

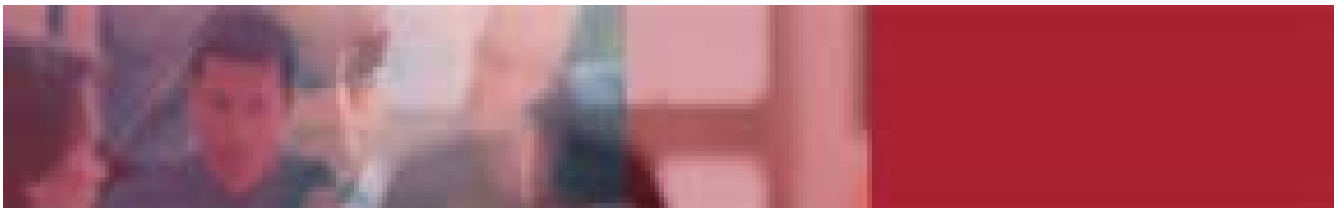
**ONTARIO 2012:**  
STIMULATING GROWTH IN ONTARIO'S DIGITAL  
GAME INDUSTRY

AUGUST 2008

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The Ontario government and its agencies are in no way bound by the recommendations herein.

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## EXECUTIVE SUMMARY

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The digital game market has emerged as a serious competitor for consumer media spending. This global industry generated \$32 billion of revenues in 2006, and is projected to continue growing at a rate of over 10 per cent annually over the next 5 years, a growth rate that is expected to outpace those of many traditional media industries. Demand for digital game products in Canada is expected to outpace global growth, although its overall share of the market pales in comparison to most other areas.

The digital game industry is constantly evolving. Over the next five years, four key trends are expected to have a significant impact on the manner in which the industry creates, distributes, and monetizes its content. The evolution of existing platforms, emergence of “lighter” platforms, consolidation of the industry, and development of a middleware market will all challenge the industry stakeholders to re-evaluate their current strategies and business models.

Production of digital games is truly an international industry, with centres of game production occurring across the globe. Regional hubs, such as Japan and California, have been leaders in game development for decades. Contender regions, including Quebec and British Columbia, are later entrants to the global market who have developed the appropriate scale and/or competitive advantage to position themselves on the international scene. In recent years, new entrants such as India and China have also begun taking active steps to carve out a piece of the lucrative market for themselves.

Each region has achieved growth through its own unique manner; however, commonalities can be observed in their different growth strategies. The existence of domestic demand for digital game products (or lack thereof), the capability to produce content efficiently, and the existence of strong industry or government leadership all contribute to the different growth trajectories of different regions. Based on these and other commonalities, a number of best practices for regional growth can be identified and used in the creation of a strategic plan for growth in Ontario.

Today, the digital game industry in Ontario is comprised of a small group of mid-sized console developers and a broad range of small developers for PC, online and mobile games. These companies employ approximately 850 digital game developers and generated estimated revenues of \$70 million in 2006. While industry stakeholders have worked hard to get to this level, a collaborative effort by public and private partners will be required to take Ontario to the next level and increase its global presence.

Ontario's digital game industry requires a clear vision for what the industry will look like over the next five years, and how Ontario can take advantage of the explosive global growth of digital games. *Ontario 2012's* recommendations will enable the province to become a leading game developing region with strong, organically developed companies, solidify Ontario's reputation as a creator of high quality digital content, and establish Ontario as an attractive destination for foreign investment. Stakeholders must now seize the opportunity to work together to make this vision a reality.

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**SUMMARY OF RECOMMENDATIONS**

	<b>Recommendation</b>	<b>Responsible Party</b>	<b>Metric Addressed</b>	<b>Priority Level</b>	<b>Sources of Public Funds?</b>	<b>Time Frame</b>
1	Leverage Next Generation of Jobs Fund for digital game industry	Government	Number of Developers	High	Existing Commitment	2008-2012
2	Support the development and commercialization of market-ready game technologies	Government	Number of Developers	Medium	New Commitment	2009-2012
3	Create hub-specific linkages between academic community and industry	Academia & Industry	Number of Developers	Medium	New Commitment	2008-2012
4	Develop an Ontario digital game industry portal	Academia & Industry	Number of Developers	Medium	Existing Commitment	2009-2012
5	Intensify efforts to track graduates	Academia	Number of Developers	Low	N/A	2008-2012
6	Consolidate the Interactive Digital Media Fund and Interactive Digital Media Export Fund	Government	Dealflow	Low	Existing Commitment	2008-2012
7A	Streamline Cluster Fund's eligibility requirements	Government	Dealflow	Medium	Existing Commitment	2008-2010
7B	Support direct collaboration amongst content creators	Government	Dealflow	Low	Existing Commitment	2010-2012
8	Provide prototype development support for console game developers	Government	Dealflow	High	New Commitment	2008-2012
9	Enhance Interactive Digital Media Tax Credit	Government	Dealflow	High	Existing / New Commitment	2008-2012
10A	Implement an annual, domestic-focused digital game industry conference	Industry & Government	Dealflow	Medium	New Commitment	2010-2012
10B	Determine additional collaborative support activities amongst industry players	Industry, Government & Academia	Dealflow	Medium	N/A	2008-2012
11	Combine funding for trade associations with the Domestic Marketing & Events fund	Government	Dealflow	Low	Existing Commitment	2008-2012
12	Provide tax credit certification based on budget costs upon project commencement	Government	Sources of Capital	High	Existing Commitment	2008-2012
13	Apply the Interactive Digital Media tax credit to joint ventures	Government	Sources of Capital	Medium	Existing Commitment	2009-2012
14	Create a public/private investment fund for digital game development	Government	Size of Companies	High	New Commitment	2008-2010
15	Increase IO's engagement with digital game stakeholders	Industry	Size of Companies	Medium	N/A	2008-2009
16	Provide resources and hold regular training sessions for game management and professionalism development	Industry	Size of Companies	High	New Commitment	2008-2012
17	Identify central liaison between all levels of government and the digital game industry	Government	General	High	N/A	2008

## **DIGITAL GAME INDUSTRY REVIEW: ONTARIO 2012**

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### **Overview**

There is a significant opportunity for Ontario to enhance its presence in the digital game industry over the next five years. To increase its global footprint, Ontario should strive to be known as:

- A world-class game developing region with strong cadre of mid-sized players developed organically and increasingly attractive to acquirers
- A diversified industry that leverages multiple support mechanisms to augment the development of existing and emerging platforms
- An industry known as a creator of high quality digital content geared towards the global marketplace
- An integrated and mobilized industry that stimulates productivity, innovation, and technology transfer
- A geographically clustered industry which leverages investments in infrastructure, technology, and talent development
- An industry integrated into Ontario's economic landscape through structured mechanisms to encourage cross-platform and cross-industry collaboration

For this vision to be realized, Ontario's digital game stakeholders – industry, academic and government – must implement a clearly defined strategy that explicitly outlines how the digital game industry will become a leading contender.

The overriding objective of *Ontario 2012* is to create a competitive critical mass of development jobs in the digital game industry. The best method to achieve this is through the development of a large and attractive “middle class” of developers working on a diversified portfolio of platforms. This report's intent is to put in place specific and measurable strategies and recommendations to capitalize on Ontario's most effective capabilities and leverage existing strengths. It is the opinion of SECOR Consulting that the proposed recommendations will go far in enhancing Ontario's areas of strength in the digital games industry and addressing most of its competitive disadvantages.

### **Project Summary**

The purpose of the Ontario Digital Game Industry Review was to complete a comprehensive investigation of the digital game industry in Ontario. Its primary outcome is the development of a set of policy and program recommendations for government, industry and academia which will enable the province to establish itself as a leading global player in the rapidly growing digital game industry.

The Ontario Digital Game Industry Review was undertaken as a partnership between the public and private sectors. The Ontario government was represented by the Ontario Media Development Corporation (OMDC) and the Ontario Ministries of Economic Development and Trade (MEDT), and Research and Innovation (MRI); the digital game industry was represented by Interactive Ontario (IO) and individuals from key industry players. The project was an outcome of the work of the Ontario Video Game Subcommittees for Talent, Finance and Critical Mass, which had already met to develop a clear understanding of the issues and taken preliminary steps towards the creation of an action plan for the industry. The need for a competitive analysis of the digital game sector in Ontario and a comparative analysis of key digital game regions arose from this activity. SECOR Consulting was engaged by these stakeholders to perform the research and analysis required to develop a comprehensive and actionable plan for the Ontario digital game sector.

## **Approach**

The Ontario Digital Game Industry Review was performed across three discrete phases to develop a strong analytical base from which to make strategic recommendations:

*Phase 1 – Research:* Data on the digital game industry was collected through a number of methods, including:

- Interviews with key industry stakeholders (Ontario and international)  
During the research phase, 15 comprehensive interviews were conducted with key Ontario digital game industry stakeholders, including developers of all sizes with expertise across console, handheld, PC, mobile and online platforms. In addition, interviews were conducted with members from the academic community and with selected distribution channel players. Interviews were also conducted with recognized experts in the international digital game community to identify best practices in competing digital game regions.
- Online survey distributed to all key stakeholders in Ontario  
An online survey was created and reviewed for feedback with each of the project's sponsoring funders. The purpose of the survey was to collect information from a broad range of stakeholders in the digital game industry, including the current state of each company, its strategic direction, and its relationship with government stakeholders.
- Review of existing studies and data related to the Ontario industry and programs, activities, best practices and actions in various international regions  
A broad range of 3<sup>rd</sup> party resources were used to develop an understanding of the structure, composition, and forecasted trends in the global digital game industry. These sources included but were not limited to:
  - PricewaterhouseCoopers, Entertainment and Media Outlook 2007-2011
  - Veronis Suhler Stevenson, Communications Industry Forecast 2006-2010
  - Publications from the International Game Developers Association
  - Publications from reputable industry and academic publications



*Phase 2 – Analysis:* The data collected through the research phase was aggregated and analyzed to derive key findings. As a result, the most significant trends and promising areas of focus within the digital game industry were identified. In particular, data on the global digital game industry was analyzed to evaluate key trends in the development of digital game regions. Ontario-specific research led to an evaluation of how Ontario currently compares to other global competitors on a number of criteria, including number of firms, size of firms, and total development jobs. The funding partners also participated in a Strategic Workshop led by SECOR, where best practices from other regions were reviewed to determine the stakeholders' view on their applicability to the industry in Ontario and provided insight into their overall industry vision for digital gaming in Ontario.

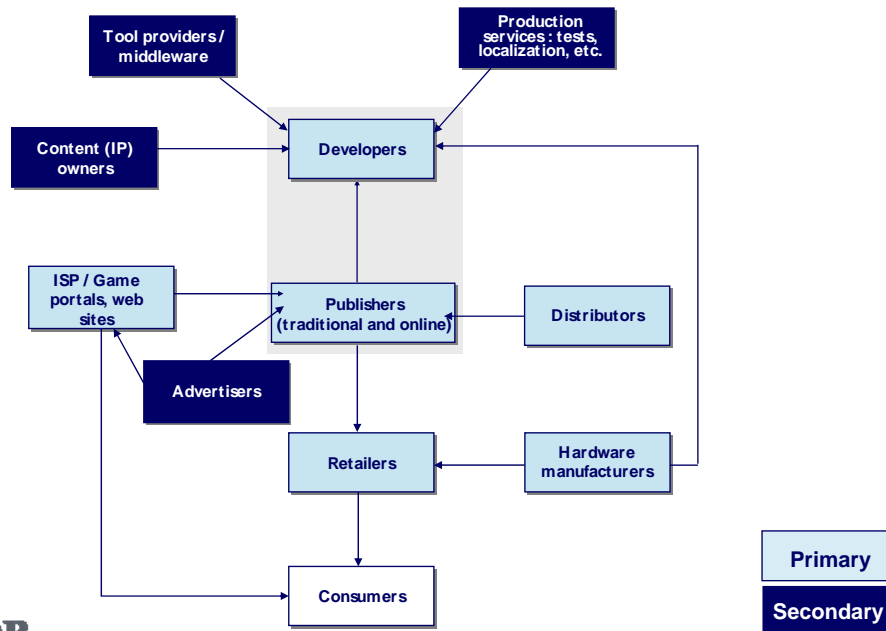
*Phase 3 – Synthesis:* In the synthesis phase, key findings from the research and analysis were used to develop a set of key strategies and tactics to be executed by the most appropriate stakeholders in government and industry. This report is the final output of the synthesis, proposing key policy recommendations, government actions, and market incentives designed to enhance Ontario's competitiveness in the digital game industry.

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### Digital Game Industry Value Chain

The digital game industry value chain is organized around the production and distribution of digital game content. Traditionally, each element of the value chain has existed relatively independently; however, increasing industry consolidation has seen many traditional value chain functions vertically integrated within large publishing houses.

**Exhibit 1 – Digital Game Industry Value Chain**



*Primary* elements are those that have the most influence and control over the digital game product – developers and publishers being the most important of this kind. An overview of primary value chain elements includes:

- Developers – Development studios represent the primary creative force in the digital game industry, responsible for transforming original and/or licensed IP on a wide variety of development platforms. The size of development studios can vary considerably, which often has an impact on the choice of game platform and/or output.
- Publishers – The primary objective of publishers is to identify, incubate and/or attract potentially marketable games being produced by development studios, and then oversee their marketing and distribution; the largest of these players also have their own integrated development studios.
- Retailers – Physical retail locations remain the most popular destination for digital game purchases; this market is now dominated by large players, including big-box retailers (Wal-Mart, Best Buy), and specialty retailer Electronic Boutique (which has a 25 per cent US market share).
- Distributors – The role of the distributor is to serve as a conduit between publishers and retailers for digital game product. As such, distributors must have the capability to rapidly deliver game releases to the global marketplace as games develop broader, more universal appeal.
- Hardware Developers – Digital game hardware is viewed in terms of evolving generations of approximately 4 years in duration.<sup>1</sup> The current generation of hardware includes the Sony Playstation 3, Microsoft Xbox 360, and the new Nintendo Wii (consoles); the Playstation Portable (PSP) and Nintendo DS (handheld); and game-compatible hardware for cellphones and PDAs.
- ISP, Game Portals, and Websites – The online world has emerged as a new distribution channel for both game developers and publishers; major internet portals such as Yahoo! offer consumers the opportunity to sample or purchase games.

*Secondary* value chain elements represent critical supporting players in the digital game industry, including:

- Middleware & Tool Providers provide licenses to developers to use their digital game engines to help reduce the cost of development, provide emerging developers with credibility in the eyes of publishers, and improve the overall quality of the game through cutting-edge technology.

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<sup>1</sup> Comments by Satoru Iwata, President of Nintendo.

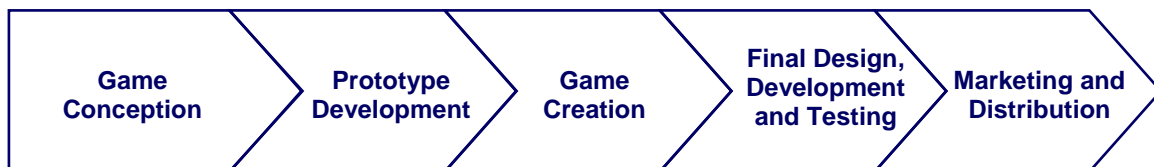
- Production Services are 3<sup>rd</sup> party service providers that perform additional services as game development winds down, such as testing, localization and porting services; while these services are not value-creating, they nonetheless require significant human resource investments, making it more efficient for developers to outsource them.
- Advertisers have multiple new opportunities for innovation with the addition of online functionality into console and handheld games (e.g. Xbox Live, Playstation Network); advertisers can dynamically rotate advertisements and targeted messages into games, or partner directly with developers to create games where their product is the central focus.
- Content/IP Owners include broadcasters, film producers, and other content creators that can provide licensed intellectual property (IP) to game developers; the existing brand strength of existing IP increases the likelihood of a game's success and lowers the risk to the publisher and developer involved.

For the purposes of the Ontario Digital Game Industry Overview, Ontario's Digital Game Industry was defined to include developers and/or publishers located in a permanent establishment in Ontario whose products educate, inform or entertain through text, sound and images that allows users to interact with the content. While other elements of the digital game industry value chain were technically beyond the scope of this report, information around their role, presence in Ontario and potential impact was gathered and analyzed wherever possible.

### ***Traditional Digital Game Development Cycle***

Currently, the most common business model for the creation and monetization of content in the digital game industry is the creation of a physical product, which is then sold directly to the consumer in a one-off transaction. The central players in this business model are the developer and publisher, and their relative market power dictates the terms of the relationship. Where large developers have the funds and experience to manage the bulk of the game development process internally, small developers generally must offer publishers some or all of the rights to their game's IP in exchange for the capital necessary to move development forward.

**Exhibit 2 – Digital Game Development Cycle**



Game Conception – Digital games are fundamentally a creative industry, and the cycle always starts with a new idea. Game conception is typically done internally at a developer or publisher, although ideas can also be generated in conjunction with 3<sup>rd</sup> party

licensors or content owners who have an intellectual property that is suitable for the digital game medium.

Prototype Development – The purpose of the prototype is to create a playable manifestation of the game concept that can be used to attract further funding. Large developers will typically fund the development of a game prototype internally; however, small and/or emerging developers typically need to leverage or “sell” their game concept to access seed money for prototype development. Potential sources of funding include angel investors and financial institutions, but the most common source of capital is in fact the publisher. Regardless of funding source, developers must demonstrate not only a marketable game concept but also a successful track record in order to receive meaningful support. For this reason, many emerging developers tend to focus on small projects that can be self-funded to hone their prototype development capabilities.

Game Creation – Game creation involves building the storyline, artwork and technology for a game. At this point in the development process, almost all developers will have entered into an investment and distribution agreement with a publisher. This agreement typically indicates that the publisher will bear responsibility for the marketing and distribution of the game. Depending on how close to completion the developer has brought the game by itself, the publisher can also provide funding for the completion of the game. In exchange, the publisher will own a proportion of the game's various revenue streams, but more importantly will typically also own the game's IP. This means that only the publisher (not the developer) can take advantage of future revenue opportunities. For large scale games, multiple teams of programmers, artists, writers and designers are involved in development; publisher funding is typically provided on a milestone basis.

Final Design, Development & Testing – This stage of the development process is focused on completing the testing, localization and porting of the game to ensure that it can be launched in the global market. While some large developers have the capacity to perform these tasks in-house, most do not have the competencies to perform these functions. This provides an opportunity for secondary value chain members in production services to position themselves as a high quality, low cost outsourcer for a particular specialization.

Marketing and Distribution – Typically, the publisher is responsible for the marketing and distribution of the finished product. In the case of large games, these expenses can be up to 30 per cent of the total cost of the game.<sup>ii</sup> Due to the hit-driven nature of the market, extensive marketing campaigns are critical in creating opening weekend “buzz” (similar to that of new film releases). Traditionally implemented on a region by region basis, distribution is now focused on global roll-outs. Large publishers typically have the infrastructure and retailer relationships to manage this distribution, while smaller publishers tend to leverage 3<sup>rd</sup> party distributors.

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<sup>ii</sup> Gamedaily report on console game cost structure.

## KEY FINDINGS

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Findings from the Ontario Digital Game Industry Review: *Ontario 2012* can be summarized in five key points:

- Digital games is a highly attractive global industry and Ontario has an important potential role to play.
- Four key trends are repositioning the digital game industry and creating new opportunities.
- Competition in digital games is strong globally, with a number of regions vying for leadership in different areas.
- Ontario has significant advantages and benefits to support continued growth and success in the digital game industry.
- The strategic recommendations contained in *Ontario 2012* will address potential gaps in Ontario's capabilities and competitiveness and support success.

The recommendations in *Ontario 2012* place an emphasis on the organic development of its existing companies and establishment of new ones. Through the implementation of policy initiatives designed to help small developers grow from online and mobile content creators into handheld and console developers, Ontario can build a broad regional "middle class" of companies. Furthermore, by providing support for established console developers to continue increasing their scale, the industry can develop its own anchor tenants.

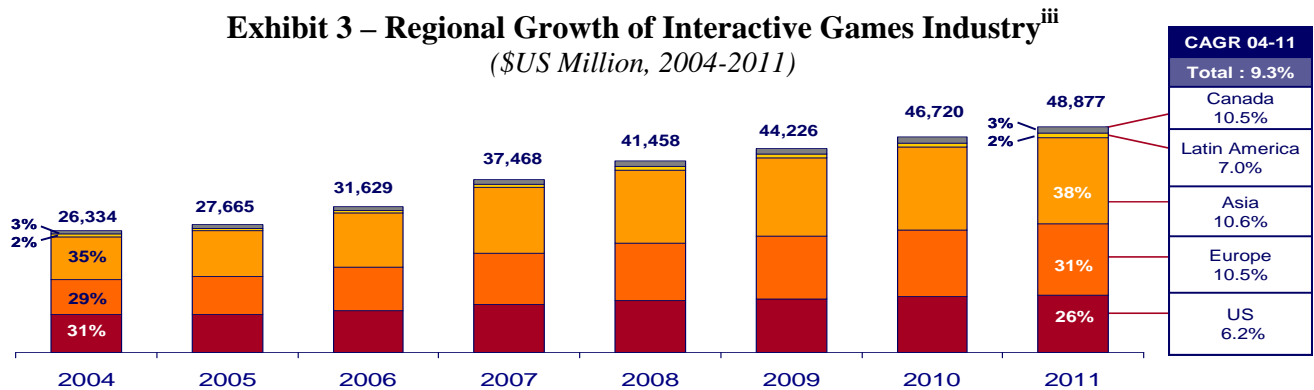
There are two key advantages to an organic growth strategy:

- 1) It creates an industry that not only has scale and sustainability but also has a diversified range of competencies.
- 2) The organic growth of domestic companies creates a number of acquisition targets that could prove attractive to multinational publishers looking to establish a presence in Ontario.

While Ontario's growth strategy is focused on organic development, it will complement tandem efforts to attract external players as anchor tenants for the industry. Attracting a multinational publisher to open a studio in Ontario in the short term would be highly beneficial; in particular, the greater scale, capital influx, and legitimacy that a large publisher would bring to Ontario could considerably shorten the industry's development timeline to achieve critical mass. Ultimately, the spillover effects would contribute to organic growth in the rest of the game community. The process of engaging with multinational publishers toward the possibility of locating a major development studio in Ontario is currently well underway. The implementation of *Ontario 2012*'s recommendations will support this activity by creating market conditions (including potential acquisition candidates) that enhance Ontario's attractiveness as a destination for foreign investment.

### Digital Games is a Highly Attractive Global Industry

The digital game market has emerged as a serious competitor for consumer media spending. This global industry generated \$32 billion of revenues in 2006, and global demand for digital games is projected to grow almost 10 per cent annually over the next 5 years, with the emerging markets in Europe and Asia expected to be the primary drivers of international growth. While demand for digital game products in Canada is expected to outpace global growth, it will continue to make up only a small portion of the global market. The United States is expected to mature as a digital game market, experiencing slower growth; however, proportionally it will continue to be a very large market. Fundamentally, the digital game industry is truly a global market and developers and publishers can expect to monetize their content across multiple international regions.



The digital game industry competes directly with all other forms of media as an attractive destination for consumer spending. While overall consumer spending on media is projected to increase in the future, the nature of spending is expected to be reallocated to digital media with the proliferation of specific products, tools and applications. Accordingly, the digital games industry's share of wallet is expected to grow considerably, at the expense of more traditional forms of media.

### Four Key Trends are Re-Positioning the Digital Game Industry

The digital game industry is constantly evolving as a result of the emergence of new technological and market opportunities. Over the next 5 years, four key trends are expected to have the most impact on the ways in which the industry creates, distributes, and monetizes its content. These trends will challenge the digital game industry to re-evaluate its current strategies and business models; however, it also provides existing and emerging players with exciting opportunities to compete in an evolving global market.

<sup>iii</sup> "Global Entertainment and Media Outlook: 2007-2011 – Video Games", PricewaterhouseCoopers, 2007.

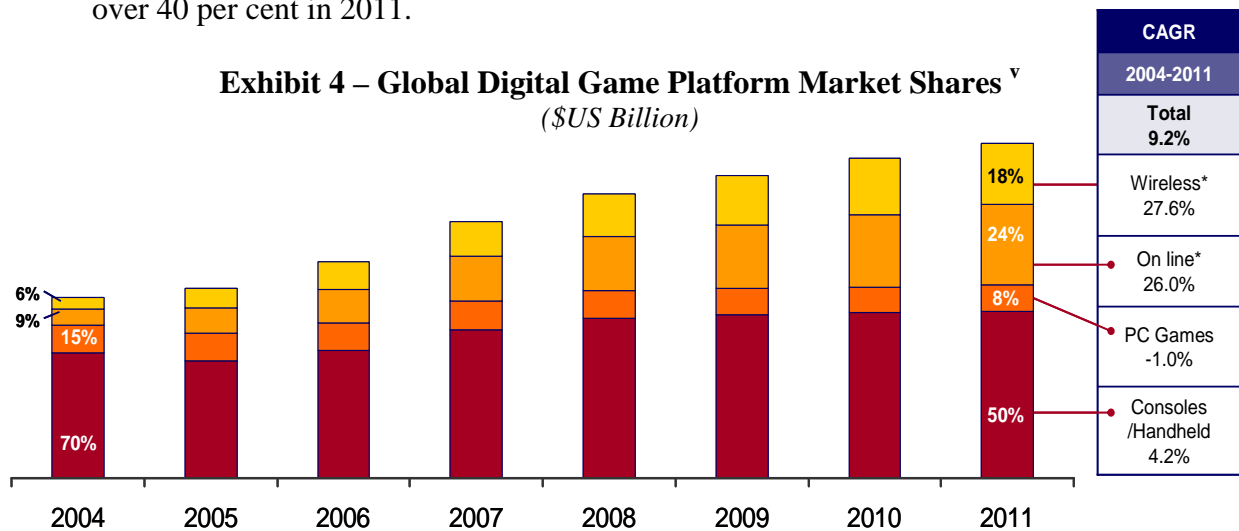
- Evolution of Existing Platforms:

With the launch of the most recent generation of digital game consoles in 2005-06, the digital game industry entered a new era of functionality. These new hardware systems boast significant advances in processing and graphical power (creating games with unprecedented levels of detail), the capacity to operate in multiple environments (HD-DVD and Blu-Ray), and full online functionality.<sup>iv</sup> The next generation of handheld consoles (Sony PSP and Nintendo DS) has similar advances in game play and multimedia functionality. This generation of hardware technology is projected to support the ongoing steady growth in the console market.

Innovations in console technology pose significant challenges to game developers. While the resulting game advances are extremely appealing to consumers, they are quite labour-intensive to create; the development of a next-generation AAA console game can require over 50 developers and can take anywhere from 18 to 36 months to develop. As a result, development costs and risks are significantly larger with more complex games, driving further need for higher sales volumes to break even. As a result current next-generation game development is an extremely hit-driven business. As this generation of console technology has significant potential left in its lifetime, developers must ensure that they have the scale and resources to take advantage of opportunities for creating and monetizing innovative content, in order to compete successfully in this capital-intensive market.

- Emergence of “Lighter” Platforms:

The evolution of technologies has not only increased the capabilities of traditional digital game industry hardware; it has also created new platforms for playing digital games. In particular, rapid increases in mobile and broadband penetration have stimulated growing demand for game content through cellular phones and computers. While the console, handheld and PC platforms will continue to attract over 50 per cent of global revenues, the “lighter” wireless and online platforms are expected to grow significantly, moving from 15 per cent of the digital game industry in 2004 to over 40 per cent in 2011.



<sup>iv</sup> BBC News, Game Daily, corporate websites.

<sup>v</sup> “Global Entertainment and Media Outlook: 2007-2011 – Video Games”, PricewaterhouseCoopers, 2007.

The ongoing penetration of broadband technology has accelerated the attractiveness of online game development, including both one-off “casual” games and more complex content (extensions of existing console or PC games, or highly complex Massively Multiplayer Online (MMO) games such as World of Warcraft). Similarly, wireless game development is also expected to grow significantly. Market studies indicate that global mobile penetration will reach 50 per cent in 2008 and will grow to 75 per cent by 2011.<sup>vi</sup> The growth of wireless gaming is driven in part by the universality of cellular phone usage; as such, the mobile platform provides an opportunity to convert non-gamers and casual gamers, particularly adults and women, into more active gamers. Expected technological improvements to battery life, screen resolution, and storage capacity will also improve mobile game functionality.

Game development for lighter platforms requires a much smaller capital investment. The lower development costs of lighter platforms lessen the need for developers to seek support from publishers, improving their ability to retain control of their own IP and to leverage their games into future revenue streams. From a production standpoint, project timelines are relatively short, meaning studios can develop more titles annually with smaller teams. The high volume of games provides small and medium-sized companies with an opportunity to compete alongside larger players in the global marketplace; mitigates cash flow risks by shortening the cycle time between capital investment and revenue generation; and provides multiple opportunities to establish good relationships and build reputation with publishers. Lighter platform games can also provide emerging developers with an affordable medium on which they can develop valuable expertise.

Despite the upside potential of lighter platforms, the market is still risky. Business models in this arena are still unproven and while growth potential is high, revenues are low compared to the more established console sector. In addition, because of the relative ease of entry, competition in lighter platforms is more significant.

- **Industry Consolidation:**

The largest players and the primary source of capital in the digital game industry are the multinational publishing houses. Industry consolidation and vertical integration have created a small number of dominant players; the top 7 console game publishers control 67 per cent of global production.<sup>vii</sup> To remain competitive in the evolving global industry, publishers must ensure that they are able to exploit economies of scale, access multiple regions, and develop capabilities in existing and emerging platforms.

Large publishers have exhibited an inclination towards “inorganic” growth – typically acquisitions – to accomplish their growth and scale development objectives. In most

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<sup>vi</sup> “The Next Billion: Strategies for driving growth and making profits in low-ARPU mobile markets,” Portio Research, 2007.

<sup>vii</sup> “Interactive Entertainment Industry”, A.G Edwards & Sons (U.K.), March 22, 2007.



cases, acquired companies are development studios of a particular size; the majority of studios targeted by publishers have less than 100 developers (an exception being Electronic Arts' acquisition of Bioware's 300-person studio). The acquisition of emerging developers with proven track records provides multinational publishers with opportunities to take advantage of new innovations quickly, increase their breadth and depth of capabilities, and expand their global footprint with limited organizational impact.

- Development of Middleware Market:

The digital game development process is highly innovative. With each new console generation, developers invest in the creation of new programs that allow them to take better advantage of available technologies. These programs range from the creation of simple programs that allow for efficient graphics creation to the core engines that establish the basic infrastructure of a game. As game technology has increased in complexity, the amount of time and resources required to create new programs customized for a particular game has become prohibitive for many developers. This has created a growing market for middleware software, with the licensing of game engines as the most significant activity in this area.

Game engines, which dictate the physics and interface of a console game, are becoming increasingly complex. Developing this internally is considered extremely challenging and costly: while the developer is able to customize the engine for any specific game, substantial investments in R&D are required – as much as \$5 million. Also, from a publisher perspective, games with developer-created engines are high risk investments, due to the uncertainty in performance functionality and quality.

In response to the high cost of internal engine development, a market for licensed engines has begun to emerge, with high quality engine licenses being sold for as much as \$1.5 million.<sup>viii</sup> This market is served primarily by game developers who have commercialized their own proprietary technologies and made them available for licensing; in addition to their own game development activities, these studios license their source code to other development studios and provide them support in using their engines. Key players in this area include Epic, whose Unreal 3 engine is the market leader, and CryTech's CryEngine 2. While these game engines have the flexibility to work for multiple game genres and platforms, none has become the "standard" in the industry. The market is still widely accessible to development studios that wish to create and use their own internal technologies for development.

### ***Competition in Digital Games is Strong Globally, with a Number of Regions Vying for Leadership in Different Areas***

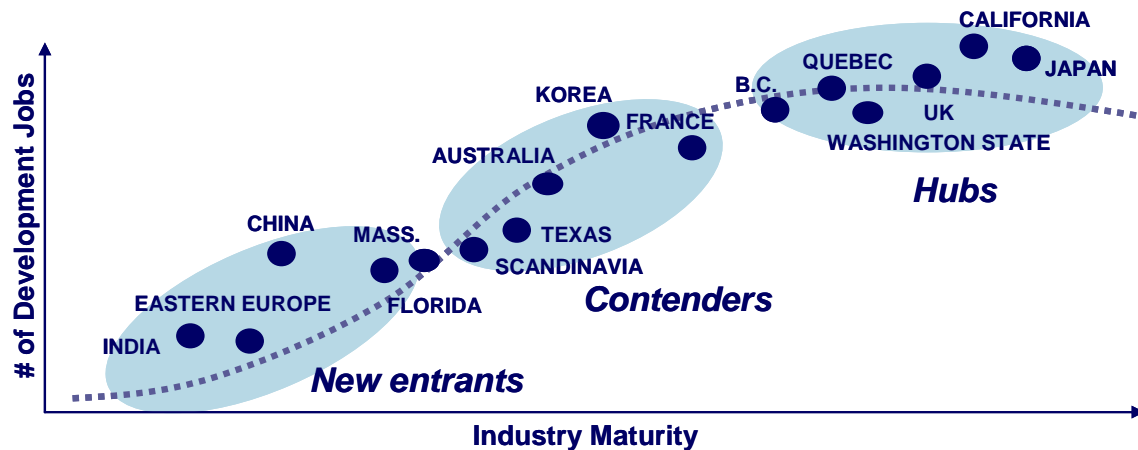
Production of digital games is truly an international industry, with centres of game production occurring across the globe. Over the course of its history, different regions

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<sup>viii</sup> Epic has licensed its Unreal 3 engine to 37 developers, at an approximate cost of \$1.5 million per game.

have played a role in driving the industry forward. The original technology centres where the industry was incubated have matured into leading industry players; at the same time, later entrants to the industry have fought to carve out their own market niches. The current industry landscape can currently be characterized into three distinct regional “types” that have attained common levels of maturity and size.

**Exhibit 5 – Illustrative Digital Game Industry Landscape**



- Regional hubs are typically regions that have been active in the game industry for over 15 years. Frequently, their entry into digital games was triggered through proximity to a major technological innovator (i.e. Nintendo in Japan, Microsoft in Washington State). In addition to longevity, digital game hubs have achieved a significant critical mass, usually hosting at least 3,000 game development jobs.
- Regional contenders are later entrants to the digital game industry who have developed the appropriate scale and/or competitive advantage to position themselves on the international scene. Their path to success has typically been through the pursuit of a specific niche. To be considered a “contender,” companies must have successfully carved out a substantial share of the global market.
- Regional new entrants have been attracted only recently to the digital game industry based on its size and potential for growth. Nonetheless, they have taken active steps to carve out a piece of the market for themselves. Despite natural advantages in some cases (i.e. low cost labour in India and China), most are still working to achieve critical mass and global relevance.

For the most part, digital game regions have developed independently of one another, with each region seeking its own competitive advantages. However, commonalities can be observed in their different growth strategies. The existence of domestic demand for digital game products (or lack thereof), the capability to produce content efficiently, and the existence of strong industry or government leadership all contribute to the different growth trajectories of different regions.

Analysis of global digital game industry regions provides an opportunity to identify best practices that can contribute to the development of a successful digital game region:

- *Critical mass:* The primary measure of success in a digital game region is a critical mass of game developers. Achieving a certain volume of workers provides a region with the necessary scale to make other key success factors attainable. Without critical mass, it is difficult to find support, retain talent, and attract international visibility and credibility. For digital game development, the critical mass threshold for an industry has been determined to be approximately 1,000 developers. At this level, successful industries are able to generate internal momentum for domestic growth.
- *Public funding of content:* The digital game industry requires significant investment in the early stages of its development process. As publisher interest is the initial requirement for a game's success, developers in growing regions must be able to progress their concept to the point where it appeals to publishers. Government support for content creation is a typical way that these kinds of "incubation" activities are facilitated for development studios, typically through such mechanisms as grants, tax credits, support for expenditures that indirectly lead to content development (including talent, R&D, and infrastructure), and encouragement of foreign investment. Governments in successful game regions must ensure that these programs are readily adaptable to changing industry needs.
- *Private investment incentives:* Government funding alone is not enough to spur industry growth, and reliance on publishers makes it difficult to retain and leverage IP for future projects. Supplementing these two sources with private investments lowers the overall cost of capital and provides additional resources for digital game developers. Successful digital game regions are typically supported by an available pool of knowledgeable and informed private investors who are aware of the risk/reward profile of the digital game industry. Where private investors are less familiar with the digital game profile, regional governments have facilitated private investment through the creation of tax-friendly environments that mitigate sector risk (i.e. government-backed venture capital funds).
- *Investments in infrastructure & R&D:* The digital game industry places a premium on technological innovation, but the cost of technological innovation can be prohibitive. Developing companies lack the scale to invest in infrastructure and the resources to invest in research and development. For a region to achieve a strong market position, it must have affordable access to infrastructure such as modern development space, broadband internet communications channels, and state-of-the-art equipment. In addition, government subsidization of R&D activities (i.e. tax credits, business incubation facilities, technology transfer programs) provides an incentive for companies to pursue new opportunities.
- *Talent incubation:* A broad range of universities and colleges providing training in game programming and design is often found within regional hubs and regional

contenders, creating a talent and technology pipeline between local schools and companies that enhances the relationship between the academic community and regional digital game industry. This can be further facilitated by establishing incubation facilities on university campuses or including game industry leaders in setting the curriculum for digital game programs. In addition, several regions have established large scale research and education centres which create direct linkages between students and future employers.

- *Industry exposure and visibility:* For a region to become truly competitive, it must be recognizable on the world stage as a destination for content and expertise. Industries can engage in a number of activities to gain this exposure, including foreign trade delegations, inbound trade missions, hosting and attending gaming conferences. There is also opportunity for emerging regions to generate partnership and technology transfer opportunities by increasing their visibility beyond the digital game sector into complementary industries such as television, 3D animation, and film. By placing an emphasis on initiatives to increase the exposure of game developers and create cross-platform networking opportunities, regions can establish themselves as attractive destinations for complementary content development.
- *Industry collaboration:* Industry collaboration creates an environment for sharing innovative technologies, ideas, and (where possible) potential competitive advantages with other regional players. For instance, shared R&D initiatives provide all developers in a region with the opportunity to access established and innovative technologies. A defining characteristic of both growing and established digital game regions is the existence of a strong, unified body that can promote the industry at home and abroad, put on events to raise industry profile, and provide support and advocacy services on behalf of the industry. For industry associations to be truly effective, they must have access to predictable sources of funding to allow focus on long-term industry planning, as opposed to their own short-term survival.
- *Cluster development:* In an era of global competition, proximity can still provide industries with significant competitive benefits, such as increased industry productivity, better access to skilled employees and public infrastructure, potential benchmarking, improved networking, and overall market knowledge. In addition, the pressure of operating in close proximity to competitors creates constant pressure to innovate and differentiate. Regions that have successfully implemented a digital game growth model have often done so around a major urban cluster, allowing these regions to concentrate their efforts and investments in a single area.

Each region has employed different approaches to implement these best practices based on their unique growth model and market circumstances. Their common element, however, is the establishment of the support, scale and expertise required to succeed.

## ***Ontario Has a Number of Significant Competitive Advantages to Support Further Success in the Digital Game Industry***

Despite the advances and success of other global jurisdictions in digital games, Ontario has not been standing still in its development toward a thriving digital games industry. While digital game companies have existed in Ontario since as early as 1982, the industry truly began to take shape in the early 90s, with the founding of a number of console and PC development studios by native Ontarians. Ontario developers established their companies based on their ability to create high quality content and rely on exceptional domestic talent, although growth in some cases resulted in part from a competitive advantage created by the low Canadian dollar.

Some of Ontario's most valuable qualities currently include:

- **Strong Base of Existing Companies:**

The digital game industry in Ontario is diversified and is comprised of approximately 80 companies, including a small group of mid-sized console developers and a broad range of small developers for PC, online and mobile games. These companies employ approximately 850 digital game developers and generated revenues of approximately \$70 million in 2006. Console development is currently the primary focus of the industry, with Ontario's 11 console game developers representing 46 per cent of total industry employment (380 developers). Developers who focus primarily on console games earned over 70 per cent of industry revenues, or approximately \$50 million. The online game sector was the second most popular platform, generating 9 per cent of industry revenues. These revenues are derived from a range of business models, including subscription-based games, advertising-based internet properties, and microtransaction payments.

Ontario's digital game industry is sub-scale though highly diversified and is predominantly composed of small companies; over 90 per cent of Ontario's digital game companies have fewer than 30 employees. Of the rest, 4 per cent have 30-50 employees, 3 per cent have 50-100 employees, and only 1 company is larger than 100 employees. All but one of Ontario's development studios with more than 30 employees identifies console games as their primary or secondary platform.

With the development of new technologies, Ontario has seen an increase in the number of development studios operating in the province. While the largest of these companies are in console development, the vast majority are small studios focused on lighter platforms, particularly mobile and online gaming. The average development studio is 7.5 years old; however, this tends to differ greatly by platform. Seventy-one per cent of responding console studios were formed before 1998; in contrast, only 14 per cent of responding handheld, mobile and online developers were in existence prior to 2000.

Ontario's digital game development studios are dispersed across the province. That said, Toronto does have somewhat of a focus on digital games. Fifty-four per cent of

all development studios, at least two publishers, and a broad range of service providers, secondary value chain members, and complementary industries are all based there. However, only three sets of three development studios are within the same postal code region, indicating that the development jobs in the Toronto region are broadly distributed throughout the city.<sup>ix</sup> From an employment standpoint, the distribution of Ontario developers is much wider. While Toronto remains the largest digital game hub, over 60 per cent of Ontario development jobs are headquartered outside of the region. Niagara, Ottawa, and London, with 20 per cent, 18 per cent and 13 per cent of the development jobs in Ontario respectively, can be considered “secondary” industry hubs, although Niagara’s large developer population is largely attributable to a single studio in St. Catharines.

The ultimate objective for most emerging companies in the digital games industry (in Ontario and elsewhere) is to produce next-generation console games. However, developers in other regions have recognized that the capability to withstand the inconsistent funding of more complex platforms increases gradually as scale, expertise and catalogue breadth is developed. Instead of jumping directly into this challenging and competitive sector, many have chosen implement high-deal flow growth models, developing a portfolio of games that gradually evolves from online and mobile to handheld and console. This allows companies to develop the skills, capabilities and reputation required to succeed in the console market, while at the same time offsetting their investments with the frequent release of lighter-platform games. Emerging studios, those with less than 50 employees, generally cut their teeth in the mobile and online industries because of the minimal capital investments required.

The ability of a developer to successfully compete in a particular platform market over the long run is a function of its organizational size and capacity. Some developers in Ontario have demonstrated a tendency to pursue advanced projects before obtaining the required scale and capability. While many developers are able to succeed in the short term with this strategy, the pressure this model places on infrastructure, human resources and capital makes it difficult to achieve long-term sustainable growth.

- Talent Pool:  
Ontario currently has a talent base that is world-recognized for creating globally attractive content. The individuals entrusted with creating the game’s design, technology and visual effects possess the type of skills that are highly relevant to a knowledge based environment, a combination of technological savvy, visual creativity, and operational efficiency. The most successful developers are able to use these skills to create innovative products that can be broadly applicable.

Approximately 81 per cent of new developers entering Ontario’s digital game industry come directly from post-secondary institutions, the majority in Ontario. On

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<sup>ix</sup> Based on a review of postal codes – studios with the same first 3 postal code digits are assumed to be in relative proximity.

the management side, Ontario's digital game companies seem to demonstrate a preference for individuals who have previous experience in digital games, as opposed to individuals who have management experience but are unfamiliar with the industry.

Ontario colleges and universities have approximately 2,900 students enrolled who are developing skills directly applicable to the digital game industry. This includes students enrolled in gaming, animation, interactive multimedia, and visual effects. Another study conducted by Ontario's Ministry of Economic Development and Trade (MEDT) found that in total there are about 13,500 students enrolled in computer and information technology programs that would be important to employers in the digital game industry (data is for Fall 2006 and includes colleges and universities). MEDT's numbers include students enrolled in gaming, animation, multimedia, computer science, computer programming and software engineering programs as well as related postgraduate programs.

- Innovative Funding Programs:

Generally speaking, the primary source of funding for the digital game industry in Ontario is publisher advances. Of responding developers whose primary focus is console games, 66 per cent report that publishers are their primary source of funds, similar to the mobile games industry. In fact, the majority of Ontario's largest developers rely predominantly on publishers to maintain their cash flows, leaving them highly vulnerable to publisher decisions.

The digital game industry receives direct support from all levels of government. Federal, provincial and municipal bodies currently provide support to the industry using a number of innovative mechanisms, including repayable investments, game competitions, tax credits, and funding grants. Notable programs include:

- Game developers in Ontario can receive support from the Canada Revenue Agency through the Scientific Research & Experimental Development (SR&ED) tax credit. Privately-owned Canadian game developers who invest in the creation of their own technology and middleware can receive a 20 to 35 per cent tax credit on their first \$2 million of expenditures, depending on the previous year's taxable income.<sup>x</sup>
- The Ontario Media Development Corporation (OMDC) has identified the interactive digital media (IDM) sector as an industry of importance. Support for this sector is provided in the form of grants and tax credits, including the Interactive Digital Media Fund (final stage funding), digital game export development, Prototype Fund (for console development), and the Collaborative Entertainment & Creative Cluster Partnerships Fund.
- Telefilm introduced the Great Canadian Video Game Competition in 2006. Telefilm partnered with UbiSoft, EA and Radical on a \$2 million competition for emerging developers, mirroring industry funding cycles. Funding was distributed over 3 rounds, with the ultimate winner given \$500,000 to commercialize their game.

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<sup>x</sup> Canada Revenue Agency; qualifying expenditures include wages, materials, machinery, equipment, some overhead, and SR&ED contracts.

- In 2007, the Ontario Ministry of Economic Development and Trade (MEDT) oversaw the launch of Ontario's Next Generation of Jobs Fund (NGOJF), a \$1.15-billion, five year program focused on, among others, creative industries like information & communications technologies and digital media. The goal of the fund is to help establish Ontario as a global leader in emerging areas, building on existing expertise where Ontario has a strong research and commercialization base.

Each level of government has its own objectives, and each ministry has a unique mandate to achieve. In recent years, government stakeholders have increased their level of collaboration in developing common objectives regarding the digital games industry (as evidenced by this review).

### ***Strategic Recommendations can Address Potential Gaps in Ontario's Capabilities and Factors for Success***

While the Ontario digital game industry has worked hard to get to its current level of success, a collaborative effort by public and private partners will be required for Ontario to move to the next level and increase its global presence. Issues that have limited the growth of the industry thus far include:

- *Critical Mass:* Ontario's digital game industry lags some of its provincial competitors in terms of developing medium and large-sized digital game development companies. As well, despite Ontario's attractive qualities and the efforts of a number of stakeholders, no major international publisher has located development operations in the region.
- *Public & Private Funding:* Limited private sector investment opportunities have created a predominance of publisher-based funding as a source of capital, making it difficult for Ontario developers to develop a "slate" of game projects to reduce their risk exposure.
- *Industry Exposure:* Most industry stakeholders indicate that the international games community is generally unaware of Ontario's digital game industry, making it more difficult for existing developers to market their products globally. In addition, Ontario's development studios have tended to remain relatively isolated from each other and from potential partners in the many complementary industries located in Ontario.

Based on the identified key success factors for growth of a digital games industry, strategic recommendations have been developed to enhance and build Ontario's competitive advantage. These recommendations are oriented around four key metrics:

**Metric A** - Double the total development jobs in Ontario, to achieve appropriate critical mass and generate international interest



**Metric B** – Increase annual game production & deal flow to equal global averages, based on primary development platform, in order to mitigate development and cash flow risks

**Metric C** – Decrease proportion of developers relying on publishers as their primary source of support to 50 per cent, to diversify its sources of support and provide developers with greater opportunity and flexibility

**Metric D** - Increase the scale of Ontario development studios, to stimulate organic growth in the region's companies; the successful implementation of metrics around job development, deal flow and new sources of capital will naturally result in an increase in company size, enhancing the ability of Ontario companies to grow and compete globally

As the success of *Ontario 2012* hinges on increased engagement from government, industry and academia with the digital game industry in Ontario, specific responsibility for each recommendation has been assigned to each of these stakeholders based on existing areas of expertise. In considering each recommendation, an emphasis was placed, where possible, on leveraging existing funding commitments.

**Summary of Recommendations**

	<b>Recommendation</b>	<b>Responsible Party</b>	<b>Metric Addressed</b>	<b>Priority Level</b>	<b>Sources of Public Funds?</b>	<b>Time Frame</b>
1	Leverage Next Generation of Jobs Fund for digital game industry	Government	Number of Developers	High	Existing Commitment	2008-2012
2	Support the development and commercialization of market-ready game technologies	Government	Number of Developers	Medium	New Commitment	2009-2012
3	Create hub-specific linkages between academic community and industry	Academia & Industry	Number of Developers	Medium	New Commitment	2008-2012
4	Develop an Ontario digital game industry portal	Academia & Industry	Number of Developers	Medium	Existing Commitment	2009-2012
5	Intensify efforts to track graduates	Academia	Number of Developers	Low	N/A	2008-2012
6	Consolidate the Interactive Digital Media Fund and Interactive Digital Media Export Fund	Government	Dealflow	Low	Existing Commitment	2008-2012
7A	Streamline Cluster Fund's eligibility requirements	Government	Dealflow	Medium	Existing Commitment	2008-2010
7B	Support direct collaboration amongst content creators	Government	Dealflow	Low	Existing Commitment	2010-2012
8	Provide prototype development support for console game developers	Government	Dealflow	High	New Commitment	2008-2012
9	Enhance Interactive Digital Media Tax Credit	Government	Dealflow	High	Existing / New Commitment	2008-2012
10A	Implement an annual, domestic-focused digital game industry conference	Industry & Government	Dealflow	Medium	New Commitment	2010-2012
10B	Determine additional collaborative support activities amongst industry players	Industry, Government & Academia	Dealflow	Medium	N/A	2008-2012
11	Combine funding for trade associations with the Domestic Marketing & Events fund	Government	Dealflow	Low	Existing Commitment	2008-2012
12	Provide tax credit certification based on budget costs upon project commencement	Government	Sources of Capital	High	Existing Commitment	2008-2012
13	Apply the Interactive Digital Media tax credit to joint ventures	Government	Sources of Capital	Medium	Existing Commitment	2009-2012
14	Create a public/private investment fund for digital game development	Government	Size of Companies	High	New Commitment	2008-2010
15	Increase IO's engagement with digital game stakeholders	Industry	Size of Companies	Medium	N/A	2008-2009
16	Provide resources and hold regular training sessions for game management and professionalism development	Industry	Size of Companies	High	New Commitment	2008-2012
17	Identify central liaison between all levels of government and the digital game industry	Government	General	High	N/A	2008

## **Increasing Developer Jobs**

**Recommendation 1** – Leverage the Next Generation of Jobs Fund's \$1.15 billion to support investments in the digital game industry

**Lead Stakeholder** – Government (likely MEDT)

**Secondary Metric Addressed** – Sources of Capital, Size of Companies

**Source of Public Funds** – Existing Commitment

**Priority Level** – High

**Timeframe** - 2008

MEDT's \$1.15 billion Next Generation of Jobs Fund, designed to support sustainable economic and environment growth, is well-suited to the digital game industry. Its objectives are to invest in industries which leverage existing provincial competencies to stimulate the creation of skills and opportunities that can lead to global competitive advantages. A small proportion of the overall fund would have a significant impact on the number of development jobs in Ontario. Spread over five years, this investment could be dispersed over a number of companies. As the fund is focused on sizable players, it can serve as yet another enticement for prospective international entrants to the Ontario digital game market. Funds could also be made available to domestic console developers, providing them with significant capital for early stage game development. These activities will enhance the competitiveness and thus global positioning of Ontario's digital game industry.

**Recommendation 2** – Invest \$6 million over 3 years to establish a technology incubator to support the development and commercialization of market-ready game technologies.

**Lead Stakeholder** – Government

**Metric Addressed** – Sources of capital, Size of companies

**Source of Public Funds** – New Commitment

**Priority Level** – Medium

**Timeframe** - 2009

The growing middleware industry provides a significant opportunity for Ontario. A number of existing Ontario developers has invested significant capital and resources into the creation of high quality software products, including game engines; however, the developers have not had the time, money or expertise to commercialize their innovative technologies. Government support could help Ontario's game technology developers establish an attractive new revenue stream, through matching funds and a "business incubator". In addition, academic institutions could gain with access to cutting edge technologies for their students.

**Recommendation 3** – Establish committees in each Ontario hub (Toronto, Ottawa, London and Niagara) for academic institutions and industry representatives to discuss digital gaming issues (effectiveness of curricula, use of new technologies, gaming research, retraining, etc.).

**Lead Stakeholder** – Academia & Industry

**Source of Public Funds** – New Commitment

**Priority Level** – Medium

**Timeframe** - 2008

Ontario is known and celebrated across the world for the quality of its digital media talent. Academic institutions in Ontario have developed world-class training programs for both the programming side (i.e. University of Waterloo for computer engineering) and design side (i.e. Sheridan College for animation) of the digital game industry. Academic institutions should take the lead on reaching out to industry to ensure that they are tightly linked and highly responsive to future needs around talent. One of the most important aspects of this recommendation would be to ensure that the training curriculum in each program related to digital games was highly and immediately relevant to the industry; for example, by having industry participate in curriculum development for major programs. Other elements to be addressed by these committees would be the identification and completion of necessary gaming research (i.e. academic institutions could partner with industry to accomplish new initiatives) and the development of programs for ongoing developer training. All activities would ultimately focus on keeping capabilities in Ontario and developing sources of competitive advantage with regards to talent.

**Recommendation 4** – Coordinate the development of an Ontario digital game industry portal that markets Ontario's content and employment opportunities.

**Lead Stakeholder** – Industry & Academia

**Secondary Metric Addressed** – Dealflow

**Source of Public Funds** – Existing Commitment

**Priority Level** – Medium

**Timeframe** - 2009

Ontario's digital game stakeholders currently place little emphasis on joint marketing, both domestically and internationally. In particular, the industry also lacks a medium through which it can aggregate content from across the province and disseminate it to key constituents. An online portal promoting the regional industry has proven successful in a number of emerging regions, including Australia and South Korea, with such specific activities as: expose digital game content and competencies to international audiences; promote console and handheld games and serve as a digital distribution hub for online and mobile content; outline opportunities for education and employment in game development; list available internship opportunities for digital game students; educate high school students, guidance counsellors and parents about the potential in games industry careers; and, act as a marketing tool for international firms interested in investing or locating in Ontario.

**Recommendation 5** – Intensify efforts to track students following graduation.

**Lead Stakeholder** – Academia

**Priority Level** – Low

**Timeframe** - 2008

To truly understand the volume and calibre of talent being developed in Ontario, the region's academic institutions must develop a quantitative understanding of how many graduates enter the game industry, and where their career paths take them. By reaching out to both high school students and former graduates, Ontario's academic institutions will be able to identify and cultivate talented game developers throughout their career paths. An understanding of their employment and mobility patterns will allow the region to better align its curricula and recruitment practices to better attract and retain top talent in Ontario.

### **Stimulating Increased Dealflow**

**Recommendation 6** – Consolidate the Interactive Digital Media Fund and Interactive Digital Media Export Fund into a single fund that is accessible to a broader range of developers.

**Lead Stakeholder** – Government (OMDC)

**Source of Public Funds** – Existing Commitment

**Priority Level** – Low

**Timeframe** - 2008-2012

Stakeholders generally provided positive feedback about the funds they received through the Interactive Digital Media Fund and OMDC Export Fund. However, several key challenges were identified with the funding model. The lack of available funds forced administrators to provide significant support for certain projects at the expense of other, equally worthy projects. Secondly, the requirements for fund eligibility were felt to be restrictive; in particular, the stipulation that the IDM Fund support the creation of a market-ready product limited the manner in which funds could be spent. Finally, the administrative burden in applying separately for two small sets of funds was seen to be onerous. The OMDC can address all these issues by pooling the resources of these two funds. The new consolidated fund would be a more effective source of capital as applicants would have the ability to pursue support for larger-scale, higher-impact projects. Initially, the new fund may be focused on lighter platforms, but the ultimate goal would be to increase funding levels to sufficiently fund a slate of projects for a company. In addition, some portion of this new fund (i.e. 10 per cent) would focus specifically on “incubating” new companies.

**Recommendation 7A** – Streamline the Cluster Fund's eligibility requirements to make it more flexible and accessible.

**Lead Stakeholder** – Government

**Source of Public Funds** – Existing Commitment

**Priority Level** – Medium

**Timeframe** - 2008

The Government of Ontario has recognized the growing importance of platform convergence, providing extensive support for the Cluster Partnerships Fund to support joint ventures between the digital game industry and complementary cultural media sectors.<sup>xi</sup> However, a fair portion of stakeholders also remain unaware of the benefits of the existing Cluster Fund – or even its existence. Informed stakeholders reported the launch of the Fund was not well communicated. Moreover, stringent guidelines and program inflexibility has discouraged stakeholders from participating in the fund, as it is seen to favour institutions, not companies. There is some confusion on which constituents the fund is actually trying to serve.

**Recommendation 7B:** Develop a fund focused on true B2B collaboration should be launched to support direct collaboration amongst content creators.

**Lead Stakeholder** – Government

**Source of Public Funds** – Existing Commitment

**Priority Level** – Low

**Timeframe** - 2010

The government must act to further facilitate collaborative opportunities amongst various creative media sectors in Ontario. In particular, the existing Cluster Partnerships Fund could be better supported through improvements in its structure and positioning. In the event that changes are not possible under the current Cluster Partnerships Fund structure, the government should reallocate the funds to create a new mechanism designed specifically to fund direct business-to-business collaboration.

**Recommendation 8** – Extend the Prototype Fund to provide \$1 million of support annually for next-generation console developers.

**Responsible Stakeholder** – Government (OMDC)

**Source of Public Funds** – New Commitment

**Priority Level** – High

**Timeframe** - 2008

Developers with the resources to invest in playable prototypes of their game concepts have greater leverage in their dealings with publishers; however, few of Ontario's developers have the scale and resources to invest in internal prototype development. In 2007, the OMDC dedicated a surplus of funds towards the creation of a prototype fund

<sup>xi</sup> The Liberal platform in the 2007 provincial election promised a \$12 million increase to the Cluster Fund.

designed to provide next generation console developers with early stage capital, to be used for the development of new game concepts. This funding should be extended for the next 3 years while the results of the investments are reviewed. Public support for this process will help enable companies to develop and retain their own IP.

**Recommendation 9** – Increase the Interactive Digital Media tax credit and make targeted legislative changes which will allow developers to apply for tax credits at year-end rather than project end and streamline application requirements.

**Responsible Stakeholder** – Government

**Source of Public Funds** – Existing / New Commitment

**Priority Level** – High

**Timeframe** - 2008

The tax credit program is one of the OMDC's most important avenues for assisting stakeholders, as total funding is large enough to have a substantial impact on operations. Going forward, tax credits will continue to be a focal point; however, their effectiveness could be enhanced with regards to application complexity and payout timing. In the current structure, developers are unable to benefit from the tax credit until the project has been completed; most game development cycles stretch well beyond the fiscal year. Furthermore, costs can only be claimed if they were incurred in the prior three years, thus forcing developers to swallow the costs of most early stage development.

The most critical of the issues around the IDM tax credit is related to the perceived lack of competitiveness of the amount of the tax credit in comparison to other jurisdictions. The 30 per cent level available in Ontario has been overtaken by other provinces such as Nova Scotia (35 per cent) and Manitoba (45 per cent) for the publicly-stated purpose of building a strong digital media industry. As long as these credits are a key driver in economic decision-making, the IDM tax credit should be further increased so that Ontario remains a "level playing field" with other jurisdictions, providing the province with a greater opportunity to both develop domestic digital game companies and attract and retain international game companies and investors.

Once these issues have been resolved, other key concerns around the IDM tax credit should be addressed. For example, the current threshold that limits the access to the 30 per cent tax credit to companies with under \$20 million in revenues (above which it drops to 25 per cent) is seen by the industry as a disincentive for domestic industry growth and should be removed.

**Recommendation 10A** – Implement an annual domestic digital game industry conference.

**Responsible Stakeholder** – Industry (IO) & Government

**Source of Public Funds** – New Commitment

**Priority Level** – Medium

**Timeframe** - 2010

As Ontario begins to reach critical mass, it will become increasingly important to provide opportunities for networking amongst key value chain elements. Developers, publishers, service providers, academic institutions, financiers and government will derive significant benefit from the opportunity to exchange information, share new ideas and technologies, and develop mutually beneficial relationships. By 2010, when new support programs for the industry will have been put in place to improve critical mass, the timing will be appropriate to hold a regional conference. This will be an ideal venue to stimulate regional networking and interaction, and would likely cost a relatively small amount, approximately \$250,000.<sup>xii</sup> As the conference attains critical mass, it will significantly enhance Ontario's regional profile. The government should look to enhance the success potential of the conference by paying for business development executives from multinational publishers and other major players to attend.

**Recommendation 10B** – Create cross-industry committee to determine additional collaborative / support activities amongst industry players.

**Responsible Stakeholder** – Industry, Academia & Government

**Source of Public Funds** – New Commitment

**Priority Level** – Medium

**Timeframe** - 2008

Establishment of a digital game conference is only one way for industry stakeholders (primary, secondary and ancillary) to collaborate and share ideas. There are multiple opportunities to bring various stakeholder groups in the industry together. A committee of industry players could be struck with the intention to discuss, develop and resource key collaborative / support activities across the digital game industry in Ontario. Some of the activities that could be considered by this committee could include: development of industry incubators (similar to nGen in Niagara) for supporting infrastructure for the game industry (i.e. motion capture studios); identification of mutually beneficial cross-sector revenue opportunities; consideration of a bonus tax credit when games are made based on other intellectual property developed in Ontario or by Ontario content creators; identification of potential linkages with research organizations outside the industry (i.e. CITO, NRC) for further R&D; and/or the creation of a critically-required marketing and/or branding campaign for the Ontario gaming sector.

**Recommendation 11** – Combine funding for trade associations with the Domestic Marketing & Events fund to create a single source of funding available for 3<sup>rd</sup> party events.

**Responsible Stakeholder** – Government (OMDC)

**Source of Public Funds** – Existing Commitment

**Priority Level** – Low

**Timeframe** - 2008

<sup>xii</sup> Industry expert interviews – assumes 2 day conference, with 150 attendees.



Providing industry associations related to the digital game industry with access to a larger pool of combined capital will improve their capability and flexibility to undertake large scale events. Creating a larger pool of funding available to 3<sup>rd</sup> parties will also enable the government to provide support for new industry association initiatives, including the online portal and domestic conference. While slight modifications to current funding guidelines would be required, this fund would increase the financial viability of large scale industry events.

### **Creating New Sources of Capital**

**Recommendation 12** – Provide developers with tax credit certification based on budget costs upon project commencement.

**Lead Stakeholder** – Government  
**Source of Public Funds** – Existing Commitment  
**Priority Level** – High  
**Timeframe** - 2008

While the IDM tax credit provides an important cost advantage for Ontario developers, it also ties up significant sums of capital in the form of expenditures that could be reinvested in new projects. The tax credit is not a loan, and should not be regarded as such; nonetheless, it is a predictable influx of funding. Providing developers with a certificate indicating their expected tax credit would enable studios to pursue debt financing, using the credit as collateral. This would effectively “unlock” the tax credits as a de facto source of interim financing; this occurs regularly in the film and television industry where companies are able to borrow against the value of their provincial tax credits. Advance funding of tax credits would also help create a cash flow model that would increase Ontario's attractiveness as a destination for international publishers.

**Recommendation 13** – Apply the Interactive Digital Media tax credit to joint ventures, thus allowing private investors to claim the benefits.

**Lead Stakeholder** – Government  
**Source of Public Funds** – Existing Commitment  
**Priority Level** – Medium  
**Timeframe** - 2009

While established developers have little appetite to accede control of their organizations to private equity investors, significant demand exists for an alternative source of funding. One alternative to the direct company funding model is a project-based model. In this scenario, private equity players partner directly with content creators on the development of a specific project. These standalone joint venture entities would share IP ownership which would allow them to take advantage of revenue streams and future projects. The

joint venture structure would be able to finance games up to approximately 40-50 per cent of completion. At that point, the JV partners would approach publishers for final stage funding, as well as for marketing and distribution; however, instead of pitching a basic game concept or prototype, developers would be bringing a playable prototype and game already in the development stage. This would significantly increase developer bargaining power, allowing them to negotiate with publishers for the best available deal. The JVs would continue to exist following the release of the game as the IP owner, and would generate further returns through cross-platform content creation, sequels, and even divestiture.<sup>xiii</sup> Previous attempts to implement this project-equity model have struggled, with the primary barrier to success as the lack of incentives to mitigate the downside risk for private investors. Subtle changes to existing legislation would redistribute these risks and encourage investment in the industry. Precedence exists in Ontario for this type of flow-through tax credit model (e.g. the film industry in the 1980s).

Experienced industry financiers and developers are poised to take advantage of the opportunities this structure would offer. Their measured investment approach and industry expertise significantly increases the likelihood of generating significant returns from a portfolio of new investments. Once a track record for this structure is established, other opportunistic investors would likely inject further capital into the industry.

### **Stimulating Developer Scale**

**Recommendation 14** – Establish a government fund that is specifically directed to raise private venture capital to be directed at emerging digital game developers.

**Lead Stakeholder** – Government

**Secondary Metric Addressed** – Number of Developers, Sources of Capital

**Source of Public Funds** – New Commitment

**Priority Level** – High

**Timeframe** - 2008

Innovative technology firms, such as digital game developers, should be an attractive target for venture capitalists. Digital games have the potential to generate significant returns, with downside risk in an equity play limited to the initial investment. Ontario's private equity community, however, has shown a reticence to invest in the digital game industry. To change venture capital perceptions, the industry must demonstrate a track record of providing positive returns for equity investors. Precedence exists within Ontario of the government using public funds to stimulate private investment in strategic sectors (for example, the Ministry of Research and Innovation (MRI)'s recently announced Ontario Venture Capital Fund). In the fund's early stages, it will be necessary to create several early success stories to generate market confidence in the digital game industry. As such, the initial focus would be on creating a portfolio of "lighter platform" investments. If successful, this initial investment would establish a track record for the digital game industry with Ontario venture capitalists, providing them with the

<sup>xiii</sup> Based on stakeholder interviews.

opportunity to grow organically into an attractive destination for further investment, and potentially for acquisition.

**Recommendation 15** – Convene a strategic planning session between IO, industry, and government stakeholders to identify improved mechanisms for industry association support

**Lead Stakeholder** – Industry

**Priority Level** – Medium

**Timeframe** - 2008

The success of *Ontario 2012* is contingent on the progressive development of a strong industry association.

In the long term, the development of a strong, industry-backed voice will be critical for the development of large scale companies in Ontario, improving existing companies' access to services and acting as an advocate for Ontario's developers on the global stage and a resource for international firms looking to enter the provincial market. Interactive Ontario (IO) is well positioned to serve as the voice of the digital game industry; however, its lack of predictable funding makes it difficult to focus on long-term strategic planning and makes it difficult to achieve the scale necessary to provide ongoing support to its broad constituency.

Given the importance of having a united voice for the industry, Ontario's digital game stakeholders must decide how they will take responsibility for the support of Interactive Ontario. In competing regions, such as Quebec, industry support in the form of dollars and resources has created a powerful advocate. While Ontario's game studios have begun to embrace IO, members of the digital game community must determine whether or not it will use IO as its industry association or whether a game-specific association will be developed. Subsequently, a concerted effort must be undertaken to provide the organization (IO or its equivalent) with financial stability and strategic direction, as well as inclusion of a broader representation in the committee including academics, additional game companies, and ancillary players, as well as local chapters of the International Game Developers Association (IGDA).

**Recommendation 16** – Provide resources and hold regular training sessions concerning game management and professional development.

**Lead Stakeholder** – Industry

**Source of Public Funds** – New Commitment

**Priority Level** – High

**Timeframe** - 2008

In order to access external sources of capital, Ontario's developers must demonstrate substantial business acumen and efficient management practices. The challenge for digital game developers is to strike a balance between three inter-related objectives: creating a high quality game, respecting a fixed budget, and meeting strict deadlines. The result of management training programs would be the ongoing development of leaders in

Ontario's digital game industry that are constantly enhancing their level of sophistication and professionalism. Not only would this improve the prospects of existing studios, but would also create a business environment and talent pool that is more attractive to prospective international investors.

### **General Industry Development**

**Recommendation 17** – Clearly identify a specific resource to act as the central liaison between all levels of government and the digital game industry.

**Responsible Stakeholder** – Government

**Metric Addressed** – N/A

**Priority Level** – High

**Timeframe** - 2008

To successfully achieve a structured growth model, all of Ontario's digital game stakeholders must leverage their respective assets and mandates to stimulate sustainable industry growth. The implementation of *Ontario 2012* gives government stakeholders an opportunity to align their efforts around the digital games industry. The current lack of a specifically identified government liaison makes it difficult to identify applicable programs and at times can create application redundancies.<sup>xiv</sup> Global best practices indicate that a unified voice coordinating government and industry efforts, helping industry players understand various programs and functions in government, is the most effective to manage a structured growth model.

A common liaison could have a number of purposes: directing inquiries to the proper source within government; providing information on emerging industry trends and business models; providing support for bureaucratic problem solving; creating awareness for private funds; and/or assessing eligibility for available funding programs. In essence, a liaison could serve as a traffic director for digital game stakeholders, ensuring that they travel the right path to receive available support. As such, it is beneficial for all government stakeholders to reach consensus on a coordinated and efficient structure to interact with their industry constituents.

Ultimately, it must be the government's responsibility to "make life easier" for game developers; to accomplish this, a combined effort must be made to reconcile different mandates and streamline application processes across all government ministries related to digital games. As an arms-length crown corporation, the OMDC is well positioned to serve a liaison between digital game industry stakeholders and the rest of government. The OMDC already has the infrastructure in place to execute funding and tax credit programs, and is a strong area of knowledge on digital game industry stakeholders for the provincial government. MEDT is also adept at working directly with Ontario stakeholders to develop and deliver targeted policy initiatives, and should continue to take the lead on foreign investment initiatives.

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<sup>xiv</sup> Based on stakeholder interviews.

The intent of this recommendation is not to establish lead responsibility for all digital gaming activities in Ontario. In fact, it is in the best interests of Ontario's industry to have multiple ministries operating and advocating on their behalf. Nonetheless, the establishment of a "one-stop-shop" for industry within government will significantly increase awareness and uptake of *Ontario 2012's* strategic recommendations.

### **Supporting Recommendation: Digital Game Cluster**

While there are certain levers governments can implement to support cluster development, successful clusters are typically brought about by market forces.<sup>xv</sup> Governments are not well positioned to "pick winners," and a planned cluster requires high levels of sustained government support and funding over a long period of time.

It is unrealistic to expect all of Ontario's existing developers to relocate to a single urban centre. Instead, efforts should focus on developing strong relationships within each of the province's central hubs. London, Ottawa, Niagara and Toronto all have developers, service providers and academic institutions which can work together to generate cluster advantages. Many of the recommendations in *Ontario 2012* are intended to create a closely knit digital game community in each hub. In particular, the development of technology incubators, strengthening of industry associations, streamlining of cluster partnership funds, and creation of local industry/academic collaborative bodies will allow local companies to work together, benchmark against each other, and establish an efficient market for talent and resources.

As Ontario's companies begin to grow in size, it is likely that a dominant cluster will emerge. This will also be the case if an anchor tenant is brought to the province. As particular hubs grow in size, they will attract secondary value chain members, incubate new businesses, and attract international attention. As momentum builds, market forces will determine which hub becomes the focal point for Ontario's digital game industry.

## **CONCLUSIONS**

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Ontario's digital game industry requires a clear vision for what the industry will look like over the next five years, and how Ontario can take advantage of the explosive global growth of digital games. *Ontario 2012's* recommendations will enable the province to become a world-class game developing region with strong, organically developed companies, solidify Ontario's reputation as a creator of high quality digital content, and highlight Ontario as an attractive destination for foreign investment. Stakeholders must now seize the opportunity to work together to make this vision a reality.

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<sup>xv</sup> The Conference Board of Canada. "Clusters of Opportunity, Clusters of Risk."