

Between the real and the virtual: The video game industry in Quebec

Quebec's video game industry is in the limelight. It is innovative, successful and has strong drawing power. In this setting, where major studios rub elbows with microbusinesses, everyone is trying to carve out their own niche in a fiercely competitive environment. Though the sector has grown tremendously in the last decade or so, it can still take some hard knocks. The factors that have driven it forward, such as high demand for video games, advantageous tax credits and a skilled labour force, are still in place. At the same time, competition is stiffer, gaming platforms have proliferated, and it could become harder to find competent workers. Despite these more demanding circumstances, Quebec remains an industry stronghold. Enthusiasm is still high, but we can expect this sector's pace to slow somewhat over the next 10 years.

QUEBEC'S GAMING INDUSTRY: UNDERSTANDABLY FASCINATING

Why has excitement over the video game industry remained so strong over time? There are many reasons. It is an innovative sector that combines reality and fiction, in which Quebec has achieved both critical and commercial success. Job creation in this field has literally exploded in the last 10 years. Practically speaking, the number of workers went from 1,200 in 2002 to around 9,000 in 2012, which is something to talk about.

Arriving in Quebec in the 1980s, under the umbrella of Multimedia, the video game industry rapidly made its mark. This hard-to-define sector is split between two major activities, according to Statistics Canada: information, culture and recreation (publishing) and professional, scientific and technical services (computer system design). Video games get some of their appeal from the panoply of new jobs they have created (e.g. motion capture technicians, 3D character artists, multiplayer network programmers, etc.). In development phases like the one the industry just went through, workers are pioneers, in their own way. This aspect of the job can be gripping: workers have free rein and tasks are defined day by day. Moreover, it can be highly appealing to apply for a job in an environment in which creativity is the raw material.

The attention surrounding the video game industry stems from the rapid growth by its labour force, the high wages attributed to it, and its concentration in Quebec compared with the rest of Canada. Add to this the fact that it is quite a new industry. This vitality is undeniably magnetic. That being said, each of these points deserves a closer look.

VIDEO GAME INDUSTRY 101

There is little official data on this activity sector. The data that is available has chiefly been collected from the businesses themselves, by industry associations or private research firms. All the same, we can sketch out a portrait (table 1 on page 2). In 2012, an estimated 9,000 workers were directly employed in Quebec's video game industry. Different sources have corroborated this figure, and each uses its own term for the industry (digital entertainment, entertainment software, video gaming).

However, the organizations producing these numbers are well aware that the surveys do not capture the sector's numerous microbusinesses (fewer than five employees). We know, however, that employment is concentrated in major studios such as Ubisoft, Eidos and Warner Brothers Games Montreal, for example. The number of workers on record increased more than sevenfold between 2002 and 2012, fairly phenomenal given that total employment growth in

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NOTE TO READERS: The letters k, M and B are used in texts and tables to refer to thousands, millions and billions respectively.

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Table 1 - Quebec's video game industry in numbers, according to a variety of sources

<i>TECHNOCompétences (2012)</i>	<i>Investissement Québec (2012)</i>	<i>MFEQ (2008) (and SECOR studies for CIAIC*)</i>	<i>Entertainment Software Association of Canada (2012)</i>
Electronic game industry	Digital entertainment	Multimedia	Video games
<ul style="list-style-type: none"> Report based on survey: 55 companies responded out of 81 businesses identified Contract workers and interns not recorded 		<ul style="list-style-type: none"> 550 businesses 12,500 jobs \$1B in revenue 	<ul style="list-style-type: none"> Estimate of spending in Quebec \$741M
<ul style="list-style-type: none"> Direct jobs: In 2012, 8,979 jobs over 55 businesses: 	<ul style="list-style-type: none"> Direct jobs: Over 8,000 direct jobs Over 90 businesses 	<ul style="list-style-type: none"> Revenue of the gaming industry only: \$240M, with 24% from multimedia 	<ul style="list-style-type: none"> Direct jobs: 8,750 jobs in 2012 97 businesses
<ul style="list-style-type: none"> Employment growth video games: 712% since 2002 Businesses surveyed: 87% in game design (consoles, mobile, online and social networks) 5% development of software and other services 8% testing and quality assurance 	<ul style="list-style-type: none"> Employment growth video games: +700% since 2003 Activity sectors: Game development (design) (consoles, mobiles, online and social networks) Publishing Production services Software and middleware 		
<ul style="list-style-type: none"> Size of businesses surveyed 1 to 10 employees: 23% 11 to 49 employees: 27% 50 to 99 employees: 15% 100 or more employees: 35% (accounts for 90% of total jobs) Many microbusinesses not surveyed 	<ul style="list-style-type: none"> Core: About 50 development studios) (± 5,000 jobs) 		
<ul style="list-style-type: none"> University education: the most sought after in the industry; particularly for production, programming and production support. 			

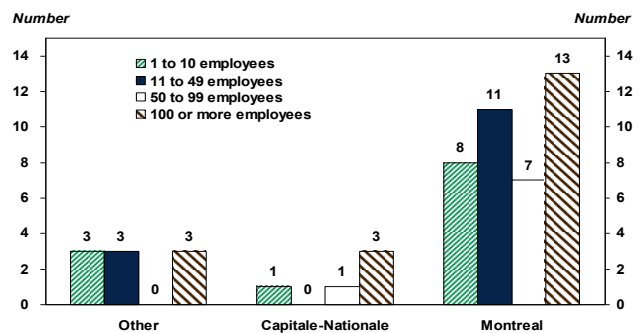
*CIAIC: Canadian Interactive Alliance / Agence interactive canadienne
Sources: Ministère des Finances et de l'économie du Québec, SECOR, TECHNOCompétences, Investissement Québec, Entertainment Software Association of Canada and Desjardins, Economic Studies

Quebec during this period was 11.8%. Growth was at 44.8% and 19.3% respectively for professional, scientific and technical services and information, culture and recreation.

According to the various surveys consulted for 2012, the industry had between 80 and 100 businesses working in game design (on all sorts of platforms: gaming consoles, mobile devices and computers), software development, production, testing and quality assurance. Video game companies are concentrated in Montreal and Quebec City, which account for almost all of the businesses (graph 1).

However, the industry's progress was not simply one long upward thrust. In 2012 and 2013, some industry flagships beat a retreat, closing several production units, such as Electronic Arts, which shut down two of its three Montreal studios in early 2013, and publisher THQ. Nothing ever just grows: after an almost runaway advance, some adjustments can be expected. We will discuss this a little later.

Graph 1 – Video game businesses are concentrated in Montreal and Quebec City (2012)



Source: TECHNO Compétences, "L'emploi dans l'industrie du jeu électronique au Québec en 2012", Avril 2013

Wages paid are another important point of interest: lofty figures are bandied about. According to the available sources, the average annual salary was between \$62,000 and \$72,500 in 2012. A little math yields the weekly pay, which ranges from \$1,192 to \$1,394. This compares favourably with the average Canadian weekly earnings in 2012 in the professional, scientific and technical services (\$1,140) and in information, culture and recreation (\$789) according to Statistics Canada. However, these rather flattering figures for the video game industry are an average and do not explain how wages are distributed among employees. The median value, using which we could divide workers into two equal subgroups, would have given a better idea of real earnings.

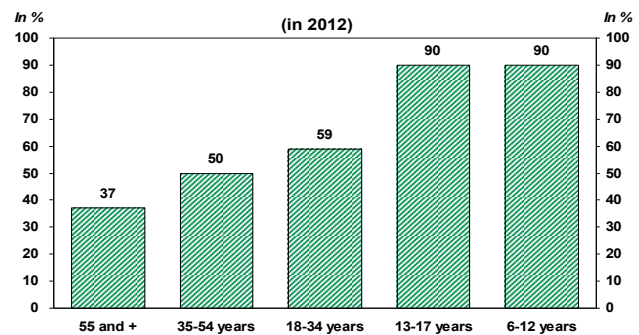
Furthermore, it is difficult to know the magnitude of spending and revenue within the industry in Quebec. Estimates published in 2008 by the Ministère du Développement économique, de l'Innovation et de l'Exportation point to revenues of around \$240M. We can easily imagine that they have risen since—the question is, by how much? For its part, the Entertainment Software Association of Canada estimates that 2012 spending in this activity sector was \$741M in Quebec. Canada-wide, the industry seems to have contributed \$2.3 billion to GDP that same year. In terms of Canada's total GDP, this represents a share of just over 0.1%. According to the various hypotheses, if Quebec accounted for 50% of this GDP (\$1.2B), the industry's share of Quebec's GDP would have been just under 0.4%. If Quebec held a 60% share of the Canadian industry (\$1.4B), the contribution would have been a bit over 0.4% of Quebec's GDP.

Some will say that this is just a drop in the bucket in terms of the whole economy, but this drop is as shiny as a speck of gold for the people who see potential for major growth in it.

DRIVING THE INDUSTRY FORWARD

What forces have helped the industry grow so quickly? They are varied. The first is demand for video games. According to the picture put together by the Entertainment Software Association of Canada (ESAC), 58% of Canadians are gamers, and their average age is 31. Furthermore, if we are to believe the survey conducted for 2012 (graph 2), video game use is fairly widespread, culminating in a 90% use rate for children under 18. These are people who were born into computer technology and are liable to play for many years. According to ESAC's estimates, 95% of Canadian households have a computer and 61% have at least one gaming console.

Graph 2 – Percentage of Canadians, by age, who have played a video game in the last 4 weeks



Source: Entertainment Software Association of Canada, 2013

Another factor in the industry's success is the government's support for the industry. The tax credits offered are some of the highest in the world. In Quebec, they were even raised in fall 2013. Besides the fact that they cover between 26.25% and 37.50% of the wages of eligible employees, they are more generous because more employees are now covered by this measure. Last year, this credit cost the government \$128M. The aid does not exclude companies from receiving additional assistance from Investissement Québec, as shown this fall. On one hand, Ubisoft received \$9.9M in assistance to support the development of an online gaming studio; on the other hand, Warner Brothers received \$1.5M to purchase equipment for its Montreal studio.

Another pillar of growth for Quebec's industry is the presence of a trained and multilingual labour force, a sizeable edge. This worker potential is supplemented by training centres and a variety of diplomas that are well aligned with industry needs. Quebec has many university programs that help develop Quebec know-how. For example, Université Laval has a three-year arts and animation science program, Université de Montréal has a graduate program in game design, Concordia University has a three-year program in design and computation arts, while at Université de Sherbrooke, there is a graduate degree in Quebec video game development.

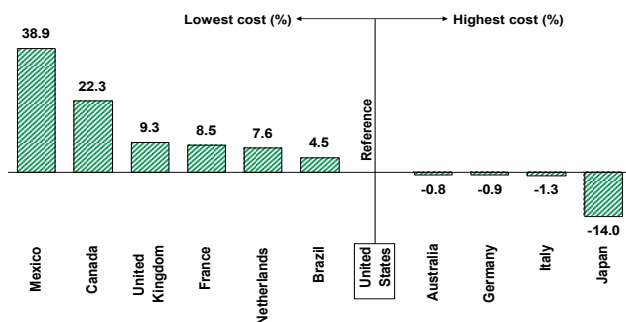
Add to this the training offered at colleges and support from private establishments like the National Animation and Design Centre (Centre NAD) and the Institut national de l'Image et du Son (INIS). Other institutions help strengthen Quebec's reputation as a place conducive to industry development. Consider the Centre de Recherche informatique de Montréal (CRIM), Hexagram - L'Institut de recherche-cr ation en arts et technologies m diatiques,

or even the Société des Arts technologiques (SAT), to name just a few. What's more, technology, production and support providers help enhance the video game sector's industrial network.

Among the other factors bolstering the industry's fame and appeal, note the commercial and critical success of certain Quebec creations. Army of Two, Chop Chop, Deus ex: Human Revolution, the Assassin's Creed and Prince of Persia franchises, Spider-Man: Shattered Dimensions and the Splinter Cell games are some of the titles that have stood out over the years.

Lastly, Canada (including Quebec) benefits from operating costs that are below those borne by many of their competitors. According to the KPMG study, Competitive Alternatives 2012: KPMG's Guide to International Business Location Costs, video game production costs were 22.3% lower than in the United States that year (graph 3). Moreover, they were below costs for many countries, including the United Kingdom, France, the Netherlands, Brazil, Australia, Germany, Italy and Japan.

Graph 3 – Comparison of video game production costs: Canada performs well



Sources: KPMG, Competitive Alternatives 2012: KPMG's guide to international Business Location Costs and Desjardins, Economic Studies

The factors mentioned above have helped the video game sector grow rapidly and are still present. However, we must not believe that the way is clear of all obstacles and that Quebec's industry will maintain the wild pace observed in recent years. Other countries have fought the good fight and are just as competitive in the industry here.

CHALLENGES THAT COULD HAMPER THE CURRENT FRENZY

Quebec is not the only province favoured by the video game industry: British Columbia and Ontario are also in the race. In 2012, British Columbia had around 5,000 jobs spread between several major companies (e.g. Electronic Arts, Disney Online Studios, Microsoft Games), and a majority of SMEs. This is a very dynamic environment in which start-ups focus almost exclusively on games played on mobile devices or through social networks. This province also offers tax incentives, including research and development credits and tax holidays to attract both workers and companies. What's more, it is in the same time zone as Silicon Valley.

In Ontario, there are between 2,000 and 2,500 workers distributed over a large number of small businesses. However, some major corporations are there as well: Ubisoft, Gameloft and Arkadium, for example. This province also has a fiscal arsenal for attracting investors and boosting the emergence of new businesses. Tax credits for skilled labour costs, non-refundable contributions from the Interactive Digital Media Fund and other tax incentives are among the weapons used to take on the competition.

Of course, competition goes far beyond Canada's borders: it is global. While the United States and Japan are industry champions, that does not keep other countries from holding their own as well. France has many heavy hitters, including some who have a foothold in Quebec. It also has tax credits for game development expenses, credits which have been renewed until 2017. Despite this, the French industry has 50% fewer employees than it did 10 years ago (from 10,000 jobs to 5,000 currently). Asia is also in the running, and we should not overlook the efforts made by Singapore (city state with 5.3M inhabitants) to become the key player in digital media. It also provides a lot of generous support to businesses. In other words, the competition is intense.

And it is not just competition that is putting Quebec's industry to the test. In fact, the proliferation of gaming platforms has changed the game for the entire sector. The general public's rapid adoption of tablets and smartphones has also increased the number of possible gaming platforms. This is a real challenge and companies must develop strategies. Many questions are being asked, including whether efforts should now be focused on platforms likely to have more longevity, or whether access should be extended to two, three or four types of media. This is also a business opportunity, as the ability to use new devices makes games accessible to a wider number of people.

Companies must also stay abreast of the latest technological developments. They are obliged to keep pace in terms of worker training, the use of new work tools and procedures, and in terms of platform evolution. While the labour force remains the most important asset for these companies, they must still choose how workers will be developed. The investments required are substantial and frequent, given the speed at which the sector is evolving. This pace will not slow down. If risk is part of the game, it is also intrinsically tied to the industry.

ONGOING ENTHUSIASM BUT A SLOWER PACE

A few years ago, the industry’s rapid growth suggested that nothing, or almost nothing, could slow its momentum. However, the closing of several studios in 2012 and 2013 in Quebec, as elsewhere in Canada, suggests that the pace is changing. The games industry has already been consolidating for several years through acquisitions and the tendency to join forces is here to stay.

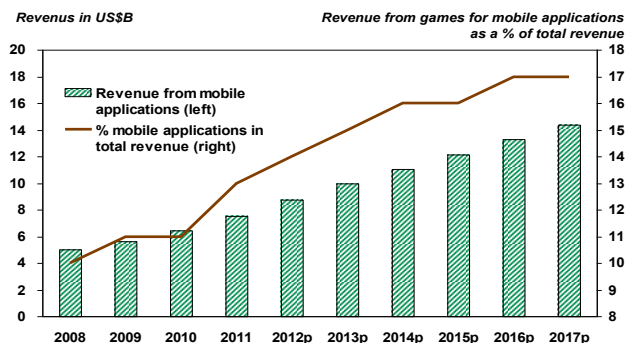
The passion for gaming is not about to die out, if we are to believe the outlooks from PricewaterhouseCoopers (PwC),¹ which bodes well for the industry’s future. The global market will go from \$63.4 billion in 2012 to \$86.9 billion in 2017. This is an average annual growth rate (AAGR) of 6.5%, which is much stronger than the growth rates forecast for the U.S., Canadian and Quebec economies.

PwC identifies trends and is able to confirm that mobile applications (mainly tablets and smartphones) will evolve the most quickly. Revenues will reach \$14.4 billion in 2017, from \$8.8 billion in 2012 (graph 4). The AAGR will be around 10% over this period.

For their part, revenues from gaming consoles will continue to rise, though at a less frantic pace, estimated at 5% (AGAR). Still, they are likely to go from \$24.9 billion in 2012 to \$31.2 billion in 2017.

What’s more, computer games, which account for one segment of the Quebec industry, are not a thing of the past: online gaming possibilities will increase substantially. PwC estimates that in 2017, spending related to gaming consoles and online games will be almost neck and neck. Every \$100 spent for consoles will be matched by \$97 for online games.

Graph 4 – Revenue from video games for mobile applications is expected to increase (2008 to 2017)



Source: PwC, Global Entertainment and Media Outlook, 2013-2017

The future will tell if these forecasts are right. In the meantime, the industry is battling: the creation of new platforms, the development of new mobile applications, increased public accessibility and, most likely, even more alliances to pool strengths and talents. In this context, it will be tougher to find workers, especially since mobile applications are not only being developed by the gaming industry: stores, financial institutions, the music industry and social networking are just some of the fields increasing their presence. Will there be a bidding war for workers? That remains to be seen, but pressure could intensify in the coming years. Firms are already recruiting from abroad while the labour market adjusts.

The investments by two major studios in the Montreal region (Ubisoft and Warner Brothers Games Montreal) in fall 2013 show that Quebec-based industries intend to follow the rising tide of demand. Just recently, a French online game publisher announced it was coming to Quebec. Ankama promises to create 40 jobs in the next three years. Without a doubt, things are happening.

From a less economic perspective, the gaming industry runs on the emotions, adrenaline and thrills that players feel. As the supply of games surges here and around the world, we can expect players to keep raising their standards. Quebec’s industry will continue to be under intense pressure and seems destined to keep outdoing itself. That will require investment, audacity and a pooling of talents. Will there be more jobs in the coming years? Probably. We will see small start-ups, as well as mergers and the creation of partnerships. What’s more, the combination of expertise and multimedia trades will help enrich content, which will increase our industry’s visibility.

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¹ PricewaterhouseCoopers, *Global Entertainment and Media Outlook, 2013-2017*