, with the labour for the creation of the game, while in France and the UK they go beyond that, including the expenses for the conception of the video game as well as other expenses for materials and supplies, even reaching in some cases the expenses for marketing and distribution of the products created, also in the case of Canada.

0 | EXECUTIVE SUMMARY

0.3. Conclusions

After analysing the current situation of the video game sector in the Canary Islands, the following conclusions have been reached:

The Canary Islands industry consists of small companies, being an incipient industry

Currently, the video game business network on the Canary Islands mostly consist of micro-companies with an average number of workers of 7. These are mostly companies that are just getting off the ground and that do not yet have a long trajectory in the sector, with a turnover of less than 200k euros per year.

The video game sector is a young industry that handles a very high volume of business compared to other industries, so the Canary Islands should take advantage of its strengths and opportunities to achieve greater development.

The necessity of considering video games as audio-visual products

Currently, the Canary Islands offer an incentive related to R&D for video game companies. However, as we have seen during the analysis, video games are similar to audio-visual products, having a cultural and entertainment component. The main companies, associations and institutions in the sector have had struggles for years for video games to be recognized as audio-visual products and to benefit from the same incentives. The current R&D incentive is adequate for companies that create their own technologies.

Difficulty in identifying qualified personnel on the islands

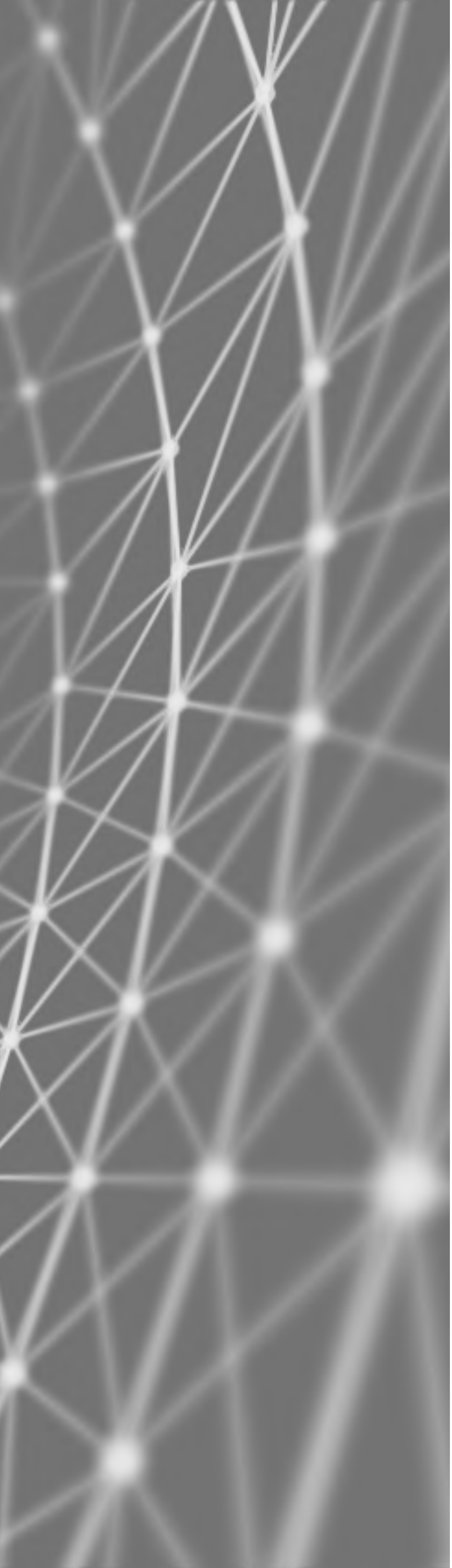
Some of the main companies have expressed their difficulty in finding qualified personnel in the sector, having to turn to other territories. One of the factors that cause this difficulty is the shortage and lack of specialization of the current training offer.

Other countries are making benefits thanks to the creation of specific incentives for the sector

Other countries such as France, Canada or the United Kingdom have created specific incentives for the videogame sector, generating a very positive impact. The implementation of tax incentives has resulted in significant benefits that have led to increasing the number of companies and, consequently, jobs, as well as enrichment of the country's economy.

Shortage of financing in both public and private sectors

It is difficult to access the scarce public aid available, as well as to find private investors who prefer to invest in other sectors that involve less risk.



1 | INTRODUCTION

1 | INTRODUCTION

1.1. Project context

The video game industry has become one of the most profitable sectors in the world. The global turnover of this medium is double that of the movie industry and six times more than that of the music industry. This sector is in a growth phase in our country. According to the report of the Spanish Association of Video Games (AEVI) that analyses the video games sector in Spain, for every euro invested in this sector, there is an impact of 3 euros on the economy as a whole and for every job generated by the video games industry, 2.6 are created in other sectors.

At a national level, the video game industry directly employs 8,790 people, with a total impact of the sector on the economy of 3,577 million euros and 22,828 jobs. During 2018, the video game industry confirmed itself as the first choice of digital leisure, with 1,530 million euros invoiced, 12.6% higher than in 2017. The e-sports registered a total audience of 6.9 million people, with 4 million casual viewers, 2.9 million fans; and with more than 300 workers and 100 professional players.

These data, as well as the positive trend in last years, demonstrate the importance of the sector and its potential for economic and employment growth in a region and, specifically, in the Canary Islands.

In addition, the current situation with the outbreak of COVID-19 has increased by 65% worldwide the consumption of video games. According to Telefónica's data, between March 13 and 15, gaming traffic increased by 271 percent compared to the previous week in our country.

About this, the Canary Islands are in a privileged situation to become a power of development and international promotion of the sector, especially highlighting its status as an Outermost Region (OR) and the development of the tools of the Economic and Fiscal Regime (REF), based on which the development of video games can benefit from the 45% tax deduction for investment in technological innovation. However, the Canary Islands industry faces some difficulties in its development, being mainly made up by small companies and studios that represent approximately 2% of the total number of Spanish companies.

Based on these characteristics, it is necessary to analyse the current situation of the sector in the Autonomous Community, in order to know the aspects in which the Canary Islands stands out in the videogame sector, but also what aspects should be promoted for its consolidation.

Predictions of the Spanish Video Game Developers Organization (DEV) :

23% industry annual growth to reach by 2021

1,630 million in turnover

In terms of employment, an increase of 18.2% and 12,379 direct workers

1 | INTRODUCTION

1.2. Project objectives

General Objective

Analyse the value chain of the videogame sector in the Canary Islands and identify areas to improve

Specifics Objectives

01 Understand the value chain of the video game sector in the Canary Islands

02 Identify the aspects that differentiate the Canary Islands within the sector and the aspects in need to improve

03 Analysis of the audio-visual tax incentive applied to video games

04 Development of recommendations for the sector improvement

1 | INTRODUCTION

1.3. Methodology used

The following methodology was proposed to carry out the project:

Steps	STEP 0. Planning and launch	STEP 1. Value chain definition	STEP 2. Final report preparation
Activities	1. Project launch meeting 2. Control, monitoring and participation mechanisms planning 3. Information gathering and searching for available information	1. Sector's value chain definition 2. Agents of the sector in the Canary Islands identification 3. Video games sector in the Canary Islands analysis	1. Recommendations definition 2. Final report preparation

The main activities carried out during the implementation of the project are described below.

STEP 0: Planning and launch

During the early stage of the project, the methodological proposal and the project planning were validated. Likewise, the work team was organised, planning in detail the tasks to be carried out and determining the appropriate instruments and tools for this purpose.

In addition, key interlocutors were selected to obtain information regarding the current situation of the video game sector in the Canary Islands.

STEP 1: Value chain definition

Accordingly, surveys were drawn up for the main companies with the aim of gaining a more in-depth knowledge of their activity, with special emphasis on the profiles of professionals involved in the production and development of video games in relation to the training offer currently available

Furthermore, the available documentation was analysed (e.g. white paper on video games 2018, the video games sector in Spain: economic impact study and fiscal scenarios, etc.) as well as that sent by PROEXCA, from which interest information on the sector was obtained and facilitated the development of the analysis.

Interviews were also carried out with some of the agents in the value chain of the Canarian sector in order to obtain their opinions more detailed.

STEP 2. Final report preparation

In this step, which we are currently in, Deloitte is drafting a final report on the project, which is responsible for collecting the most relevant information from the previous steps, the conclusions obtained from the analysis of the sector and makes proposals for change or improvement to guarantee the adaptation and appropriate evolution of the video games sector in the Canary Islands.

1 | INTRODUCTION

1.3. Methodology used

Producing this report and during the development of the steps described above, the following techniques were used for consultation, compilation or collection of information and analysis of it:

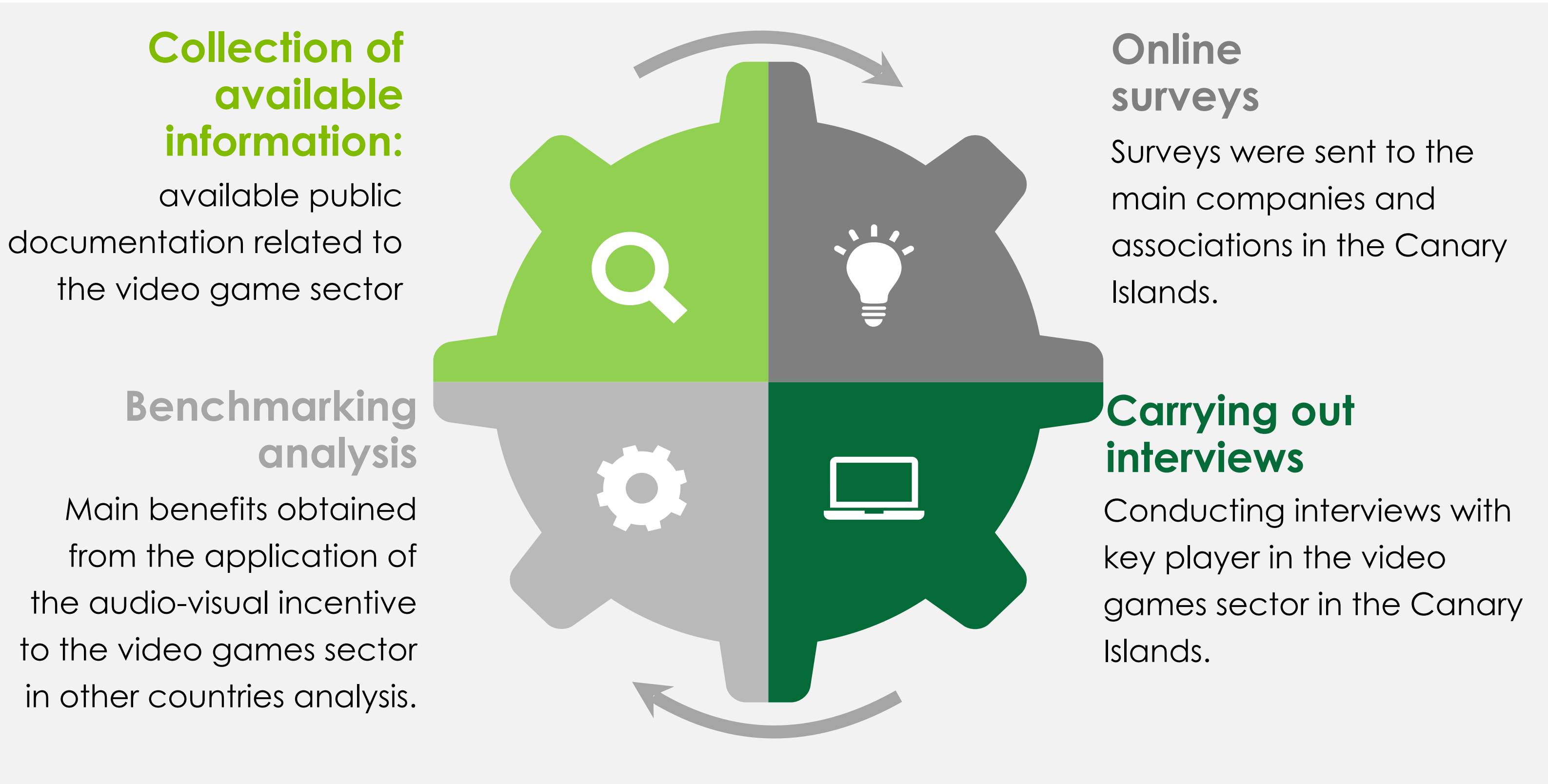
Collection of available information: available public documentation related to the video game sector in Spain was analysed, the main documents being the White Paper on video games 2019 and the economic impact analysis study and tax scenarios developed by AEVI (Spanish Association of Video Games). PROEXCA also submitted several internal studies as well as a preliminary list of agents.

Online surveys: surveys were sent to the agents identified, both companies and associations, in order to analyse the current state of the video games sector in the Canary Islands.

The surveys were conducted using the LimeSurvey tool, after being validated by PROEXCA's project managers.

Interviews: a total of 7 telephone interviews were carried out with some of the agents identified in order to find out more about their opinion on the sector development and its main advantages and shortcomings. For this purpose, a script of open-ended questions was prepared in advance so that they could develop their opinions more easily.

Benchmarking analysis: In order to find out the benefits of applying audio-visual incentives to the video games sector in other countries, a comparative study or benchmarking analysis was carried out in countries such as Canada, France and the United Kingdom, being a reference for the application of this incentive in the Canary Islands.



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2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.1. Fieldwork results

2.1.1. Overview

The aim of this section is to explain the main results obtained from the fieldwork carried out in the context of the project. This provides, a reflection of the current situation and also it serves as input for the subsequent drawing of conclusions on the current state of the video games sector in the Canary Islands.

The participatory process was carried out through two different activities, the online surveys and the interviews.

The main characteristics of each one are set out below:

Online surveys

- Recipients: a survey has been sent to the main companies that are part of the value chain of the video games sector in the Canary Islands, and to the main associations in the sector.
- Purpose: find out the main characteristics of each company, with special emphasis on the profiles available to them and the needs detected in the Canary Islands sector.
- Participation: 16 replies received.

Interviews

- Recipients: Justice Administration staff from different services and administrative units.
- Purpose: to obtain qualitative information about the development of its activity, as well as the main needs and advantages of the Canary Islands sector.
- Participation: 7 interviews.

The implementation of the actions mentioned above reflects the importance of the agents opinion that compose the sector when determining the current situation of the sector in the Canary Islands. Finally, the following agents were involved in the process:

- Canary Islands companies and professionals in the Animation, Videogame and Visual Effects sector Association (SAVE)
- Canary Islands Video Game Developers Association (ACADEVI)
- Asociación Innova 7
- Rising Pixel
- Boombox
- Mindiff technology
- Eteru Studio
- Promineo Studios
- Drakhar Studio
- Triple O Games
- Daydream Software
- Bmcaff Studio
- PlayMedusa
- Fire Cycle Games
- OrbisNauta
- Windlanders Studio

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2.1. Fieldwork results

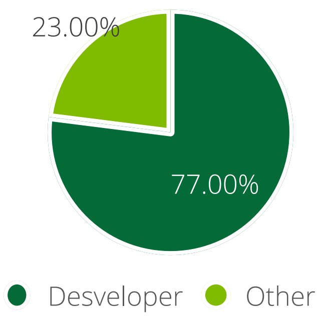
2.1.2. Surveys results

In terms of the surveys, the principal results obtained after analysing the responses received, where participation was over 60% of the people selected for the development of the participatory process, are detailed below.

These surveys were filled in by the main companies that make up the video games sector in the Canary Islands, with 54.2% of the responses, as well as by the main Associations, whose percentage of participation represents 100%.

Regarding to the type of participating companies, 77% of them are development companies, while 23% belong to "other types of companies" whose main activity is localisation and design in parallel to development.

Figure 1- Type of company



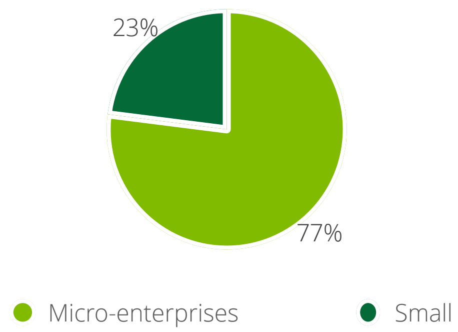
Source: compilation based on the results of the surveys

Furthermore, there are other agents involved in the sector apart from companies, such as Associations, which have also been included in the surveys, stating that their main activity consists of promoting the video games sector by holding events and collaborating in training.

Regarding to the size of existing enterprises, a high percentage of them are micro-enterprises.

As can be seen in the following figure, 77% of the companies have less than 10 workers, that means they are micro-enterprises, while the remaining 23% are small companies with less than 50 workers. There are currently no medium-sized or large companies in the Canary Islands.

Figure 2- Enterprise size



Source: compilation based on the results of the surveys

Therefore, the workers average number in companies from the Canary Islands is 7.

In terms of turnover volume, 84,6% of companies have an annual turnover of less than 200,000 euros, while the remaining 15,4% have a turnover of between 200,000 and 1 million euros.

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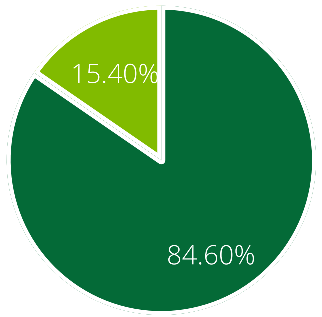
2.1. Fieldwork results

2.1.2. Surveys results

Figure 3- Turnover volume

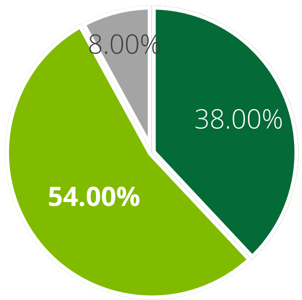


Source: compilation based on the results of the surveys

All the companies chosen for the study have their headquarters in the Canary Islands, which is why they were selected for the study

Here it is worth noting that the headquarters of the companies are located in the capital islands, with none of them having headquarters in the rest of the non-capital islands, according to the distribution shown in the following figure:

Figure 4. Company location

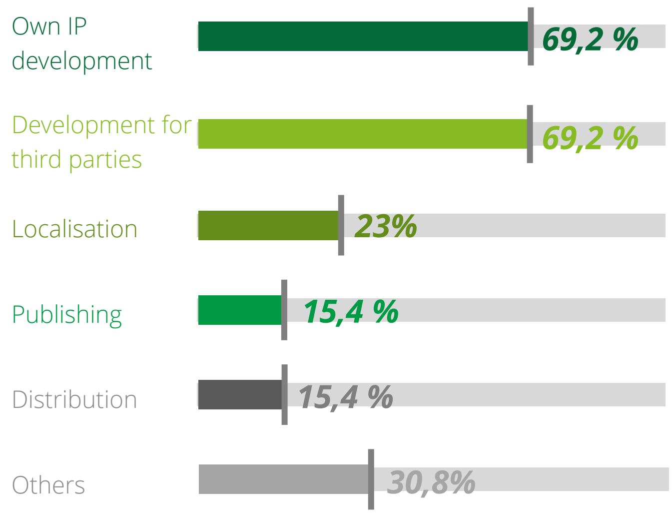


Source: compilation based on the results of the surveys

In addition, 7% of the companies have headquarters in other Autonomous Communities and 14.3% have headquarters in other countries

Regarding to the type of services or products offered by the companies, we can see that 66.6% of them focus on the development of proprietary IP, and this activity stands out above the others

Figure 5. What services does the company provide or what kind of products offer?



Source: compilation based on the results of the surveys

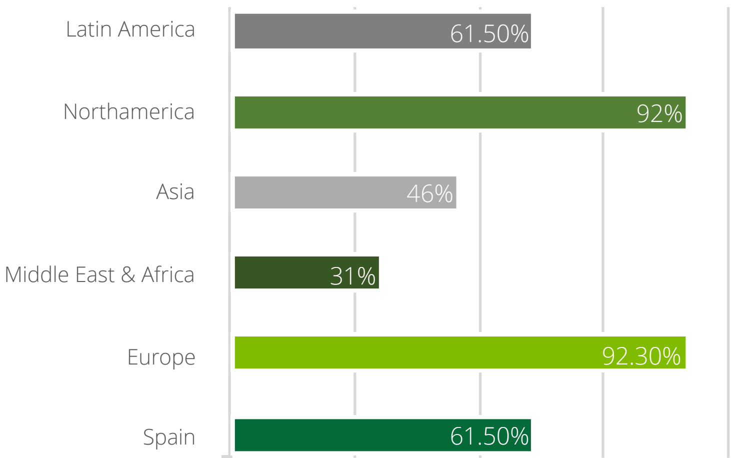
2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.1. Fieldwork results

2.1.2. Surveys results

Concerning the destination´s largest markets for products and services, the results of the survey show that the largest markets are Europe and North America.

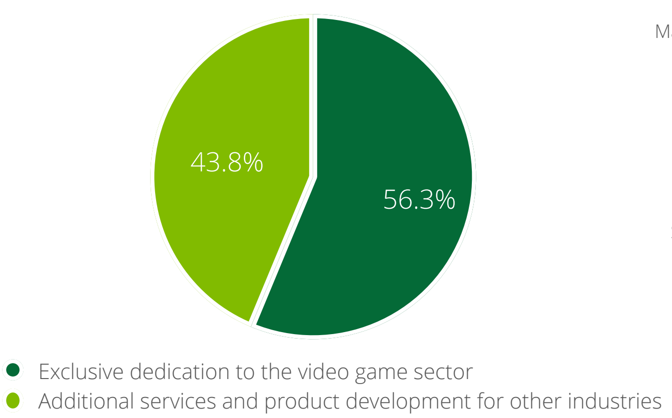
Figure 6- Target markets



Source: compilation based on the results of the surveys

In terms of the activities degree of specialisation carried out by each of the companies and associations surveyed, a 56.3%of them are dedicated exclusively to the video games sector.

Figure 7- Degree of specialisation



Source: compilation based on the results of the surveys

Regarding to existing synergies with the animation sector, opinions vary. 68.75% of the interlocutors consider that such synergies do exist, therefore, they express the following opinions:

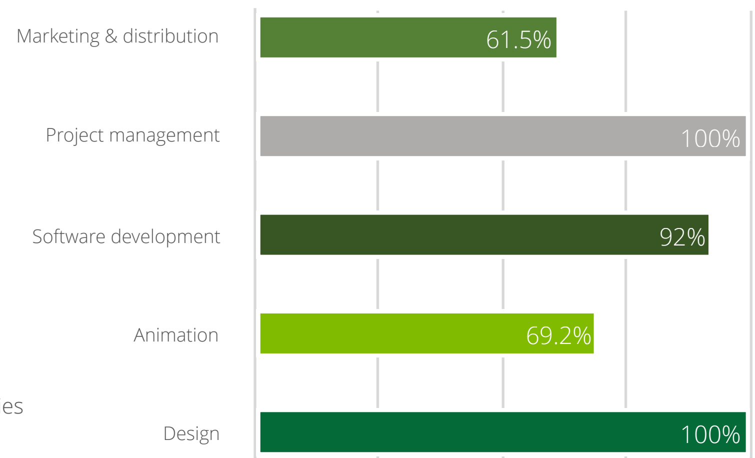
"Almost all games have animations, whether 2D or 3D"

"We think that both go hand in hand"

"Many of the tasks are very similar and can be applied almost directly at a technical level. However, I have the feeling that at the enterprise level each sector individually aims at its own goals without taking advantage of the fact that together we could be stronger".

All companies identify the necessary skills and qualifications that their employees should have for the development of their activity. 69.2% of them consider to incorporate new profiles in their staff, including metrics analysts, community managers, artists, illustrators, programmers, game directors...

Figure 8- Does the company have the following profiles?



Source: compilation based on the results of the surveys

2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

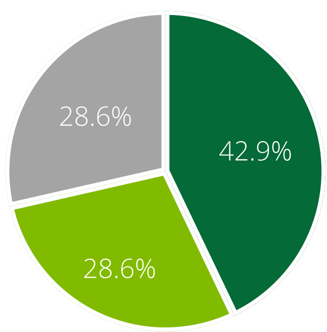
2.1. Fieldwork results

2.1.2. Surveys results

The degree of coordination with other companies that are part of the value chain is high. They represent 53.8%, emphasising the fact that in the majority of cases the companies in which this coordination takes place, they belong to the international level, with only 42.8% of cases involving other Canary Islands companies.

This high degree of coordination means that all the activities of the company surveyed are carried out jointly with other companies that form part of the value chain, while in other cases, as can be seen in the following figure, outsourcing is carried out with other companies for the development of certain services or products.

Figure 9- Degree of coordination



Source: compilation based on the results of the surveys

Concerning to the current training offers available in the Canary Islands(*) related to the video game industry, 56.2% of the companies surveyed claimed that they were aware of the current offer. 66.6% of them consider that it was not enough to provide trained professionals in the sector.

(*) The current training offer is defined in section 2.4 in this report on identified needs (see page 30)

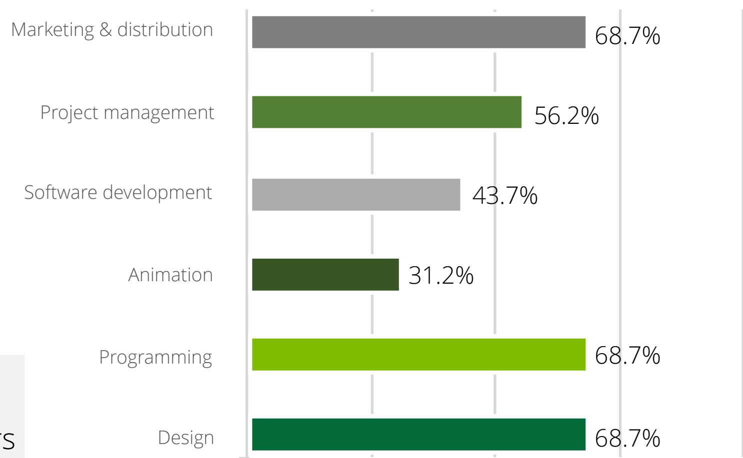
Regarding to the feeling of the training offer insufficiency, the interlocutors expressed the following:

"It's not very specialised, they give notions of many things at a very high level instead of offering a more segmented and specialised training in each field".

"It's too focused on animation and art, they ignore aspects of equal or more importance such as programming, design, storytelling, production and business development."

In terms of areas considered a priority in terms of training, as can be seen in the following figure, design, programming and marketing and distribution stand out.

Figure 10- What are the priority areas for training?



Source: compilation based on the results of the surveys

Only 38.5% of the companies have their own training plans for their employees. However, 84.6% of companies provide training to their employees, most of them using internal resources.

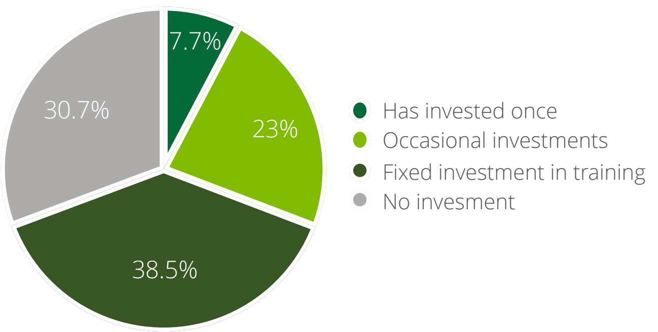
2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.1. Fieldwork results

2.1.2. Surveys results

Companies investment in training degree is shown below, highlighting that 33.3% maintain a continuous investment in this area.

Figure11- Training investment



Source: compilation based on the results of the surveys

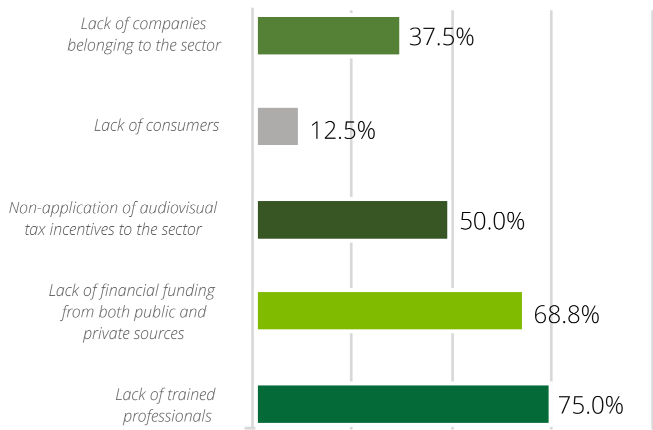
Regarding to the video games sector´s finance, we can distinguish between the aid offered by public institutions and private financing, with 93.75% of the interlocutors considering neither of them to be enough.

Furthermore, 87.5% of the interlocutors believe that the tax incentives established for audio-visual productions should include the video games sector. They consider that this application would be very beneficial for the Canary Islands sector, observing the positive results in other countries like Canada and France. Section 3 of this report will examine the situation in these countries in more detail.

According to 56.25% of interlocutors, the audio-visual incentive would be more beneficial than the current R&D&I incentive, stressing that they could be complementary.

Related to the previous point, among the main shortcomings for the sector development today, the lack of both public and private funding, as well as the lack of qualified professionals in the sector, stand out as the main ones.

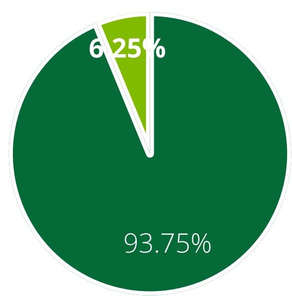
Figure 12- Main sector shortcomings in the Canary Islands



Source: compilation based on the results of the surveys

Finally, 93.75% of participants in the survey agreed that the video games sector in the Canary Islands is currently an infant industry.

Figure 13- Sector current situation



Source: compilation based on the results of the surveys

2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.1. Fieldwork results

2.1.3. Surveys results

In relation with the interviews carried out during the participatory process, the main qualitative results obtained are detailed below. The main objective of these interviews is to go deeper into the interlocutors opinions on the current situation of the video game sector in the Canary Islands. This allow more open answers than the surveys.

As we have seen in the previous section, the majority of Canary Islands companies are developers, with a very low percentage of them belonging to another link in the value chain in the territory

The services provided by the interviewees focus exclusively on the video game industry. However, some of them provide services for other industries such as animation, real image producers or even for marketing companies making presentations with virtual reality or product catalogues. There are also other companies that are currently creating their own technological tools in order to develop their video games.

In the video game sector, there are also Associations whose main activity is focused on the promotion of the video game industry by organising events or collaborating with other institutions for the development of training courses.

The training offer available in the Autonomous Community of the Canary Islands is insufficient to provide trained professionals in the sector.

Most of the interviewees said that they were aware of the current training offer, considering that it is not enough, because it is not very specialised. At the moment, the concepts that are given in fields such as development, programming or art are basic, and in the video game sector are very specialised. Moreover, it is mainly focused on the art part and not on programming.

An effort has been made by public institutions and companies such as Factoría de Innovación, to expand the range of training offer, although it is aimed at the artistic side and there is a lack of programming and video game production.

Some people consider that the current training offer is enough for the existing audience. The Canary Islands population is small and there is not much demand for this type of training as the industry is still in its development phase. In addition, companies often find trained people who in practice have difficulties in solving "real" problems, so they believe that the training offer should be more practical.

Currently, the profiles most in demand in the Canary Islands are related to art and programming.

Moreover, interlocutors say that these are the most difficult profiles to find due to the shortage of specialised training in the sector. In many cases, it is necessary to go to other territories to find the trained professionals they need. Companies say that it is not so important when recruiting a new employee that they have extensive experience, but they do need a minimum of training, and therefore consider these areas to be a priority in terms of training.

2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.1. Fieldwork results

2.1.3. Surveys results

It is also difficult to find other profiles such as VFX (special effects), producers or 3D animators.

Nowadays, companies have a wide variety of profiles, highlighting that all of them are necessary to develop the video games and that it is a very collaborative industry in which team work is carried out and programmers, artists, composers, etc. are important. Furthermore, marketing and distribution-related profiles such as community managers, marketing managers, licensing managers, etc. are not very well represented in companies.

Coordination with other companies in the sector takes place mainly with international companies..

This international coordination is a consequence of the non-existence of other companies in the value chain in the Canary Islands, such as localisation or publishing companies. It is also related to the current size of Canary Islands companies, as well as the difficulty to find trained professionals in the sector.

Therefore, the partners are forced to turn to companies located in other countries or even in other autonomous communities, working with them on certain aspects of the video game, such as translation, music composition, special effects, etc. In line with the above, it also highlights the importance of marketing and commercialisation, which are fundamental for the industry, since if you do not promote a product, it is difficult to sell it.

Public support provided to the sector is not enough, especially for start-up companies.

Firstly, it is worth noting that many of the interviewees expressed a lack of knowledge about existing public support, stating that there is almost no information on the subject. Furthermore, those who are aware of them, consider that the economic support for companies that are starting from scratch is scarce or practically non-existent, and that they must have a minimum amount of capital or a certain size to be eligible for it. For this reason, the interlocutors consider that the government should focus aid on the creation of new companies and entrepreneurship in the sector. The general perception is that the administration has not assimilated the sector's business model.

In this point, other sectors such as animation and cinema say that they do receive economic support, stating that governments should support the video game sector more, as it currently moves larger sums of money than other audio-visual products such as music or cinema. In addition, public aid should be focused as incentives to attract private investment, which is what happens in the rest of the audio-visual world.

The video games sector has hardly any private funding.

Private investors tend to target other sectors, such as the hotel or construction industry, as they offer better guarantees than video games. However, there are companies that manage to obtain private financing, indicating that it all depends on the idea and the prototypes that you present.

2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.1. Fieldwork results

2.1.3. Surveys results

Investors generally value ideas as well as the team behind them.

However, there are interlocutors who claim that they have never used this type of financing but consider that it is scarce not only in the Canary Islands but in our country in general due to the lack of diffusion given to the sector at the present time. Nevertheless, as a solution to this problem, a number of events are held throughout the year in our country aimed at fostering connections between companies and investors.

All interviewees agree that tax incentives established for audio-visual productions should include the video games sector.

Firstly, it should be remarked that there is a general lack of knowledge of the types of incentives that currently exist and which can be applied to video games companies in the Canary Islands. However, the opinions of those interviewed are oriented towards the greater suitability of these audio-visual incentives than those currently applied in relation to R+D+ innovation.

They consider that video games have a higher turnover than other audiovisual products and should therefore enjoy the same advantages. Moreover, the synergies with the animation sector come into play here, with all the interlocutors believing that the development of a video game is practically identical to the production of an animated film, even more closely resembling that of a live-action film, with which it shares the same incentives, although the production process is totally different.

In addition, video games are considered to be more a cultural and entertainment product, so according to some of the interlocutors these incentives would be more appropriate than those for research and development. The latter are appropriate for companies that not only create video games but also develop their own technological tools for their development instead of using existing ones, so that in these cases both incentives could be applied.

Nowadays, the video game sector in the Canary Islands is just starting.

It is a sector with many possibilities, but it is still in its infancy. Those interviewed consider that the creation of companies in the Canary Islands is at a very early stage, with fewer than 100 professionals in all the islands. There are very few companies and those that do exist still need more trajectory.

2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.1. Fieldwork results

2.1.3. Surveys results

Finally, the interviews included questions aimed at eliciting interlocutors' views on the main weakness, advantages and impediments of the sector nowadays.

Based on the answers obtained, the following SWOT has been drawn up, which includes the weaknesses, threats, strengths and opportunities of the video game sector in the Canary Islands:

Weaknesses

- Shortage of direct public aid
- Lack of knowledge of the tax benefits available in the Canary Islands
- Lack of private funding
- Lack of information on the size and benefits of the sector
- High barriers to entry due to the scarcity of start-up aid involving large investments
- Limited specialized educational offer

Threats

- Being an outermost region could mean a difficulty for the transit of profiles
- More visibility is being given to other sectors at the expense of video games
- Lack of support for the sector
- Competition with other international companies that have a higher development level
- Lack of qualified personnel

Strengths

- Tax benefits for being an outermost region, such as those related to the ZEC zone
- Geographical location of the Canary Islands which is among some of the potential markets
- The small number of professionals who can be found are highly talented

Opportunities

- The quality of life on the islands can be an advantage to attract professionals and companies from other countries
- New technologies can be used to reach a larger number of consumers
- It is a young high-growth industry with an increasing market share.

2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.2. Value chain

The value chain is a management tool designed by Michael Porter, which allows categorising and ordering all those activities and processes that produce added value to a final product.

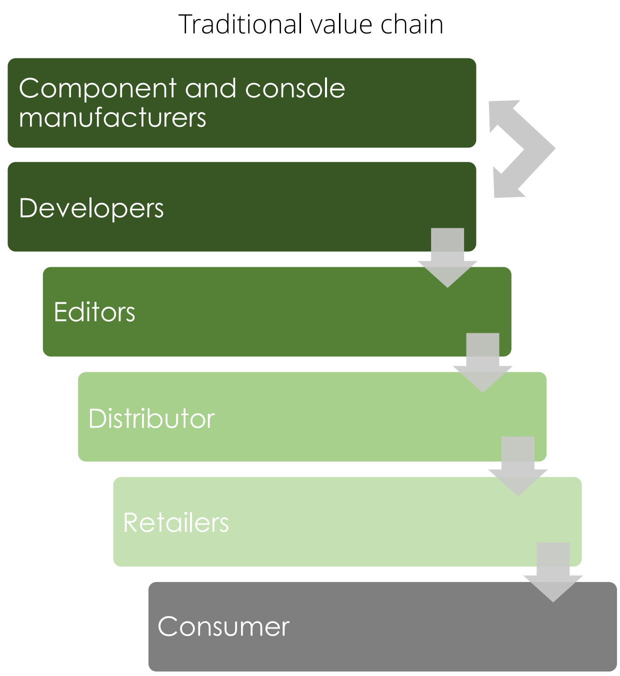
It is called a value chain because it considers the main activities of a company as links in a chain of activities, which add value to the product as it passes through each of them. These activities form a process that basically consists of the design, production, promotion, sale and distribution of a product. Therefore, the value chain of a video game is the set of processes and stages necessary to create and add value to the video game until it reaches the consumer.

The value chain of the video game industry is not significantly different from that of the other industries in the Entertainment and Media complex.

This chain is traditionally based on the purchase of the product in physical format in any establishment. The agents that make up the traditional value chain in the Video Games Industry are:

Firstly, the game designers and developers, who work with help technology providers help, who are in charge of solving any problems or limitations of the developers, through game engines or any kind of computer programmes (Software).

It is at this point that the genre is determined, what type of creativity the video game will have and a first sketch of the story. In this first block, the artistic design, mechanics and programming are also developed, culminating in the planning of the development of the product.



The second link is formed by the publishers (editors). They are responsible for ensuring that the concept can be elaborated by the developers and transformed into a final product, with the possibility of being distributed and reaching the user: the player. At this stage of the value chain, several activities must be articulated: the organisation of the development of the game, the marketing of the game, its financing, the pricing policy, the relationship with distributors and retailers. It is common for developers and publishers to be part of the same company, as a result of vertical integration, which is particularly common in large companies in the sector.

The third link is made up by distributors. The participation of these actors in the video game circuit depends on the channel chosen by the publisher.

2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.2. Value chain

As the last link in the chain, we can mention consumers. Consumers profile has been changing in recent years.

According to Intel, the profile of the Spanish gamer is still mainly male, although the difference is becoming smaller and smaller (20%), mainly between 25 and 34 years old, with a job and university studies.

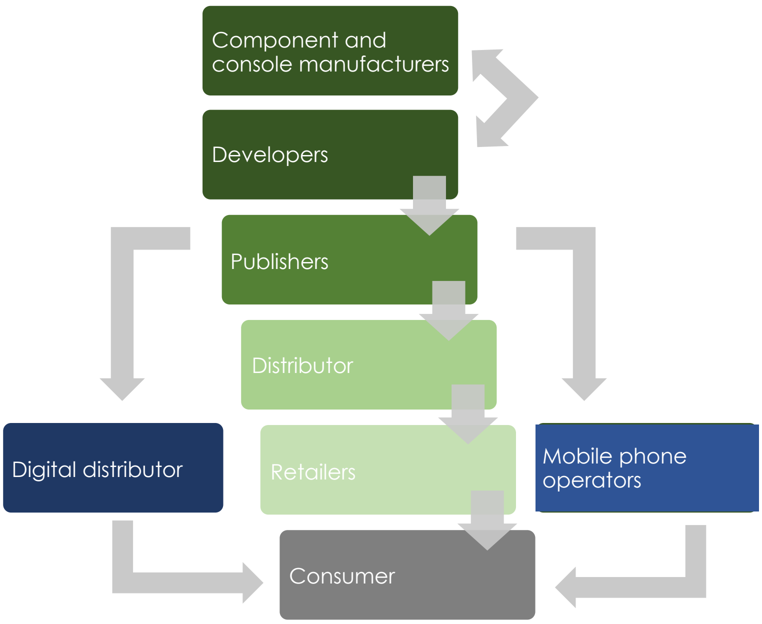
This average gamer also tends to play between three and four days a week. Although they play on different platforms, the study highlights the tendency of young people to play on PC. Older people tend to prefer the game console. In this sense, 38% of respondents in the Intel report have the PC as their preferred platform for gaming, compared to the game console and the mobile phone or tablet. For 40%, it is also the platform they spend the most time on per week. Finally, the report notes the increasing trend to communicate either through the game itself or through a programme that allows them to do so.

The Internet and new technologies have broken this "traditional" structure, as it had developed in the marketing of video games for consoles and PCs, leading to a phenomenon known as "disintermediation". This phenomenon opens up new channels of exchange and new financial flows between consumers and producers.

Nowadays, it is very common to pay for the download of a video game, so that you acquire a "digital copy", without a physical format.

The progressive switch to online gaming has introduced new methods of distribution and has begun to reorganise the roles and dynamics of interaction between actors at each of the different levels of the value chain.

New value chain



One of the actors most affected by the emergence of the Internet are retailers and their logistical distribution function. This process is no longer relevant in the online video games segment, due to the fact that "digital goods" are produced and distributed online at marginal costs that tend to zero.

2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.2. Value chain

Online digital distribution affects the operational structure, bringing about a convergence of the roles of the distributor and retailer with those of the publisher. Nowadays, their role is rather limited around distribution logistics, as publishers have grown in the value chain, taking over the relationship with retailers. In turn, retailers have increased their influence by taking over the link, due to their proximity to the consumer and the advisory services they provide.

Depending on the type of game, the publisher may also act as a distributor and seller of the published video games to other players such as mobile operators or mobile device manufacturers for marketing through their own applications. In this way, the portals and device manufacturers themselves provide shops and portals for the distribution of games, and even add advertising that facilitates the promotion of new video games to users.

These changes in the commercialisation of online video games, compared to the traditional value chain, affect not only the interactions between the different actors in the value creation process, but also the type and number of actors involved.

The value chain in the Canary Islands is quite limited, as there are currently only a small number of companies dedicated mainly to the development of video games. As mentioned above, these companies represent 75% of the total figure, with no significant representation of the other links in the chain.

As a consequence, the new change brought about by the new technologies in the value chain has not affected the Canary Islands sector to any great extent, given that most of the companies that form part of it, as has already been mentioned, are developers. Some consider that it has even favoured the sector development, since the publication of video games on the Internet makes it possible to reach other markets and therefore a greater number of consumers.

2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.3. Map of actors

Below is a map of the main agents that form part of the video games sector in the Canary Islands. This includes the studios and companies that carry out their activity in the Canary Islands, which either have their main headquarters in the territory or carry out some type of activity.

Furthermore, we find the main Associations that make up the video games sector. The map of agents also includes the main Canarian Public Administrations as well as the educational institutions that are present in the territory.

Companies

Companies

- 30 Paralell Games
- BoomBox SL
- Drakhar Studio
- Factoría Innovación
- Games Experience SL
- Gamescribes
- Mindiff
- No Brakes Games
- Promineo Studio
- Rising Pixel
- Triple O Games
- Windfish Windlanders Studio
- IslaOliva Games
- Qubical Game Studio

Freelancers

- Bmcaff Studio
- Daydreamsoftware
- Eteru Studio
- FireCycleGames
- Gofio Games
- NeroSaution
- Orbisnauta
- Papas con Mojo Games
- Play Medusa
- QuilloProds
- RainBrawl
- Reckless Monster Studios

Associations

- Canary Islands Video Game Development Association (Acadevi)
- Canary Islands Companies and Professionals of the Animation, Video Games and VFx Sector Association (SAVE)
- Innova 7 Foundation

Public Administration

- Canary Islands Government
- Island Councils
- Town Councils

Education institutions

- Canary Islands Universities (ULL, ULPGC, UEC)
- CIFP Cesar Manrique
- IES Puerto de la Cruz Telesforo Bravo
- IES el Rincón
- IES Lomo de la herradura
- CEP Santa Cruz de Tenerife
- Gran Canaria Economic Promotion Society– SPEGC
- Factoría de innovación

2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

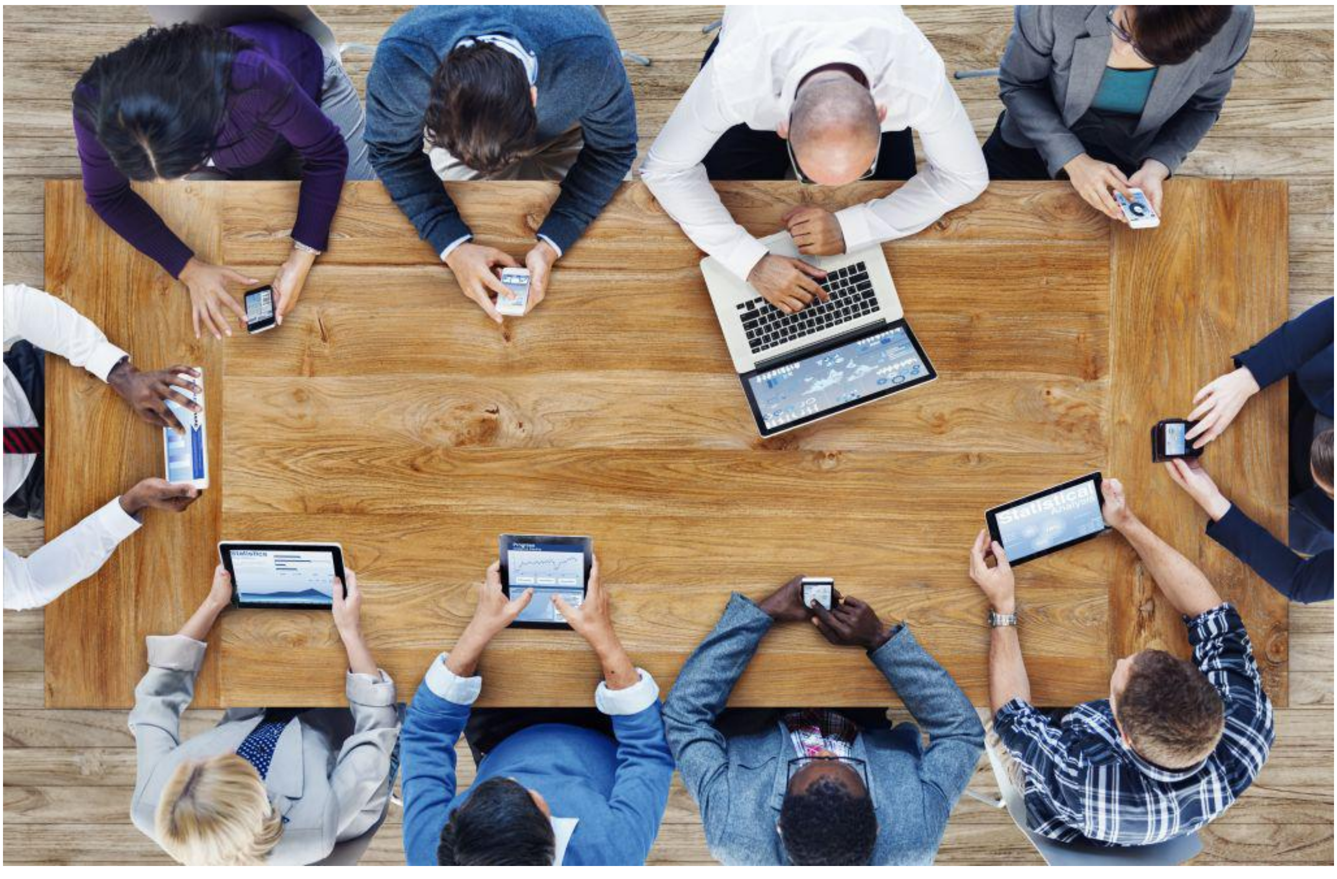
2.3. Map of actors

First of all, regarding to the type of companies, it should be noted that 88% are dedicated to the development of video games, while 8.2% provide video game localisation services and 3.8% provide art services.

Regarding to Associations, their main activities consist of organising events for the industry promotion and the creation of talent in the video game development sector. They also collaborate in the creation of courses related to training in video game development. Finally, they act as a communication link between animation, video game and visual effects companies and public institutions, universities and schools in order to consolidate the sector on the islands.

In terms of public administrations, their main function is to grant the aid that allows companies to develop their actions in the Canary Islands, which, as we have been able to observe in the fieldwork results, the interlocutors consider to be insufficient. On the other hand, to generate public-private coordination in order to tackle the challenges that the video game sector will face in the coming years.

Finally, in relation to training, there are several institutions in the Canary Islands that have training offers related to the video game sector. The following section shows the training offer available in the Canary Islands.



2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.4 Identified needs

Through the compiled documentation analysis, as well as the information obtained during the development of the participatory process through surveys and interviews, the following current needs in the video game sector in the Canary Islands have been identified:

Training requirements

Financing needs

1. Training requirements

One of the factors affecting the number of independent video game companies and developers in the Islands is training. This sector employs highly qualified staff, which means that the training of current and future employees is essential to maintain the quality of the video games produced in the Canary Islands.

The fieldwork shows that the companies in the sector have identified the necessary skills and qualifications that their employees must have in order to carry out their activity. 91.6% of the companies have video game programmers and producers, as well as 75% have video game designers and art directors. However, 25% have testing technicians and only 8.3% of the companies have an online positioning specialist and a stereoscopic technician.

As we have seen in the results of the fieldwork regarding training, many of the companies expressed difficulties in finding qualified staff, having to turn to professionals located in other Autonomous Communities or even in other countries.

Training in areas related to video games covers several different educational levels, such as: vocational training, university degrees, official master's degrees and other types of non-regulated training.

Below is a description of the training offer currently available in the Canary Islands in the video games sector:

➢ University of La Laguna (ULL):

Master's Degree in Video Game Design and Development. In 2020, this master's degree has changed its name to Master's Degree in Videogame Development since during the verification process of the degree, the National Agency for Quality Assessment and Accreditation (ANECA) stated that there is not enough knowledge of an adequate level in the subject of "Video Game Design" for this concept to be included in the name of the degree.

University of Las Palmas de Gran Canaria (ULPGC):

- Expert in video game design and programming

2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.4 Identified needs

Some educational institutions, such as CIFP César Manrique, IES Puerto de la Cruz Telesforo Bravo, IES Rincón and IES Lomo Herradura offer the following training:

- Multiplatform Applications Development - Higher Level Vocational Training Cycles (LOE):
- 3D Animations, Games and Interactive Environments - Advanced Vocational Training Cycles (LOE)
- Development of Computer Applications - Higher Level Vocational Training Cycles (LOGSE).

Other entities such as the Society for the Economic Promotion of Gran Canaria (SPECG) also offer courses related to basic shader programming for video games or workshops in unity.

CEP Santa Cruz de Tenerife offers an introductory course in video game development in Unity3D.

Other companies such as Tenerife Juega offer courses related to the world of video games aimed at the use of virtual reality applications, Unreal Engine4 tool or concept-art for the creation of characters.

Lastly, the company Factoría de Innovación from Santa Cruz de Tenerife is a private initiative dedicated to highly specialised technological training, offering the following courses:

- VFX Master
- Video game Master
- Master in Animation
- Other (advanced animation, 3D lighting...)

In terms of this, 57.1% of the companies surveyed said that they were aware of the current offer, 75% of them considering that it was not enough to provide them with trained professionals in the sector. Nowadays, other autonomous communities such as Catalonia and Madrid have more training offers, with the Canary Islands being far behind them.

Regarding to the areas considered as priorities in terms of training, the results of the surveys and questionnaires show that priority is given to marketing and distribution as well as design, both representing a percentage of 71.4%, followed by project management and programming (64.3%).

In terms of specific profiles, the main agents demand more specialised training at production level, as they consider that there is no specific training for video game producers or publishers, both of whom play an important role in the value chain. They also highlight the need for more specialised training for programmers and artists, as the training currently available is generic for many branches.

However, there are those who believe that the importance of training does not lie exclusively in its quantity but in its quality. As indicated in the 2019 video game white paper, training is sometimes not very specialised, and there are curricula that are not adapted to the technological demands of leading sectors such as video games.

For this reason, it is considered that training is one of the keys to the future of the industry, and it is necessary to achieve greater specialisation of the workers who form part of it.

2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.4 Identified needs

2. Financing needs

As we have seen in the fieldwork results, most of the existing companies in the Canary Islands are micro-enterprises that are in a state of development, for which they sometimes need to seek external financing, since the financing provided by the founding partners may be not enough.

In this sense, the interlocutors indicated that there is not enough information on the current aid offered by the public sector in relation to video games. Moreover, those who are aware of existing subsidies say that they are not enough in relation to those offered to other sectors such as the film industry or animation. Some of these grants are aimed at large companies with a track record in the sector. These requirements are very restrictive and are not met by 90% of Spanish companies, which are characterised by being young companies that do not handle large amounts of capital.

There are also less restrictive state aids such as the Programa de Impulso al Sector del Videojuego, offered by Red.es, a public entity attached to the Ministry of Economic Affairs and Digital Transformation. This aid, in the 2018 call for applications, amounts to a total of 5 million for companies throughout Spain. To qualify for the programme, 333 applications were submitted in 2018, with 36 micro-enterprises and self-employed workers finally receiving the sum of 150,000 euros, being considered insufficient[1].

Other entities also offer aid focused on innovation, as is the case of AEVI, which has created an Aid Programme for innovation in the development of video games in Spain, granting an amount of up to 10,000 euros. The National Innovation Company (ENISA) offers lines of financing for innovative projects, although they are not specific to the video games sector.

In general terms, subsidies are not adapted to the business fabric that makes up the sector. This is a clear reflection of the public administration's lack of commitment to the video game sector, which represents more profitable figures than other audiovisual products such as cinema or music.

However, in the current COVID-19 crisis, the government will invest 70 million euros to support the Spanish technology and video game industry. This is a new record for the industry. Until now, the highest amount of government aid to the video game industry was 5 M€.

In particular, 20 million euros will go to promote youth employment in the Spanish digital industry. The remaining 50 million euros will go towards improving the technological offer in digital content (15M€) and technological development based on artificial intelligence and other enabling technologies (35M€)[2].

In terms of private financing, 91.66% of the interlocutors consider it to be enough. The video game industry is a high-risk industry, which makes the search for financing a difficult task, since investors usually prefer to invest in other, safer sectors, such as hotel or construction sectors.

1. https://as.com/meristation/2019/04/05/noticias/1554460192_196170.html
2. https://www.businessinsider.es/gobierno-invierte-industria-tecnologica-videojuegos-634751

2 | ANALYSIS OF THE VIDEO GAME SECTOR IN THE CANARY ISLANDS

2.4 Identified needs

As a conclusion to the needs outlined above, it is worth mentioning the current situation, caused by the coronavirus global pandemic, which has meant that the population has had to stay at home for long periods of time, which has generated positive figures for the video game sector, with a 75% increase in online game consumption during the quarantine period in Spain, Italy, China and the USA. March saw the highest digital spending on video games in history, with more than 9 billion euros, according to the consultancy Super Data.

Spanish video game industry is among the top ten countries in the world in terms of turnover, with a turnover of 1,479 million euros. This turnover is higher than that of other industries such as music or cinema, so it can be considered that video games lead the cultural industries and technological development in Spain. The industry also presents other positive data such as the generation of more than 9,000 jobs[4].

These figures once again reflect the importance of the sector whose consumption figures have continued to grow despite the global slowdown.

However, despite the good figures in terms of consumption, the video game sector has also suffered the consequences of the crisis, although to a lesser extent than other artistic and cultural sectors, especially in terms of physical sales.

The Spanish Video Games Association (AEVI) estimates losses of around 50 million euros per month in direct impact due to the measures adopted to combat the coronavirus and considers it a "major threat" to the 9,000 jobs that the sector generates in Spain, of which, it claims, 4,000 could be lost "temporarily". In order to alleviate these negative consequences, the Association has proposed a serie of measures and recommendations, including the following:

- Enabling credit lines
- Direct aid and public subsidies, as well as the establishment of tax incentives in the medium term aimed at developers for the production of video games,
- Deferment or temporary financing of payments to suppliers and public administrations (e.g. self-employed quota).
- Gradual opening of commercial establishments with preventive and protection measures for workers and consumers.
- Facilities and discounts on telecommunication service fees and measures to support adaptation to remote working tools.
- Campaigns to support the sector

Source: [Propuestas del sector ante la crisis del Coronavirus (Covid-19)](). Spanish Video Games Association

3. El País: https://elpais.com/cultura/2020-05-03/el-videojuego-echa-su-partida-mas-incierta.html
4. AEVI: http://www.aevi.org.es/anuario-aevi-2019/

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.1. Incentive introduction

Currently in Spain there is a tax incentive for the audio-visual sector that only includes film and television productions, including Spanish feature and short film productions and fiction, animation and documentary audio-visual series.

At national level, this is a deduction that represents 30 percent of the first million of the deduction base made up of the production total cost, as well as the expenses for obtaining copies and the advertising and promotion expenses to be paid by the producer. In Canary Islands, the tax incentives for audio-visual productions are as follows:

01 Deduction for investment in productions or co-productions: 50% - 45%.

02 The Canary Islands Special Zone (ZEC) for the companies creation in the Canary Islands at a reduced corporate tax rate of 4%, compatible with the tax benefits mentioned above.

Source: [Incentivos fiscales para la producción audiovisual en Canarias.]

The video game sector has been demanding for many years for the integration of this industry in the deduction for investments from which the aforementioned audio-visual products benefit in Spain. However, video games have never been recognised within the audio-visual sector.

In this regard, Royal Decree-Law 17/2020, of 5 May, approving measures to support the cultural sector and tax measures to tackle the economic and social impact of the COVID-2019 recently approved by the Council of Ministers, has included the video game industry as an addressee of the measures, which shows the close relationship with the audio-visual sector, considering video games as cultural and not exclusively technological products.

Due to the advantages that this deduction would entail, both the main companies in the sector and the Associations are calling on the Government to reform [article 36 of the Corporate Tax Law] to include video games among the audio-visual productions benefiting from the deductions. This measure is necessary to encourage the entry of national and international investors in video game projects developed in Spain.

The deduction has been highly effective in the audio-visual sector, including animation and visual effects, which have seen a significant increase in production since 2015, when the measure was implemented. Likewise, countries such as France, Italy and the United Kingdom have for years implemented the tax incentive from which video game development companies established in these territories benefit, which considerably increases their competitive advantage over Spain when it comes to attracting investment, projects, companies and human capital.

Throughout this section, we will first develop the similarities detected between video games and some audio-visual productions included in the deduction, as well as the situation in some countries which, as already mentioned, apply this incentive, explaining the main positive results they have obtained with its application.

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.2. Main similarities with the audio-visual sector

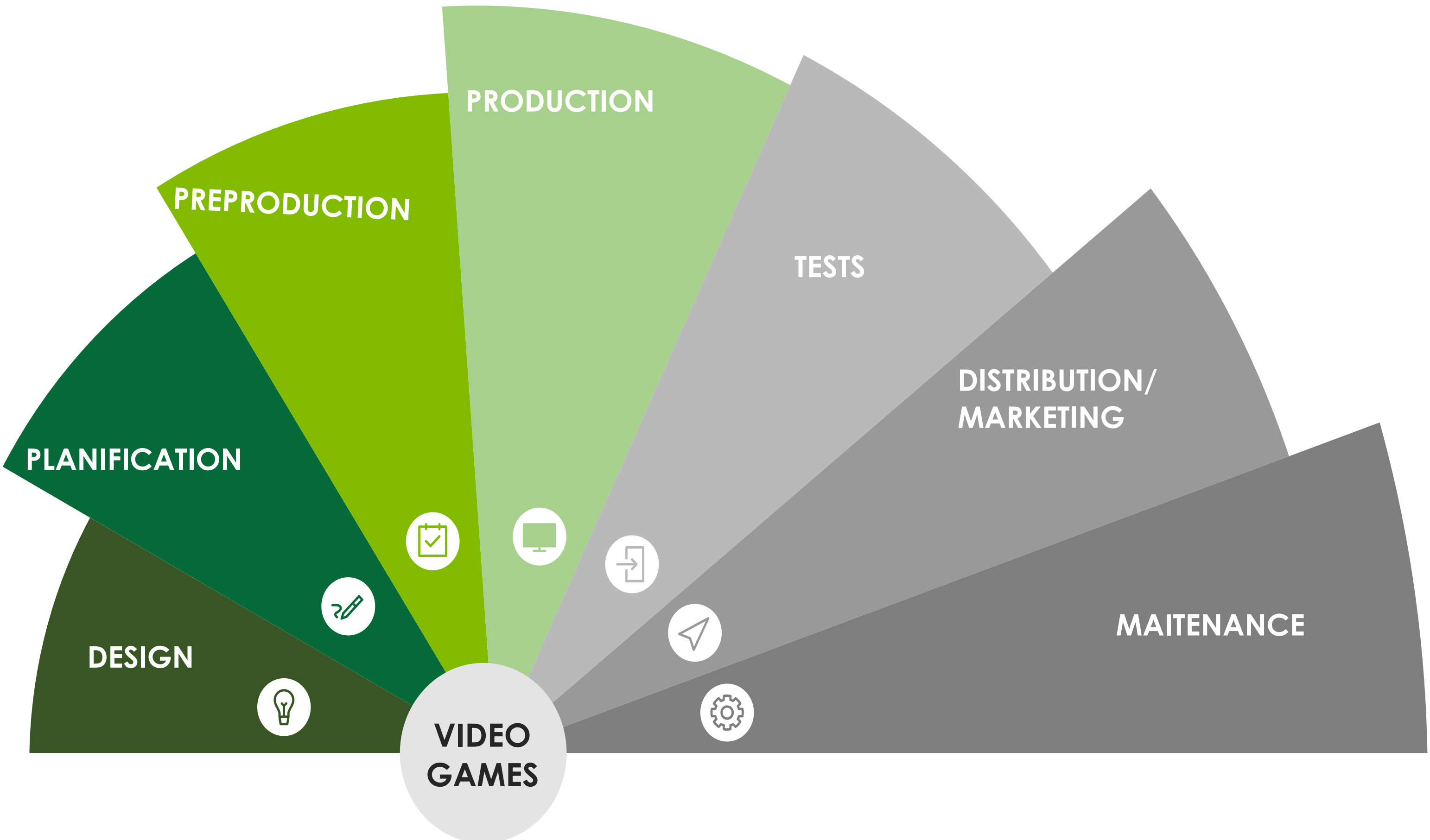
As we have seen in the results of the fieldwork section, most of the interlocutors consider that there are currently synergies between animation and video games. The process of creating an animated film is very similar to the process of creating a video game. This similarity between the two is even greater than between animated films and other products belonging to the audio-visual sector such as feature films or documentaries.

In this sense, other EU member states as well as third countries have already included video games among audio-visual products, as they consider that these projects go beyond the traditional concept of film and television productions.

In the section below, we will analyse some of the similarities between animated films and video games, including the creative processes and the required profiles for their development.

1. Creative process
The process of creating a video game is similar to the creation of software in general, although it differs in the large amount of creative input (music, story, character design, levels, etc.) required.

In the following figure we can observe each of the phases that the creation process goes through:



3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.2. Main similarities with the audio-visual sector

Design: In this section, all the elements that will make up the game are detailed, including the following:

- History: the way in which the characters in the game will develop
- Script: the document drafting in which aspects such as the objectives of the game, the phases into which it will be divided, the main characters, etc. are set out
- Conceptual art: visualisation and contextualisation of characters, settings, creatures, objects, etc. by a group of artists
- Sound: all the sound elements of the game (voices, ambient sounds, music…) are detailed
- Game mechanics: definition of the game general functioning
- Programming design: describes the way in which the videogame will be implemented on a real machine (PC, console, mobile, etc.) using a specific programming language and following a specific methodology

Planification: the tasks necessary for the video game execution are identified.

Preproduction: during this section a team is assigned the project in order to verify the feasibility of the idea.

Production: based on the design, this section includes programming, artist illustrations, interface development, animation and modelling, and the sounds for each of the characters and SFx.

Tests: video games must go through a stage in their development where errors inherent to the programming process are corrected and their functionality is ensured

Marketing and distribution: In this section, the copies that will be distributed either physically or digitally are produced. Marketing tasks are also essential to raise awareness of the video game and reach as many consumers as possible

Maintenance: once the game reaches its final version and is released, bugs and improvements may be detected

After analysing the video games creation process, it should be noted that the creation of an animated film has similar sections, consisting of a pre-production section that includes the idea conception, the proposal, the script and the initial design. During this same section, the graphic work of the artists begins, both in relation to the characters and the environment in which the story takes place, translating these ideas into a script or storyboard. When all the film elements have been created, everything is focused on the team concentrating on giving personality to the main characters and bringing the project to life according to the script. During pre-production, the personalities created are also given voice.

Then, during the production section, the film will be animated, rendered and finished. Finally, in the post-production section, the final touches are made. A large part of post-production consists of sound design and editing in order to make the sound environment as rich as the visual experience.

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.2. Main similarities with the audio-visual sector

The value chains of both products are shown in the figure below, in which it is possible to observe the coincidences between the creation processes of the video game and the animation sector

	Animation value chain	Video game value chain	
Development	• Script development • Setting up the Core Team • Production budget • Search for financing	• Story definition • Script development • Conceptual artwork • Detailing of sound elements • Definition of the general functioning of the game. • Programming design:	Design
Preparation	• Script review • Hardware and software selection • Work team configuration • Production processes definition	• Resource allocation and development tasks	Planification
Preproduction	• Storyboarding • Preproduction (models, backgrounds, animatic…) • Digital derivatives design • Showrunner incorporation • Focus testing	• Team consolidation • Idea feasibility	Preproduction
Production	• Video editing • Special effects • Music • Dubbing • Content preparation • Evaluation	• Programming, artists' illustrations • Interface development, • Animation and modelling • Character voices and ambient sounds	Production
Postproduction	• Pipeline • 2D, 3D, stop motion, classic techniques…	• Bug fixes • Functionality assurance	Tests
Delivery	• Technical adaptation • Promotional material development • Style guide for exploitation elaboration	• Copy production • Physical or online distribution • Marketing tasks	Marketing and distribution
Distribution	• Distribution agreements closing • Assistance to national and international markets • Marketing plan implementation • Content distribution • Digital derivatives development	• Development of maintenance tasks for the correction of post-publication errors. • Improvement tasks	Maintenance

Source: Libro Blanco de la Animación

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.2. Main similarities with the audio-visual sector

Observing the chains described above, we can see that there are many similarities, with the phases involved in the creation of a video game and an animation product being practically identical, although the names or tasks are specific to each sector. Both begin with a design and planning or preparation phase in which the tasks of script development, team definition and task assignment are carried out, as well as the choice of the tools used for development. Subsequently, both products go through a pre-production, production and post-production phase. Once the video game or animated film production process is completed, the delivery and distribution tasks begin, with the maintenance phase being specific to the video game, in which any errors that may have arisen are corrected and improvement tasks are carried out.

2. Profiles

The required profiles for the creation of both products, i.e. both video games and animated films, include character designers and developers, animators, artists, directors, music composers, scriptwriters, etc.

This is reflected in the fact that there is usually a common educational offer, such as the Degree in Design, Animation and Digital Art, the Degree in Animation (or in 3-D Animation) or the Higher Technician in 3D Animation, Games and Interactive Environments.
The profiles of each sector are shown graphically below:

Animation profiles

Design:
- Video game designer
- 3D designer
- Graphic designer
- Character developer

Animation:
- 3D Animator
- Layout technician
- Lighting technician
- Stereoscopic technician
- Visual effects technician

Software development:
- Programmer
- Rigger technician
- Render technician
- Application developer
- Test technician
- Test engineer

Project management:
- Director de arte
- Productor
- Responsable de estrategia digital
- Jefe de producto
- Responsable de inteligencia de negocio

Marketing and distribution:
- Licensing Manager
- Communications Manager
- Marketing manager
- Community manager
- Growth hacker

Others:
- Scriptwriter
- Music composer
- Online positioning specialist
- IP specialist
- Monetisation manager
- Administration

Source: Libro Blanco de la Animación

Videogames profiles

Design:
- 3D designer
- Graphic designer
- Character developer

Animation:
- 3D Animator
- Layout technician
- Lighting technician
- Stereoscopic technician
- Visual effects technician

Software development:
- Programmer
- Rigger technician
- Render technician
- Application developer

Project management:
- Director de arte
- Productor de animación

Marketing and distribution:
- Licensing Manager
- Communications Manager
- Marketing manager
- Community manager

Others:
- Scriptwriter
- Music composer
- Online positioning specialist
- IP specialist

Source: Libro Blanco del Videojuego

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.2. Main similarities with the audio-visual sector

As can be seen in the graph above, the profiles of each of area that form part of the production process, both in video games and animation, are the same, with the exception of the video game designer, who is only present in this type of product, as well as testing technicians and test engineers. As far as marketing and distribution are concerned, the growth hacker profile is non-existent in the animation sector, as are other profiles such as those responsible for monetisation.

However, there are some differences between them, such as:

- Video game environments are more complex as they cover a wider viewing environment.
- The video game system is limited by the engine power of the consoles or equipment used.
- The video game is an interactive product whereas other audio-visual products purpose is visibility without any user input.

Despite these differences, both products purpose is leisure, and sometimes there may even be a cultural or educational component. Due to the similarities between the creation processes and profiles, it is considered that the differences are not enough to not include video games as an audio-visual product, as other countries do, and that they can benefit from the tax incentive for this type of production, as can be seen below.

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

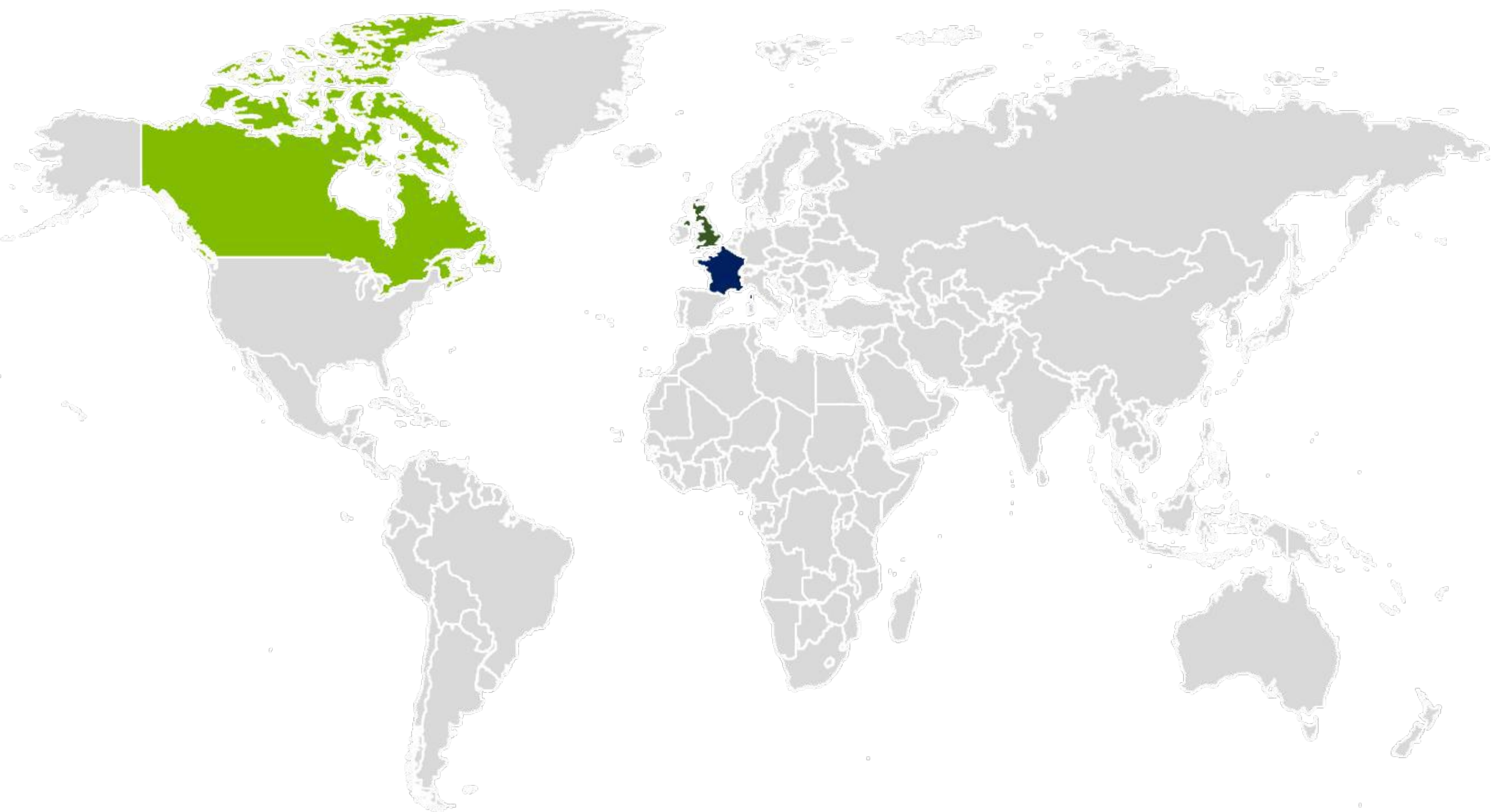
3.3. Benchmark analysis

Both at European and global level, there are countries that already apply the incentive for audio-visual productions to the video game industry, such as France, the United Kingdom and Canada.

This section provides more detailed information for each of these countries, analysing the main features of their incentives, as well as the positive results derived from their implementation.

Furthermore, the results of the incentives analysed will be included in a summary sheet prepared for each of these countries, including information such as the name, the date of approval, the deduction percentage and the requirements for obtaining them.

Finally, a brief comparative analysis will be made, including both the main differences and similarities observed during the analysis of the incentives applied in France, the UK and Canada.



3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.1. United Kingdom

1. Incentive description

On 25 January 2013, the United Kingdom notified the European Commission of its intention to introduce tax relief for video games from 1 April 2013. Initially, approval was granted until 2017, but in the same year the Commission made it possible to apply for the relief until March 2023.

This tax relief is known as Video Games Tax Relief (VGTR) and its main objective is to provide an incentive to video game creators to produce culturally British or European video games. The measure is inspired by the United Kingdom Film Tax Incentive approved by the Commission in 2006.

The Video Games Tax Relief is also known as the UK Games Tax Relief Scheme, being part of the Creative Sector Tax Relief which also covers high-end film, animation and television production.

2. VGTR approval process

Concerning the implementation of the incentive, the Commission had doubts as to whether such aid to video games was necessary, since the video games market was in a period of full growth in the year in which the UK government's application was made.

However, in order to facilitate its decision, the Commission launched a participatory process in which it received comments from one Member State, France; national associations of games developers in the UK, France, Germany and Finland; the European Games Developers Federation (EGDF); public bodies from the European Commission, the European Games Federation (EGGF), the European Commission and the European Games Council (EC).

UK involved in the promotion of film works; a broadcaster and UK film production industry associations. All participants stressed the quality and cultural importance that games can have and considered market incentives for game production to be insufficient.

In addition, the United Kingdom Independent Game Developers Association (TIGA) cited numerous examples of plans and projects where UK or European based video games could have been made with the help of a tax incentive but were not realised due to the non-application of the tax incentive.

Dialogues with representatives from across the video games sector, including small and large-scale creators, have indicated that, like other creative sectors, the creation of video games is a closely collaborative process with core creative activities such as programming, design and art direction. Some Member States support audio-visual projects that go beyond the traditional concept of film and television productions,

3. Operation

As a consequence of the implementation of this new inventive, companies subject to UK corporation tax that develop qualifying video games will be able to claim tax relief for expenditure on goods and services used or consumed in the UK to the value of 20% of the production budget. The relief is obtained by an additional deduction of the eligible production costs from the taxable income generated by the video game.

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.1. United Kingdom

However, no more than 80 % of the production budget may be additionally deducted.

In case the beneficiary has incurred losses in the accounting year, it may claim a tax credit payable. According to the Corporate Income Tax Act 2009, the eligible costs are limited to the basic costs for the design, manufacturing and testing of the game. Other post-launch costs are also included, excluding however debugging and maintenance costs and initial concept design costs.

There is no minimum spending threshold, which means that gaming companies with low budgets are eligible for the VGTR.

As to how it interacts with other reliefs such as the R&D tax relief, the VGTR cannot be claimed in respect of any expenditure for which R&D&I is claimed. However, both reliefs can be claimed in respect of different expenses.

4 Requirements

For the implementation of this tax advantage, the video game must be of UK origin and be subject to a cultural test similar to that of the United Kingdom Film Tax Incentive. Both tests are divided into four sections:

- Cultural content,
- Cultural contribution,
- Use of UK cultural poles
- Participation of cultural professionals who are nationals or residents of the UK or EEA.

The British Film Institute (BFI) is responsible for assessing and issuing UK certifications for video games.

In addition, the following main requirements must be met:

- The application for relief must be made through a Video Games Development Company (VGDC). This means that freelancers and limited liability companies are not able to apply.
- The VGDC company must be subject to UK income tax.
- The VGDC must be directly involved in the production of the video game, fulfilling the following premises:
  - Being responsible for the design, production and testing of the game
  - Actively participate in decision-making during this process.
  - Pay for and contract directly for gambling-related goods and services.
- There can be only one applicant company per game
- The VGTR can be claimed for all video games forms, including virtual reality games, mobile and tablet and other formats.
- The video game must be intended for supply to general public.
- The video game may not belong to any of the excluded categories such as gambling games, games containing pornographic or other sensitive material.

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.1. United Kingdom

5. Main economic data

The need for the implementation of this incentive was justified by the United Kingdom on the basis of key economic data representing the video games sector. In particular, according to TIGA, between 2008 and 2010, employment in this sector in Canada grew by 33 %, while in the UK it fell by 9 %.

The UK was losing its leading position in the video games market. In 2012, less than 10 % of games released in the UK were created in the UK, down from 16 % in 2008, with the market dominated by North America and Asia and a migration of workers in the sector to Canada.

Between 2003 and 2012, figures show a steady decline in the number of UK games and a sharp drop in their market share, from 9 % of all games in the UK (including those from other countries) in 2003 to 4 % in 2006, remaining at 3% from 2009 to 2012..

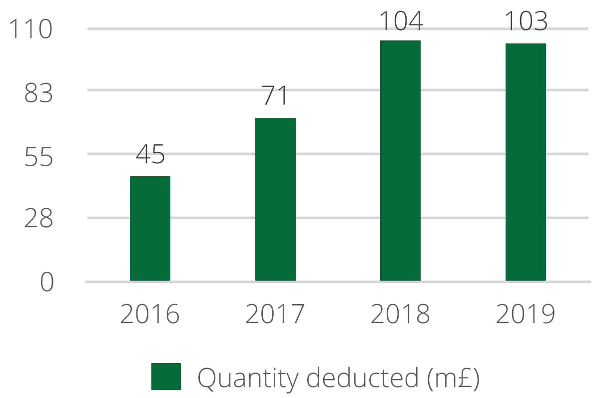
In 2003, 41% of games created in the UK would have passed the cultural test, compared to only around 25% in 2012.

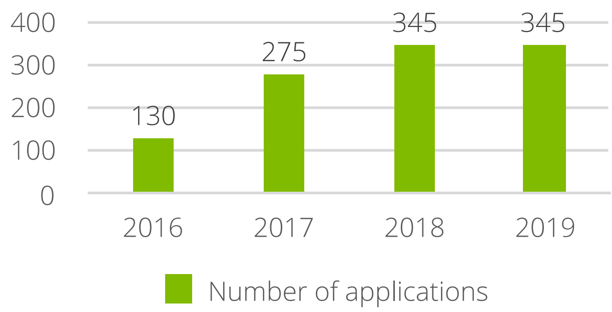
After the approval of the VGTR in 2013, the data on both employment in the sector and economic benefits have improved considerably. Between 2012 and 2014 the number of video game companies grew at a rate of 14.1 %. Also between 2013 and 2015 there was a direct employment growth of 2.9%.

Between 2016 and 2019 the number of companies in the sector increased by 8.4 %. There are currently 2285 companies active in the video games sector.

In 2016 the VGTR generated 9,240 jobs across the UK games industry, including 4,320 directly in development roles, corresponding to 31% of the total UK development labour force.

Since the VGTR was introduced, £323 million has been provided to UK studies in 1105 applications.





Finally, for every £1 invested in the video games industry through VGTR, an additional £4 in GDP is generated for the UK economy.

Source: 2014/764/UE: Decisión de la Comisión, de 27 de marzo de 2014 , relativa al régimen de ayuda estatal SA.36139 (13/C) (ex 13/N) que el Reino Unido tiene previsto ejecutar en favor de los videojuegos.
Fuente: Video Games Tax Relief.

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.2. France

1. 1. Incentive description

French fiscal initiatives related to the video game sector were implemented by the Audio-visual Law of 5 March 2007 on the modernisation of audio-visual broadcasting and the television of the future.

This measure aims to support the most innovative and creative projects, enabling the French video games industry to strengthen its competitive position in an important, dynamic and increasingly popular cultural sector.

French video games industry benefits from an ambitious public policy based mainly on two support mechanisms:

- The tax credit for video games, known as Crédit d'Impôt Jeu Vidéo, consists in the existence of a tax incentive
- Selective aid (Fonds d'Aide au Jeu Vidéo or Video Game Support Fund) to support video game projects, based on the evaluation of their artistic quality and commercial potential.

These two systems are administered by the CNC (Centre National du Cinéma et de l'Image Animée), a public establishment supervised by the French Ministry of Culture and Communications. However, in this report we will focus on analysing the video game tax credit called Crédit d'Impôt Jeu Vidéo.

2. Approval process

A participatory period was opened before the European Commission's approval of the incentive proposed by the French government, during which interested parties could make any comments they considered necessary.

Some companies such as Ubisoft, TIGA, GAME, APOM and EGDF wanted to stress that in their opinion video games should be considered as cultural products, underlining that gaming in general is one of the oldest cultural traditions of humanity, and insisting on its interaction with other cultural sectors such as cinema, music and plastic arts.. They consider video games as audio-visual products that can influence players' imagination, ideas, language and cultural references. According to these stakeholders, video games reflect the cultural environment in which they have been created through the use of language and humour, music, the environment (architecture, landscapes, etc.), the characters (costumes, origins), and through the script, the themes or narratives addressed, or the user-friendliness and ergonomics of the game. UNESCO also recognises the video game industry as a cultural industry.

In these circumstances, the French authorities also point out that the artistic costs involved in the creation of a video game can represent more than 50% of the costs of the game's conception, which in fact indicates the particular importance attached at the video game production stage to the design, script, dialogue and music, which are essential elements in deciding that, overall, a video game has a cultural content.

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.2. France

3. Tax relief

The Video Game Tax Credit is intended for video game development companies located in France. Under certain conditions, it offers a tax exemption equivalent to 20% of the total expenditure directly allocated to the creation of a video game.

A maximum limit per company is set in order to keep the fiscal cost of the measure under control. The French authorities have set this limit at €3 million.

However, on 10 August 2017, a second video game tax credit reform came into force, including the following changes:

- Tax credit rate increased to 30%, up from 20% previously;
- Doubling of the annual tax credit limit from EUR 3 million to EUR 6 million per company;
- Doubling of the maximum amount of eligible annual European subcontracting from EUR 1 million to EUR 2 million.

In addition, the duration of the possibility of applying the incentive was extended until December 2022.

The expenses to be deducted correspond to the expenses for the conception and creation of the video game. These expenses include the following:

- Depreciation of fixed assets.
- Remuneration paid to the authors who participated in the creation of the video game, in the implementation of a contract for the transfer of intellectual property exploitation rights, as well as related social charges.
- Personnel costs related to the company's employees directly assigned to the creation of the video game and the salary costs of the technical and administrative staff contributing to it, as well as the related social charges;
- Other operational expenses which include the purchase of materials, supplies and equipment, building rentals, maintenance and repair costs related to these buildings, travel expenses, technical documentation costs, shipping and electronic communication costs.
- Expenditure on subcontracting from European organisations, up to a limit of EUR 2 million per year.

In particular, the costs of debugging and testing are excluded.

4. Requirements

The companies eligible for this tax credit are those that produce video games, i.e. video game development studios, both independent and subsidiaries of publishers.

Eligible games are defined as entertainment software made available to the public, for computer or online, which includes elements of artistic and technological creation. They cover not only computer or console video games, but also mobile games, individual or multi-player online games, educational or educational/entertainment software, and cultural CD-ROMs provided that they are sufficiently interactive and creative.

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.2. France

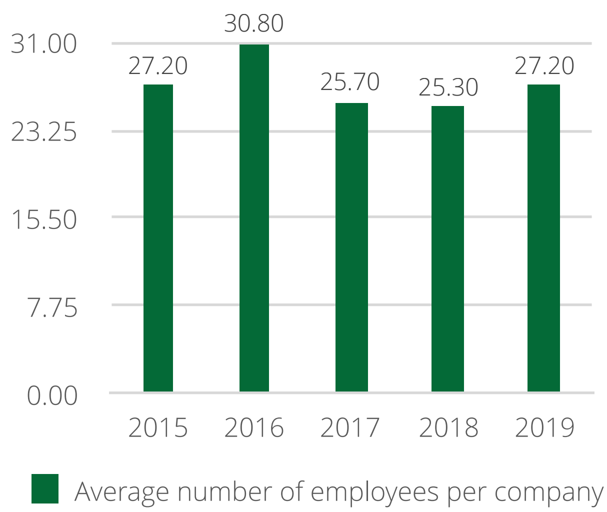
Moreover, in order to qualify for the tax advantage, video games must meet a number of criteria:

- Have development costs of at least 100,000 euros.
- Be intended for sale to the public
- Contribute to the development of French and European culture (determined on a scale of points). The assessment criteria include:
    - Heritage, i.e. whether it is an adaptation of a recognised work of European historical, artistic or scientific heritage.
    - The original creation, which includes the originality of the script/creativity of the graphic and sound universe
    - The cultural content,
    - The European location of the expenditure and the nationality of the persons collaborating in the creation.
    - Editorial and technological innovation.

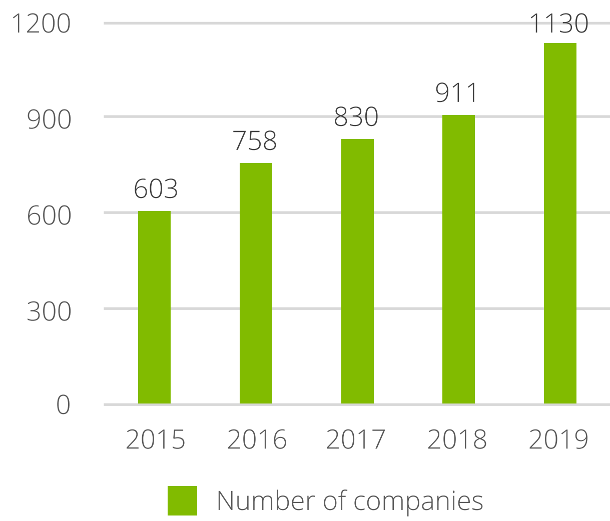
5. Main economic data

French video games industry is generally characterised by the small size of the production offices (fewer than 200 employees), which do not have enough financial capacity and are therefore dependent on publishers to finance the development of their products. The system of remuneration by the publishers of development studios depends on sales, after the production costs advanced by the publishers have been covered. The French authorities pointed out that the number of 'cultural' video games that would have been able to pass the selection test for the tax credit has been in steady decline since 2000.

Since 2015, the average number of employees of French companies has been 27,24.



However, the number of companies has grown over the years, standing at 1130 companies involved in the video games sector in 2019.

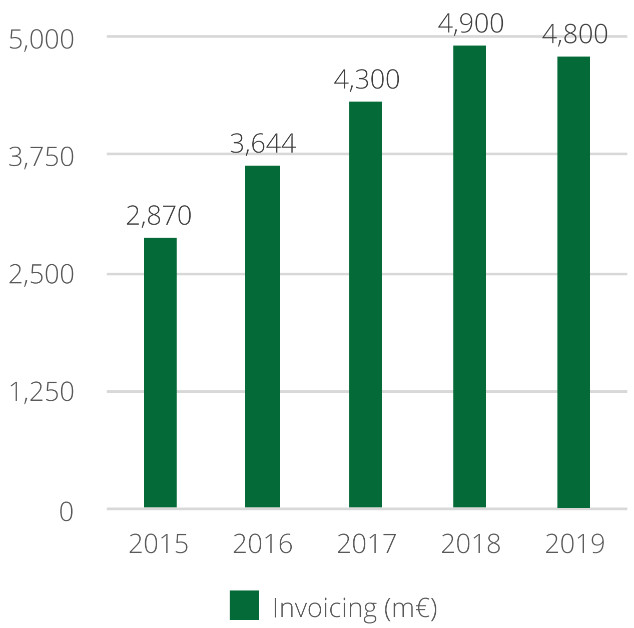


3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.2. France

The sector's turnover also shows a positive growth trend, rising from €2.87 billion in 2015 to €4.8 billion in 2019.



In 2019, 1,200 games were produced, an increase of 43 % over the previous year.

Source: Decisión de la Comisión de 11 de diciembre de 2007 relativa a la ayuda estatal C 47/06 (ex N 648/05) — Ventaja fiscal en favor de la creación de videojuegos.
Source: French videogame industry.

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.3. Canada

Gaming industry has had a major impact on the Canadian economy. New technologies bring innovation and a demand for talent and new skills that lead to the creation of new businesses and new job opportunities.

Canadian gaming industry's strength is mainly attributed to four factors:

- Living costs and wages are cheaper than in neighbouring countries such as the US.
- The presence and synergetic development of the technology and visual media sectors
- Strong government policies and fiscal incentives to favour the development of the specific video games sector.
- Existence of a highly qualified and creative workforce due to strong government investment in higher education.

Canada is also well located geographically, between export markets in Asia and Europe, and in the same time zones as major US-based video game publishers. A particularly close link in the last respect has been between major publishers located in West Coast cities.

Canadian governments, both at federal and provincial level, have developed a number of incentives applicable to video game companies, such as in Ontario, Quebec and British Columbia, for example, which have established refundable labour tax credits ranging from 17.5% to 37.5% of expenditures.

Furthermore, the Federal Government has established a Scientific Research and Experimental Development (SR&ED) incentive that provides tax credits and/or cash reimbursements for R&D-related expenses.

Below we will analyse the main federal and provincial incentives aimed at granting tax advantages to video game development companies, categorised under digital interactive products.

1. Provincial incentives

Alberta Interactive Digital Media Tax Credit

Incentive description:

This province sets the deduction at 25% of Alberta province-owned labour that is directly attributable to interactive digital products created after 31 March 2018.

Requirements to obtain it:

- A Canadian company with a permanent establishment in Alberta that meets the following criteria:
  - Its core business is the development of interactive digital products.
  - Have annual expenditures of $2 million or more in the province of Alberta.
- Wages and salaries must be paid to Alberta residents.

Source: Alberta Interactive Digital Media Tax Credit.

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.3. Canada

- The product must be intended to educate, inform or entertain by presenting information in at least two of the following forms: text, sound or images.
- Companies which claim the Scientific Research and Experimental Development Tax Credit Program are not eligible to claim this incentive.

British Columbia Interactive Digital Media Tax Credit (BCIDMTC)

Incentive description:

Tax incentive for digital interactive products represents 17.5% of the labour input in BC that is directly attributable to these products production.

Requirements for obtaining it:

- It must be a Canadian company with a permanent establishment in BC that meets the following conditions:
  - Its principal business is the development of interactive digital products.
  - Have annual expenditures of 2 million or more in the province of BC
- Wages and salaries must be paid to Alberta residents.
- The product must be intended to educate, inform or entertain by presenting information in at least two of the following forms: text, sound or images.
- Companies which claim the Scientific Research and Experimental Development Tax Credit Program are not eligible to claim this incentive.

Source: British Columbia Interactive Digital Media Tax Credit (BCIDMTC).

Manitoba Interactive Digital Media Tax Credit (MIDMTC)

Incentive description:

This incentive represents one of the following amounts:

- 40% of the project costs
- 35% of the labour costs

Requirements for obtaining it:

- Provision of a permanent establishment in Manitoba
- For the 40% earmarked for project costs, at least 25% of business wages and salaries for the tax year must be paid to Manitoba resident employees.
- In the case of the 35% labour-related, a minimum of $1 million per fiscal year must be for Manitoba resident personnel costs.
- Companies must obtain a certificate of compliance with the requirements before production starts and another at the end of production.

Source: Manitoba Interactive Digital Media Tax Credit (MID MTC).

Newfoundland and Labrador Interactive Digital Media Tax Credit

Incentive description:

This tax credit represents 40% of the labour directly attributed to interactive digital media activities.

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.3. Canada

In addition, there is a maximum limit of EUR 2 million per year per company or group of companies.

Requirements to apply it:

- It must be a company based in Newfoundland and Labrador, whose primary purpose is to develop products in the digital media sector.
- Includes 65% of payments made to another NL company for labour directly attributable to the development of interactive or educational, information or entertainment products that include at least two of the following effects: text, sound, image.

Source: Newfoundland and Labrador Interactive Digital Media Tax Credit.

Nova Scotia Digital Media Tax Credit

Incentive description:

This incentive established by the Nova Scotia authorities consists of a deduction of the lower amount of the following:

- 50% of the labour force
- 25% of total expenditure in Nova Scotia

Requirements to apply it:

- Provision of a permanent establishment in the geographical area of Nova Scotia whose primary purpose is the development of interactive digital products.
- Companies will also receive a credit towards marketing and distribution costs of a maximum of $100,000 per product. These expenses can be incurred outside the province.
- The product must be intended to educate, inform or entertain by presenting information in at least two of the following forms: text, sound or images.
- Product interactivity will be judged on the basis of 3 characteristics: feedback, control and adaptation.
- The application for the tax credit must be made no later than 30 months after the end of the tax year in which the deductible production expenses were incurred.

Source:: Nova Scotia Digital Media Tax Credit.

Ontario Interactive Digital Media Tax Credit (OIMTC)

Incentive description:

The deductible amount is 40% of the labour incurred in Ontario for the creation of interactive digital products, as well as distribution and marketing costs, with a maximum of $100,000 per product. These expenses may be incurred outside the province.

For big companies, the incentive will be 35% of the labour cost of developing digital games, with no maximum amount. These big companies can apply for the incentive as Specialized Digital Game Corporation (SDGC) or Qualifying Digital Game Corporation (QDGC).

Requirements:

- It must be a Canadian company with a permanent establishment in Ontario that develops interactive digital products.

Source: Ontario Interactive Digital Media Tax Credit (OIMTC).

3 ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.3. Canada

- The product must be intended to educate, inform or entertain by presenting information in at least two of the following forms: text, sound or images.
- Product interactivity will be judged on the basis of 3 characteristics: feedback, control and adaptation.
- The application for the tax credit must be made no later than 18 months after the end of the tax year in which the deductible production expenses were incurred.

In addition, the following requirements are established for big companies:

- In the case of Specialized Digital Game Corporation (SDGC) they must spend a minimum of 1 million on labour in the province of Ontario during the year and have 80% of wages and salaries for services provided in Ontario or 90% of annual gross revenues directly attributable to digital game development.
- For QDGCs must incur a minimum of 1 million in eligible Ontario labour in any 36-month period that is directly attributable to the development of a single digital game under an agreement with a purchasing corporation.

Quebec Production of multimedia Titles Tax Credit

Incentive description:

This is a refundable tax credit that allows them to recover up to 37.5% of the labour costs incurred in Quebec. However, this incentive distinguishes between two categories of products:

- The deduction amounts to 30 % of the qualified labour costs for category titles. In addition, it allows a deduction of 7.5 % if the versions that are in French.
- For category B securities, a deduction of 26.25 % is established, with an additional 7.5 % if they are in French.

Category A corresponds to multimedia titles intended for marketing, while category B includes other types of multimedia titles.

Requirements to apply it:

- It is designed for corporations developing digital products established in the province of Quebec.
- Multimedia titles must include interactivity and contain at least three of the following four types of information: text, sound, still images and animated images..
- Obtaining a certificate issued by Investissement Québec certifying that the title produced or to be produced complies with the existing requirements. Subsequently, the company must obtain, for each tax year for which it wishes to claim the tax credit, an annual certificate of eligibility with respect to the production work related to the eligible multimedia title.

Prince Edward Island Innovation and Development Labour Rebate

Incentive description:

This incentive amounts to 25% of labour costs.

Source: [Quebec Production of multimedia Titles Tax Credit](#).

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.3. Canada

Requirements to apply for it:

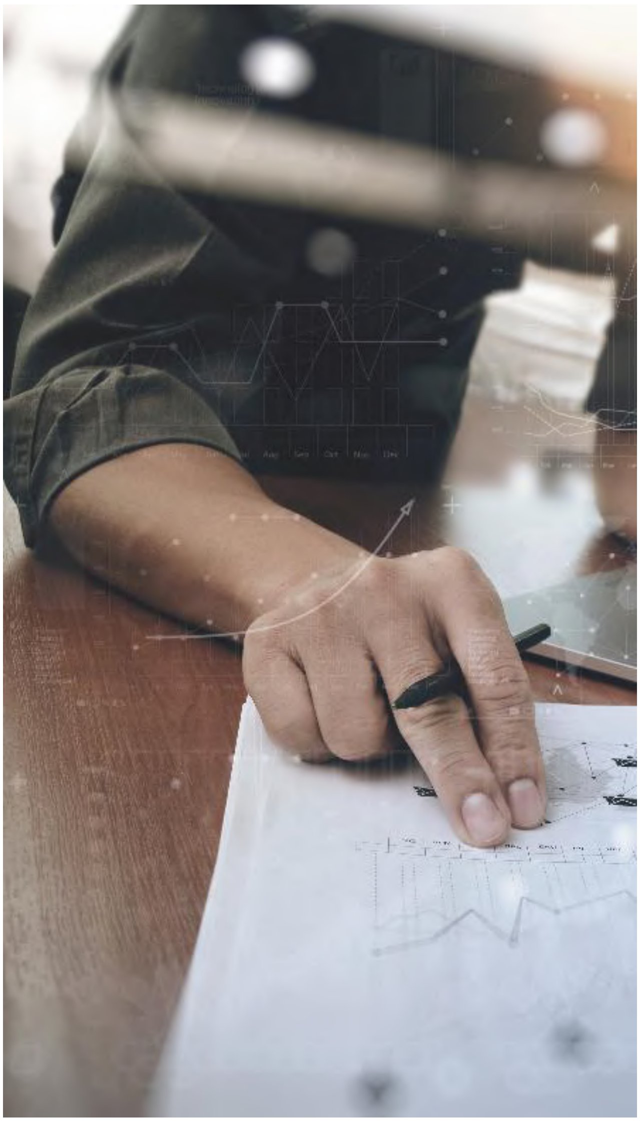
- The company must have a permanent establishment in PEI.
- It must be engaged in the development of innovative products.
- Only one year's expenses can be claimed.
- Deductible wages and salaries must be paid to persons resident in PEI and must be full-time positions with a minimum gross annual salary of $30,000.

Once each of the existing incentives at provincial level has been analysed, both their characteristics and their requirements, it should be noted that there are other provincial incentives related to animation that are also applicable in the case of video games, namely the following:

- Computer Animation and Special Effects Credit (OCASE): applicable in the province of Ontario, representing 20 % of the cost of digital animation and visual effects labour, as well as an additional 10 % refundable tax credit on labour cost when more than 85% of the production takes place outside the greater Toronto metropolitan area.
- Digital Animation or Visual Effects (DAVE): 17% on the cost of BC digital animation and visual effects labour; an additional refundable tax credit of 12.5 % on the cost of regional labour when more than 50 % of the photography takes place outside the Vancouver area; an additional 6 % credit on the cost of labour hired outside Vancouver and finally 30 % of the cost incurred in training.

Source: Prince Edward Island Innovation and Development Labour Rebate.

- Computer Animation and Special Effects Tax Credit: 8% on the cost of labour for digital animation and special effects in Quebec; an additional refundable tax credit of 16% on the cost of labour when the project takes place more than 25 km from Montreal; and an additional credit of 8% on the cost of labour when the production is not eligible for financial assistance from other public institutions.



3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.3. Canada

2. Federal incentives:

One of the programmes that video game companies can take advantage of is Scientific Research and Experimental Development (SR&ED), which allows Canadian companies of all sizes and in all sectors to conduct research and development (R&D) activities, providing applicants with cash reimbursements and/or tax credits for their R&D expenditures.

In this sense, research and development activities carried out by video game companies may include:

- Algorithm design
- Improving system performance.
- Interoperability tools with third party products
- Rendering: Improved framework rates and physical simulations (smoke, fog, rain, etc.)
- Overcoming memory and frame limitations

On this basis Canadian companies can receive a credit of 35 % of up to the first USD 3 million of qualifying expenses and 20 % on any amount in excess. For freelance or sole proprietorships the credit will be lower at 20 % of the expenses.

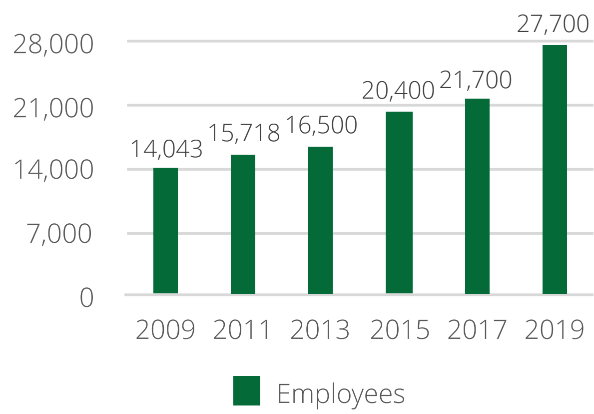
These expenses include salaries, materials (machinery and equipment), some overheads and contracts.

The programme is administered by the Canada Revenue Agency.

3. Main economic data

A measure on the Canadian industry size is the number of active companies operating in it. In 2017, there were 596 active companies. Over the next two years, the industry appears to have experienced significant growth with respect to the number of active firms, rising to 692 active firms in 2019.

In addition to the number of active companies, perhaps the most accessible indicator of the size of an industry is the number of people working in the sector. In total, the video games industry directly employed approximately 27,700 people in 2019. This is 27.6 % higher than the 21,700 people in 2017.

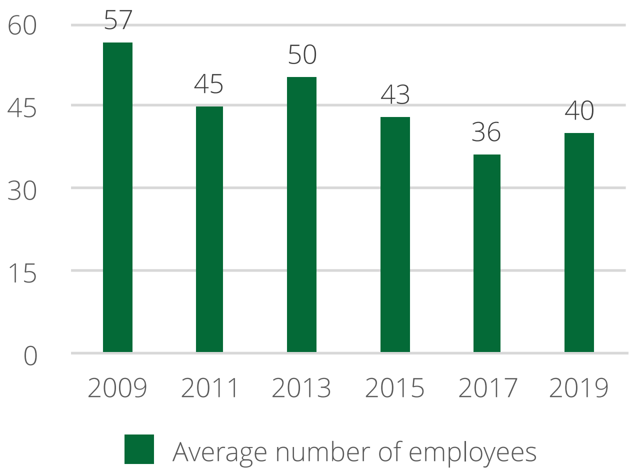


3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.3. Canada

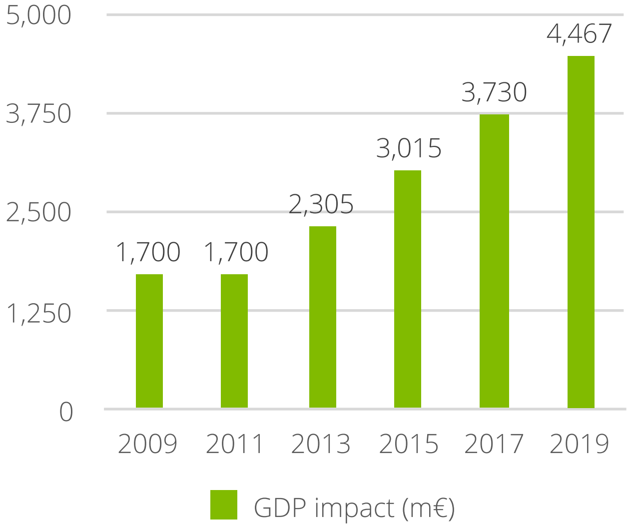
Since 2009, the average number of employees of Canadian companies has been 45.31.



At provincial level, for example, in Quebec, according to figures provided by the provincial government, the application of the incentive, which ranges from 26.25 to 37.5 % of the wage bill, has helped to create a strong industry employing approximately 11,000 people in 140 companies.

In the case of Ontario, government claims that the incentive application will allow companies to reduce the minimum amount spent on labour costs to $500,000. In this province, more than 22,000 people are employed in the interactive digital media industry, which is largely made up of video game developers.

Video games industry contribution to GDP in Canada in 2019 was just over $2.5 million. The industry also generated approximately $831 million in indirect impact GDP and $1,078 million in induced impact GDP. The total GDP generated by the video games industry in 2019, including direct, indirect and induced impacts, was just under $4.5 billion. This GDP impact represents an increase of 19.7 % of the total impact on the Canadian economy in 2017.



3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

United Kingdom
Video Games Tax Relief (VGTR)

Date of approval	April 2013	***Apply until***	March 2023

Description
Companies subject to UK corporate tax that produce qualifying video games may claim tax relief for expenditure on goods and services used or consumed in the UK to the value of 20% of the production budget. No more than 80% of the production budget may be deducted in addition. VGTR cannot be claimed regarding to any expense for which R&D is claimed. However, both advantages can be taken into account regarding different expenses.

Deductible expenses	• Basic expenses on design, manufacture and trials of the set. • Post-launch costs, excluding, debugging and maintenance costs and initial concept design costs. • There is no minimum spending threshold
Requirements	• The application for tax relief must be made through a Video Games Development Company (VGDC). • The VGDC company must be subject to UK corporation tax. • The VGDC must be directly involved in the production of the video game, being responsible for the design, production and testing of the game; participating in decision making and paying for all goods and services related to the game. • There can only be one VGDC applicant for each game. • The VGTR can be claimed for all forms of video games, including virtual reality games, mobile and tablet and other formats. • The video game must have a British origin and be subject to a cultural test

Major benefits obtained		
Between 2016 and 2019 the number of companies increased by 8.4%	In 2016, the VGTR generated 9,240 jobs	For every £1 invested in the video game industry, £4 in GDP is generated

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

France			
Crédit d'Impôt Jeu Vidéo			
Date of approval	March 2007	***Apply until***	December 2022

Description
The Video Game Tax Credit is intended for companies engaged in the development of video games located in France. Under certain conditions, it offers a tax exemption equivalent to 30% of the total expenditure directly allocated to the creation of a video game.

Deductible expenses	• Video game conception and creation costs: • Depreciation of fixed assets. • Remuneration paid to the authors who participated in the creation of the video game. • Staff costs. • Operating expenses including purchase of materials, supplies and equipment, building rentals, maintenance costs and travel expenses. • Subcontracting expenses of European organizations, up to a limit of 2 million euros per fiscal year..
Requirements	• Have a development cost of at least 100,000 €. • Must be destined for sale to the public • Contribute to the development of French and European culture (determined by a point scale). Among the valuation criteria are: ○ The heritage, i.e. whether it is an adaptation of a recognized work of European historical, artistic or scientific heritage. ○ Original creation, which includes the originality of the script/creativity of the graphic and sound universe. ○ Cultural content, ○ European localisation of expenditures and nationality of individuals collaborating in creation ○ Publishing and technological innovation.

Major benefits obtained		
The number of companies has grown over the years, reaching 1130 companies in 2019	As from 2013, the average number of employees of French companies has been 26,94.	Sector turnover has grown by 77,8% since 2013, standing at 4,8 billion in 2019

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

Canada
Several federal and provincial incentives

Date of approval	N/A	*Apply until*	N/A

Description

There are currently multiple incentives applicable to the video game industry in Canada.

- At the federal level there is the Scientific Research and Experimental Development (SR&ED) incentive, for which companies receive US$3 million.
- At provincial scale, Alberta, Ontario, Quebec, British Columbia, Manitoba, New Scotia and Newfoundland and Labrador have created their own tax credits ranging from 17,5% to 40% depending on certain expenditures.

Deductible expenses	At the federal level, the following expenses are deductible: salaries, materials (machinery and equipment) and other general expenses. At the provincial level, depending on the applicable incentive, the deductible expenses are different, the main ones being the following: • Staff cost • Total costs incurred in the development of the interactive product • Marketing and distribution costs
Requirements	In terms of the R&D incentive at the federal level, the main requirement is that the company performs research and development activities which in the case of video games may be related to algorithm design, system improvement etc. At a general level, the requirements defined for federal incentives are as follows, without prejudice the fact that each of the provinces may establish more specific requirements: • Existence of a permanent establishment in each region • The main business involves the development of interactive digital products • Wages and salaries must be paid to persons resident in each region • Products must be educational, informative or entertaining, providing information of at least two of the following types: text, image or sound

Major benefits obtained

Between 2017 and 2019 the number of companies increased by 16.1 %

The industry directly employed approximately 27,700 people in 2019, this is a growth of 27.6 % over 2017

In 2019, the industry's impact on GDP increased by 19.7 % compared to the impact in 2017

3 | ANALYSIS OF THE AUDIOVISUAL TAX INCENTIVE APPLIED TO VIDEO GAMES

3.3. Benchmark analysis

3.3.4. Main conclusions

As we have seen throughout the analysis of Canada, France and the United Kingdom, all of them currently apply very advantageous tax benefits for video game companies.

All of them have both differences and similarities in their configuration, but in all cases their application has brought significant economic benefits both for the companies themselves and for the economy of their countries.

The participatory processes carried out by the European Commission during the approval processes of the incentives for France and the United Kingdom reflect the opinions of the main players in the sector, focused on the consideration that video games are audio-visual products that can influence players imagination, ideas, language and cultural references.

They also considered that the incentives approved so far for the video games sector were not enough or practically insistent, as is currently the case in Spain. This reduces the ability of Spanish companies to compete in the international market with other countries that do enjoy tax advantages.

As we have seen during the analysis, deductions in France and the UK initially corresponded to 20 % of budget expenditure, while in 2017 France increased this percentage to 30%. In the case of Canada, depending on the province, the incentives range from 17.5% to 40%, representing a higher percentage than the European incentives.

In Canada, the main deductible expenses tend to coincide with the labour costs for the creation of the game, while in France and the UK they go further by including the costs of the conception of the video game as well as other costs of materials and supplies, in some cases even including the costs of marketing and distribution of the products created, also in the case of Canada.

In France and the UK, in order to obtain the incentive, it is necessary to pass a cultural test in addition to meeting other requirements, mostly related to the types of company applying, corporate tax liability or exclusion from certain categories. This cultural content sample is replaced in Canada by the need to prove that it is an educational, informational or entertainment product.

In France and the UK there is a single incentive at the state level while Canada divides these incentives by province and is applicable at the federal level for research and development. In the case of the UK there is also an R&D incentive which is compatible with the video game incentive in terms of certain expenditures.

At the economic level, the introduction of tax incentives has led to significant benefits that have translated into an increase in the number of companies and, consequently, jobs, as well as enrichment for the country's economy. In the case of French companies between 2015 and 2019 there was an increase of 87 %, while in the case of Canada this increase represents 180% between 2009 and 2019. The lowest percentage is in the UK, where the number of companies increased by 8.4 % between 2016 and 2019.

4 | FINAL CONSIDERATIONS

4 | FINAL CONSIDERATIONS

4.1. Conclusions

After analysing the current situation of the video game sector in the Canary Islands, the following conclusions have been reached:

The Canary Islands industry consists of small companies, being an incipient industry

Currently, the video game business network on the Canary Islands mostly consist of micro-companies with an average number of workers of 7. These are mostly companies that are just getting off the ground and that do not yet have a long trajectory in the sector, with a turnover of less than 200k euros per year.

The video game sector is a young industry that handles a very high volume of business compared to other industries, so the Canary Islands should take advantage of its strengths and opportunities to achieve greater development.

The necessity of considering video games as audio-visual products

Currently, the Canary Islands offer an incentive related to R&D for video game companies. However, as we have seen during the analysis, video games are similar to audio-visual products, having a cultural and entertainment component. The main companies, associations and institutions in the sector have had struggles for years for video games to be recognized as audio-visual products and to benefit from the same incentives. The current R&D incentive is adequate for companies that create their own technologies.

Difficulty in identifying qualified personnel on the islands

Some of the main companies have expressed their difficulty in finding qualified personnel in the sector, having to turn to other territories. One of the factors that cause this difficulty is the shortage and lack of specialization of the current training offer

Other countries are making benefits thanks to the creation of specific incentives for the sector

Other countries such as France, Canada or the United Kingdom have created specific incentives for the videogame sector, generating a very positive impact. The implementation of tax incentives has resulted in significant benefits that have led to increasing the number of companies and, consequently, jobs, as well as enrichment of the country's economy.

Shortage of financing in both public and private sectors

It is difficult to access the scarce public aid available, as well as to find private investors who prefer to invest in other sectors that involve less risk.

4 | FINAL CONSIDERATIONS

4.2. Recommendations

In relation with the conclusions set out above, the following recommendations are made to improve the current situation of the sector, contributing to its further development:

Setting up a specific tax incentive for the production of video games.

In line with the other countries success in applying specific incentives for the video game sector, Spain should follow the same path. The main companies and associations in the sector have been calling for this incentive for a long time, which would involve reforming article 36 of the Corporate Tax Law, including video games in the deductions foreseen for audio-visual productions.

Increasing and giving visibility to the sector's aid programmes

Existing aid programmes are currently not enough, either because their requirements are too restrictive or because the amounts available are not enough to cover all the companies in the sector.

These subsidies are not in line with reality, and therefore the Public Administrations should make a greater investment in video game companies by providing more subsidies that contribute to the further development of companies by promoting factors such as entrepreneurship, the creation of new companies and the internationalisation of the sector.

Designing a more specialised training offer

Given the difficulty in finding qualified professionals in the sector, it is necessary to define a more complete training offer that covers profiles related to marketing and distribution as well as design, which are the areas where the greatest need for training has been detected by the interlocutors. In addition, due to the characteristics of the video games sector, this training must be specialised and it is not enough to provide basic notions in each area, as more in-depth training is needed in programming or art.

4 | FINAL CONSIDERATIONS

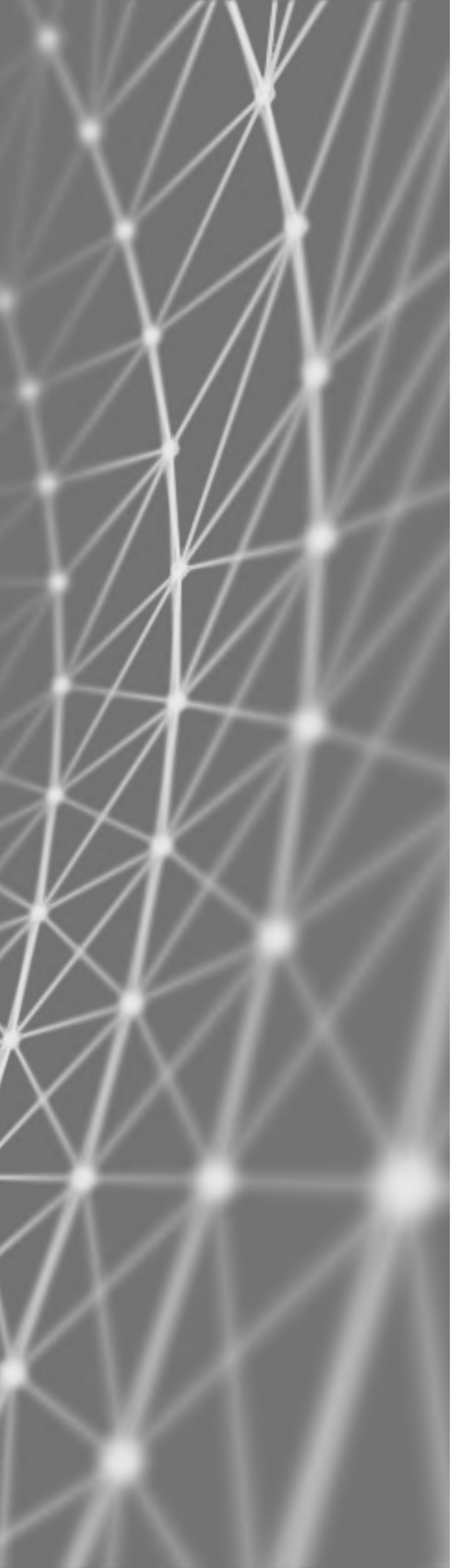
4.2. Recommendations

Attracting more investment

Currently, there is no company dedicated to video game publication in the Canary Islands, and it is necessary to launch games with a wider scope, covering international markets. It is also necessary to set up a mechanism to facilitate investment in productions in the Canary Islands, such as holding a greater number of events that bring together the main companies from other countries, allowing them to learn how the sector works, as well as the advantages and benefits that investment would bring.

Raising sector profile

The Canary Islands are currently in an advantageous position compared to other regions, especially in terms of tax advantages. Incentives are greater than in the rest of Spain. However, there is a general lack of knowledge about the existence of these advantages, and it is therefore necessary to make them more widely known, which would lead to the establishment and creation of a greater number of companies in the territory, thus increasing the size of the Canary Islands sector.



5 | APPENDIX

5 | APPENDIX

5.1. Bibliography

1. Libro Blanco del Desarrollo Español de Videojuegos 2018
2. Libro Blanco del Desarrollo Español de Videojuegos 2019
3. Devuego portal database.
4. Sector value chain:
    1. Estructura y evolución reciente de la industria del videojuego.
    2. Libro Blanco del desarrollo español de videojuegos.
    3. Análisis externo de la industria de los videojuegos e interno de la empresa "riot games.
    4. La industria de los videojuegos y del software de entretenimiento como futuro motor de la industria en España.
    5. La industria del desarrollo de videojuegos en la Comunitat Valenciana: oportunidades nacionales e internacionales.
    6. The Video Game Industry, Resume Play
5. News:
    1. Más ayuda para el videojuego canario.
    2. La industria del videojuego una oportunidad para Canarias.
    3. La formación de los canarios es hoy incompatible con la industria de los videojuegos.
6. Training:
    1. Animaciones 3D, Juegos y Entornos Interactivos - Ciclos Formativos de Formación Profesional de Grado Superior.
    2. Experto universitario en Diseño y Programación de Videojuegos.
7. Comparative video games with audio-visual products:
    1. Diferencia entre animar para los videojuegos y las películas.
    2. Herramientas técnicas y narrativas que diluyen la separación entre los dos medios.
    3. Cómo se hace una película en animación 3D.
    4. ¿Cuáles son los países europeos que ofrecen mejores incentivos por ir a grabar?

5 | ANEXO

5.1. Bibliography

8. Benchmark analysis
    1. United Kingdom
        1. 2014/764/EU: Commission Decision of 27 March 2014 on the State aid scheme SA. 36139 (13/C) (ex 13/N) which the United Kingdom is planning to implement for video games
        2. Understanding the Video Games Tax Relief.
        3. A Map of the UK Games Industry.
        4. The cultural test for video games.
    2. France
        1. Commission Decision of 11 December 2007 on State Aid C 47/06 (ex N 648/05) Tax credit introduced by France for the creation of video games
        2. French videogame industry.
        3. El crédito fiscal de los videojuegos.
    3. Canada
        1. Digital Media incentives in Canada.
        2. Alberta Interactive Digital Media Tax Credit.
        3. British Columbia Interactive Digital Media Tax Credit (BCIDMTC).
        4. British Columbia Digital Animation or Visual Effects (DAVE).
        5. Manitoba Interactive Digital Media Tax Credit (MID MTC).
        6. Newfoundland and Labrador Interactive Digital Media Tax Credit.
        7. Nova Scotia Digital Media Tax Credit.
        8. Ontario Interactive Digital Media Tax Credit (OIMTC).
        9. Ontario Computer Animation and Special Effects Credit (OCASE).
        10. Quebec Production of multimedia Titles Tax Credit.
        11. Quebec Computer Animation and Special Effects Tax Credit.
        12. Prince Edward Island Innovation and Development Labour Rebate.
    4. Federal
        1. Scientific Research and Experimental Development (SR&ED).

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