
Economic Profile of the Ontario Computer Animation and Visual Effects Industry

Nordicity Group Ltd.

Prepared for
Computer Animation Studios of Ontario
(CASO)

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Computer Animation Studios of Ontario (CASO)

The Computer Animation Studios of Ontario (CASO) is an association dedicated to promoting and growing the Ontario Animation and Visual Effects industry.

As an advocate for the industry in Ontario, CASO operates in the following areas:

- 1. International Promotion and Marketing*
- 2. Industry Statistics and Competitive Advantage*
- 3. Education and Organizational Relations*
- 4. Government Relations*
- 5. Membership*

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Economic Profile of the Computer Animation and Visual Effects Industry in Ontario

Executive Summary

This study examines the economic profile of the computer animation and visual effects (VFX) industry in Ontario and develops financial, corporate and employment baseline indicators for future market analysis and comparison. It was conducted by Nordicity Group Ltd. for Computer Animation Studios of Ontario (CASO). The project received funding assistance from the Ontario Media Development Corporation (OMDC), York University, Royal Bank of Canada, the City of Toronto – Economic Development and CASO. It is intended to address the need to document industry statistics and composition, in addition to dimensions of markets and financing sources.

The study develops estimates of total industry revenue, operating expense, output volume, number of employees and future market opportunities. The key methodological approach involved the administration of a firm-level survey designed to collect data from senior company managers of animation and visual effects companies. The target info was organized as follows:

- **Corporate Profile** – e.g. years of operations and types of business ownership
- **Financial Profile** – e.g. revenue by market segment and operating expense breakdowns
- **Access to Financing** – e.g. sources of original capitalization and ongoing financing
- **Employment & Training** – e.g. number of full-time, part-time and freelance employees; availability of required skills; and perceived quality (preparedness) of new hires
- **Market Growth Outlook** – e.g. areas of opportunity and barriers to growth

The survey-sample data was then combined with industry revenue estimates from the OMDC's Ontario Computer Animation and Special Effects (OCASE) tax credit data to generate estimates for the industry as a whole. The sample of firms that responded to the survey represented an estimated 68% to 74% of the entire industry in Ontario on the basis of revenues. With these data inputs, Nordicity generated a survey multiplier to estimate total industry size and industry-wide financial performance.

Overall, the main findings of the report are as follows:

Industry Economic Statistics

- The computer animation and VFX industry employed a total of 1,600 to 1,900 people in 2007.
- Total computer animation and VFX industry revenues are estimated to be between \$170 million to \$200 million on an annual basis.

Corporate Composition

- The majority of computer animation and VFX studios in Ontario are Canadian-owned, privately-held corporations that have been in existence for over seven years.
- The industry is comprised of a large number of small and medium-sized businesses. In fact, 81% of respondents reported fiscal 2007 revenue of under \$5 million. A small group of companies account for a large share of industry revenue - 53% of the total survey-sample revenue was generated from 14% of respondents.
- Most computer animation and VFX studios in the province operate under a fee-for-service business model serving producers of film, television and, increasingly, interactive media. In fact, survey respondents had copyright ownership in only 17% of their projects. Despite this reality, about 20% of survey respondents identified intellectual property development as a future growth opportunity for their company.

Markets & Financing

- With respect to market segments, 16% of computer animation survey-sample revenue was derived from feature films and 45% from TV series. For VFX companies it was the reverse - 44% of VFX survey-sample revenue was derived from feature films and 16% from TV series. TV commercials commanded similar shares of computer animation and VFX survey-sample revenue at 17% and 13% respectively.
- While the majority of computer animation revenue originate within Canada, the opposite is true for VFX revenue. This trend also holds in Ontario where 54% of total computer-animation survey-sample revenue came from clients located within the province compared to 44% of VFX survey-sample revenues.
- International markets provide opportunities for growth, but they also represent the strong presence of competition, particularly regarding labour costs in Asia. Increasingly,

Ontario-based studios, and their counterparts in other jurisdictions, face greater cost competition. As a result, operating margins may experience downward pressure. Increasing competition from other jurisdictions was cited as the most significant barrier to growth by survey respondents.

- The OMDC's OCASE labour-based tax credit assists studios in building some capacity and is a popular financing tool in the industry - over 81% of the survey sample accessed the tax credit. However, computer animation and VFX studios in Ontario remain underfinanced, possibly as a result of being perceived as not attractive to traditional sources of investment capital. Within the survey sample, a 60% share of ongoing financing came from retained earnings/profit, 12% from private sources and only 5% from new equity injections.
- The conventional market segments of television series and feature films continue to be regarded as general growth opportunities for the industry. Emerging market segments such as games, web and mobile content production are also seen as growth opportunities – about 20% of respondents regarded web and mobile content production as a growth opportunity for their company.

Nordicity concludes that the computer animation and VFX industry in Ontario is mature, robust and experiencing moderate growth. The long-term, ongoing stability of the industry requires a competitive business strategy focussed on the production and ownership of high-quality creative to counter the growing challenge of low-cost labour availability in other jurisdictions. This approach necessitates that computer animation and VFX studios in Ontario have adequate access to capital and talent (particularly senior artistic and technical staff) to foster intellectual property development and compete on higher margin, higher quality services. They need to do so in order to distinguish themselves from competitors and attract both fee-for-service and copyright exploitation opportunities.

1 Introduction

1.1 Profile Mandate

- In November 2007, the Computer Animation Studios of Ontario (CASO) commissioned Nordicity Group Ltd. (“Nordicity”) to prepare an economic profile of the computer animation and visual effects (VFX) industry in Ontario. Other stakeholders and project partners included: the Ontario Media Development Corporation (OMDC), York University, Royal Bank of Canada, City of Toronto – Economic Development.
- CASO was formed to address the issues and opportunities of Ontario-based computer animation and VFX studios. CASO works with its members, as well as the OMDC and other government bodies and agencies, to develop sound industry strategy. As a result, CASO seeks to be equipped with essential data and industry research.
- The mandate of the study was to provide an initial examination of the business characteristics of the industry and to develop an economic baseline for market analysis and comparison. The core objective of the study was to determine estimates of total revenue, operating expense, output volume, number of employees and future market opportunities.
- The principal research tool Nordicity used to gather industry data from company operators and owners was an online survey designed to address the need for benchmark industry documentation and research.
- As well as constructing a financial, corporate and employment profile, the scope of the survey encompassed access to financing, including a review of the use of the Ontario Computer Animation and Special Effects (OCASE) tax credit; new-hire employee preparedness, and barriers to market growth.
- In addition to providing a valuable overview of the general state of the computer animation and VFX industry in Ontario, this economic profile sets the stage for future work in the area.
- The following section outlines the approach and methodology Nordicity used to develop the economic profile of the computer animation and VFX industry.

1.2 Approach & Research Methodology

- Nordicity developed a provincial economic profile of the computer animation and VFX industry by working with stakeholders and incorporating limited secondary research to design, implement and analyze an online survey. The scope of the survey included:
 - **Corporate Profile Questions** – e.g. years of operations and types of business ownership
 - **Financial Profile Questions** – e.g. revenue by market segment and operating expense breakdowns
 - **Access to Financing Questions** – e.g. sources of original capitalization and ongoing financing
 - **Employment & Training Questions** – e.g. number of full-time, part-time and freelance employees; availability of required skills; and perceived quality (preparedness) of new hires
 - **Market Growth Outlook Questions** – e.g. areas of opportunity and barriers to growth

Please refer to Appendix A for a copy of the survey questionnaire.

- The results of the survey of the computer animation and VFX industry in Ontario provide valuable, first-time insight into many of the companies that comprise the marketplace.
- In the remainder of this section, Nordicity provides detail on the tasks undertaken to complete the study:
 - Project Work Plan & Milestone Timeline
 - Secondary Research
 - Survey Design
 - Survey Implementation
 - Survey Data Analysis & Report Preparation

1.2.1 Project Work Plan & Milestone Timeline

- With input from stakeholders, Nordicity developed a work plan which mapped key milestones and tasks with timelines. These were managed through regular communication and meetings with the project team for the duration of the study.
- Nordicity's preliminary secondary research revealed that there were few sources of data on the computer animation and VFX industry in Ontario. As a result, stakeholders recognized the significant seminal nature of the economic profile study.

1.2.2 Secondary Research

- Nordicity reviewed available domestic and international secondary research sources which document trends and issues regarding the computer animation segment; Nordicity used the information to help shape the content of the survey and the final report.
 - Domestic secondary research sources: Statistics Canada, Canadian Audio-Visual Certification Office (CAVCO), Export Development Canada, OMDC, *Profile 2008* (CFTPA), Canadian Animation Directory.
 - International secondary research sources: Journal of Visualization & Computer Animation, Computer Graphics Forum, Animation World Magazine.

1.2.3 Survey Design

- The three key considerations involved in designing the Computer Animation & VFX Economic Profile Survey were: a) sensitivity to the sharing of confidential information, such as revenue and operating expense levels; b) the length of time and ease of use factors that comprise user friendliness; and c) ensuring output of the survey would lead to meaningful data analysis, including the ability to quantify responses.
- Nordicity prepared survey questions by drawing on input from industry leaders, stakeholders and others. Nordicity also reviewed similar economic profile surveys conducted in other industries and jurisdictions. From over 40 proposed questions, Nordicity prepared a final survey questionnaire consisting of 26 questions.
- Survey design objectives: The sections and questions of the survey sought to provide insights summarized in Table 1 below:

Table 1 – Survey Design Objectives

Section	Objective
A. Corporate Profile	To determine general business incorporation structures, length of operation, project volumes and output mixes of computer animation and visual effects studios.
B. Financial Profile	To compile top-level revenue and operating expense data ranges to determine relative company sizes, market segments and impact of costs
C. Access to Financing	To gather data on initial capitalization and ongoing financing sources, including provincial and federal tax credits.
D. Employment & Training	To gather information regarding the employee base of the industry, including the relative proportion of contract vs. full-time employees, and the amount of work being outsourced to foreign countries.
E. Market Growth Outlook	To identify key success factors for promoting industry growth and the barriers to growth.

- In an effort to select an online survey which met the necessary requirements, Nordicity researched and tested a number of web-based survey applications across a variety of criteria.
- The survey was pre-tested with five members of the CASO board and the resultant feedback provided Nordicity with insight into ways to improve the intent of the questions and the general flow of the questionnaire.
- Following the pre-testing phase, Nordicity made final edits to the survey, and then distributed a web link to the survey questionnaire via email. A PDF version of the survey was also available for respondents who preferred a printable copy.

1.2.4 Survey Implementation

- Seeking a representative data sample, Nordicity focused on securing participation from computer animation and VFX studios which represented a significant proportion of industry revenues.
- The original list of potential respondents was comprised of about 150 computer animation and VFX companies, including suppliers, software developers and producers as well as a range of very small (one-person operation) to large studios; Nordicity compiled this list based on information found in various industry directories including the Ottawa Animation Festival delegate list.

- The final survey list of 93 companies that was used for survey distribution included eleven very small studio operations whose overall contribution to industry revenues is minute and four creative content producers with animation production capability. Of these 93 companies, 78 were active computer animation and VFX studios.
- One limitation of the survey-data is that it excludes some major producers of animated content who did not participate in the study. These companies generate the majority of their revenue from broadcaster license fees, have in-house studios and also serve as customers to smaller computer animation and VFX studios.¹
- To complete the survey, Nordicity targeted senior managers at the companies within the survey sample. In an effort to maximize the response rate and timely survey completion, Nordicity avoided using survey questions that sought a high level of detail data or information from respondents.
- Several members of the CASO board of directors leveraged their knowledge of company representatives on the survey list to promote the completion of the survey questionnaire. Nordicity and the CASO board of directors conducted an extensive and extended survey follow-up process in order to secure the 32 responses.
- With respect to the number of companies in the broader computer animation and VFX industry, the 32 responses represent approximately 15% to 20% of the total. However, the volume (production revenue) of the survey sample was \$128 million and, based on our estimates, the total industry revenue was about \$170 million to \$200 million. As a result, Nordicity estimates that the survey sample comprises approximately 68% to 74% of the industry when measured by revenue, and therefore is a valid representation of the industry. Please refer to Appendix C for details.

1.2.5 Survey Data Analysis, Estimates & Report Preparation

- Revenue estimates were calculated from annual Ontario Computer Animation and Special Effects (OCASE) tax credit data.² The OMDC estimates that OCASE tax credit claims totalled \$11.2 million during the 2006-2007 fiscal year (April 1, 2006 to March 31, 2007). For the 2005-2006 fiscal, OMDC estimates that the amount was \$11.1 million (see Appendix B).

¹ The companies include: Nelvana (Corus Kids), 9 Story, Cookie Jar and Mercury Filmworks

² The OCASE Tax Credit is calculated as 20% of the eligible Ontario labour expenditures incurred by a qualifying corporation with respect to eligible computer animation and special effects activities.

- Given that the OCASE tax credit represents 20% of qualifying labour and 50% of remuneration paid to freelancers, Nordicity used detailed calculations and assumptions to estimate a total industry revenue range. The approach is further outlined in section 4.1.2 and a description is available in Appendix C.
- This grossed-up revenue range estimate of the total computer animation and VFX market was used to generate a survey multiplier and contextualize the size of the survey sample with respect to total operating expenses, total employment, and other metrics of industry size and industry-wide financial performance.

1.3 Outline of Report

- In Section 2, Nordicity discusses the structure, services and business models of the computer animation and VFX industry in Ontario.
- In Section 3, Nordicity presents the results of the survey of the business leaders in the industry. The economic profile generated focuses on financial operations, access to financing, employment trends and market growth opportunities.
- In Section 4, Nordicity provides estimates of industry-wide metrics based on the survey-sample data, and summarizes the key findings from its research and analysis.

2 Industry Description

2.1 Industry Structure & Services

- The computer animation and digital VFX industry in Ontario is comprised of companies that produce content and/or provide other services for film and television markets in Canada and internationally. For companies operating in the computer animation and VFX industry, primary customer base includes film studios, distributors, content producers and television broadcasters.
- Companies operating in the computer animation and VFX industry also serve the commercial market by producing TV commercials, training materials, corporate communications, or music videos for brand owners, either directly or indirectly through an agency.
- Some production companies operating in the computer animation and VFX industry provide post-production services in-house; whereas, other producers contract work out to specialty post-production service houses. Some producers do both.
- Typical services provided by animation and VFX studios are summarized in Table 2 below:

Table 2 – Typical Computer Animation and VFX Services

Computer Animation	VFX
<ol style="list-style-type: none"> 1. Design and consultation 2. Prepare budget and schedule 3. Storyboards 4. Create animatic reel 5. Create digital elements (characters, props, environments, set, motion) 6. Integrate with animated sequences 7. Edit 8. Output to hard drive 	<ol style="list-style-type: none"> 1. Design and consultation 2. Prepare budget and schedule 3. On-set supervision 4. Pre-visualization 5. Create digital elements (characters, props, environments) 6. Integrate with live-action sequences 7. Matte painting, crowd replication, set extensions 8. Addition of environment elements, e.g. fire, water, dust, smoke 9. Rig removal 10. Output to film or frame to hard drive
<p>Note: In some instances, Items 5 and 6 may not be severable from each other.</p>	<p>Note: Items 5 through 10 are stages of the production process and, in some instances, may not be severable from each other.</p>

- Animation and visual effects studios do not typically provide sound recording or audio post production services.

- The market segments served by the computer animation and VFX industry can be summarized as follows:
 - Feature Film
 - TV Movie/MOW
 - TV Series
 - TV Commercial
 - Music Video
 - Direct-to-Video
 - Scientific Visualization (Medical & Legal)
 - Broadband/Internet content
 - Mobile content, incl. games
 - Console or PC games

2.2 Computer Animation

- Computer animation is the evolution of classical cel animation into digital technology. Of the numerous forms of commercial animation -- stop motion, claymation (using Plasticine), cut-out and others -- production of cel animation, in the style of traditional Disney and Looney Toons cartoons, has, for the most part, been supplanted by computer technology. This style of animation is often referred to as 2D animation reflecting the fact that visual elements (characters and environments) have no apparent volume -- they are flat, two-dimensional objects.
- With the significant improvements in computer hardware and software during the past two decades, creating three-dimensional (3D) animation has become a commercially feasible process.
- The fundamental difference between 3D and 2D animation is the apparent depth and volume of the character models, environments and props. The first large scale, well-known project to use 3D technologies was the animated feature film *Toy Story*. Since its release in 1995, further developments in digital technologies have enabled the production of innumerable television and DVD projects which can now be produced with significantly lower budgets than those required for feature films.
- Of the programs commonly produced today, animated features are usually produced as 3D animation in order to appeal to theatrical audiences. Programs for television are produced in both 2D and 3D animation.
- At its core, computer animation is an efficient production platform that is suited to simulating many other media. In some studios, computer animation is replacing many traditional "hard media" animation forms one by one, for example simulated stop-motion. The scope and definition of computer animation is changing and increasingly meaning many things to many people.

2.3 Digital VFX

Filmmakers use digital VFX to modify, enhance and augment live-action cinematography. Digital VFX, or simply VFX, are a subset of visual special effects available to directors that enable realization of the visual aspects of film and television projects. Some of these include non-digital “in-camera” effects using manipulation of physical elements, lighting, makeup, prosthetics, “men-in-suits” and others.

Digital technologies permit filmmakers to surpass the constraints of physical reality. Typically VFX include integration of digital elements into live-action cinematography, combining elements from multiple sources into composite images or creating photorealistic shots totally by computer.

VFX artists can create 3D elements that do not exist in reality – monsters, horror characters, a castle in the forest, a pig that talks, a head that explodes – but need to have photorealistic characteristics.

Digital set extensions permit modification of film locations that extend beyond both physical reality and budget allowances. The same is true for crowd replication in which a handful of live actors are multiplied to fill every seat of a sports stadium – and often now even the actors are not needed. In addition, VFX can alter environmental elements such as making day-night and vice-versa, creating storms, tornados, blizzards, fire storms, explosions, adding icy breath to a “winter scene” shot in July, showing the detail of a bullet in flight and replacing the hazardous work of stuntmen, women and animals with a process that has zero physical risk.

The range of VFX is wide and filmmakers’ capacity to conceive of new ways to expand audiences’ visual experience with creative use of VFX technologies is constantly evolving.

2.4 Skilled Labour

- Despite the advances in digital technology, it is the combined work of individual artists and technologists that creates animation and digital VFX.
- The introduction of fast computers and advanced software has had the dual effect of increasing the demand for complex outputs and at the same time opening jobs in the industry to a wider range of individuals with varying skills.
- Every year, animation schools produce thousands of graduates providing basic support for industry growth. In addition, universities and technical colleges provide a labour pool of additional support personnel. However, new graduates cannot provide the level of skill required for complex work. No commercial animation or VFX studio can operate in today's market without having a foundation of experienced working artists who have built careers on a continuing advancement of experience and enhanced skill.
- The requirement for more complex outputs has also led to specialization of jobs within the industry. Despite the general description of the process and output as “animation,” actually creating the animation is a minor component of the process.
 - Depending on the requirements of individual projects, animation and VFX projects will include the artistic crews with job titles such as:
 - writer, director, designer, storyboard artist, layout artist, colourist, modeler, rigger, animator, lighter, compositor, editor.
 - And the following technical crew:
 - technical director, shader writer, software developer, systems administrator, network administrator, render wrangler as well as line producer, production managers, coordinators and assistants.

2.5 Business Models in the Computer Animation and VFX Industry

- Computer animation and VFX are generally created and sold in the manner illustrated in Figures 1 and 2 below.

Figure 1 - The Structure of the Animation Industry (TV and Feature Film)

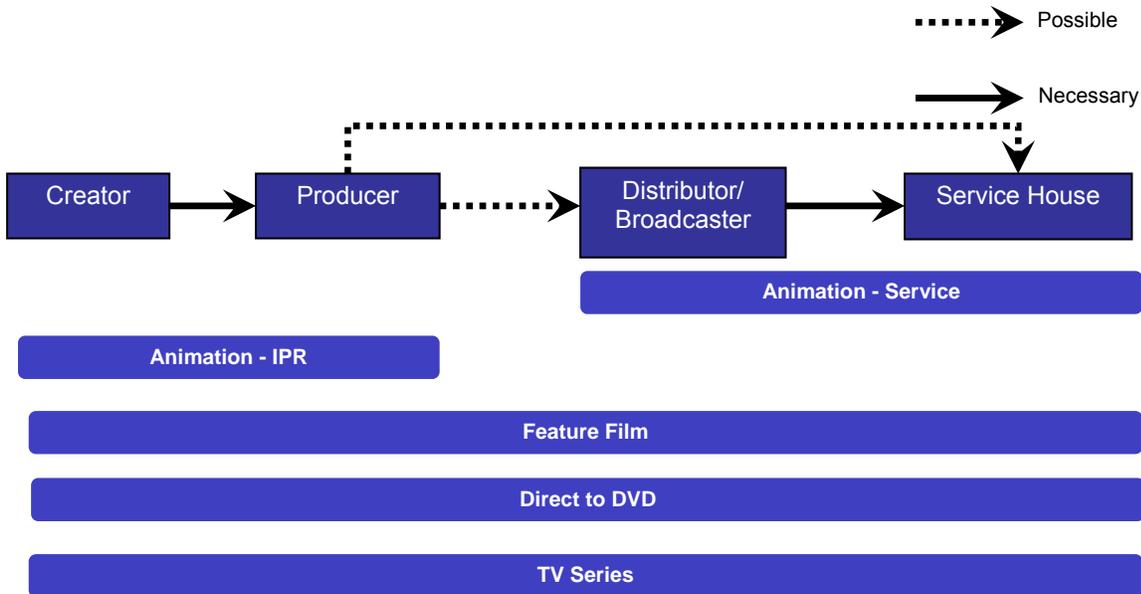
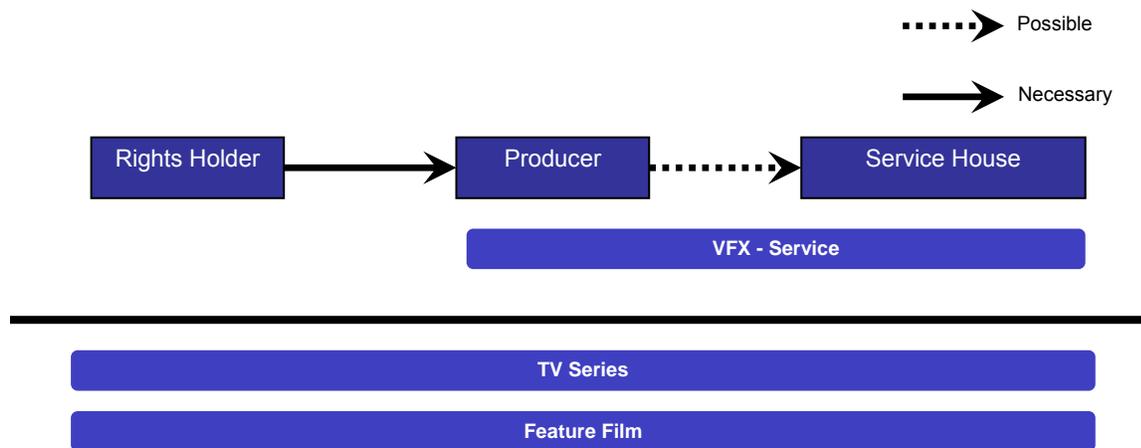


Figure 2 - Structure of the VFX Industry (TV and Feature Film)



There are two principal business models in the in the computer animation and VFX industry – the owner operator – “bootstrap start-up” and program producer approach.

1. Owner-operator – Bootstrap Start-up

- The “owner operator bootstrap start-up” is the most common form of business model in both the computer animation and VFX industry. In most cases, these enterprises evolve from employees of existing studios who leave to start their own entrepreneurial new ventures. Often this is a direct result of business layoffs, studio closures, or sales or mergers of studios.
- Typically a new studio is started by an individual with artistic training and experience; sometimes this individual will partner with a “business” associate. Savings and contributions of family and friends provide seed capital and early contracts usually consist of work from clients known to the operator from former studios. At this stage, work is on a fee-for-service basis with no retention of property rights by the studio.
- It is easy to understand why the preponderance of studios begins with this model. Lack of capital for start-up operations and negligible opportunity to attract it limits scale of new operations. Landing service contracts from producers enables studios to build capacity in direct response to workflow and limit the amount of capital required and associated risk. Developing animation properties for sale to broadcasters and distributors is expensive and risky with only a small proportion of potential projects ever being produced. Developing properties that will have visual effects (VFX) is even more expensive and entails similar risk.
- Once in operation, two factors drive the operations of the fee-for-service business: 1) establishing a constant flow of new projects and 2) maintaining adequate working capital.
- The availability of new work depends on a number of factors including competition, project budgets and schedules, fit of work with studio capabilities, volume of existing work in process, and availability of incremental staff. Any one of these factors may cause a studio to miss an opportunity to develop a continuous flow of work.
- The gaps in production create a number of issues for the studio. Often it needs to discount pricing to attract business. Often it needs to hold staff and resources through the gap period between projects, to ensure availability of staff when the next project commences. Both of these scenarios deplete available working capital. This is particularly problematic when most, if not all, capitalization is derived from operations.
- Market factors affect these studios in numerous ways. Some studios in Ontario have developed a reputation for quality work that improves their ability to attract work. However, in the VFX

segment, there is an ongoing demand from clients to increase the complexity of the work beyond any corresponding increase in budgets or schedules. Such demands require the studio to increase the time to perform the work often with more skilled (and more expensive) artists and often with increased computer power and software capability.

- In the animation segment, the demands by clients are more often to be schedule and cost. Off-shore competition from low-cost labour areas predominantly India, China, Thailand and Philippines cause a downward pressure on pricing. For example, an average animator in Mumbai will earn about \$200 per week.³ In Toronto, an employee with the same skill level will earn \$1,200 per week; the employer must also cover payroll taxes and the costs of employee benefits, which are likely higher than those in Mumbai. Even after taking into account the effect of the OCASE, labour costs will be more than four times the salary cost in India.
- Affecting both the computer animation and VFX segments, aggressive tax credits in other jurisdictions often have the effect of Ontario studios reducing bids to match the net prices from such areas and thereby reducing profitability and working capital. This appears to be a global trend as indicated below:

Jurisdiction	Base Production Credit	Animation and VFX Credit
Ontario	25% of qualified labour	Add'l 20% qualified animation or VFX labour ⁴
British Columbia	45% of qualified labour	Add'l 15% qualified labour relating to
Quebec	20% of qualified labour	Add'l 10.2% qualified animation or VFX labour
Manitoba	45% of qualified labour	Included
Nova Scotia	35% of qualified labour	Included

Source: "The Big Table – Digital Media and Animation Incentives in Canada", PricewaterhouseCoopers, 2007.

- Generally, owner-operator studios attempt to move from strictly service work into becoming producers with the objectives of 1) increasing efficiency by eliminating external producer level in value chain, 2) gaining more control over flow of production into studios, 3) mitigating general risk by developing independent profit centre. This is often done in the first instance as a co-production with an existing producer.

³ Source: <http://nitawriter.wordpress.com/2007/07/07/plenty-of-jobs-for-animators-in-india/>

⁴ The effective rate of Credit is 10 – 12% depending on individual studio's circumstances.

2. Program Producer

- In some instances animation producers will integrate an animation production capability into their operation. This structure extends the producer's direct role in production beyond the fairly typical acquisition of rights to or development of programs, securing financing and distribution. Such vertical integration gives the producer a greater degree of control of costs and the production process. This model is non-existent in the Canadian VFX segment.
- As noted above, many service providers have aspirations of becoming producers and several have accomplished this to varying degrees. In those instances, the company will usually have followed the "Bootstrap" model above in developing their business.
- This model requires a higher level of capitalization due to the necessity of developing properties for sale to broadcasters or distributors in order to feed their production facility. In some instances these producers will take on some service work in order to mitigate risk. As well, one studio has a known portfolio of owned, co-produced and service projects and as well produces animation in-house as well as takes on sub-contracting projects.

3 Survey Analysis

3.1 Corporate Profile

As stated earlier, Nordicity estimates that the survey sample of 32 accounted for between 68% and 74% of the entire industry in Ontario on the basis of revenues. The sample coverage managed to capture a greater percentage of the larger companies than the smaller ones, which enabled the project team to cover nearly three quarters of the animation and VFX industry.

- **Computer Animation:** Of the total sample of 32 surveyed companies, 23 reported that they produced some output of computer animation production volume. Of these 23 companies, 12 (53%) reported that they produced only computer animation projects, and did not produce VFX projects.
- **VFX:** Of the total sample of 32 companies, 18 reported that they produced some output of VFX volume. Of these 18 companies, five (28%) reported that they produced only VFX projects, and did not produce computer animation projects.

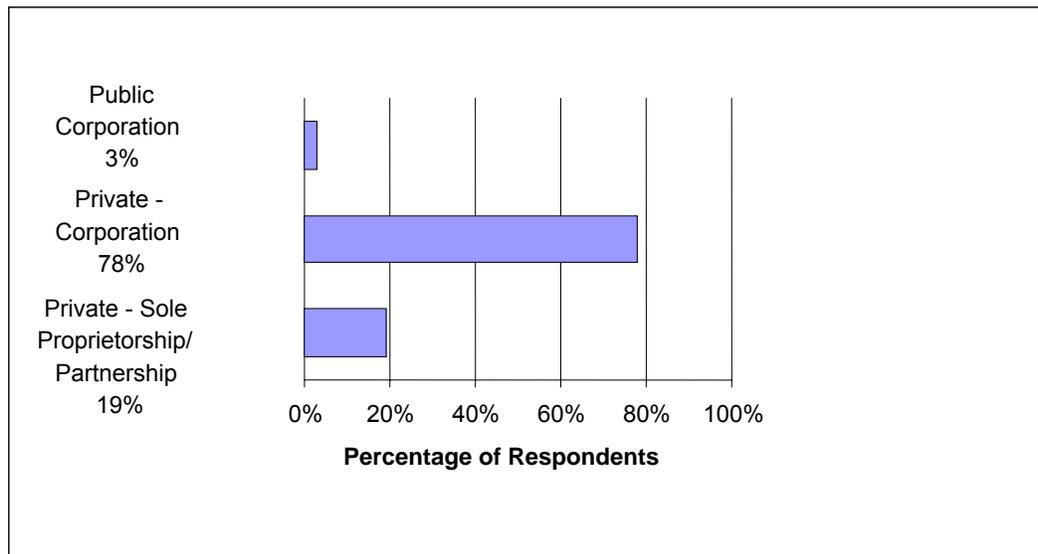
3.1.1 Corporate Profile - Highlights

- Seventy-eight percent of respondents were privately held corporations, 19% were sole proprietorship/partnerships and 3% were public corporations. The public corporations were not Canadian-controlled.
- While only 3% of respondents have been operational for less than two years, the data suggest that there was a wave of company formation and market entry in recent years – 34% of survey respondents have been in business for two to six years. Still, the majority of surveyed companies have been in operation for more than seven years: 38% of respondents have been in operation for between 7 and 11 years; 10% of respondents have existed for over 20 years.
- Survey respondents had copyright ownership in only 17% of the projects in which they were involved; for the other 83% of projects, respondents provided services but did not have copyright ownership.
- Survey respondents generated 14,408 minutes of computer-animation output in 2007, a 9% increase over 2006 levels. Survey respondents also generated 5,915 shots of VFX production, a decrease of 6% from 2006 levels.

3.1.2 Business Type and Ownership

- In 2007, the majority of computer animation and VFX survey respondents were privately held corporations (78%). Nineteen percent were sole proprietorship/partnerships and only 3% were public corporations.
- Ninety-seven percent of the respondents were Canadian-controlled companies. All but five respondents (16%) listed Toronto as the primary site of service delivery.

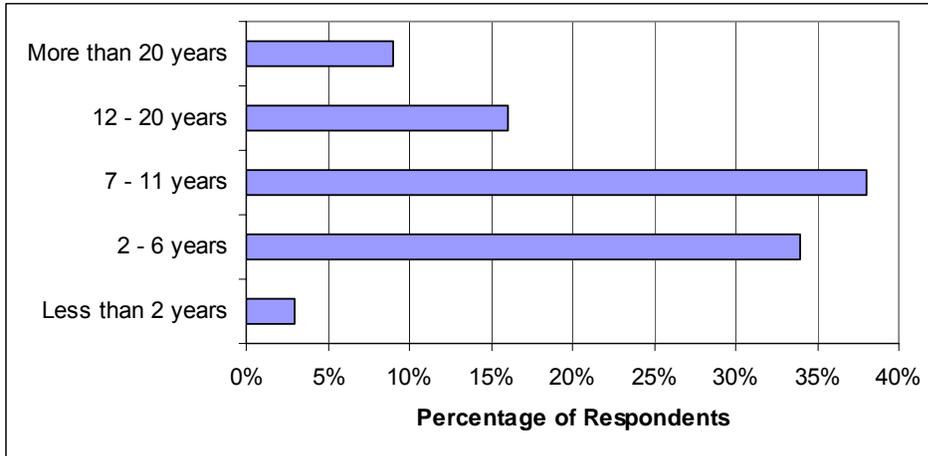
Exhibit 1 Types of Business Incorporation



3.1.3 Years of Operation

- Of the surveyed companies, 38% reported that they have been in operation for between seven and 11 years; and 34% reported that they had been in operation for between two and six years. Sixteen percent of respondents have been in operation for between 12 to 20 years; 9% have been in operation for over 20 years, and 3% for less than two years.
- The data summarized in Exhibit 2 suggest that while the majority of companies have been in operation for over seven years, there was a wave of new company formation or market entry that occurred in the early 2000s. The fact that approximately one-third of companies have only been in operation for between two and six years is evidence of this relatively recent wave of company formation.

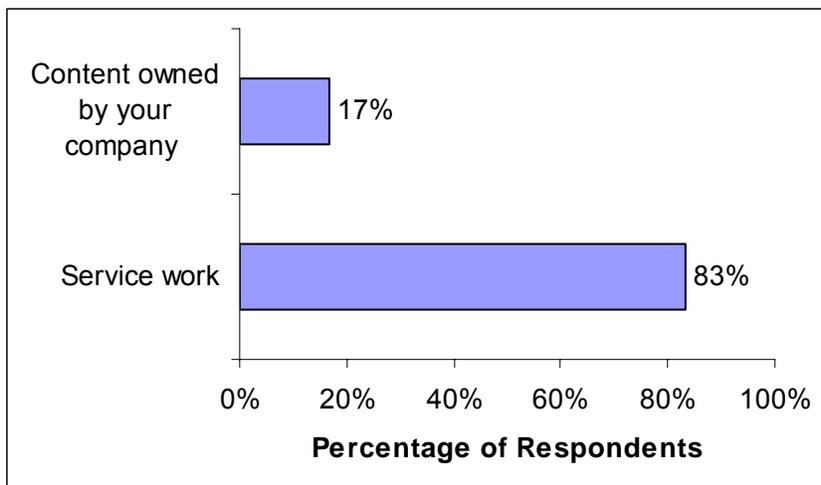
Exhibit 2 Years of Operation



3.1.4 Project Mix – Service Work vs. Owned Content

- In 2007, Ontario-based computer animation and digital VFX companies had content ownership in only 17% of the projects that they were involved in; for the vast majority projects (83%), Ontario-based companies provided service work and had no content ownership.

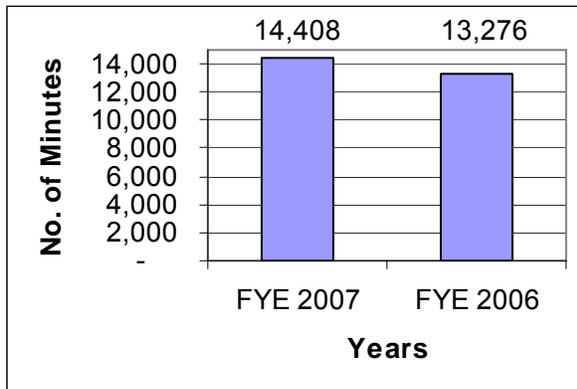
Exhibit 3 Proportion of Service Work to Owned Content, FYE 2007



3.1.5 Output Volumes for Computer Animation and VFX

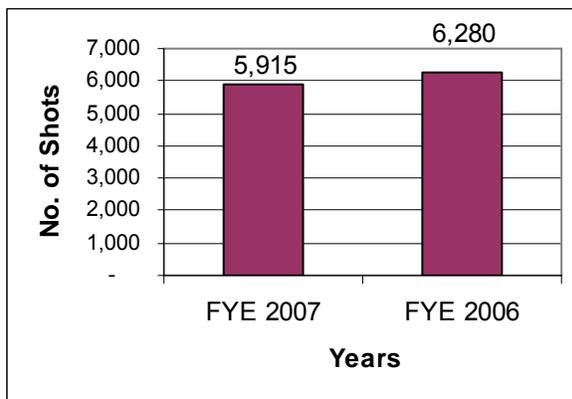
- In 2007, the companies in the survey sample generated a total of 14,408 minutes of computer-animation production; the sampled companies' computer animation output increased by 9% in 2007, from 13,276 minutes in 2006.

Exhibit 4 Output Volume – Computer Animation Production



- The survey-sample companies also generated 5,915 shots of VFX production in 2007, down 6% from 6,280 shots in 2006.

Exhibit 5 Output Volume – VFX Production



3.2 Financial Profile

3.2.1 Financial Profile - Highlights

Revenue Estimates

- Eighty-one percent of respondents reported fiscal 2007 revenues of under \$5 million; 14% of respondents reported revenues over \$15 million, this group represented 53% of the total survey-sample revenue.
- Nordicity estimates that the total revenues for the survey respondents (only those companies that answered the revenue question) were \$128 million in 2007 and \$107 million in 2006; an increase of 19.6%.

Computer Animation – Region and Market Segments

- Survey respondents reported that they earned 61% of their computer-animation revenues in fiscal 2007 from clients based in Canada; 54% of total computer-animation revenues came from clients located in Ontario.
- Forty-two percent of computer animation project revenue was derived from feature films and 31% from TV series in fiscal 2007.
 - Respondents projected a slight decline in feature film activity to about 13% from 16% in the next two to three years; TV series revenues are estimated to decline marginally to 40% from 45%;
 - In the next two to three years, survey respondents expect broadband/internet, mobile and console/PC games segments to grow from about 0% to 8%, 3% and 2%, respectively.

VFX– Region and Market Segments

- Survey respondents reported that they earned 45% of their VFX revenues fiscal 2007 from clients based in Canada; 44% of total VFX revenues came from clients located in Ontario.
- For the fiscal year ending in 2007, 45% of VFX project revenue was derived primarily from feature films. The TV series and TV commercial segments commanded 16% and 13% respectively.
 - Respondents projected 47% of VFX project revenues would come from feature films in the next two to three years; 16% from TV series, 16% from TV commercials and 10% from TV Movies/MOWs.
 - The broadband and mobile segments are projected to grow from 0% to 3% respectively.

Operating Expense Estimates

- Nordicity estimates that the total operating expenses across the responding companies was \$91.1 million in 2007 and \$75.8 million in 2006. Operating expenses among the responding companies increased 20.1% between 2006 and 2007; this increase was consistent with the 19.6% increase in reported revenue.
- The surveyed companies stated that the average change in operating margins was -2.6%.

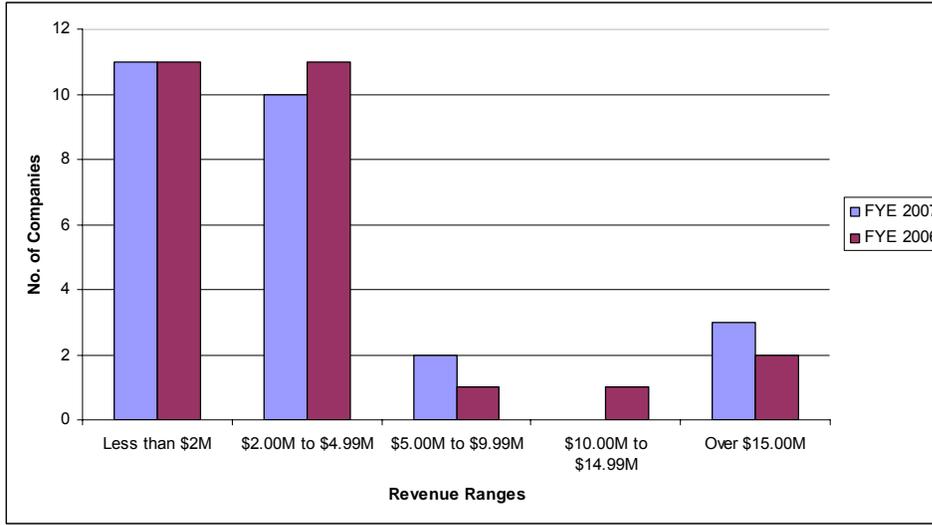
Labour Costs

- Wages, other compensation and employee benefits represented, on average, 64.0% of total operating expenses.
- Respondents cited lower labour costs in other jurisdictions as the primary reason for outsourcing.
- Of the 40% of respondents who outsourced any element of their business to other companies, 59.2% originated from the VFX segment; 40.7% from computer animation.

3.2.2 Revenue

Revenue Profile

- In order to protect the confidentiality of survey respondents' revenue information, Nordicity designed a survey question that asked respondents to identify one of 28 revenue ranges (of \$1 million increments) within which their 2007 and 2006 revenues fell. Despite structuring the question in this manner, only 26 of the 32 total survey respondents provided an answer to the question pertaining to revenues.
- In 2007, three respondents generated revenues that exceeded \$15 million; two respondents reported revenues exceeding \$15 million in 2006. On the other end of the revenue-size spectrum, only one respondent recorded revenues of less than \$100,000 in 2007 versus two respondents in 2006.
- In both 2006 and 2007, most respondents reported revenues of between \$1.0 million to \$1.9 million. In 2007, 7 of 26 respondents reported revenues between \$1.0 million and \$1.9 million; in 2006, 5 of 26 respondents reported revenues in this range.
- As illustrated in Exhibit 6, 81% of all respondents (21 out of 26) reported 2007 revenues of under \$5 million; among the companies reporting revenues of under \$5 million, 42.3% (11 respondents) reported revenues in the bottom part of the range (less than \$2 million.).
- Exhibit 6 also shows that a large cluster of computer animation studios (67% of the total number of responding studios) reported revenues of between \$1 million to \$4 million; and no respondents reported revenues of between \$8 million and \$15 million in 2007. Fourteen percent of respondents reported revenues over \$15 million.
- Subsequent to the survey, Nordicity identified the companies that reported revenues over \$15 million and asked them to identify one of seven additional revenue ranges (\$5 million increments from \$15 million to \$50 million) within which their 2007 and 2006 revenues fell. Nordicity used these additional data to refine its estimates of total revenues among the sampled companies.
- While the survey sample was comprised of many small and mid-sized companies, there were also a small number of large companies within the sample. In fact, three companies within the sample accounted for 53% of the 2007 revenue generated by all companies within the sample.

Exhibit 6 Revenue Profile Comparison


- Exhibit 7 shows the distribution of survey sample revenues over \$15 million.

Exhibit 7 Revenue Profile Comparison – Over \$15 million

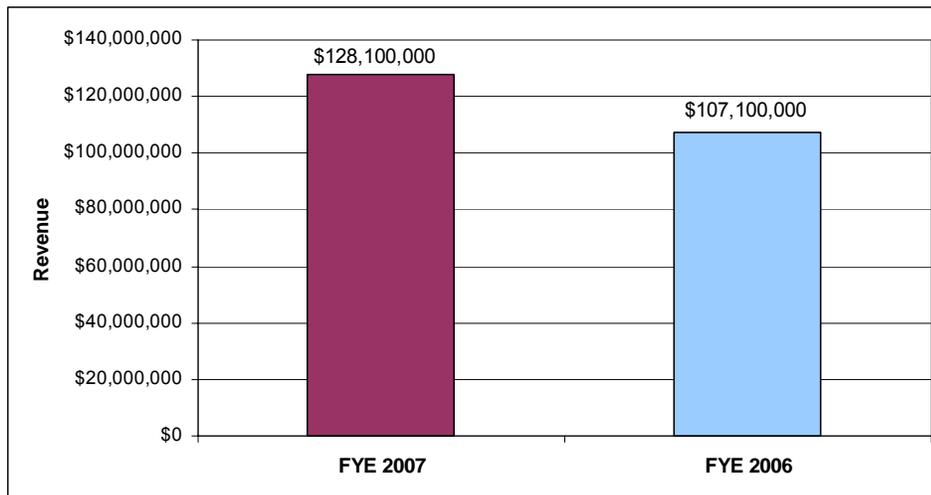
Revenue Range	No. of Companies	
	FYE 2007	FYE 2006
\$15.00M to \$19.99M	1	1
\$20.00M to \$24.99M	1	1
\$25.00M to \$29.99M	1	0

Survey Sample Revenues

- For purposes of confidentiality, Nordicity asked respondents to select ranges that corresponded with their levels of revenue for the past two years.
- Nordicity derived estimates of survey sample revenues by using the mid-points of each range and multiplying each mid-point by the number of respondents in each revenue range. For example, in response to the question regarding 2007 revenues, five respondents selected the range, “\$1.50 million to \$1.99 million.” The mid-point (median) for this range is equal to \$1.745 million. On the basis of these data points, Nordicity derived an estimate of \$8.725 for the total revenue across all five respondents (5 respondents X \$1.745 million = \$8.725 million).
- Because the top-end revenue range is open ended (“Over \$15 million”), Nordicity could not, at first, apply the mid-point estimation approach. Instead, Nordicity contacted all respondents which indicated that their 2006 or 2007 revenues exceeded \$15 million. Nordicity asked them to complete a supplementary question with a seven revenue ranges above \$15 million. On the basis of respondents’ answer to this supplementary question, Nordicity was able to apply the mid-point estimation approach (described in the preceding paragraph) and derive an estimate for the total revenues among this group of large companies.

Using this method, Nordicity estimates for the revenues of the survey respondents totalled \$128 million in 2007 and \$107 million in 2006. This represents an increase of nearly 20% from 2006 to 2007.

Exhibit 8 Revenue Estimates

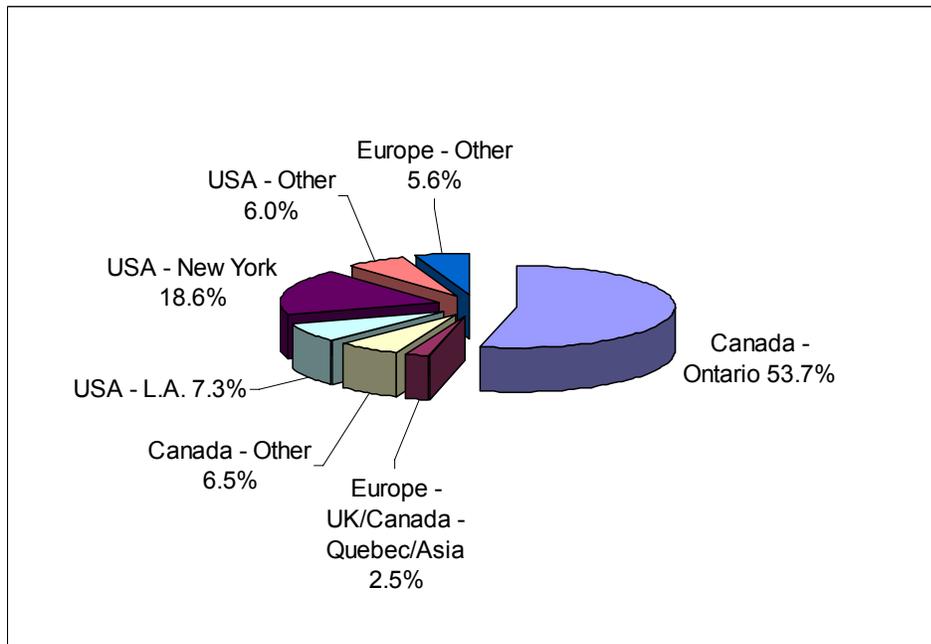


3.2.3 Revenue by Region

Computer Animation

- Survey respondents reported that they earned a majority (61%) of their computer animation revenues from clients based in Canada in fiscal 2007. In fact, just over one-half (54%) of total computer animation revenues came from clients located in Ontario. Quebec-based clients accounted for only 0.5% of the total, while clients located in other parts of Canada (excluding British Columbia) accounted for 6.5%.
- Thirty-nine percent of computer animation revenues originated from clients outside of Canada. New York was the source of 19% of computer animation revenues; revenues from clients based in Los Angeles accounted for 7% or computer animation revenues.
- Clients based in Europe accounted for 7.5% of total computer animation revenues, with the United Kingdom accounting for 1.9% of total revenues and other European countries accounting for 5.6%.

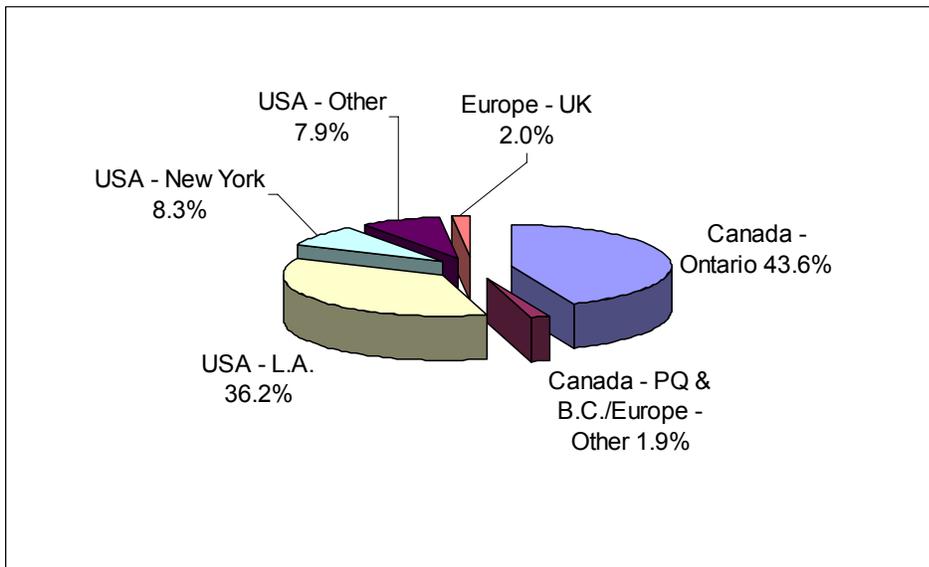
Exhibit 9 Revenue by Region – Computer Animation, FYE 2007



VFX

- A breakdown of VFX revenues by region shows that just over one-half originated from outside of Canada. Foreign clients – primarily U.S.-based clients – accounted for 55% of VFX revenues during the 2007 fiscal year, while domestic sources accounted for 45%.
- For the fiscal year ending in 2007, Ontario was the source of the largest share of VFX revenues; it accounted for 44% of project revenues. Ontario was followed closely by Los Angeles, which accounted for 36% of VFX revenues. New York and other regions in the U.S. each accounted for 8%. Europe (2%) and other regions of Canada (<2%) accounted for only small shares of VFX revenues in 2007.

Exhibit 10 Revenue by Region – VFX, FYE 2007

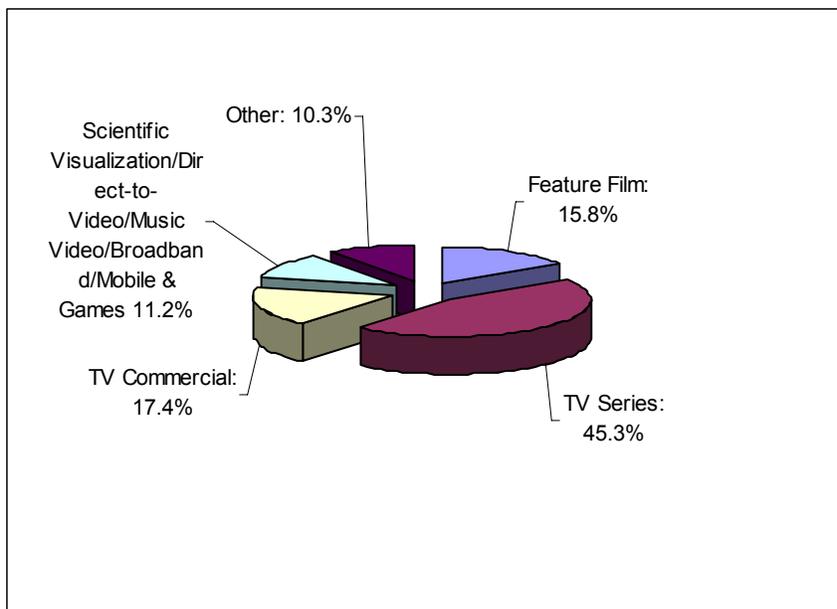


3.2.4 Revenue by Market Segment

Computer Animation

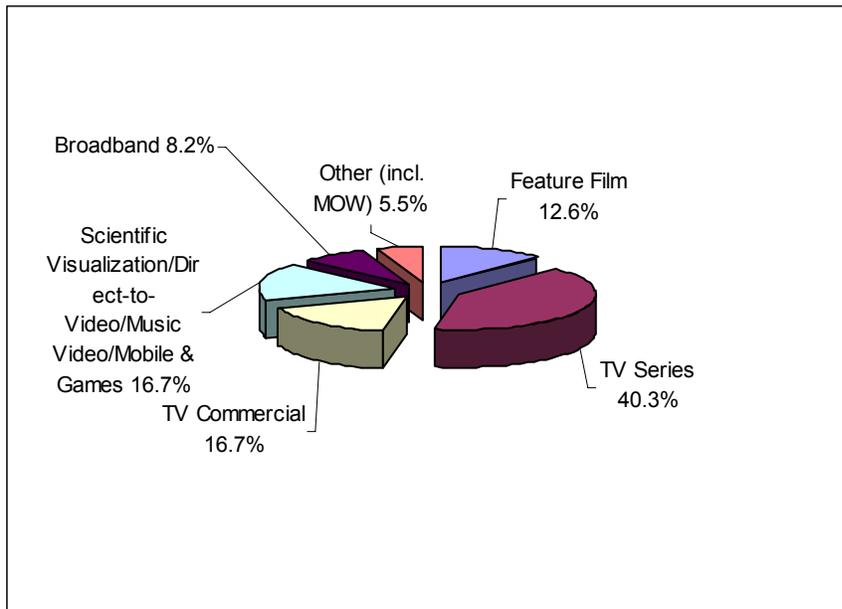
- Exhibit 11 shows the market-segment distribution of computer animation revenue.
- For the fiscal year ending in 2007, 45% of computer animation project revenue was derived from TV series, 17% from TV commercials, 16% feature films and 10% from other types of production. The combined segments of scientific visualization (medical and legal), direct-to-video, music video, broadband and games was about 11% of revenues.
- Broadband/internet content and music videos accounted for less than 0.5%; and mobile content and console/PC games accounted for 0% of computer animation revenues among survey respondents.

Exhibit 11 Revenue by Market Segment – Computer Animation, FYE 2007



- Exhibit 12 below shows the projected market-segment distribution for the next two to three years.
- Projected percentages of computer animation project revenues revealed that respondents expect a slight decline in feature film activity to about 13% from 16% in the next two to three years. Respondents expect TV series revenues to decline marginally to 40% from 45%; they expect revenues from TV commercials to increase to remain flat at 17%.
- Survey respondents reported that they expect revenues in the broadband/internet, mobile content and console/PC games segments are to grow from about 0% to 8%, 3% and 2%, respectively.

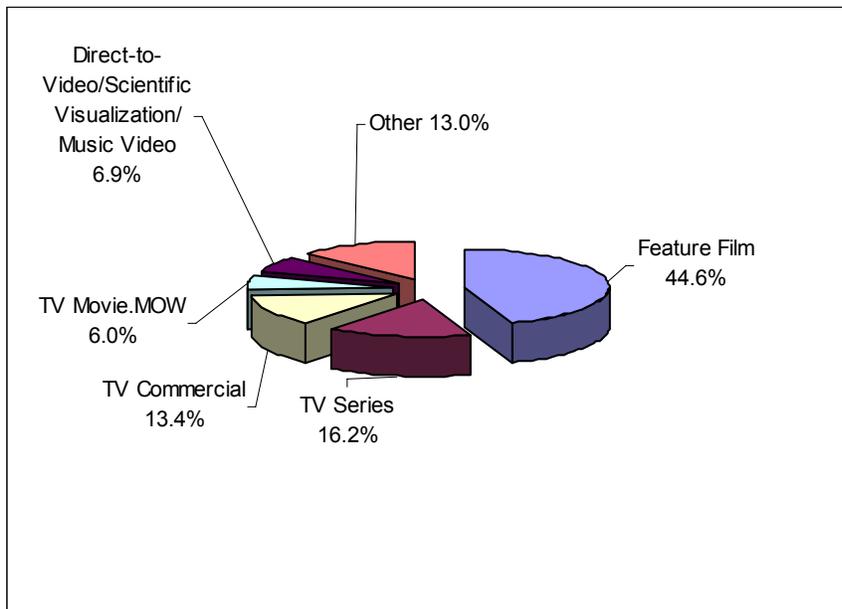
Exhibit 12 Revenue by Market Segment – Computer Animation, 2 – 3 Year Projection



VFX

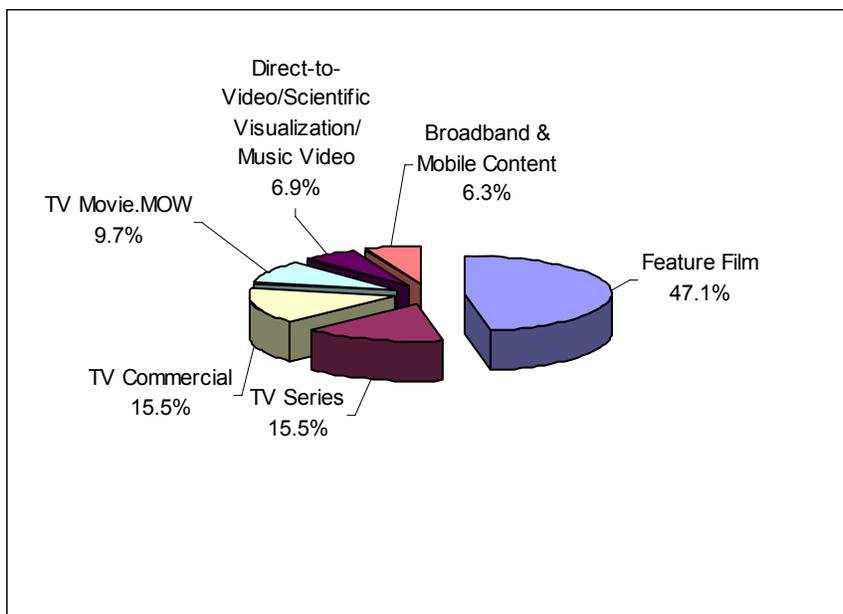
- Exhibit 13 below shows the market-segment distribution of VFX revenue.
- For the fiscal year ending in 2007, 44% of VFX project revenue was derived primarily from feature films. The TV series and TV commercial segments commanded 16% and 13%, respectively.
- Other types of production accounted for 13% and TV Movies/MOWs for 6%. The combined segments of direct-to-video, scientific visualization (medical and legal), music video, was about 7% of revenues.
- On a combined basis, broadband/internet content, mobile content and console/PC games accounted for 0% of VFX revenues among the responding companies.

Exhibit 13 Revenue by Market Segment – VFX, FYE 2007



- Exhibit 14 below shows the projected market segment distribution in the next two to three years.
- Projected percentages of VFX project revenues revealed that respondents expect about 47% to come from feature films, 16% from TV series, 16% from TV commercials and 10% from TV Movies/MOWs in the next two to three years.
- The combined segments of direct-to-video, scientific visualization (medical and legal), music video are projected to remain flat at about 7% of revenues. The broadband and mobile segments are projected to grow from 0% to 3% respectively.

Exhibit 14 Revenue by Market Segment – VFX, 2 – 3 Year Projection

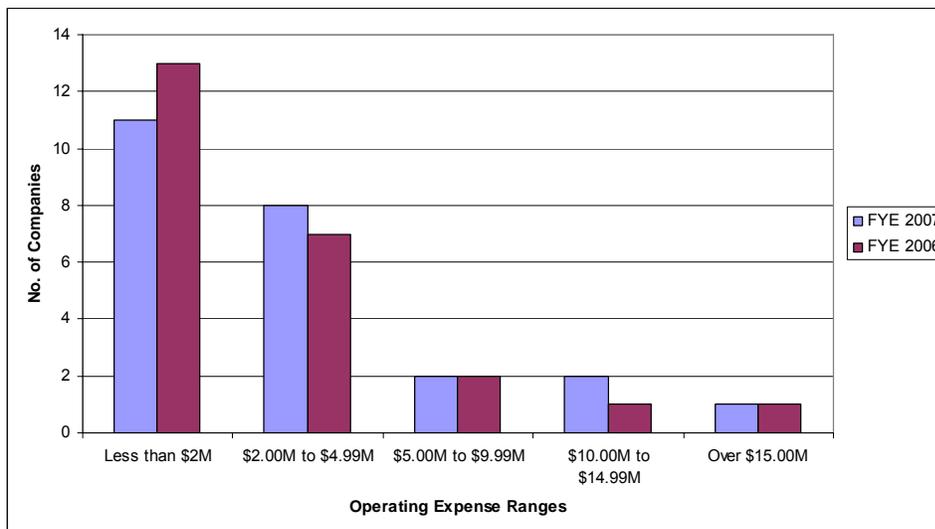


3.2.5 Operating Expenses

Operating Expense Profile

- As was the case with the collection of revenue data, Nordicity asked respondents to indicate the magnitude of the operating expenses by selecting a range within which it fell. Despite using such value ranges to collect data on studios' total operating expenses, only 24 of the 32 total survey respondents provided an answer to the question "What are your company's operating expenses? (Please select one range)."
- Given that there are two fewer companies that provided operating-expense data compared to revenue data, the operating-expense estimates below are likely understated in relation to the revenue estimates (see Section 3.2.1).
- Overall, 79% of all respondents (19 in total) reported operating expenses of less than \$5 million. Of these 19 companies that reported operating expenses of under \$5 million, 63% (or 12 respondents) reported that their operating expenses were in the bottom half of the range, i.e., less than \$2.5 million.
- Exhibit 15 shows the distribution of respondents across the operating-expense ranges.

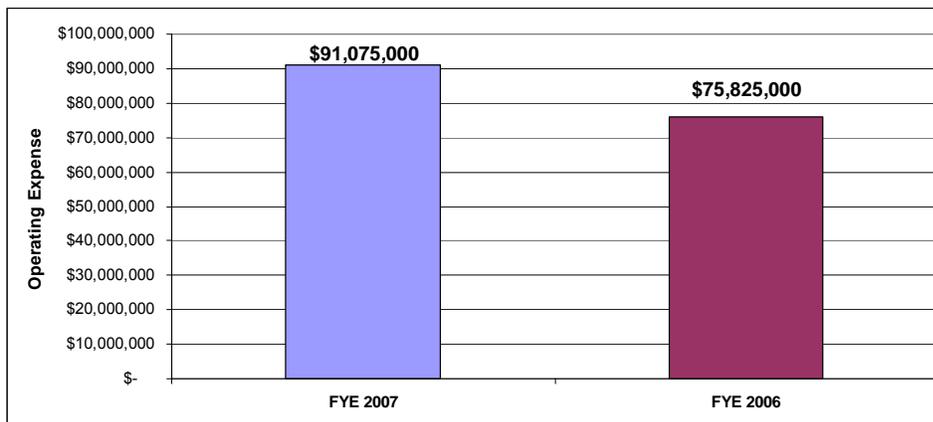
Exhibit 15 Operating Expense Comparison



Survey Sample Operating Expense

- For purposes of confidentiality, Nordicity asked respondents to select ranges that corresponded with their levels of revenue and operating expenses for the past two years. Nordicity derived estimates of total operating expenses by using range mid-points in each range and multiplying them by the number of respondents.
- For operating expenses greater than \$15 million, Nordicity contacted respondents, and asked them to identify one of seven larger operating-expense ranges. Nordicity derived estimates of total operating expenses by using the mid-points of each range and multiplying them by the number of respondents.
- Using this method, Nordicity estimates that total operating expenses across the responding companies totalled \$91 million in 2007 and \$76 million in 2006. Operating expenses within the sample increased 20.1% between 2006 and 2007; this increase was consistent with the 19.6% increase in reported revenue.

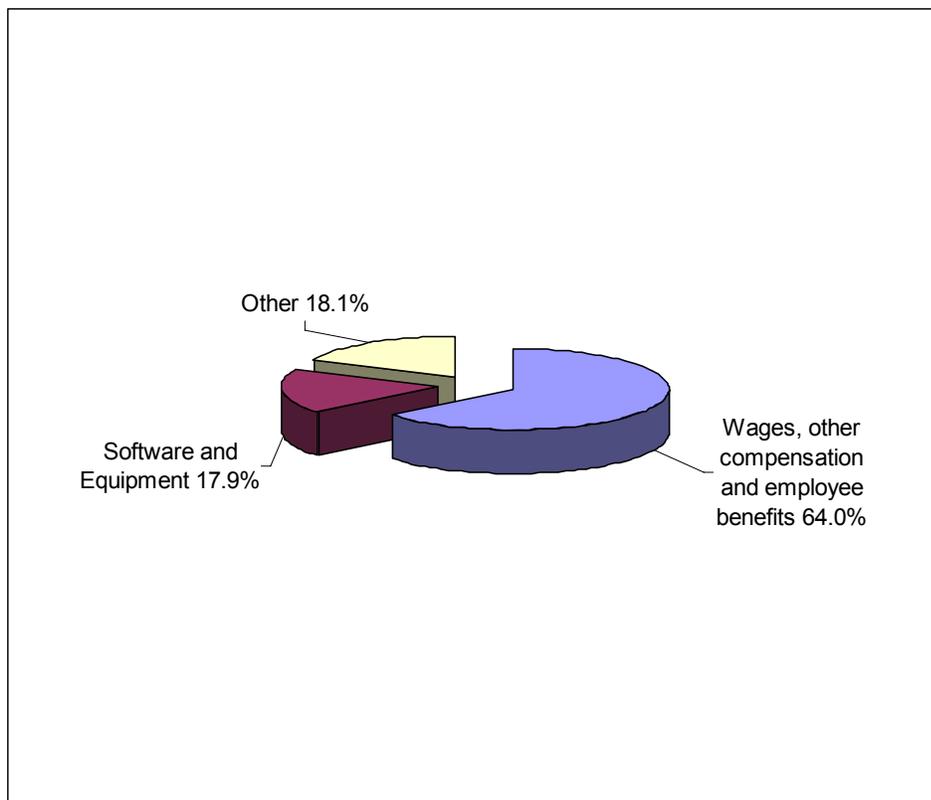
Exhibit 16 Operating Expense Estimates



Operating Expense Breakdown

- Exhibit 17 summarizes the survey respondents' breakdown of operating expenses. Each individual survey response totalled 100%.
- The surveyed companies stated that wages, other compensation and employee benefits represented, on average, 64.0% of their total operating expenses. Software and equipment expenses represented 17.9%, and other expenses accounted for the remaining 18.1% of operating expenses. The 'other' category was not itemized.

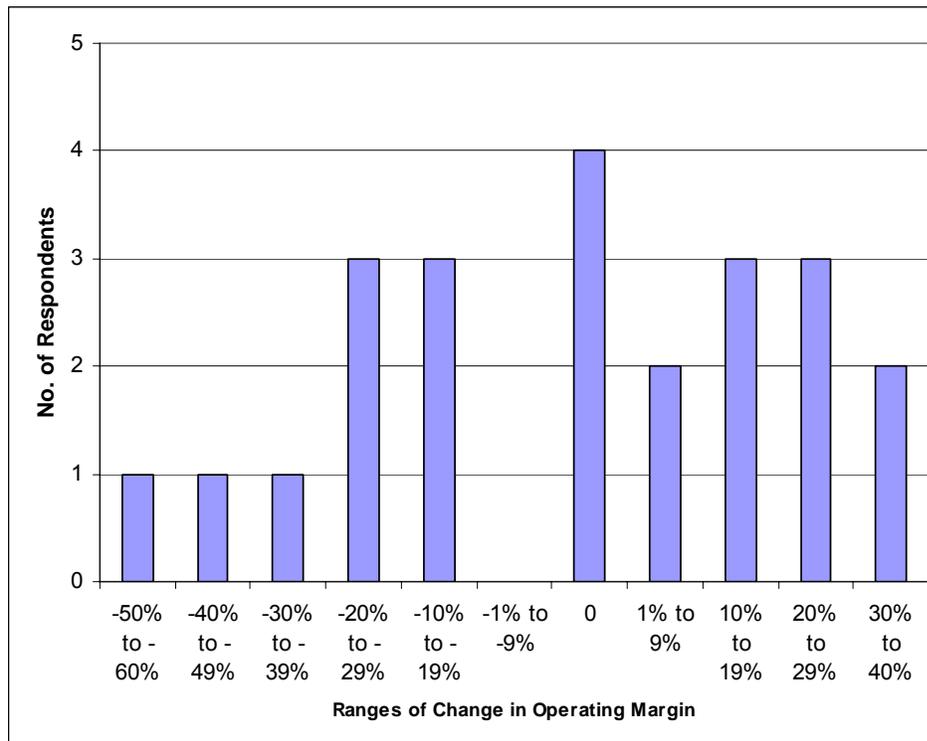
Exhibit 17 Operating Expense Breakdown



3.2.6 Change in Operating Margins

- Twenty-three of the 32 total survey respondents provided an answer to the question: “To what degree has your company’s operating margin increased or decreased in the fiscal year ending in 2007? Please use a negative sign (-) to indicate a decrease.”
- The average change in operating margins was -2.6%. The most common response (17.4%) was zero change.
- The largest positive increase reported within the sample was a magnitude of 35%, while the largest reported decline was of 50%. Two respondents (8.7% of the 23 respondents) experienced a drop in their operating margins of 40% or greater.
- Overall, there were 9 negative responses (39.1% of respondents) and 14 positive ones (60.9% of respondents).
- Exhibit 18 shows the distribution of changes in operating margins from 2006 to 2007.

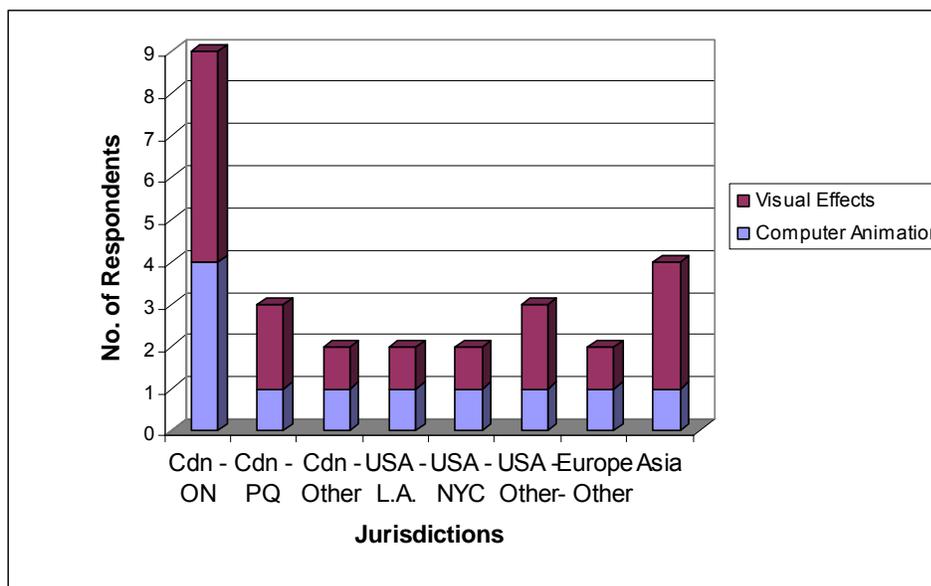
Exhibit 18 Change in Operating Margins, FYE 2007 vs. FYE 2006



3.2.7 Company Outsource Trends

- When asked “Do you outsource any element of your business to other companies (e.g. other than to individual freelancers)?” 60.7% of survey respondents answered in the negative and 39.3% answered in the affirmative.
- Respondents who answered in the affirmative cited lower labour costs in other jurisdictions as the primary reason for outsourcing. According to these respondents, outsourcing labour also allowed them to access specific skills/talent, and improve capacity and workflow, while reducing overhead.
 - Services that were outside the scope of the respondent’s principle businesses were also outsourced. For example, medical writing, post-production audio and offline editing.
- Respondents who answered in the affirmative outsourced to other regions within Ontario about one-third of the time – 36% for computer animation projects and 31% for VFX projects.
 - Asia, including India, is the outsource destination that differs the most between VFX and computer animation segments – VFX projects source labour in this region 3 times more frequently than do their computer animation counterparts.
- Overall, survey respondents indicated that outsourcing to other jurisdictions was about 50% more common with VFX projects than with computer animation projects.
 - Of the 40% of respondents who outsourced any element of their business to other companies, 59.2% originated from the VFX segment; 40.7% from computer animation.

Exhibit 19 Outsourcing - Other Jurisdictions



3.3 Access to Financing

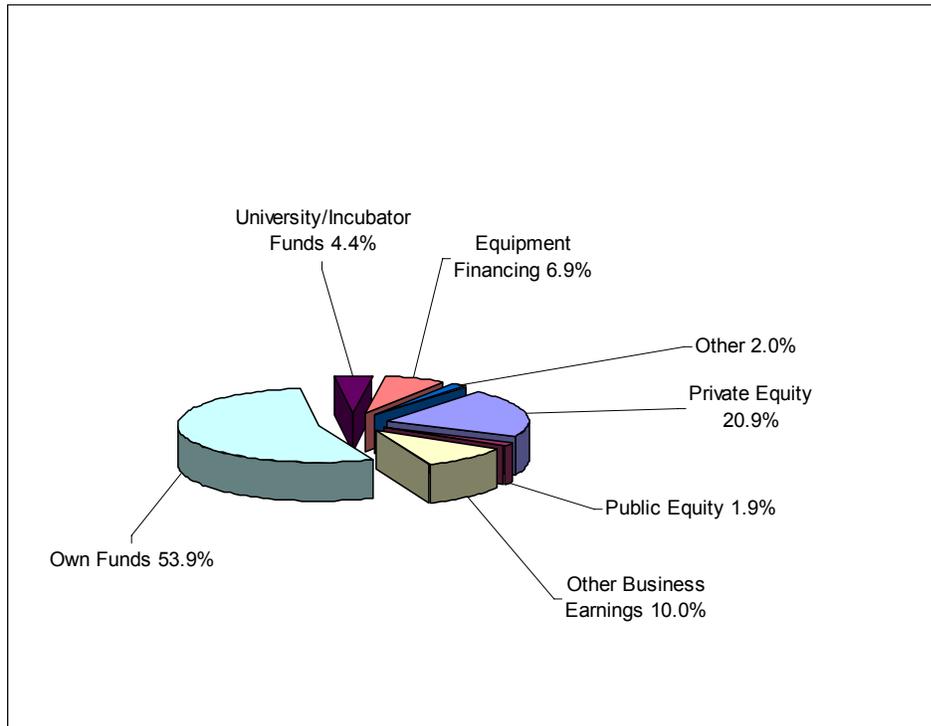
3.3.1 Access to Financing – Highlights

- Business owners' own funds represented a 54% share of original capitalization funds; privately-held shares were 21%, public equity represented 2%.
- Company retained earnings and profit represented an even greater share (60%) of ongoing financial sources; bank loans were 17%; private sources represented 12% and new public equity accounted for 5%.
- The Ontario Computer Animation and Special Effect (OCASE) Tax Credit was used as a source of financing by 81% of respondents.

3.3.2 Original Capitalization

- Exhibit 20 summarizes the survey respondents' sources of original capitalization for their businesses. Each individual survey response totalled 100%.
- Personal funds were, by far, the largest single source of financing for the sample companies. Fifty-four percent of respondents used their "own funds" to initially finance their companies. Privately-held shares were another major sourcing of financing for companies' original capitalization. On average, privately-held shares accounted for 21% of the original capitalization financing.
- Other business earnings comprised 10% of the original capitalization financing and equipment financing accounted for 7%.
- Survey respondents derived 4% of their original capitalization financing from university and incubator funds. Other sources, such as government-backed loans for small businesses, accounted for 2%.
- The issuance of company shares through the public markets was a source of 2% of original capitalization financing.

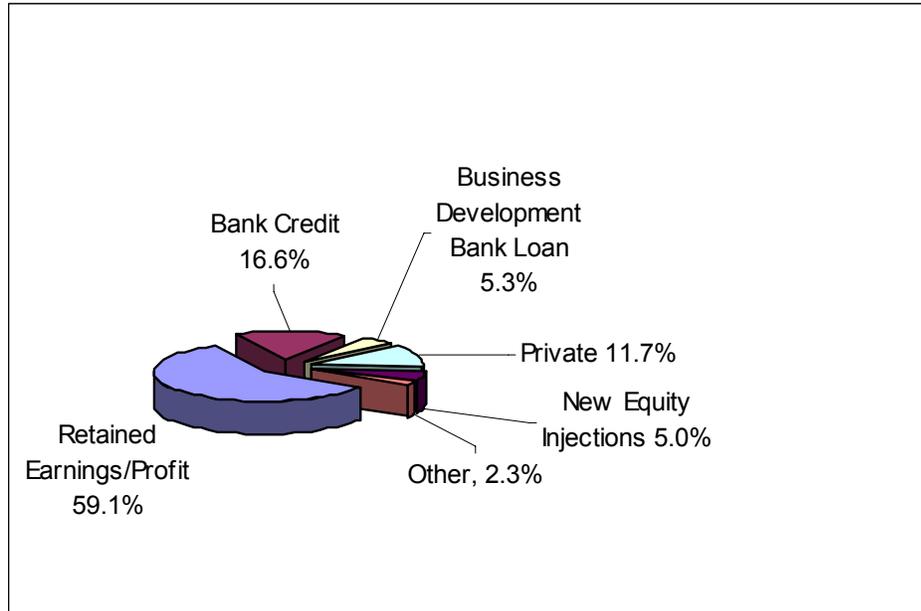
Exhibit 20 Sources of Original Capitalization



3.3.3 Ongoing Financial Sources

- Exhibit 21 summarizes the respondents' sources of ongoing financial sources for their businesses. Each individual survey response totalled 100%.
- Retained earnings were, by far, the most important – and largest – source of ongoing company financing. Sixty percent of ongoing financial resources came from company's retained earnings/profit.
- Bank credit (e.g., loans, mortgages, lines of credit) accounted for a 16.6% share of ongoing financing; while private sources accounted for 12% of the ongoing financing sources.
- Loans from business development banks, such as the Business Development Bank of Canada and new equity injections comprised 5% each.
- Other sources of ongoing financing, such as advertising revenue and Scientific Research & Experimental Development Tax Credits accounted for 2% of ongoing financing requirements (see section 3.3.4).

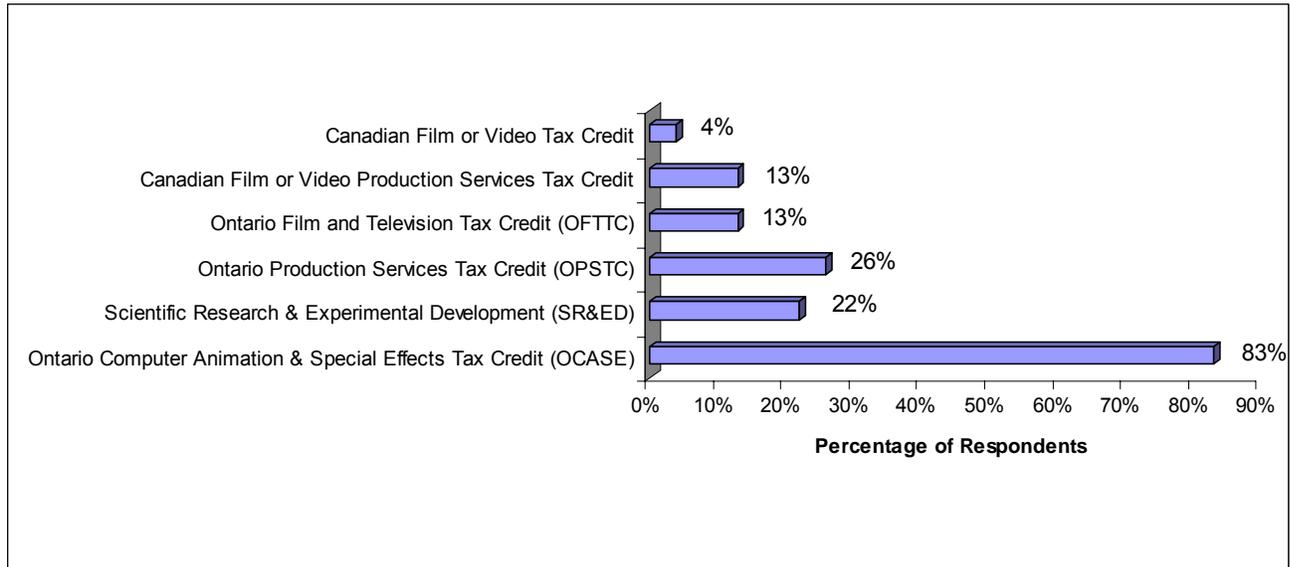
Exhibit 21 Ongoing Financial Sources



3.3.4 Tax Credits

- Exhibit 22 summarizes the responses to the survey question: “Does your company directly receive any of the following tax credits? Please select all that apply”.
- Eighty-three percent of respondents reported that they used the Ontario Computer Animation and Special Effect (OCASE) Tax Credit as a source of financing.
- The OCASE Tax Credit is a refundable tax credit which refunds a portion of labour expenditures to the qualifying corporation, net of any Ontario taxes payable by the qualifying corporation. It is based on eligible Ontario labour expenditures incurred by a qualifying corporation during a taxation year with respect to eligible computer animation and special effects activities.
- The next most popular tax credits were the Ontario Production Services Tax Credit at 26% and the Scientific Research & Experimental Development Tax Credit at 22%.
- Thirteen percent of respondents made use of the Ontario Film and Television Tax Credit (OFTTC); 26% of respondents made use of the Ontario Production Services Tax Credit (OPSTC)

Exhibit 22 Direct Receipt of Tax Credits



3.3.5 Use of OCASE and SR&ED Tax Credits

- Of the 17 companies that stated they did not access either the OCASE tax credit, or the SR&ED tax credit, seven responded to the OCASE portion of the question and 10 to the SR&ED portion.
- OCASE: When asked why their company does not receive OCASE tax credits, 43% of respondents to the survey question stated that they had never applied, 29% did not qualify because of the nature their work (e.g. not evaluated as computer animation or VFX). Fourteen percent stated they were required to “give up OCASE” to secure contracts with producers and 14% had applied for OCASE in the past, but did not intend to in 2008.
- SR&ED: Respondents stated their company does not receive SR&ED tax credits for four main reasons. Thirty percent of respondents believed they did not qualify because of the nature of their work and/or research focus, 30% had never applied, 20% were in the process of applying and 20% found the application procedure and/or requirements were not clear.
- Eight percent of respondents mentioned that the rules and application procedure for both tax credits were unclear. One stated that they should consider applying for the credit in the future.

3.4 Employment and Training

3.4.1 Employment and Training – Highlights

- The total number of people employed by the survey respondents increased 33% in 2007 to 1,285 from 966 in 2006.
- The median number of employees across the responding companies was 36 per company in 2007 and 33 in 2006.
- The technical employee category emerged as the lead growth category with a 72% increase in full-time staff between 2006 and 2007; full-time artistic staff increased 52%; full-time administrative staff increased 24%.
- The survey research found that the greatest personnel shortages (least available new hires) in computer animation were among general animation freelancers and systems administrators; senior artistic workers; senior and intermediate technical personnel.
- In VFX, the greatest personnel shortages were found among senior artistic and technical personnel; visual effect freelancers were also in relatively short supply.
- Computer animation employers expressed a low level of satisfaction with new graduate hires.

3.4.2 Employee Size

- Exhibit 23 below summarizes the survey responses to the question: “How many employees does your company have?”
- Overall, the total number of people employed by the survey respondents, including full-time, part-time, contract/temporary staff and freelancers, increased 33% in 2007 to 1,285 from 966 in 2006.
- The median⁵ number of employees across the responding companies was 36 per company in 2007 and 33 in 2006. The median number of full-time employees was 20.5 people per company in 2007 and 17.0 in 2006.

⁵ The median represents the number in the middle of the set of survey responses. It is used here instead of an average because it is a better indicator given that the survey sample includes many small companies and a few large ones.

- **Technical:** Of the three employee categories – technical, artistic, and administrative – technical emerged as the lead growth category with a 72% increase in full-time staff between 2006 and 2007. There were 98 full-time technical staff in the survey sample in 2007.
 - While the figures are small, there was no change in freelancers and moderate increases in the absolute number of part-time and contract/temporary staff.
 - The median number of full-time technical employees across the responding companies was equal to three in 2007 and two in 2006.

- **Artistic:** The total number of full-time artistic staff increased 52% in 2007 and reached 655 in 2007.
 - Growth in artistic employees was likely driven by OCASE which provides a refundable tax credit for the salaries and wages paid to this category of employee. It is reasonable that increases in artistic employment are supported by corresponding growth in the technical and administration categories.
 - There was a small decline in the number of freelancers and contract/temporary staff levels were relatively unchanged. While the figures are small, there was a notable increase in the number part-time employees in the artistic category.
 - The median number of full-time employees in the artistic category was 13.5 in 2007 and 11.0 in 2006.

- **Administrative:** The total number of full-time administrative staff at responding companies increased 24% to 157 people in 2007. The total number of administrative employees working on contract or as temporary staff increased almost 50% to 25.
 - Part-time workers in the administrative category totalled 11 in 2007; freelance workers in this category totalled 10.
 - On average, there were four full-time administrative employees per company in 2007 and 2006.

Exhibit 23 – Employee Size

Type of Employee	2007	2006	Change	Median 2007	Median 2006
Artistic					
Full-time staff:	655	432	51.6%	13.5	11
Part-time staff:	24	6	300.0%	1.5	-
Contract/Temporary staff:	182	176	3.4%	4.5	5.0
Freelancers:	94	120	-21.7%	3	4.5
Technical					
Full-time staff:	98	57	71.9%	3	2
Part-time staff:	8	6	33.3%	1	1
Contract/Temporary staff:	15	10	50.0%	1.5	1
Freelancers:	6	6	0.0%	1	1
Administrative					
Full-time staff:	157	127	23.6%	4	4
Part-time staff:	11	5	120.0%	1	1
Contract/Temporary staff:	25	17	47.1%	1	1
Freelancers:	10	4	150.0%	1	1
Total	1,285	966	33%	36	33

Definitions:

Artistic = designers, layout artists, modellers, riggers, animators, etc.

Technical = systems operators, programmers, network and communication specialists, etc

Administrative = production management, sales, marketing, PR, finance, etc.

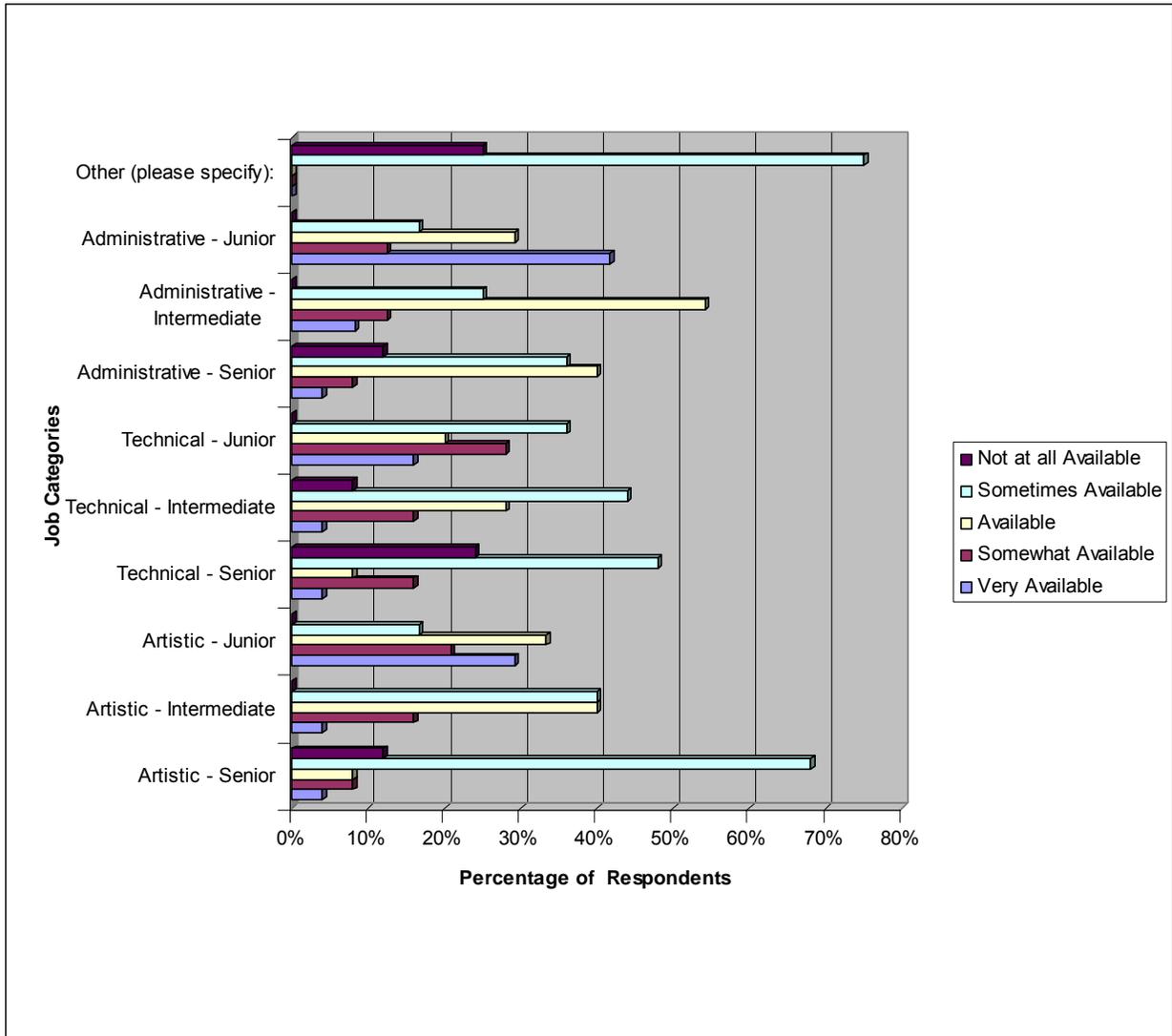
Contract/Temporary labour = Individuals hired on a short-term basis, either full or part-time.

Freelancers = Self-employed workers including personal corporations.

3.4.3 Availability of New Hires

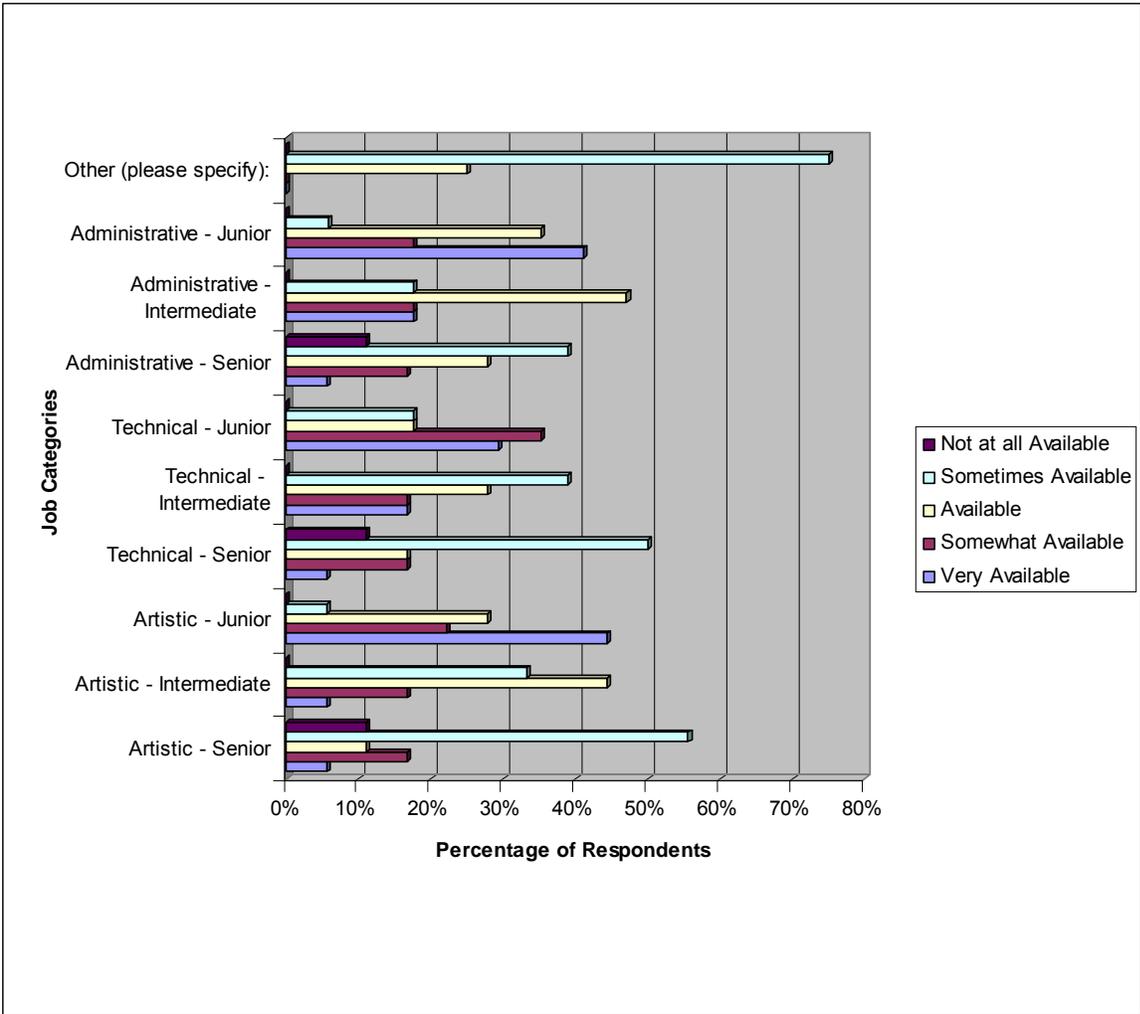
Computer Animation

- Exhibit 24 summarizes the responses to the survey question: “How would you rate the availability of well-trained, experienced new hires for your company in the following categories?”
- The survey research found that the greatest personnel shortages (i.e., a lack of available new hires) were among general animation freelancers and systems administrators (Both of these occupational roles were not specified in the question; so respondents provided their answers in the ‘other’ category.)
- Survey respondents also indicated that they experienced the most significant personnel shortages in the category of senior artistic workers; 68% of respondents reported that senior artistic workers are only *sometimes available*; and 7% reported that they are *unavailable*.
- Senior and intermediate technical personnel were also in short supply, according to survey respondents. Just under 50% of respondents reported that senior technical personnel were only *available sometimes*; 23% reported that they were *unavailable*. Approximately 45% of respondents reported that intermediate technical personnel were only *sometimes available*; approximately 8% reported that they were *not at all available*.
- The availability of new hires was less of a concern in the several of the junior-personnel categories. Survey respondents reported high rates of availability for junior artistic personnel, junior technical personnel, and junior administrative personnel.

Exhibit 24 Availability of New Hires - Computer Animation


VFX

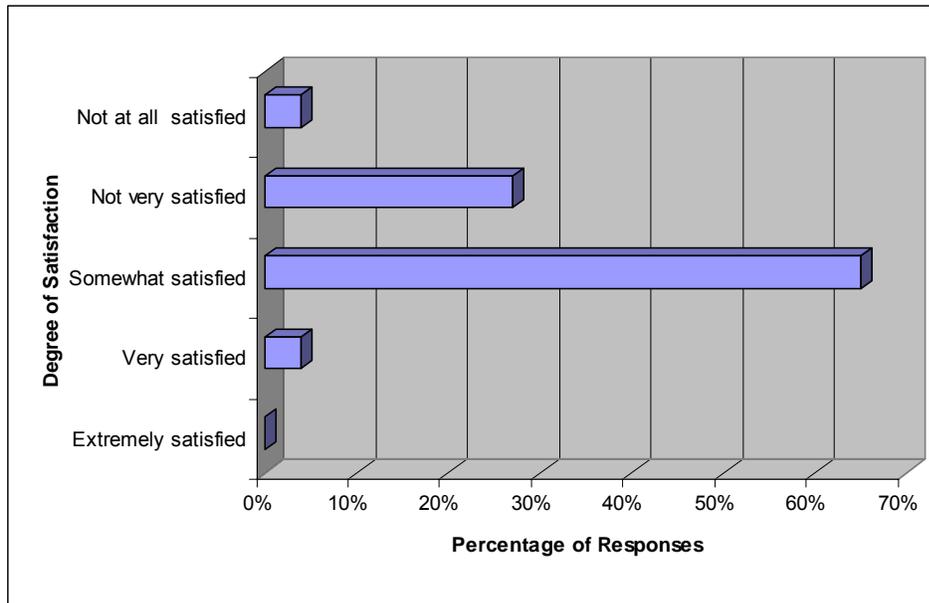
- Exhibit 25 summarizes the responses to the survey question: “How would you rate the availability of well-trained, experienced new hires for your company in the following categories?”
- The greatest personnel shortages (least available new hires) were found among senior artistic and technical personnel. The category of Artistic – Senior was also the one indicated to be the least available with respect to new hires in the computer animation segment. Fifty-six percent of respondents described the job category as *sometimes available* and 11% as *not at all available*.
- However, the survey research found that visual effect freelancers were also in relatively short supply; 75% of respondents identified the category as only *sometimes available*.
- Survey respondents also indicated that they experienced the significant personnel shortages in the categories of senior technical workers; 50% of respondents reported that senior technical workers are only *sometimes available*; and 11% reported that they are *unavailable*.
- The most available job categories in the survey sample were junior artistic and junior administrative workers.



3.4.4 Employer Satisfaction with New Graduate Hires

- Computer animation employers expressed a moderately low level of satisfaction with new graduate hires. Only 4% were *very satisfied* with their new graduate hires; no respondents reported that they were *extremely satisfied*. Sixty-five percent of respondents were *somewhat satisfied* with their new graduate hires, 27% were *not very satisfied*, and 4% were *not at all satisfied*.

Exhibit 26 Satisfaction with New Graduate Hires



- Table 3 below is a selection of testimonials that reflect the sentiment of respondents.

Table 3– Summary of Employer Satisfaction with New Graduate Hires Testimonials

<p>Critical</p>	<p>“We feel that recent grads are not being trained artistically, technically or professionally in a manner which helps to increase productivity in the industry. Today, it is a job and nothing else.”</p> <p>“Recruiting in our area always requires a certain amount of re-training. We would be more satisfied if the programs were a little more connected to actual production pipelines.”</p> <p>“They are not trained properly. In school they are trained how to navigate the software, but not how to apply it. We deal with this by bringing in trainers to train people on the job.”</p> <p>“US and French schools produce superior graduates. Ours have no attention to detail and lack passion.”</p> <p>“Generally poorly trained to meet real-world deadlines.”</p>
<p>Supportive</p>	<p>“We rarely have the opportunity to hire graduates due to the experience level needed,</p>

	<p>however, whenever we do, it's satisfactory.”</p> <p>“Artists from the Sheridan co-op program were very well trained, currently a four year degree program.”</p> <p>“Mixed results - as a smaller company in a demanding and competitive market, we require highly skilled and experienced staff.”</p>
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3.5 Market Growth Outlook

3.5.1 Market Growth Outlook – Highlights

- The development of intellectual property (IP) rights was seen as a growth opportunity for 19.2% of respondents.
- The same percentage of respondents regarded the production of web-content and mobile-content as growth opportunities for their company.
- Fifteen percent of respondents identified international markets (namely US, Europe and Asia) as a source of growth opportunity.
- However, 61% of respondents reported that strong international competition was their most significant barrier to their growth.

3.5.2 Areas of Growth Opportunity

- The following is a summary of responses to the question: “What do you see as the most important areas of growth opportunity for your company?”
- A majority of the 26 respondents identified television series and feature films as general growth areas for their companies.
- The development of intellectual property (IP) rights was seen as a growth opportunity for 19.2% of respondents; the same percentage of respondents regarded web- and mobile-content production as a growth opportunity for their company.
- Fifteen percent of respondents identified international markets (namely US, Europe and Asia) as a source of growth opportunity.
- Table 4 below is a selection of testimonials that reflect the sentiment of respondents.

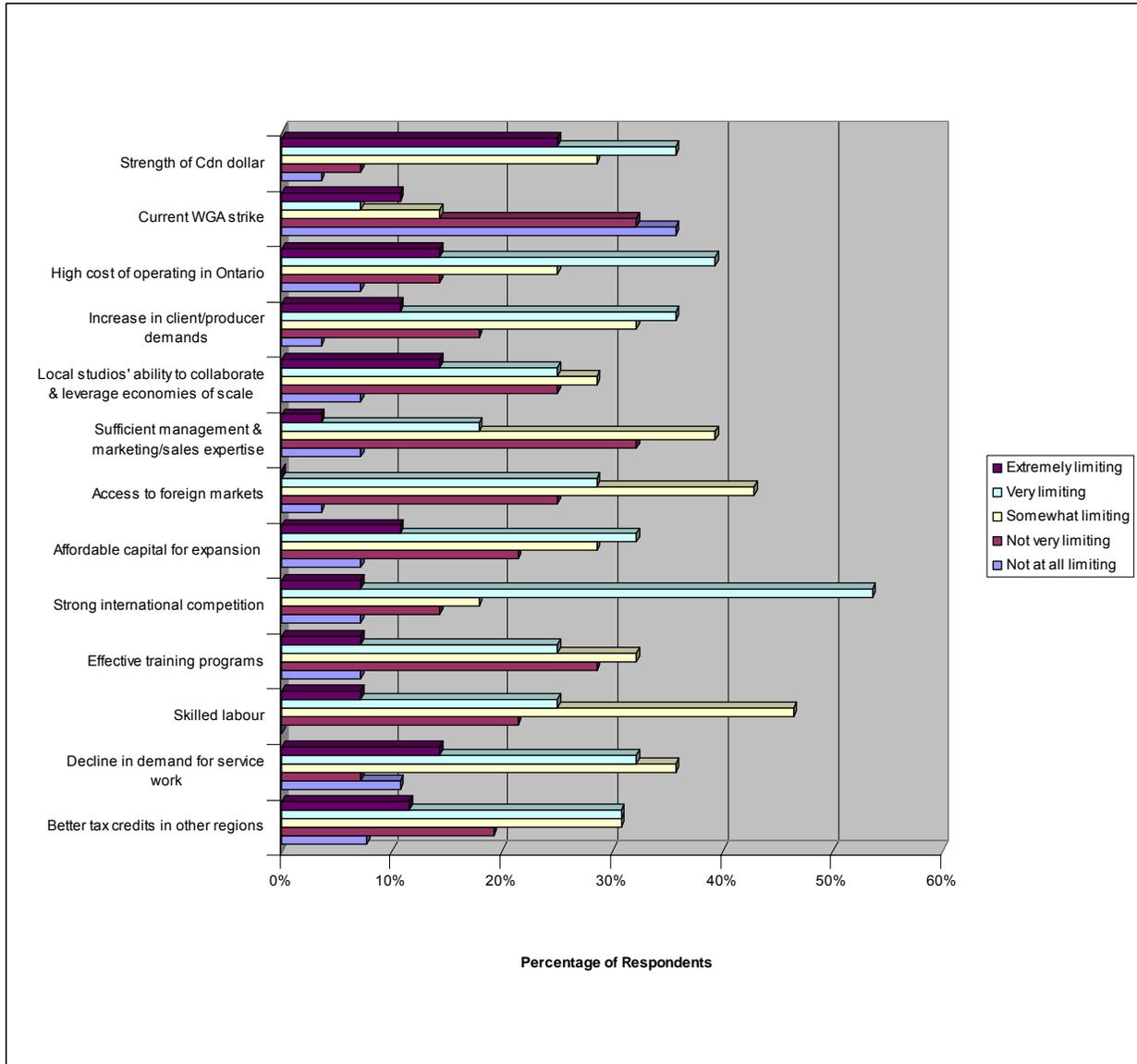
Table 4 – Summary of Company Growth Opportunity Testimonials

IP Development	<p>“Feature film and television series proprietary intellectual properties.”</p> <p>“IP - Contents development: retail - animation (cartoon) property development.”</p>
Web/Mobile	<p>“Web-based [sic] video and developing low-cost [sic] high-value [sic] technical services such as motion control.”</p>

	<p>“We would like to expand services into mobile content, special effects for feature films rather than just providing animation services where the margins are somewhat pathetic!”</p>
Global	<p>“Global markets. Canadian market is too small for the number of available resources.”</p> <p>“We see Europe, Asia and further growth in the U.S. as markets the key growth areas in visual effects.”</p> <p>“Our main growth area is in expanding where we do business as opposed to expanding our service offerings.”</p>

3.5.3 Growth Limiting Factors

- Overall, respondents identified the strong international competition as the most significant barrier to their growth. Sixty-one percent of respondents reported that strong international competition was either very limiting or extremely limiting.
- Respondents also cited the strength of the Canadian dollar, the high cost of operating in Ontario, the decline in demand for service work, and local studios' ability to collaborate in an effort to leverage economies of scale as factors that were moderately limiting their growth.
- The least limiting was the Writer’s Guild of America (WGA) strike in 2007.

Exhibit 27 Growth Limiting Factors


4 State of the Industry

4.1 Estimates

4.1.1 Revenue Overview

- The estimates of total revenue for Ontario's computer animation and VFX industry were based on data collected from the survey respondents and other data related to the OCASE tax credit. For a detailed description of the calculation of total industry revenues, please refer to Appendix C.
- Nordicity estimates that the companies comprising Ontario's computer animation and VFX industry earned total revenues of between \$170 million and \$200 million in 2007. Industry revenues for 2006 were also within a similar range.
- In addition to estimating total industry revenue on the basis of OCASE tax credit data, Nordicity also considered other methodologies; a discussion of these other methodologies can be in Section 4.1.3.

Survey Multiplier

- On the basis of Nordicity's estimate of total industry revenue, it developed a multiplier to convert the sample data into estimates of overall industry size or activity.
- From the survey sample data, Nordicity estimated that the total revenues earned by *survey respondents* were \$128 million in 2007. The survey respondents, therefore, accounted for between 67% and 80% of total industry revenues in 2007.
- The survey sample's industry coverage in terms of revenue indicates that one can use a multiplier of between **1.25** ($160 \div 128$) and **1.50** ($190 \div 128$) to convert certain sample data into estimates of overall industry size or activity.

4.1.2 Revenue Estimate from OCASE Data

- **Estimated Value of OCASE Tax Credits:** During the 2006-2007 fiscal year, the estimated value of OCASE tax credits was \$11.2 million. Please refer to Appendix B for more details.
- **Computer Animation vs. VFX:** Over \$9.8 million (88%) of OCASE tax credits were related to animation projects vs. approximately \$1.4 million (12%) related to VFX projects.⁶
 - Of the total 130 projects which received the OCASE tax credit, about 77 (59%) were animation projects and 53 (41%) were VFX projects.
- **Total Project Value:** During the 2006-2007 fiscal year, the total project value of OCASE tax credits was \$154.1 million. This figure reflects the eligible labour costs of OCASE applicants and seeks to capture prescribed costs.⁷
 - However, for expenditures incurred after May 11, 2005 the OCASE tax credit is calculated only on the eligible labour expenditures. Prior to May 11, 2005, the OCASE tax credit was calculated on the lesser of a) eligible labour expenditures, or b) 48% of the prescribed costs. This change in the calculation of the OCASE tax credit (effectively the removal of the cap) was the result of a change in the May 11, 2005 Provincial Budget.
 - In 2006 – 2007, OCASE applicants reported prescribed costs on a voluntary basis only.
- Nordicity used the revenue estimates derived from OCASE tax credit data to determine the size of the industry. For a detailed description of Nordicity’s calculations, please refer to Appendix C.
- The estimate of total industry revenue is based on the following assumptions:
 - **Assumption #1:** The estimated value of total OCASE tax credit claims in 2006 and 2007 was equal to 18% of total labour expenditures for projects that received the tax credit. The OCASE tax credit is available at a statutory rate of 20% of eligible Ontario labour expenditures incurred on computer animation projects. Nordicity used an effective tax credit assistance rate of 18% as part of its modelling, in order to take into account the fact that only 50% of the remuneration for freelance worker is eligible. The survey research found that freelance workers accounted for approximately 10% of total industry workers. Nordicity reduced the effective tax credit assistance rate on this basis,

⁶ OMDC Research

⁷ “Prescribed Cost”* of eligible activities – OCASE Guidelines: Amounts included in the prescribed cost of eligible activities may be directly or indirectly related to the eligible computer animation and special effects activities for an eligible production. Accordingly, amounts such as labour expenditures for activities which support the performance of the eligible computer animation and special effects activities (e.g. administrative labour), and non-labour costs such as costs of computer hardware, software, equipment, materials and corporate overhead may be included in the prescribed cost of eligible activities. (Source: Subsection 1201(1) of the OCASE Tax Credit regulation.)

while assuming that the average rate of remuneration for full-time and freelance workers was not materially different.

- **Assumption #2:** Total labour costs on OCASE-supported projects are equal to 40% to 45% of total project revenue. This assumption is based on informal research interviews, but it is also supported by certain survey data. The survey research found that “wages/fringes” represented, on average, 64% of operating expenses at computer animation and VFX companies in Ontario. Nordicity assumed “fringes,” which include benefits and other employee incentives, were 10% resulting in an effective labour-expenditure-to-operating-expense ratio of 54%. The survey data also indicate that, among the sample respondents, operating expenses represented approximately 70% of total revenues in 2007 and 2006. However, these data under-represent the survey sample’s operating expenses because fewer companies answered this question compared to the revenue question. As a result, 75% may be a better approximation. These survey data points, therefore, also suggest that labour costs at computer animation and VFX companies represent 41% of total revenues ($54\% \times 75\% = 41\%$).
- **Assumption #3:** The guidelines for the OCASE tax credit imply that it is available for most types of computer animation and VFX projects. Indeed, the survey data indicate that 83% of respondents access the OCASE tax credit. On the basis of this survey data point, Nordicity assumed that production supported by the OCASE tax credit accounted for 83% of overall computer animation and VFX production volume in Ontario.

4.1.3 Other Revenue Estimate Approaches

CAVCO Data

- Nordicity also considered using data from the CFTPA and CAVCO to estimate total revenues in Ontario's computer animation and VFX industry. According to the CFTPA, the total volume of the Canadian animation production segment was equal to \$361 million in 2006-2007. This figure reflects the activity of producers of animated content. It includes 54 television series, comprising 92% of the total number of animation projects, four animated short films and one theatrical animation feature film made by Canadian producers. The CFTPA also reports that Ontario-based producers accounted for \$212 million in animation production volume in 2006-2007.
- However, the volume estimates published by the CFTPA are based on CAVCO data for Canadian films and television projects produced by Canadian production companies and certified as Canadian content (in accordance with the 10-point Canadian-content scale). The CAVCO data exclude any animation production made by Canadian (or Ontario-based) companies for foreign producers making feature films or television programs in Canada, the U.S., or elsewhere.

Statistics Canada Data

- Nordicity also considered using data from Statistics Canada's *Survey of Film, Television, and Video Post-Production*. The data tables from this survey provide financial data for establishments operating in North American Industry Classification System (NAICS) 512190 *Film, Television and Video Post-Production Industry*. This NAICS category includes establishments engaged in post-production, computer animation and VFX activities; it also includes establishments engaged in: editing, film/tape transferring, dubbing, subtitling, creating credits, closed captioning, and producing computer graphics, developing and processing motion picture films.
- The Statistics Canada data indicate that all establishments within NAICS 512190 and located in Ontario generated revenues of \$409 million in 2006 (and \$385 million in 2005). The Statistics Canada data also indicate that national revenues within NAICS 512190 totaled \$794 million; of this amount, VFX (including animation) accounted for \$106 million. The data indicate that Ontario-based companies earned \$24 million from VFX (including animation) in 2005; the data also suggest that VFX revenues (including animation) in Ontario in 2006 were in the range of \$20 million to \$27 million.⁸

⁸ Profile of the Film, Television and Video Post-production Industry (survey portion), provinces and regions, 2006 and 2005; <http://www.statcan.ca/english/freepub/87-009-XIE/87-009-XIE2008001.pdf>

- This amount is only a fraction of the revenue estimate of \$128 million derived by Nordicity for the 32 companies sampled in its survey; and it is much lower than Nordicity's estimate of \$170 million to \$200 million for overall industry revenues.
- There is a large gap between the revenue data points reported by Statistics Canada and the revenues data points derived by Nordicity on the basis of the survey data. While the Statistics Canada methodology suggests that it captures a much larger sample of companies within the industry, it is unclear why Statistics Canada's revenue estimates are much lower than those from Nordicity's survey. Because of this discrepancy, Nordicity did not use the Statistics Canada data.

4.1.4. Reasonability Test – Review of Non-respondents

- Nordicity distributed the survey questionnaire to 93 industry members in Ontario. In addition to 78 computer animation and VFX studios, the survey distribution list included some suppliers, post-production houses, software developers and content producers.
 - Please note that in order to isolate metrics related only to studios, Nordicity excluded the latter from its calculations of total revenue, operating costs, and employee size.
- By subtracting the revenue estimate of the survey sample (\$128 million) from the mid-point of the revenue range (\$176 million), the amount of revenue activity of the rest of the industry can be approximated (\$48 million) in 2007.
- Through discussion with industry experts, Nordicity determined that a reasonable estimate of the revenues of the computer animation and VFX studios that did not participate in the survey was \$48 million.

4.1.5 Estimates of Industry Figures

- Applying the survey multiplier of 1.25 to 1.50 (discussed above), Nordicity estimated total employment figures, operating expenses, and output volumes.
- Table 5 (below) summarizes the results.

Table 5 – Industry Figures Using the Survey Multiplier

	Survey Sample		Gross-up with Multiplier	
	2007	2006	2007	2006
Total Employment	1,285	966	1,600 – 1,900	1,200 – 1,500
Operating Expense	\$91.1M	\$75.8M	\$114M - \$137 M	\$95M - \$114M
Output Volume – Computer Animation (min)	14,408	13,276	18,000 – 21,600	16,600 – 20,000
Output Volume – VFX (shots)	5,915	6,260	7,400 – 8,900	7,800 – 9,400

- The following sections provide an overview of industry trends.

4.2 Summary of Industry Profile

- The survey sample allowed Nordicity to gain insight into the composition and characteristics of the entire computer animation and VFX industry in Ontario.
- Overall, the computer animation and VFX industry in Ontario is stable, robust and experiencing moderate growth. The industry is maturing and is comprised of about 150 experienced small and mid-sized companies as well as a number of start-up companies. There are also a small number of large players (revenues of over \$20 million) in the industry.
- The survey sample indicates that most computer animation and VFX studios in Ontario operate under a fee-for-service business model serving producers of film, television and, increasingly, interactive media. The majority of studios are also privately-held corporations, and Canadian-owned; many have been in existence for over seven years.
- Using the survey multiplier discussed in Section 4.1.1 to estimate the output production volume of the industry, Nordicity calculated the number of computer animation minutes produced in Ontario in 2007 to have been between 18,000 and 21,600; the number of shots for VFX was between 7,400 and 8,900.
- The grossed-up industry revenue estimate in Ontario was \$170 million to \$200 million and the operating cost estimate was \$110 million to \$140 million in 2007.
- While VFX companies outsource labour to a greater extent than do computer animation companies, VFX companies also derive a greater share of their revenue from outside the province.
- The OMDC's OCASE tax credit is a popular financing tool in the industry. A large majority of computer animation and VFX studios access the tax credit (over 80% of the survey sample).
- A highly labour-intensive industry that relies heavily on specialized artistic and technical skills, computer animation and VFX studios in Ontario employed a total of 1,600 to 1,900 people in 2007 according to Nordicity estimates. Most companies have less than 30 employees. Freelancers are used extensively in this industry and may represent approximately 10% of all labour.

4.3 Industry Trends

- Based on Nordicity’s observation and analysis, companies in the computer animation and VFX industry in Ontario are facing a number of business trends. These are summarized below:
 - **Access to external capital:** Nordicity began this study with the central hypothesis that companies operating in the computer animation and VFX industry in Ontario are not attractive to traditional investors. Survey analysis provides good evidence to support this hypothesis as a 60% share of ongoing financing was derived from retained earnings/profit. Only 5% of ongoing funds came from new equity injections and 12% from private sources. Some respondents felt that the market required OCASE tax credits to be used as part of project financing and to lure clients as opposed to building the capacity of their companies.
 - “New legislation for OCASE to prevent the soft extortion of OCASE away from service providers to Executive Producers/ Clients.” (Testimonial from survey respondent).
 - **Intellectual property ownership:** Nordicity’s research indicates that companies are increasingly attempting to develop projects in which they can retain the rights to their own intellectual property. About 20% of survey respondents identified IP development as a growth opportunity for their company. The majority of the rights retention and exploitation opportunities were seen by respondents as being in the production of television series and feature films and, to a lesser extent, in web- and mobile-content development.
 - **Cost competitiveness:** The research shows that the industry is not highly profitable, as a result operating margins are under pressure as companies increasingly compete on cost. Increasing competition from other jurisdictions (cited as the most significant barrier to growth by survey respondents) also puts pressure on studios to be cost competitive. For example, India and China are able to put hundreds of workers on an animation job for the cost of significantly fewer workers in the U.K. or the U.S. Most companies currently compete on the basis of either low-cost or high-quality.
 - **Lowered barriers to entry:** The reduction in capital costs required to starting and sustaining a VFX or animation business appears to have led to an increase of new entrants. Over one-third of the survey sample was comprised of companies that

- were less than six years old. This may indicate that the industry is attractive to entrepreneurs as a result of its health and long-term stability.
- **Global market opportunities:** Nordicity’s research indicates that studio owners and operators see growth opportunities outside of Canada, as well as within. Testimonials from survey respondents included the following statements:
 - “The Canadian market is too small for the number of available resources.”
 - “Our main growth area is in expanding where we do business as opposed to expanding our service offerings.”
 - **Skilled, trained talent:** At the core of operating a viable computer animation and/or VFX studio is human capital. The industry appears to be experiencing a shortage of senior-artistic and senior-technical personnel in both the computer animation and VFX segments. Evidence suggests there is growing demand for colleges and universities to deliver training which meets industry needs and there is a notable perception that employers are dissatisfied with new graduate hires. Overall, survey respondents gave a strong general impression that there is a lack of inflow of solidly trained personnel entering the industry workforce.

References and Data Sources

Appendix A – Survey Questionnaire

Economic Profile of the Computer Animation Industry in Ontario Survey Questions

Thank you for agreeing to collaborate in this study of the computer animation industry.

CASO has prepared this online survey to collect information on the issues and challenges facing businesses in Ontario's computer animation and visual effects industry. Your input is vital to developing:

- inputs for the analysis of relevant economic data and industry benchmarks;
- public and private incentives;
- valid insight into market changes;
- critical success factors for the growth of computer animation and visual effects companies.

All of your responses to the survey will be kept **strictly confidential**. The information collected will be **used in aggregate** in order to improve programs and policies that serve the industry. Only the survey company will see individual company information. The CASO board, its members or our funding sponsors will **have no access to any individual company results**, but will only see the information in aggregate.

There are five sections to the survey, a total of 19 questions:

- A. Corporate Profile – 6 questions
- B. Financial Profile - 6 questions
- C. Access to Financing - 2 questions
- D. Employment and Training - 3 questions
- E. Market Growth Prospects – 2 questions

Please take the time to complete the survey. This may best be done by person(s) in senior management most familiar with key financial, human resources and other strategic issues facing your company.

Please note: Some of these questions may best be answered by person(s) in senior management most familiar with key financial, human resources and other strategic issues facing your company.

Should you need to pass the survey on to a colleague to complete some of the questions:

1. Forward the email with the survey link you received. close your browser before proceeding to the final page, and simply forward your colleague the link (the URL) we have sent you.
2. Be sure to indicate to your colleague(s) which questions need to be answered.
3. Do not press the ">>" button on the final screen.

Your participation in this survey is of the utmost importance and is greatly appreciated. The questionnaire is easy to fill out and should take less than 20 minutes to complete.

If you have any questions about this survey, you may contact: Terri Wills, Nordicity Group Ltd., 647 408 3978, twills@nordicity.com.

Thank you for your cooperation.

A. Corporate Profile
A1. Interviewee Info

Company _____

Name _____

Title _____

City/Town _____

Postal Code _____

A2. Is your company public or private?

- Private - Sole Proprietorship/Partnership
- Private - Corporation
- Public Corporation

A3. Is your company Canadian or foreign-controlled?

- Canadian-controlled
- Foreign-controlled

A4. For how many years has your company been operating?

- Less than 2 years
- 2 - 6 years
- 7 - 11 years
- 12 - 20 years
- More than 20 years

**A5. What percentages of your projects are service-oriented vs. content owned by your company?
 (Percentages must sum to 100%)**

Service work _____%

Content owned by your company _____%

A6. What is your company's volume of output? For comparative purposes:

- Computer animation - Please convert the number of films/TV episodes into the number of minutes.
- Visual effects - Please state the number of shots.
- Other - Please state the number of projects.

	Fiscal Year Ending in 2007	Fiscal Year Ending in 2006
Computer Animation – total minutes:	_____	_____
Visual effects - total shots:	_____	_____
Other (please specify) _____	_____	_____

B. Financial Profile

B1. What are your company's revenues and operating expenses? (Please select one)

a) Revenues:	Fiscal Year Ending in 2007	Fiscal Year Ending in 2006
	\$ _____	\$ _____
	Less than \$100 000	Less than \$100 000
	\$100,000 to \$249,999	\$100,000 to \$249,999
	\$250,000 to \$499,999	\$250,000 to \$499,999
	\$500,000 to \$749,999	\$500,000 to \$749,999
	\$750,000 to \$999,999	\$750,000 to \$999,999
	\$1 million to \$1.49 million	\$1 million to \$1.49 million
	\$1.5 million to \$1.99 million	\$1.5 million to \$1.99 million
	\$2 million to \$2.49 million	\$2 million to \$2.49 million
	\$2.5 million to \$2.99 million	\$2.5 million to \$2.99 million
	\$3 million to \$3.49 million	\$3 million to \$3.49 million
	\$3.5 million to \$3.99 million	\$3.5 million to \$3.99 million
	\$4 million to \$4.49 million	\$4 million to \$4.49 million
	\$4.5 million to \$4.99 million	\$4.5 million to \$4.99 million
	\$5 million to \$5.49 million	\$5 million to \$5.49 million
	\$5.5 million to \$5.99 million	\$5.5 million to \$5.99 million
	\$6 million to \$6.49 million	\$6 million to \$6.49 million
	\$6.5 million to \$6.99 million	\$6.5 million to \$6.99 million
	\$7 million to \$7.49 million	\$7 million to \$7.49 million
	\$7.5 million to \$7.99 million	\$7.5 million to \$7.99 million
	\$8 million to \$8.49 million	\$8 million to \$8.49 million
	\$8.5 million to \$8.99 million	\$8.5 million to \$8.99 million
	\$9 million to \$9.49 million	\$9 million to \$9.49 million
	\$9.5 million to \$9.99 million	\$9.5 million to \$9.99 million
	\$10 million to \$10.99 million	\$10 million to \$10.99 million
	\$11 million to \$11.99 million	\$11 million to \$11.99 million
	\$12 million to \$12.99 million	\$12 million to \$12.99 million
	\$13 million to \$13.99 million	\$13 million to \$13.99 million
	\$14 million to \$14.99 million	\$14 million to \$14.99 million
	\$15 million +	\$15 million +

b) Operating expenses:	Fiscal Year Ending in 2007	Fiscal Year Ending in 2006
	\$ _____	\$ _____
	Less than \$100 000	Less than \$100 000
	\$100,000 to \$249,999	\$100,000 to \$249,999
	\$250,000 to \$499,999	\$250,000 to \$499,999
	\$500,000 to \$749,999	\$500,000 to \$749,999
	\$750,000 to \$999,999	\$750,000 to \$999,999
	\$1 million to \$1.49 million	\$1 million to \$1.49 million
	\$1.5 million to \$1.99 million	\$1.5 million to \$1.99 million
	\$2 million to \$2.49 million	\$2 million to \$2.49 million
	\$2.5 million to \$2.99 million	\$2.5 million to \$2.99 million
	\$3 million to \$3.49 million	\$3 million to \$3.49 million
	\$3.5 million to \$3.99 million	\$3.5 million to \$3.99 million
	\$4 million to \$4.49 million	\$4 million to \$4.49 million

	\$4.5 million to \$4.99 million	\$4.5 million to \$4.99 million
	\$5 million to \$5.49 million	\$5 million to \$5.49 million
	\$5.5 million to \$5.99 million	\$5.5 million to \$5.99 million
	\$6 million to \$6.49 million	\$6 million to \$6.49 million
	\$6.5 million to \$6.99 million	\$6.5 million to \$6.99 million
	\$7 million to \$7.49 million	\$7 million to \$7.49 million
	\$7.5 million to \$7.99 million	\$7.5 million to \$7.99 million
	\$8 million to \$8.49 million	\$8 million to \$8.49 million
	\$8.5 million to \$8.99 million	\$8.5 million to \$8.99 million
	\$9 million to \$9.49 million	\$9 million to \$9.49 million
	\$9.5 million to \$9.99 million	\$9.5 million to \$9.99 million
	\$10 million to \$10.99 million	\$10 million to \$10.99 million
	\$11 million to \$11.99 million	\$11 million to \$11.99 million
	\$12 million to \$12.99 million	\$12 million to \$12.99 million
	\$13 million to \$13.99 million	\$13 million to \$13.99 million
	\$14 million to \$14.99 million	\$14 million to \$14.99 million
	\$15 million +	\$15 million +

B2. What is your company's approximate breakdown of operating expenses? (Percentages must sum to 100%)

Wages/Fringes	% _____
Software/Equipment	% _____
Other	% _____
Total:	100%

B3. To what degree has your company's operating margin increased or decreased in the fiscal year ending in 2007? What is the average over the past 5 years? Please use a negative sign (-) to indicate a decrease.

	Fiscal Year	
	Ending in 2007	5-year average
	(vs. the previous period)	
Operating margin increase/decrease	% _____	% _____

B4. What percentages of your company's revenues came from projects commissioned from each of the following regions? (Percentages in computer animation and percentages in visual effects must sum to 100%)

Regions	Computer Animation FYE 2007	Visual Effects FYE 2007
a) Canada:	% _____	% _____
Ontario	% _____	% _____
Quebec	% _____	% _____
B.C.	% _____	% _____
Other (please specify): _____	% _____	% _____
Canada sub- total:	% _____	% _____
b) USA:	% _____	% _____
L.A.	% _____	% _____
New York	% _____	% _____
Other (please specify): _____	% _____	% _____
USA sub- total:	% _____	% _____
c) Europe:	% _____	% _____
UK		
France		
Other		
d) Asia		

d) Other (please specify): _____		
Overall Total	100%	100%

B5. a) Do you outsource any element of your business to other companies (e.g. other than to individual freelancers)?

Yes

No

b) If yes, why?

c) If yes, to which jurisdictions (please check all that apply).

Regions	Computer Animation	Visual Effects
e) Canada: Ontario Quebec B.C. Other (please specify): _____ Canada sub- total:	<input type="checkbox"/>	<input type="checkbox"/>
f) USA: L.A. New York Other (please specify): _____ USA sub- total:		

g) Europe: UK France Other h) Asia d) Other (please specify): _____		
Overall Total	100%	100%

B6. What are the current and projected percentages of your company's revenues from each of the following market segments? (Percentages must sum to 100%)

	Computer Animation		Visual Effects	
	FYE in 2007	In 2 -3 Yrs	FYE in 2007	In 2 -3 Yrs
Feature Film	% _____	% _____	% _____	% _____
TV Movie/MOW	% _____	% _____	% _____	% _____
TV Series	% _____	% _____	% _____	% _____
TV Commercial:	% _____	% _____	% _____	% _____
Music Video:	% _____	% _____	% _____	% _____
Direct-to-Video	% _____	% _____	% _____	% _____
Scientific Visualization (Medical & Legal)	% _____	% _____	% _____	% _____
Broadband/Internet content:	% _____	% _____	% _____	% _____
Mobile content, incl. games:	% _____	% _____	% _____	% _____
Console or PC games:	% _____	% _____	% _____	% _____
Other _____:	% _____	% _____	% _____	% _____
Total:	100%	100%	100%	100%

C. Access to Financing

C1. What is the source of your company's original and ongoing capitalization? (Percentages must sum to 100%)

a) Original capitalization

Angel Investor	% _____
Venture Capital	% _____
Private Equity	% _____
Public Equity	% _____
Other Business Earnings	% _____
Own Funds	% _____
University/Incubator Funds	% _____
Equipment Financing	% _____
Other _____:	% _____
Total:	100%

b) Ongoing financial sources

Retained Earnings/Profit	% _____
Bank Credit	% _____
Business Development Bank Loan	% _____
Private	% _____
New Equity Injections	% _____
Other _____:	% _____
Total:	100%

C2. a) Does your company directly receive any of the following tax credits?

- Ontario Computer Animation & Special Effects Tax Credit (OCASE)
- Scientific Research & Experimental Development (SR&ED)
- Ontario Production Services Tax Credit (OPSTC)
- Ontario Film and Television Tax Credit (OFTTC)
- Canadian Film or Video Production Services Tax Credit
- Canadian Film or Video Tax Credit

b) If no, why not?

- i. Ontario Computer Animation & Special Effects Tax Credit (OCASE)
- ii. Scientific Research & Experimental Development (SR&ED)

D. Employment and Training

D1. How many employees does your company have? Please report the average for the past two years.

	Fiscal Year Ending in 2007	Fiscal Year Ending in 2006
Artistic		
Full-time artistic staff	_____	_____
Part-time artistic staff	_____	_____
Contract/Temporary artistic staff	_____	_____
Freelancers - artistic	_____	_____
Non-artistic		
Full-time non-artistic staff	_____	_____
Part-time non-artistic staff	_____	_____
Contract/Temporary non-artistic staff	_____	_____
Freelancers – non-artistic	_____	_____

D2. How would you rate the availability of well-trained, experienced new hires for your company in the following categories?

a) Computer Animation (Please skip if question does not apply.)

	Very Available	Somewhat Available	Available	Sometimes Available	Not at all Available
Creative (e.g. designers, animators, composers, etc)					
Senior					
Intermediate					
Junior					
Technical (e.g. system and network administrators, other IT staff, etc)					

Senior					
Intermediate					
Junior					
Management/ Admin					
Other (please specify):					

b) Visual Effects (Please skip if question does not apply.)

	Very Available	Somewhat Available	Available	Sometimes Available	Not at all Available
Creative (e.g. designers, animators, composers, etc)					
Senior					
Intermediate					
Junior					
Technical (e.g. system and network administrators, other IT staff, etc)					
Senior					
Intermediate					
Junior					
Management/Admin					
Other (please specify):					

D3. a) How satisfied is your company with new graduates' ability to meet your human resource needs?
 (Please select one)

Extremely satisfied

- Very satisfied
- Somewhat satisfied
- Not very satisfied
- Not at all satisfied

b) Why?

E. Market Growth Prospects

E1. What do you see as the most important areas of growth opportunity for your company?

E2. What are the factors that are limiting growth for your company?

	Extremely limiting	Very limiting	Somewhat limiting	Not very limiting	Not at all limiting
Better tax credits in other regions					
Decline in demand for service work					
Skilled labour					
Effective training programs					
Strong international competition					
Affordable capital for expansion or day-to-day operations					
Access to foreign markets					
Sufficient management & marketing/sales expertise					
Local studios' ability to collaborate in an effort to leverage economies of scale					
Increase in client/producer demands					
High cost of operating in Ontario					
Current Writer's Guild of America strike					
Strength of Canadian dollar					
Other (please specify): _____					

Appendix B – OCASE Tax Credits

The OCASE Tax Credit is calculated as 20% of the eligible Ontario labour expenditures incurred by a qualifying corporation with respect to eligible computer animation and special effects activities.

Qualifying labour expenditures are:

- a) salaries and wages (i.e., amounts paid to employees) directly attributable to eligible activities carried on by the qualifying corporation, that are paid to Ontario residents (individuals resident in Ontario at the end of the previous calendar year) who report to a permanent establishment of the qualifying corporation in Ontario at which the eligible activities are carried out; and
- b) 50% of remuneration incurred after May 4, 1999 paid to freelancers with respect to qualifying activities performed in Ontario.

Tax Credit Applications Received and Certificates Issued in 2006 - 2007

	Number of Applications	Number of Certificates Issued	Number of Projects	Estimated Value of Tax Credits	Total Project Value
Ontario Book Publishing Tax Credit	277	228	228	\$1,778,449	\$5,960,753
Ontario Sound Recording Tax Credit	100	219	110	\$1,444,555	\$7,287,629
Ontario Film & Television Tax Credit	414	421	421	\$127,176,690	\$980,576,007
Ontario Production Services Tax Credit	61	66	66	\$44,891,604	\$1,137,829,117
Ontario Computer Animation & Special Effects Tax Credit	56	47	130	\$11,152,657	\$154,052,481
Ontario Interactive Digital Media Tax Credit	85	60	273	\$5,531,195	\$39,672,953
Grand Total for all Tax Credits	993	1,041	1,228	\$191,975,150	\$2,325,378,941

Note OCASE and OIDMTC applications are based on the applicant's fiscal year of activity and may include multiple productions.
OSRTC projects may receive more than one certificate per project.

Source: From the OMDC website; prepared by the Tax Credits department.

Tax Credit Applications Received and Certificates Issued in 2005-06

	Number of Applications	Number of Certificates Issued	Number of Projects	Estimated Value of Tax Credits	Total Project Value
Ontario Book Publishing Tax Credit	285	263	263	\$2,098,542	\$8,823,566
Ontario Sound Recording Tax Credit	99	357	141	\$1,499,052	\$7,435,673
Ontario Film & Television Tax Credit	383	293	293	\$69,362,532	\$646,278,446
Ontario Production Services Tax Credit	77	67	67	\$23,365,584	\$802,940,121
Ontario Computer Animation & Special Effects Tax Credit	56	49	141	\$11,071,616	\$163,175,872
Ontario Interactive Digital Media Tax Credit	42	35	179	\$2,850,840	\$20,422,535
Grand Total for all Tax Credits	942	1,064	1,084	\$110,248,166	\$1,649,076,213

Note: OCASE and OIDMTC applications are based on the applicant's fiscal year of activity and may include multiple productions.
OSRTC Projects may receive more than one certificate per project.

Source: From the OMDC website; prepared by the Tax Credits department.

Appendix C – Industry Revenue Estimates

- The estimated total industry revenue range is \$165 million to \$190 million in 2007 and \$165 million to \$185 million in 2006.

Table 6 Computer Animation & VFX Industry Revenue Estimates

	Est value of OCASE tax credits	1. Assume 18% of labour costs	Range		Range	
			2. Assume labour costs are 40% of revenue	2. Assume labour costs are 45% of revenue	3. Adjustment for industry use of tax credit, Assume 83%, 40% of revenue	3. Adjustment for industry use of tax credit, Assume 83%, 45% of revenue
2006 - 2007	\$ 11,152,657	\$ 61,959,206	\$ 154,898,014	\$ 137,687,123	\$ 186,624,113	\$ 165,888,101
2005 - 2006	\$ 11,071,616	\$ 61,508,978	\$ 153,772,444	\$ 136,686,617	\$ 185,268,005	\$ 164,682,671

- Survey Multiplier:** Given that the revenue estimate of the survey sample was \$128 million in 2007 the survey sample reflects 68% to 77% of the entire computer animation and VFX market in Ontario.

Table 7 Survey Multiplier Ranges

	2007	2006
Proportion of Survey Sample Revenue to Total Industry	68% to 77%	57% to 65%