Soundstage Market Sounding Assessment

FINAL REPORT

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Delivered to

CreateTO

Prepared by

Nordicity

Table of Contents

Summary of Findings

Global Context

- Spending from Streaming Video On Demand services has driven a global film and TV production boom.
- Post-production, video games and other digital media industries have exhibited exceptional global growth in recent years.

Soundstage Inventory and Usage

- Toronto has participated in the global film/TV production boom, but has been constrained by limited production space capacity.
- In recent years, growth in Toronto's international feature film production has been displacing foreign and domestic TV production, leading to capacity shortages and pent-up demand.
- The 1.3 million square feet of space (across 50 stages) due to come online by 2020 will alleviate constraints on capacity in the near term, but demand for soundstages in the GTHA will continue to outstrip supply.

Role of Future Developments in the Port Lands

- Future developments in the Port Lands should focus on facilities suitable for foreign television production and other high-growth, high-tech, high-flex digital media production industries.
- To do so, new facilities should emphasize mid-sized soundstages (~20,000 sqft) that are over 22 feet tall, provide at least 10,000 sqft of office space, and provide infrastructure for digital media production.
- Foreign television and digital media production tend to employ a full-time workforce. As such, features of new facilities (permanent office space), local amenities (restaurants and bars) and public infrastructure (transit) should be tailored to accommodate the presence of an increasingly permanent workforce.

1. Introduction

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Project Overview | Objectives

This document presents the results of Nordicity's research addressing future developments in the Port Lands over the next 5 years.

More precisely, Nordicity was asked to:

- **Recommend development criteria** to support CreateTO's procurement and search for a development partner; and,
- **Identify priorities for a meaningful development program** of soundstages and ancillary facilities in support of film, media and television production.

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Project Overview | Process – Research

In performing research to meet the objectives set out on the previous slide, Nordicity's project team encountered several unanticipated gaps in available data. As a result, Nordicity worked with CreateTO to adjust the research plan. The following points outline the research undertaken.

- **Desk research:** Nordicity pursued several lines of desk research during this engagement:
  - **Soundstage database** – Nordicity maintains a proprietary database that tracks film and TV production studios worldwide. The data incudes specifications at the level of individual soundstages for studios in Canada. For this engagement, Nordicity updated the data to reflect all publicly available information about past and prospective studio openings and closures in Ontario as at March 2019. This research largely relied on news articles and press releases. Details of several major projects were verified with studio operators during the interview process.
  - **Production data** – Nordicity worked with CreateTO to submit a data request to Ontario Creates, and later, engaged with the City of Toronto's Film Permitting Office to learn about production activity in Toronto and Ontario.
  - **Third party industry data** – Nordicity assembled various market and industry size estimates published by relevant industry organizations, statistical agencies, and other researchers.
- **Interviews:** In order to better understand how production activity relates to the capacity of production space in the GTHA, Nordicity conducted telephone interviews with 12 local studio operators. Those 12 interviewees represented 43% of soundstages in the GTHA in 2016, and 50% of total the soundstage area in the city by square footage.

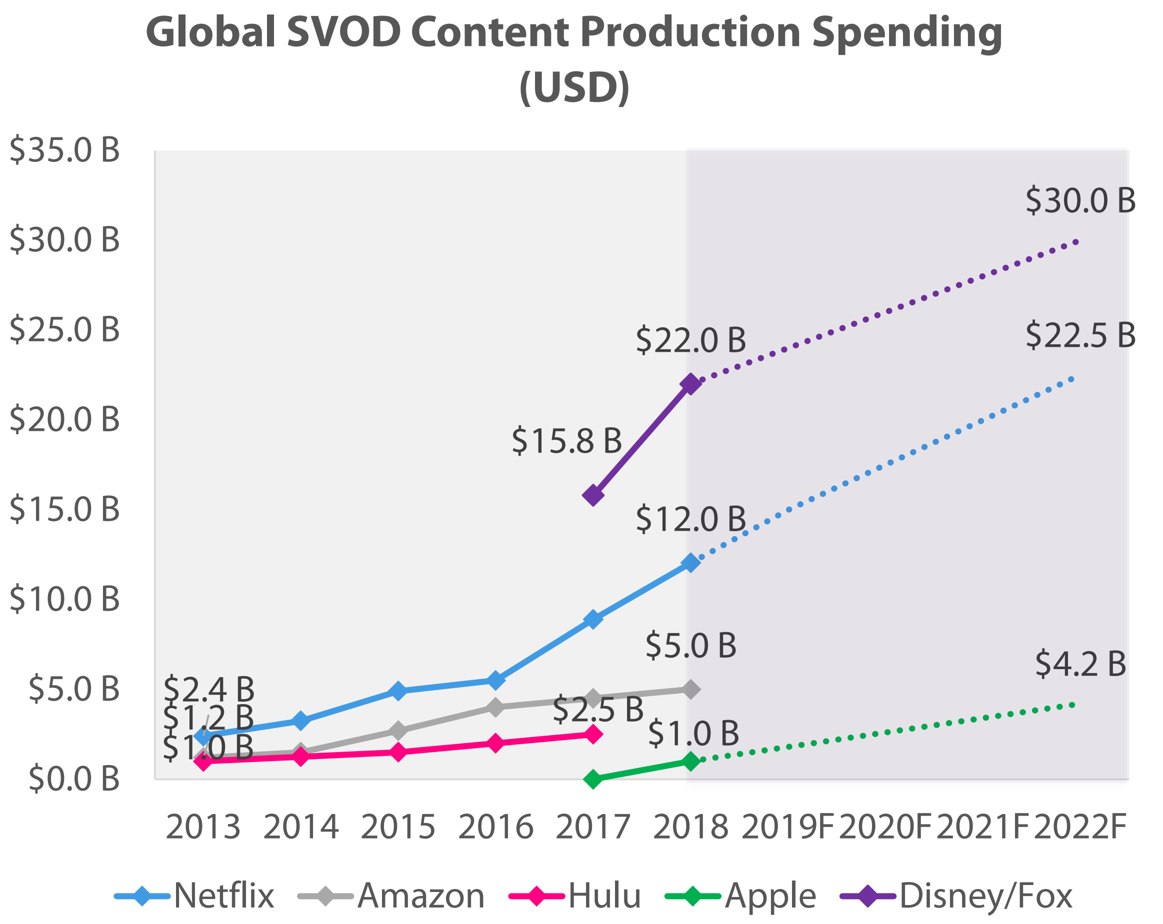
2. Context

Context | Overview

- Toronto's audiovisual production activities do not occur in a vacuum.
- Rather, Toronto's industry operates as part of an integrated global industry. This integration is particularly the case with respect to "foreign location service" production.
- As such, it is crucial for any analysis of the potential future market for soundstages in Toronto to consider the broader market context.
- More precisely, the analysis should consider:
  - Global production trends (e.g., from subscription video services)
  - Growth in post-production services
  - Growth in video games and other digital media
- Finally, it is important to situate Ontario's industry within these broader industry trends.

Context | Global Production Trends

- The global film and television production industry has seen an **unprecedented influx of investment from Subscription Video on Demand (SVOD) services** – recently joined by Disney/Fox and Comcast/Sky after their respective content-inspired mergers.
- These SVOD services have progressively escalated **a ‘content war’ based on their common strategy of producing exclusive original content** to attract and retain subscribers.
- The SVODs’ content spending has occurred at a scale that has overwhelmed the capacity of film and television producers at a global scale, driving film and television production booms across most jurisdictions with such an industry.
- Based on historical data and forecasts (adjacent chart), this boom is expected to continue over the next five years, due to continued spending growth from incumbents, as well as new entrants.



Sources: eMarketer; JPMorgan Chase; Goldman Sachs; IHS; Netflix; Business Insider; Statista; FierceCable; Variety; Forbes; RBC Capital Markets

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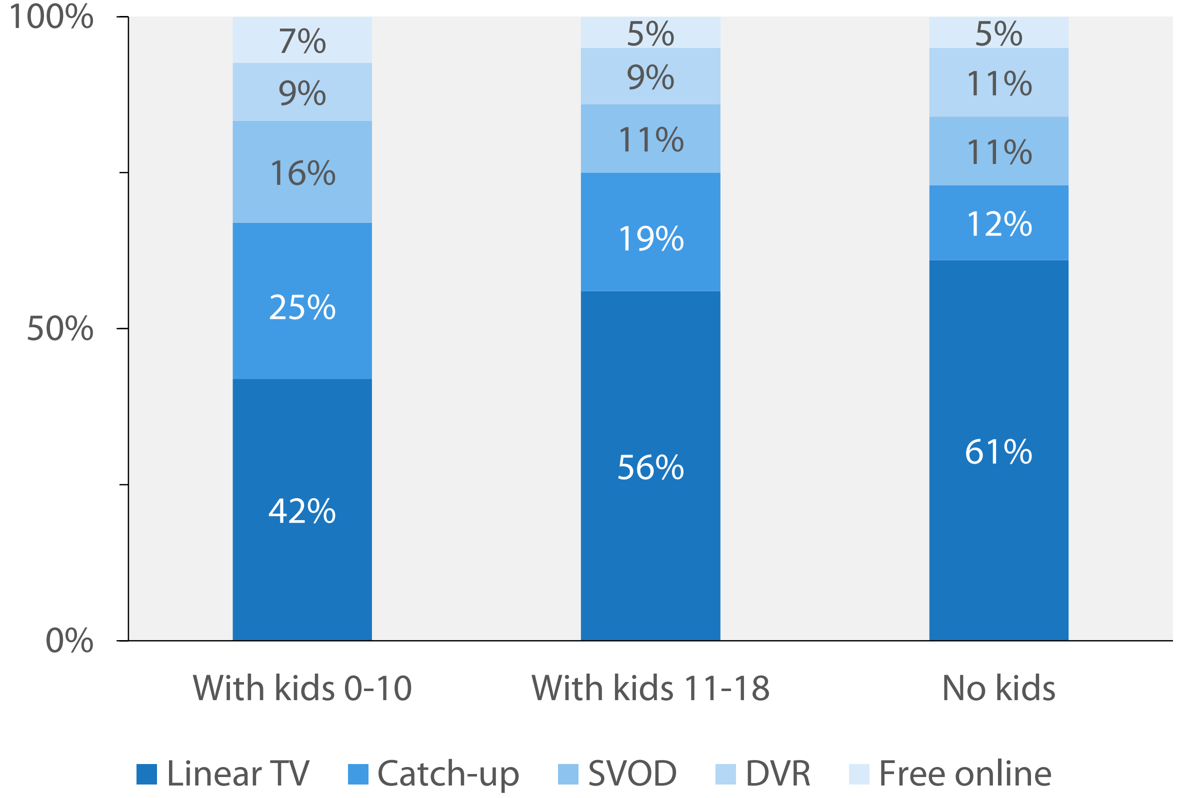
Context | Global Production Trends

- An additional trend worth noting in the context of the SVOD 'content war' is that **households with young children** are much more active users of SVOD platforms than other household types, as illustrated to the right.
- As such, **SVODs have publicly committed to the production of kids content** in a bid to attract new subscribers with young children.
- In 2017, kids content comprised 17% of all film and television production volume in Canada ($0.6B out of $3.3B overall), and just over half (52%) of kids content is animated (as opposed to live action).
- Taken together, these trends suggest that **animated kids content is both significant and poised for a near- to mid-term growth spurt** in global jurisdictions that have the capacity (i.e., talent and suitable space) to accommodate growth in animated production.

Distribution of Daily Viewing by Platform, by Household Type

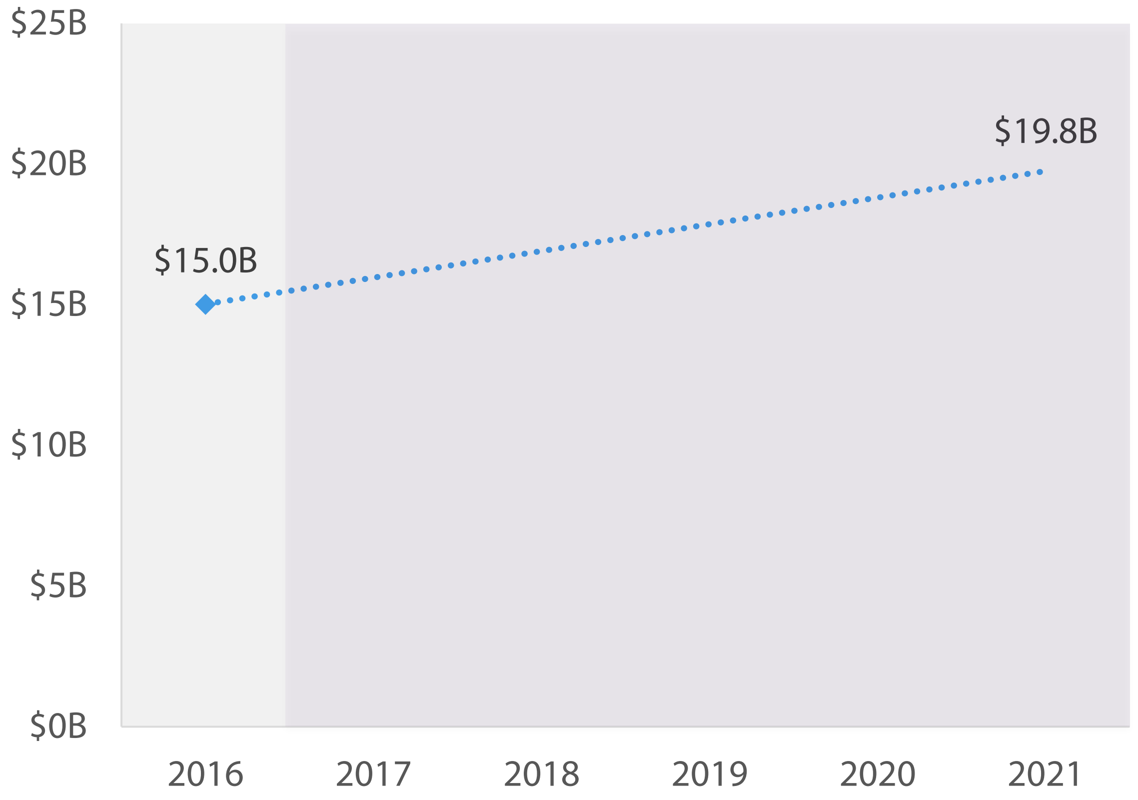


Source: Ampere Analysis. Data based on nine European markets and the US, Q1 2018.

Context | Visual Effect and Post-Production

- Against the backdrop of a global production boom, **advances in technology and shifting audience consumption habits** have driven changes in both the form and complexity of entertainment content.
- **Visual effects** budgets have climbed to keep pace with ever-increasing consumer expectations for higher production value.
- Content is increasingly developed on the model of '**360 content experiences**,' which refers to multifaceted media properties in which film and TV projects are released alongside complementary interactive and short-form web content.
- **Virtual and augmented reality** have created new opportunities for content production. Although it has yet to be commercialized at scale, this possibility remains on the horizon.

Value of the global video post-production market (incl. VFX, conversion, VR/AR) (USD)

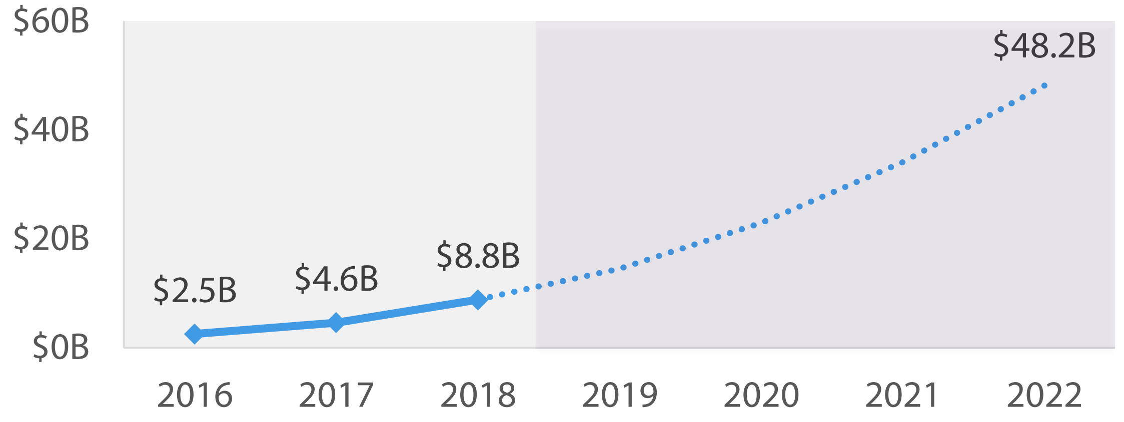


Sources: Business Wire; TechNavio

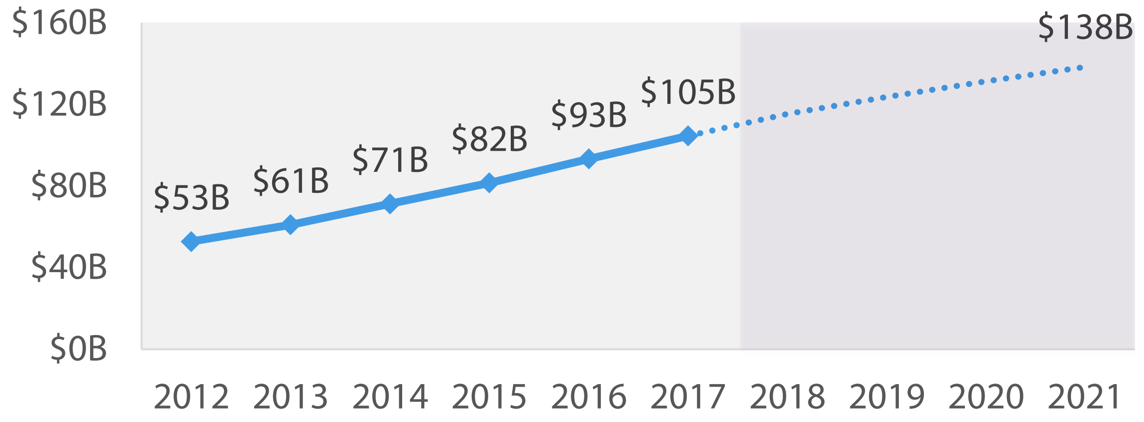
Context | Digital Media and Games

- While the core of the present mandate is to examine the market demand for soundstage space, **it is unlikely that linear audiovisual growth will be able to continue indefinitely**.
- As such, jurisdictions will need to consider **what media entertainment products will "come after" film and TV**.
- To that end, growth the global VR industry (52% CAGR on a relatively small base) and the global video games market (16% CAGR) should be considered as part of any planning process related to positioning a jurisdiction to capture a portion of the media entertainment market.

Gross revenue of the global VR industry (USD)



Value of the global video games market (USD)



Sources: Statista estimates; PwC

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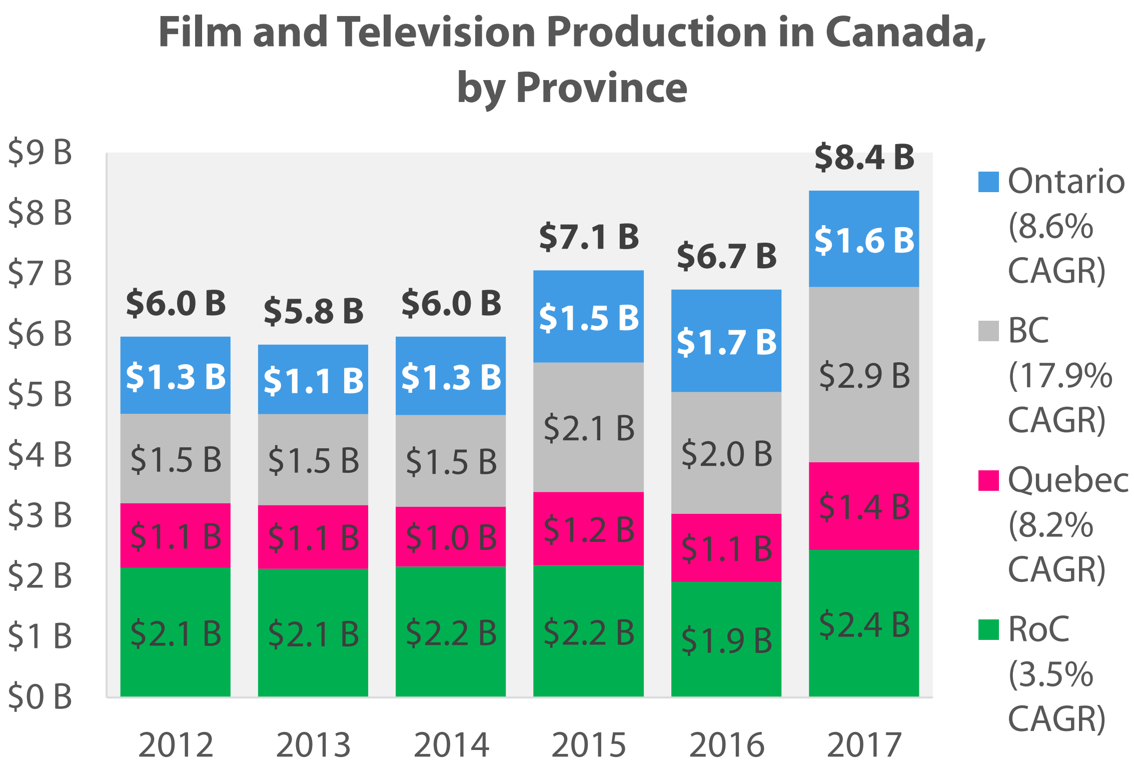
Context | Ontario's Film/TV Production Industry

- Since 2012, **film and TV production in Canada has increased across all regions**, with a slight dip in 2016.
- Although it increased in dollar value, Ontario (in which Toronto is, by far, the largest production centre) saw its **share of national production volume decrease from an average of 22% between 2012 and 2016 to 19% in 2017**.
- This relative 'decline' in market share was largely coincident with increases in production volume in BC and the Rest of Canada (mainly Manitoba).
- These high-growth jurisdictions focus mainly (though not exclusively) on attracting foreign projects.

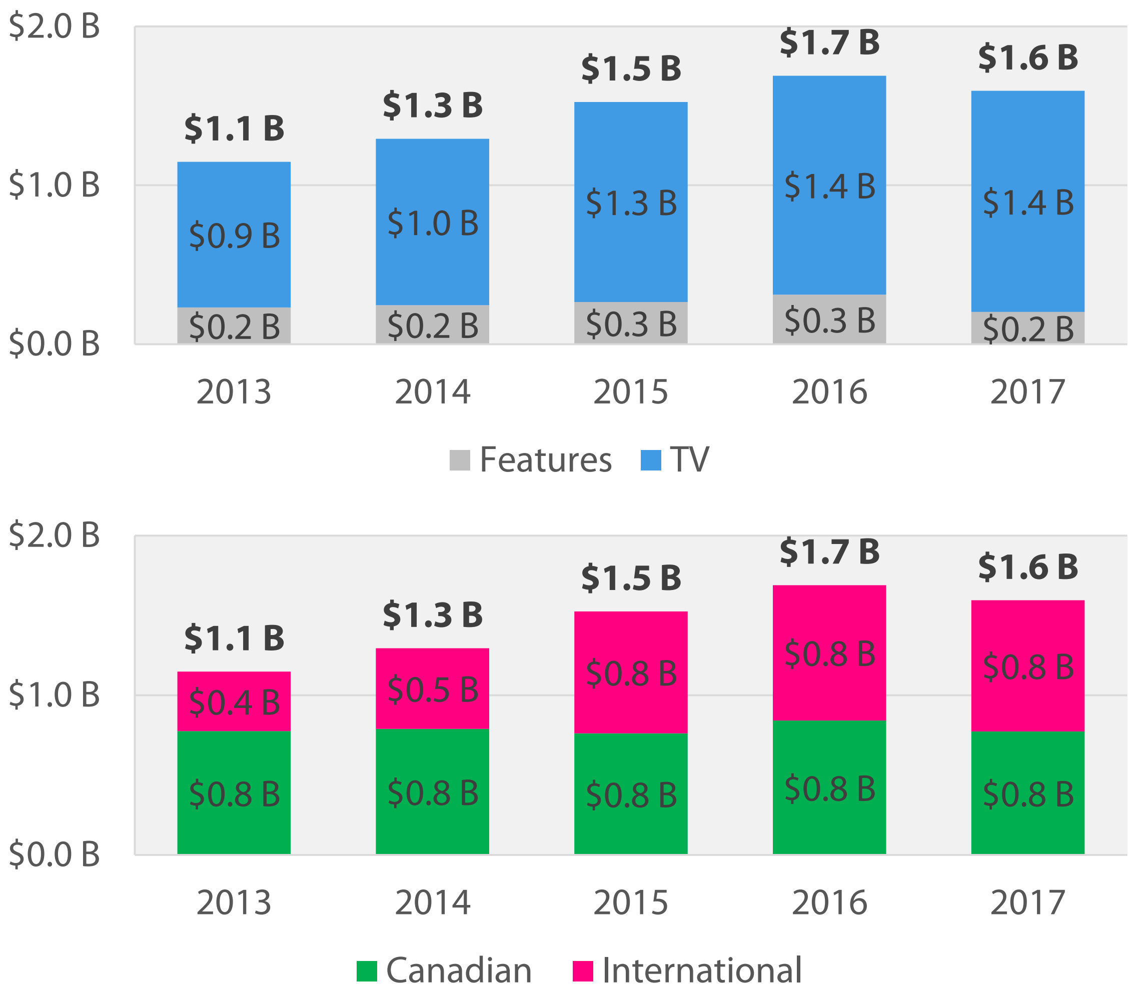


Sources: CMPA Profile 2017; Ontario Creates

Context | Ontario's Film/TV Production Industry

- While the overall production volume in Ontario is (broadly) increasing, the vast majority of production since 2012 has been **TV series**, which **accounted for 82% of production between 2013 and 2017**.
- At the same time, the portion of **international productions** occurring in Ontario (and thus Toronto) has **increased from 32% in 2014 to 51% in 2017**.
- The observed growth in international productions roughly maps to the growth in SVOD spending (see Slide 9), indicating that at least part of that growth can be attributed to the broader global trend.

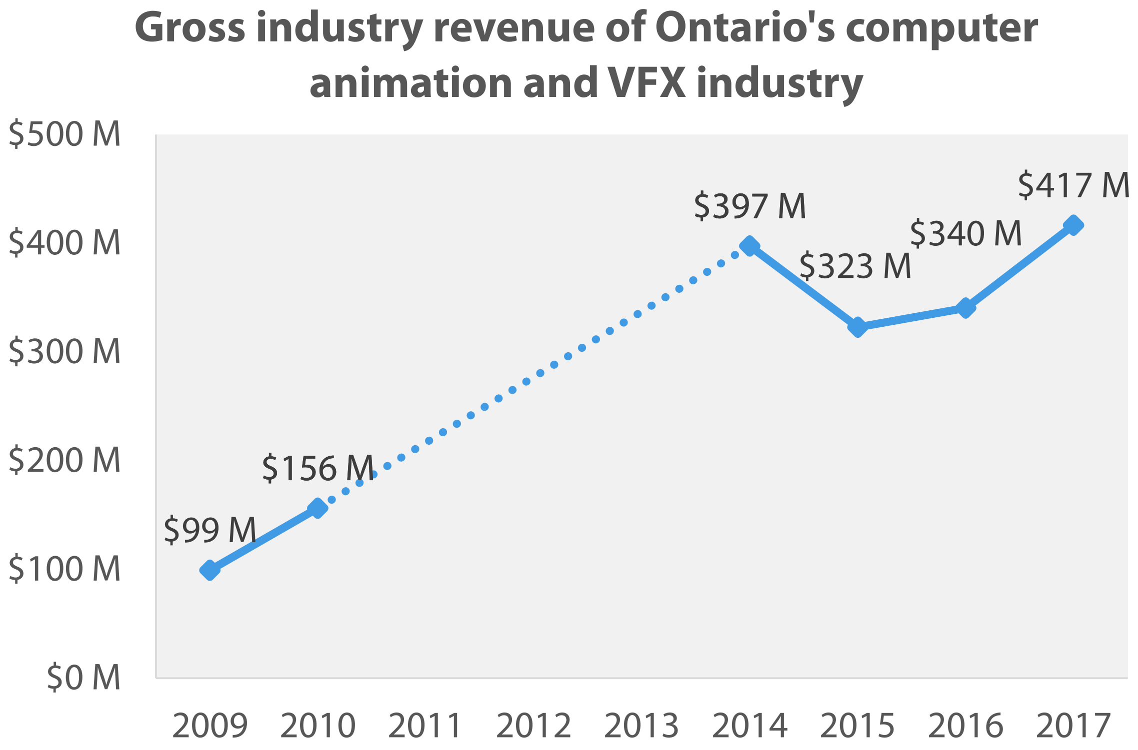
Film and Television Production in Ontario



Source: Ontario Creates

Context | Ontario's Animation and VFX Industry

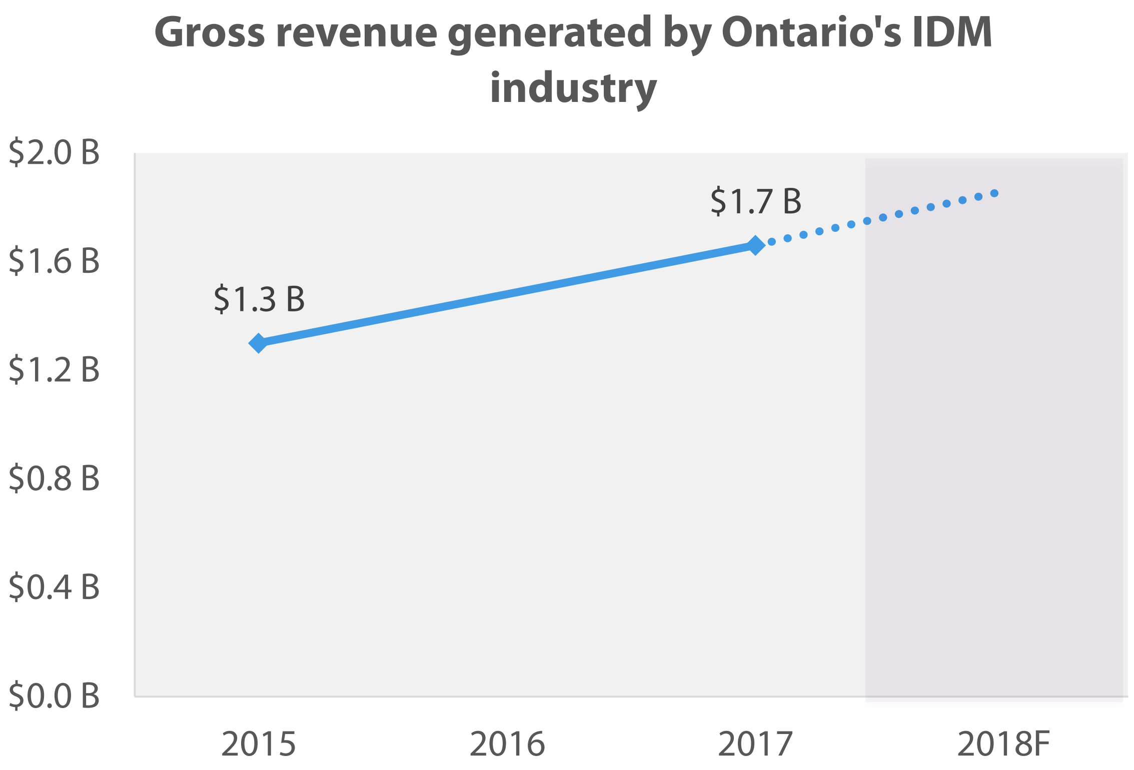
- Ontario's animation and VFX industry has largely mirrored the trajectory of the broad film/TV production industry.
- That said, in 2017 only 30% of the industry's revenue was generated from clients based in Canada (with 53% from US-based clients).
- As more projects use visual/digital effects the demand for these services is likely to grow.
- Most (65%) of people who work in Ontario's animation/VFX industry work on a salaried, full-time basis.



Source: Computer Animation Studios of Ontario

Context | Ontario's IDM Industry

- Ontario's Interactive Digital Media (IDM) industry grew by 30% from 2015 to 2017.
- Almost all (90%) of the industry's revenue is generated from outside of Canada.
- People who work in IDM in Ontario predominantly (80%) work as full-time salaried employees.



Source: Interactive Ontario

Context | Key Takeaways

Globally:

- Spending from SVOD services is likely to continue to increase for the foreseeable future. Much of that spending will be devoted to higher-budget TV series and feature film projects (which require increasing amounts of post-production/VFX spending).
- Post-production, video games and other digital media markets are also likely to continue to grow.

In Ontario:

- While production volume can be somewhat volatile, a larger share of production is composed of TV production and FLS production.
- Animation/VFX and IDM industry revenue roughly mirrors the global growth pattern.
- Both the VFX and IDM industries are largely export-focused, and they mainly employ workers on a full-time salaried basis.

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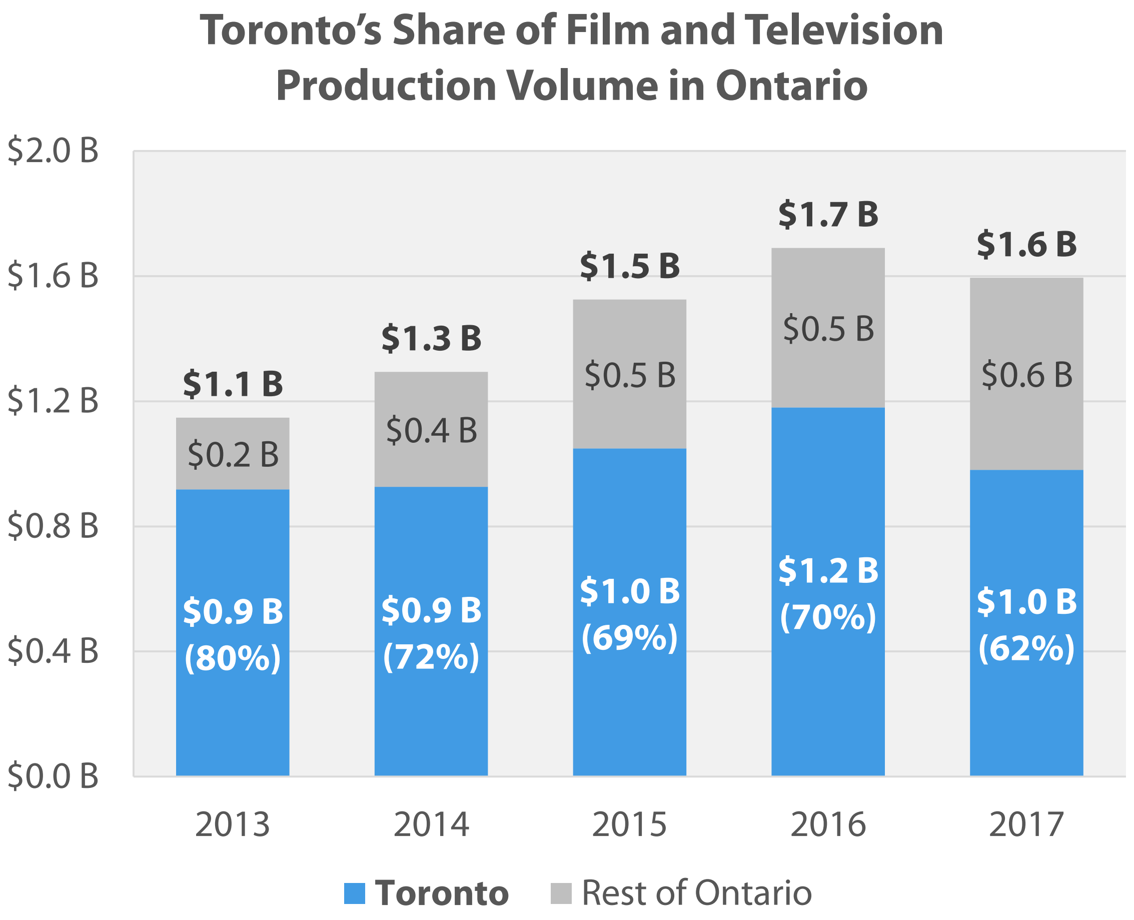
3. Soundstage Inventory and Usage

Inventory & Usage | Overview

- Over the past five years, film and television **studios in the GTHA have struggled to keep up with unprecedented demand** for production space. Although the region has steadily added new capacity since 2007, recent data suggests that **production activity is being constrained by a limited supply** of soundstage space.
- Based on data collected through interviews with studio operators, Nordicity performed analysis to better understand **which types of production are using the available spaces**. The results of that analysis were used to inform a **forecast of capacity utilization in the GTHA** over the next five years.
- Based on the analysis described above, Nordicity then presents its conclusions about **the type of new studio space that will be required to sustain growth in the GTHA's film and television production sector** over the next five years.

Inventory & Usage | Toronto's Film/TV Production Industry

- Since 2013, **Toronto's share of Ontario production volume has declined** from 80% to 62%.
- While **there has been a near tripling of production outside of Toronto, the city has stagnated** between $0.9 billion and $1.2 billion in annual film and TV production volume in this period.



Sources: Ontario Creates; City of Toronto

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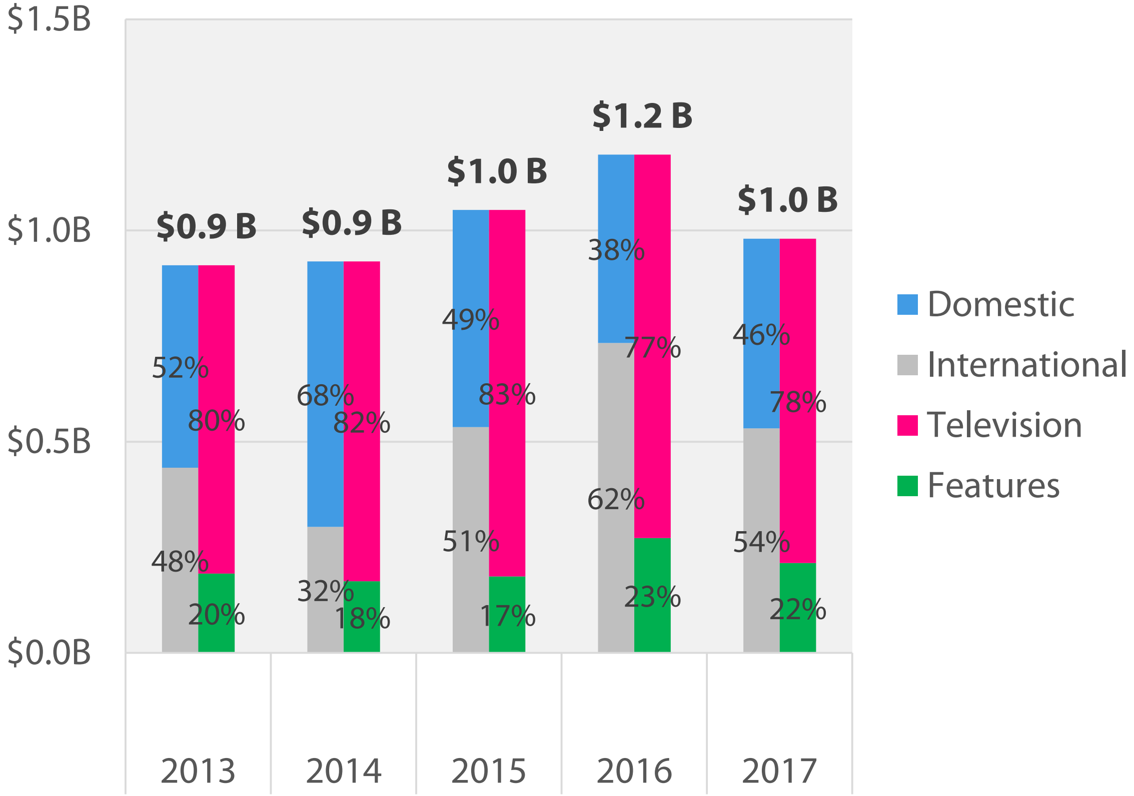
Inventory & Usage | Toronto's Film/TV Production Industry

- Since 2013, **international production has increased as a share of total production volume in Toronto**.
- Similarly, **feature films have slightly increased their share** of the city's total production volume.
- Because these changes occurred against a growing overall level of production, each one of these segments grew in dollar terms *except domestic production*. **Domestic production declined by 6% in this period.**

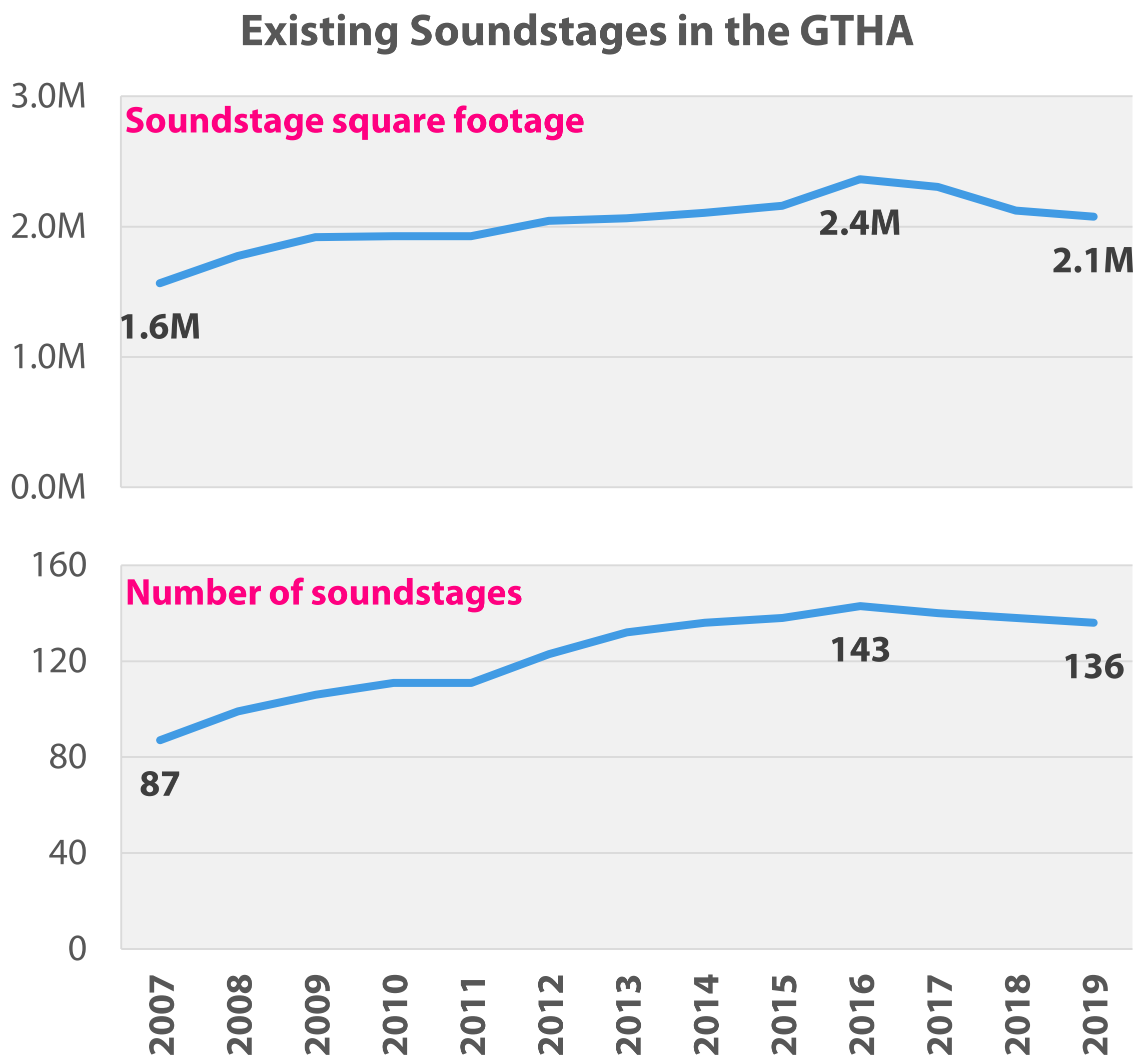
Film and Television Production Volume in Toronto by Type and Provenance



Source: City of Toronto

Inventory & Usage | Historical Capacity – Soundstage Capacity

- Soundstage capacity in Toronto exhibited stable growth from 2007 to 2016.
- **Soundstage square footage in the GTHA grew 800,000 square feet from 2007 to 2016** (from 1.6M to 2.4M).
- More **recently, soundstage closures have outnumbered new openings** from 2016 to 2019, which resulted in a net decline of 300,000 square feet of *existing soundstage space* (excluding forthcoming new facilities) from 2016 to 2019.
- The 2016 peak in soundstage capacity appears to correlate with the peak in production volume in Toronto, which was illustrated on the previous slide.



Source: Nordicity research (news, press releases, interviews)

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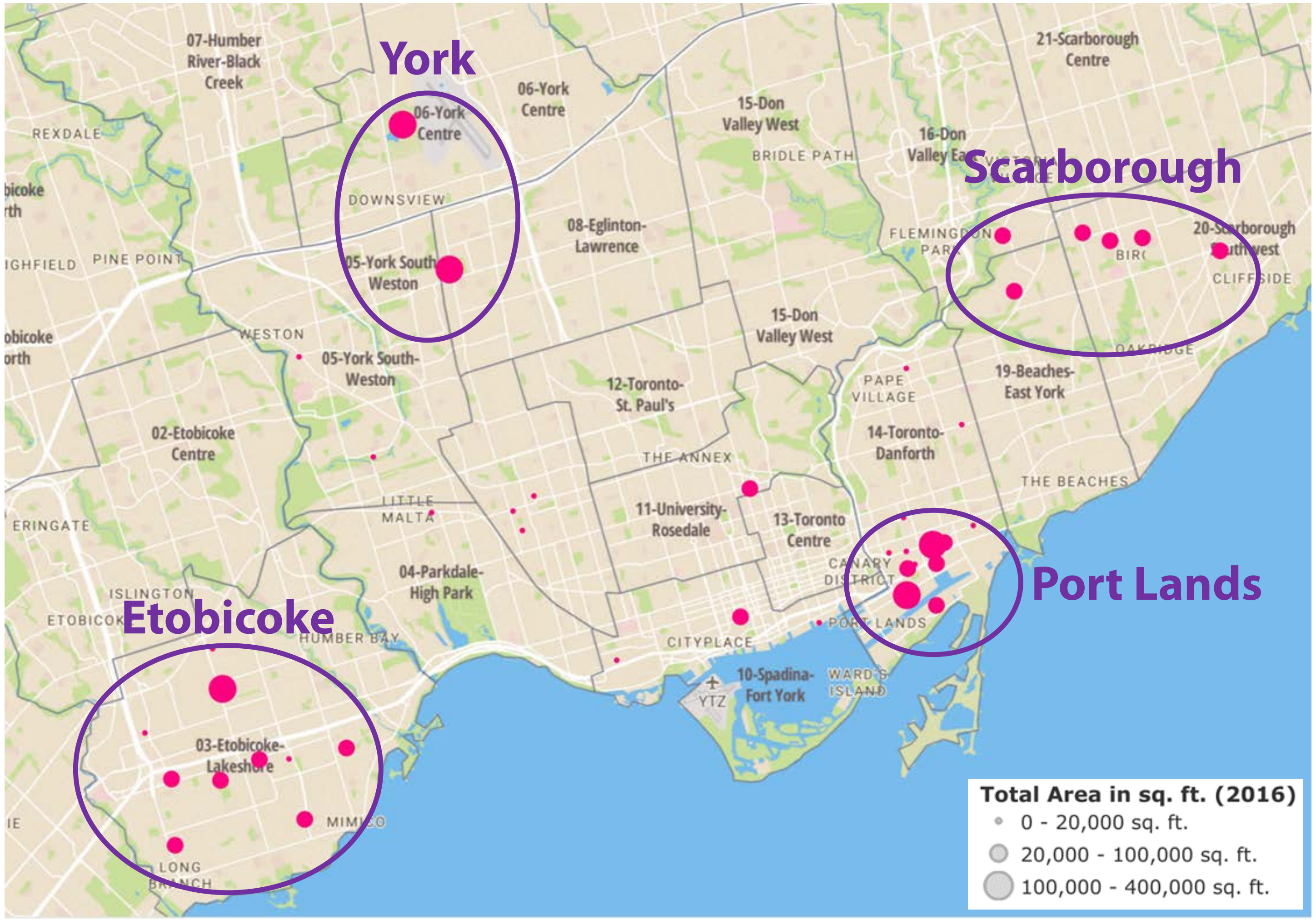
Inventory & Usage | Historical Capacity – Geography

- Depicted at its peak in 2016, film and TV studio space in Toronto features **four notable film and television production clusters***, with smaller spaces distributed throughout the city.
- The clusters identified here contain 76% of the soundstages in the GTHA and 84% of the total area, as shown below.
- Note that studios within each cluster tend to have similar characteristics - see **Slide 25** for descriptions of each cluster.

Cluster	Soundstages		Square footage	
Port Lands	46	*32%*	574,121	*24%*
Etobicoke	37	*26%*	747,505	*32%*
Scarborough	17	*12%*	259,126	*11%*
York	8	*6%*	404,300	*17%*
All Clusters	**108**	***76%***	**1,985,052**	***84%***
GTHA Total	**143**	***100%***	**2,363,167**	***100%***



*** Note that the film and television production clusters were identified and named to simplify the discussion of analysis in this document. These groupings of studios do not conform to any pre-existing designations.**

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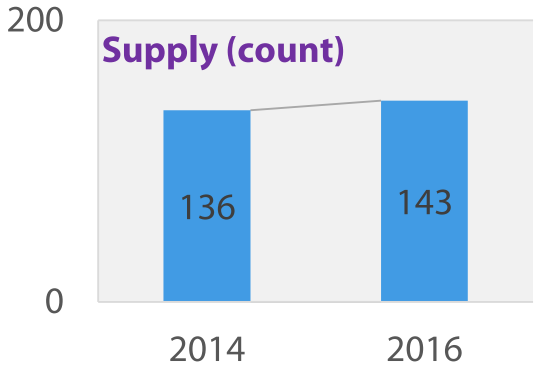
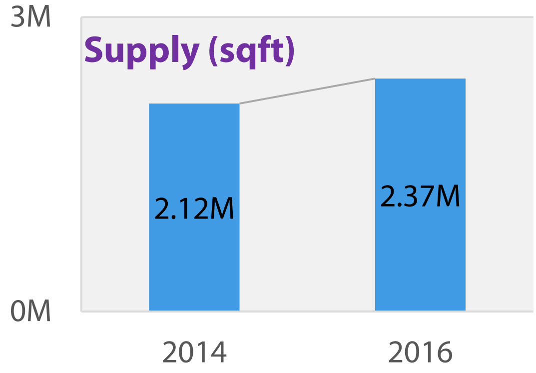
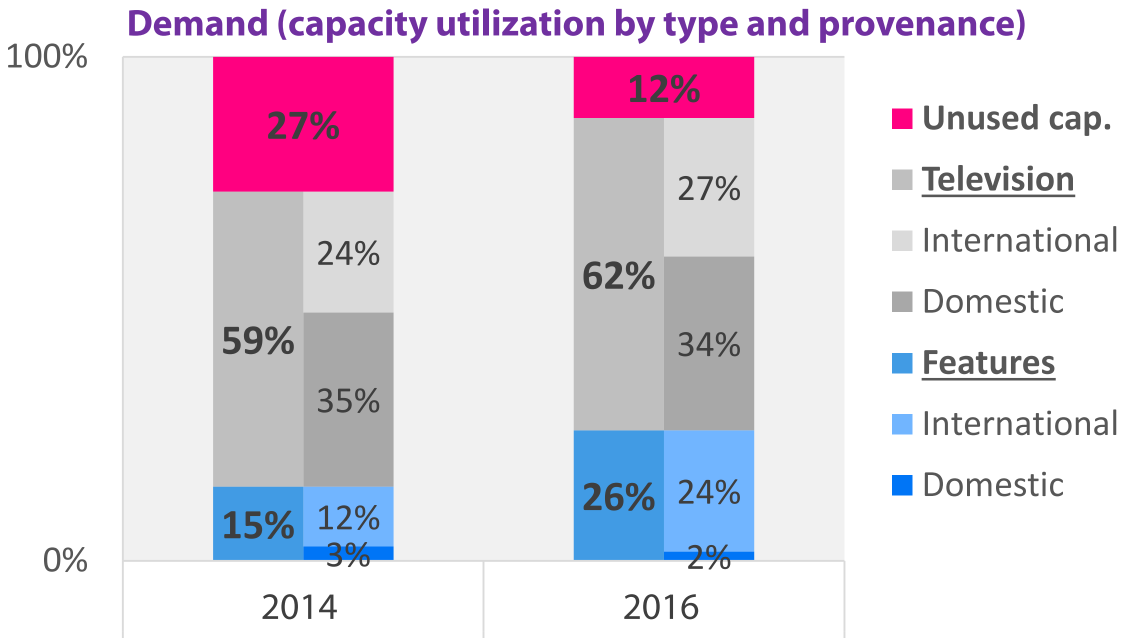
Inventory & Usage | Historical Capacity – Utilization

- As part of this research, Nordicity conducted **interviews with studio operators** to learn about capacity utilization in the GTHA.
- Although **the supply of soundstages in the GTHA increased from 2014 to 2016**, (in number and square footage), **capacity utilization also increased from 73% to 88%** (measured at the soundstage level).
- During this period, **international film and television production** (particularly feature films) **was the main source of increasing capacity utilization** in the GTHA.
- With most GTHA studios at or near capacity in 2016, **these findings suggest that the 2017 decline in production volume was, in part, due to the decline in available space**.







Inventory & Usage | Historical Capacity – Utilization

- In addition to the overall capacity utilization by type of production, Nordicity also assessed capacity utilization based on five attributes of film and television production studios.

Attribute	Supply	Capacity utilization and outlook
Stage size	Toronto's largest soundstages are concentrated in the Port Lands, Scarborough and Etobicoke production clusters.	▪ Capacity utilization of large stages, particularly for foreign feature film, grew faster than supply from 2014 to 2016, indicating **strong excess demand for large stages**. ▪ **Domestic television will likely face increased competition for small stages** as high-budget (most often foreign) producers' demand spills over into small stages.
Stage height	Short stages are most prevalent outside of the main production clusters, however there are several larger studios in Etobicoke and Scarborough with short stages.	▪ Although tall stages had significant unused capacity in 2014, **utilization of tall stages tightened** to a similar (high) level of utilization as small stages by 2016. ▪ **Short stages are largely home to domestic TV, but some international TV entered these spaces in 2016**, potentially due to high competition for tall spaces.
Office space	Office space is available in about half of the studios in the production clusters, and much less prevalent at other studios throughout the city.	▪ The supply of **studios with office space grew significantly from 2014 to 2016**. ▪ **Domestic TV is a growing share of occupancy** at studios **with office space**. ▪ **International TV grew as a share of occupancy** for studios **without office space**.
Workshop facilities	Studios with workshops represent about two thirds of the supply in the Port Lands, Scarborough and Etobicoke clusters, and are much less prevalent elsewhere in the city.	▪ **Studios with workshops reported steep growth in feature film production** and moderate growth by foreign television producers. ▪ **Facilities without a workshop faced increasingly constrained capacity** from 2014 to 2016, with notable growth in occupancy by domestic television.
Digital facilities	Digital facilities are less common than the other attributes – the few that exist are most prevalent in the Port Lands and Scarborough clusters.	▪ **Feature film production is concentrated at studios with digital facilities**. ▪ **Domestic television is a major user of digital facilities**, and has held a stable share of these spaces, despite increasing capacity utilization in this segment

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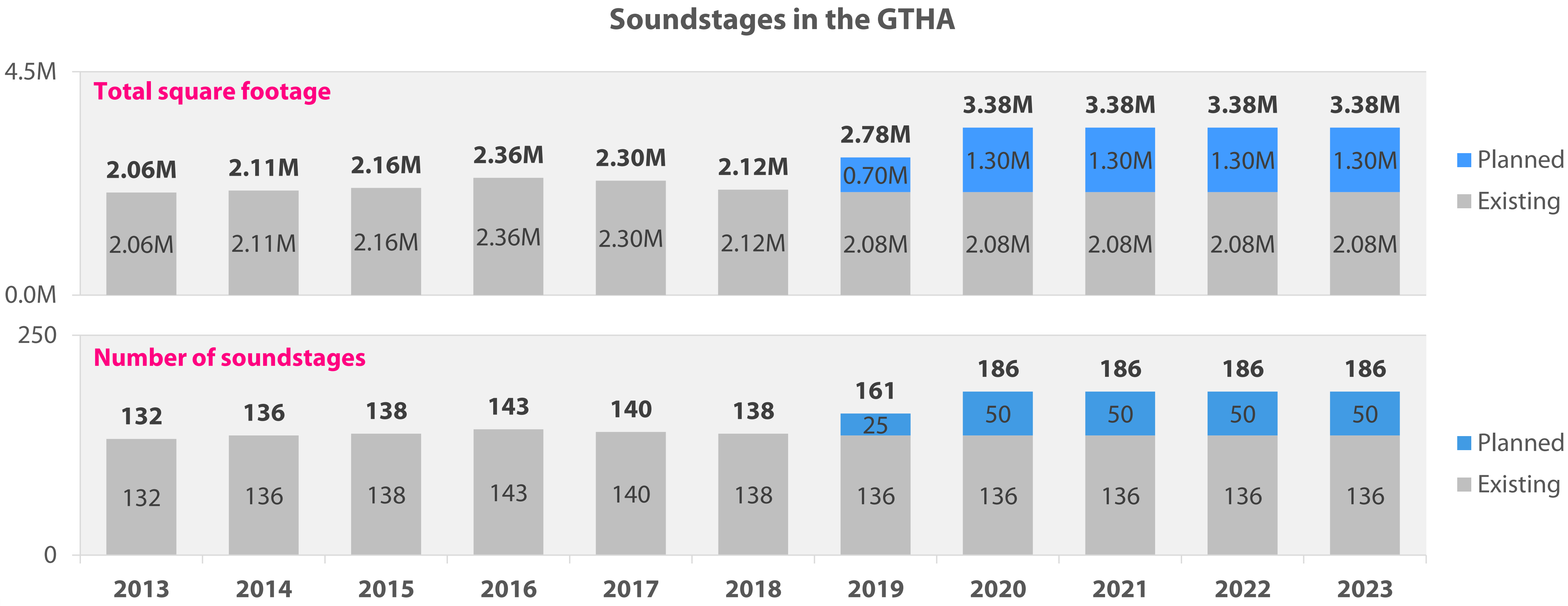
Inventory & Usage | Historical Capacity – Decision Factors

- In general, decisions to select a production facility depend on the type of production. The following table relates the capacity utilization analysis back to each type of production.

Production type	Facility attributes	Growth outlook
Foreign features	Large, tall, workshop-equipped studios	Foreign features are expected to grow notably as a result of the SVOD content wars, as well as Toronto's growing capacity for high-level feature film production, both in terms of available space and the local production workforce.
Foreign television	Various spaces – at the high end, comparable to facilities required by foreign features; at the low end, limited only to facilities with tall stages	Foreign television is currently shooting in Toronto to the extent that space permits (and even flowing into less-than-ideal spaces). The preceding analysis suggests that there may be significant pent-up demand for studios that are equipped to host this type of production.
Domestic television	Smaller, often high-tech studios, often with abundant office space	With foreign TV taking as much studio capacity as available, domestic television has been pushed into (or naturally befits) smaller, makeshift spaces. Although domestic television has felt the squeeze of increasingly constrained capacity in the GTHA, these productions' flexibility in using a variety of spaces means that capacity constraints have not have had as much of an effect on domestic production activities as other segments.
Domestic film	Various spaces – domestic film tends to use the broadest range of facility types (from small makeshift spaces to well-equipped soundstages).	Overall, this is not a significant segment and it is not expected to have a material (or predictable) influence on Toronto's overall production capacity.

Inventory & Usage | Projected Growth – Capacity Growth

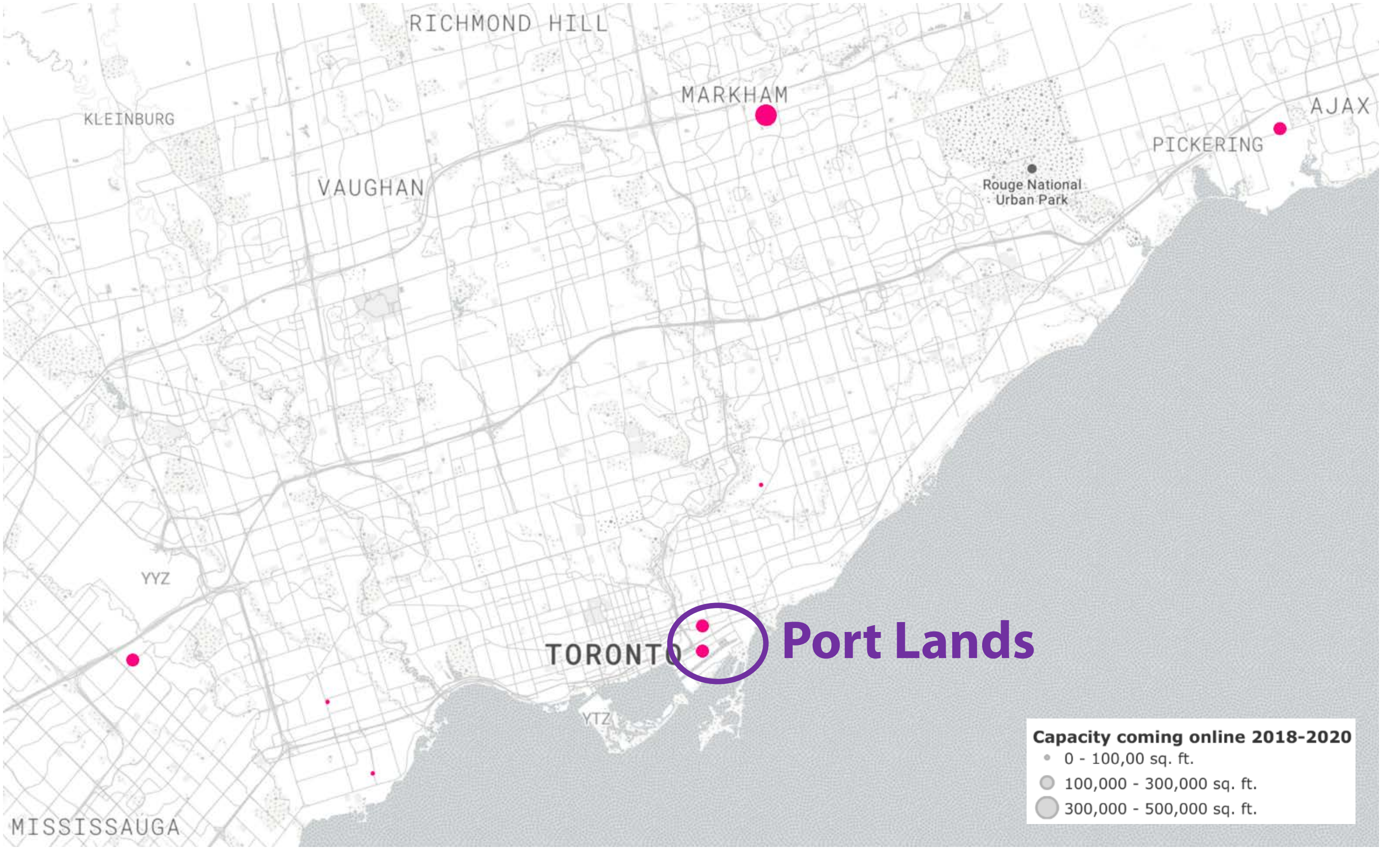
- Based on information known about studios currently in development, **the GTHA will add 1.3 million square feet of production space by 2020** (across 50 new soundstages), and a new studio complex in Ottawa will add another 80,000 square feet in Ontario.



Inventory & Usage | Projected Growth – Capacity in the GTHA

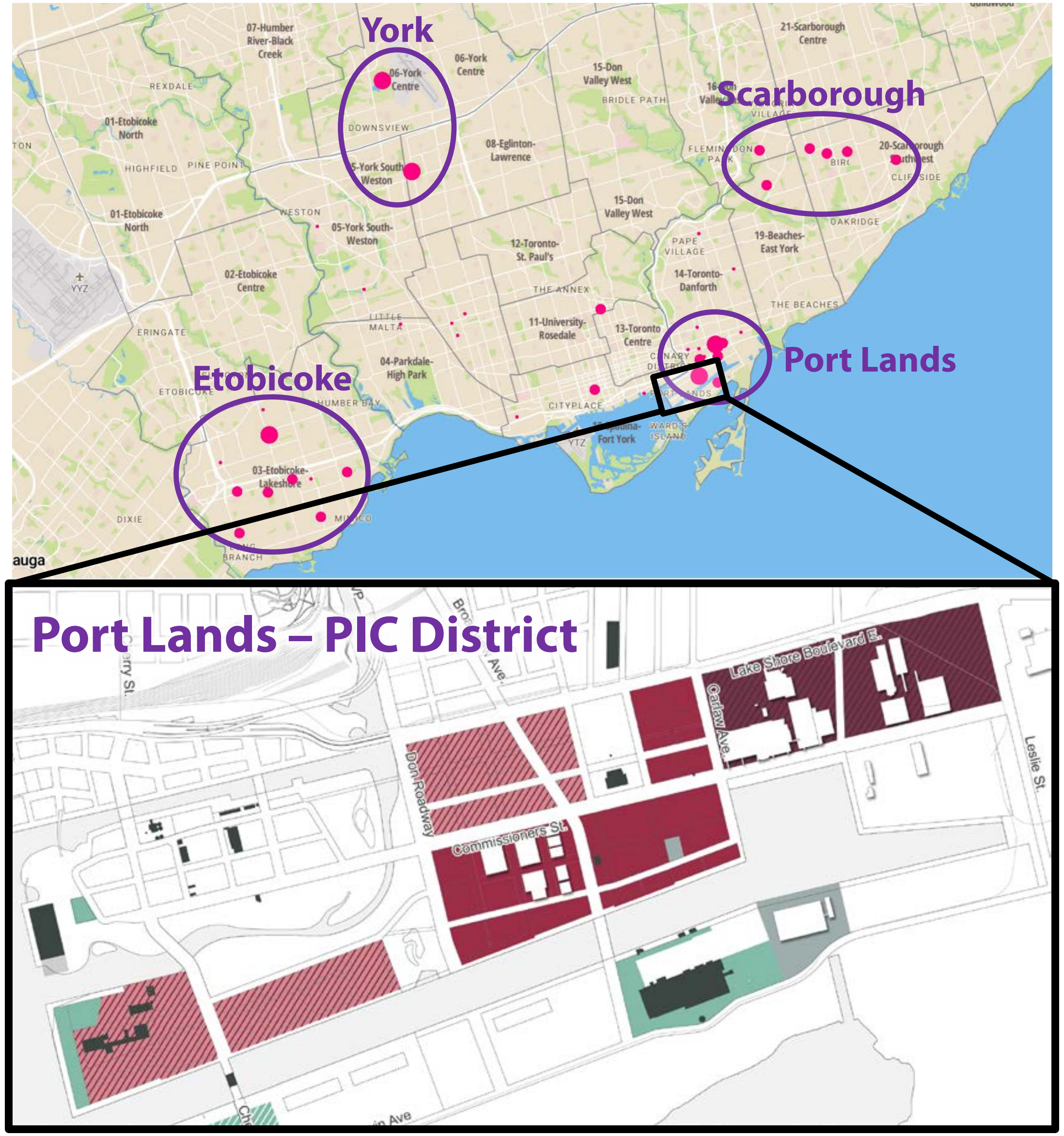
In recent years, there have been two notable trends affecting new **supply of soundstages** in the GTHA:

- There is a large slate of **new, purpose-built soundstages and several well-equipped conversions** that have been announced. These facilities will come online by 2020. These studios are equipped for the high-budget feature film and TV production that is typical of foreign producers.
- Of the four clusters identified on a previous slide, **Port Lands is the only existing cluster that will contribute significantly to the forthcoming expansion**. Most new space is located far from the city centre.



Inventory & Usage | Projected Growth – Zoning

- While most of the existing production space in Toronto is concentrated in employment areas, the City has specifically designated the **Port Lands** for intensification of Production, Interactive and Creative (PIC) land uses.
- In terms of production, the Port Lands Planning Framework (2017) sets out:
  - **'Core' PIC areas** designated for production and creative industries.
  - Additionally, the framework includes a **PIC Mixed Use** designation that permits combinations of PIC and residential uses, and the northeast block of the Port Lands is designated for **light industrial and productions**, which permits PIC, as well as a variety of commercial and light industrial uses, including production supports such as warehouses and workshops.



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Inventory & Usage | Projected Growth – Forecast Methodology

For practical purposes, Nordicity extended its analysis of historical utilization to forecast capacity utilization in the GTHA for the next five years. The forecast model is structured as follows:

- First, **the supply of soundstages in the GTHA was classified** based on the facility attributes most in demand for each type of production (based on the preceding analysis of decision factors). In the forecast, each segment of production was limited to the supply of suitable spaces as follows:
  - **Foreign film** requires facilities with **large**, **tall** stages, and either **office space** or **workshops**.
  - **Foreign television** requires **tall** stages, and at least one of: **office space**; **workshops**; or **digital facilities**.
  - **Domestic production (film and television)** was assumed to be feature-agnostic.
- Second, recent levels of production in the GTHA are understood to be constrained by limits on capacity. As such, **the forecast model uses two assumptions to estimate demand for production that could not be accommodated in the GTHA due to capacity constraints**:
  - **Practical capacity limit:** Beyond some level of capacity utilization, incremental productions will be unable to find suitable space in the GTHA and therefore, move elsewhere. Based on recent trends in the GTHA, a value from 75% to 85% would be reasonable. The results on the following slide are based on the more conservative 85%.
  - **Unrealized demand:** In order to quantify the amount of demand that could not be accommodated in GTHA stages, the model assumes that for every unit of utilization (soundstage-years) above the 85% practical capacity limit, there are X additional units that would have taken place in the GTHA if more space had been available. The results of the following slide are based on the assumption that X = 2 for foreign production and X = 0.5 for domestic production.

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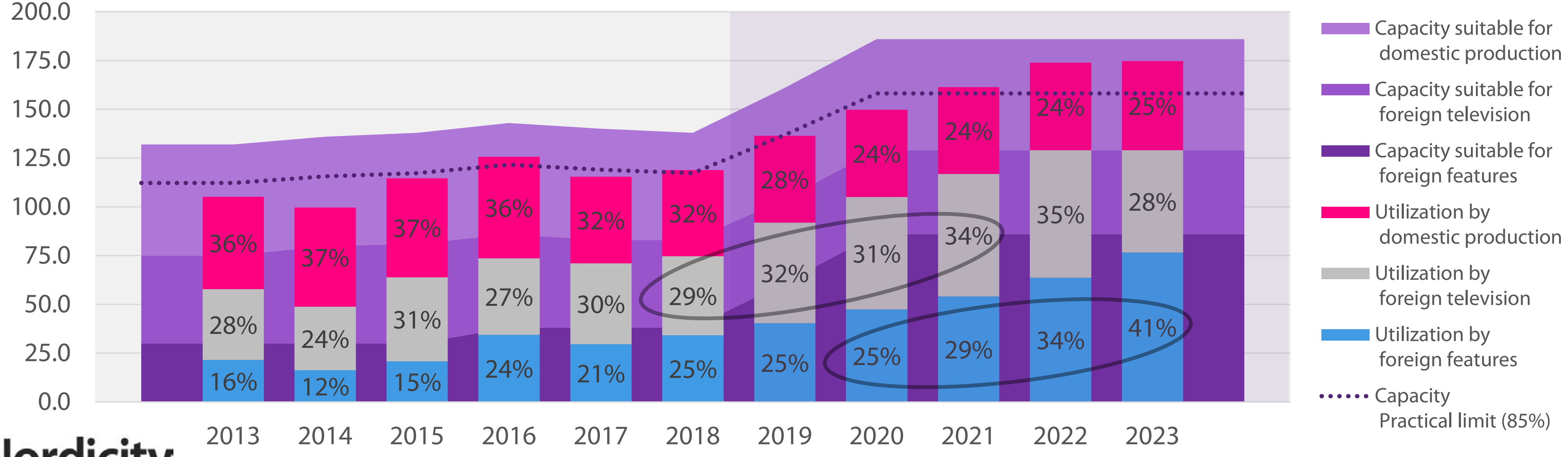
Inventory & Usage | Projected Growth – Forecast Utilization

Chart description

- The chart below shows the **historical and forecast utilization of soundstages in the GTHA** (stacked bars) against the **total soundstage capacity in the GTHA** (purple area).
- The data labels in this chart state utilization as a percentage of total available soundstage-years.

Analysis

- As noted in the utilization analysis, growth in foreign film appears to have driven foreign TV into less suitable spaces, which has, in turn, squeezed domestic producers into any space they can get.
- Consistent with that dynamic, the forecast shows an influx of foreign TV in newly-opened spaces, which will reach the total effective capacity limit of soundstages in the GTHA by 2021.
- After 2021, the forecast suggests that the GTHA will once again experience dynamics analogous to recent years – more precisely, growing foreign film production will squeeze foreign TV into less suitable spaces and push foreign production to other centres.
- Based on this analysis, **GTHA production capacity appears to have a "missing middle."** That is, **capacity is, and will be, most constrained for tall, well-equipped stages (with office space and digital facilities) most suitable for foreign TV production.**



Inventory & Usage | Summary

- The types of studios that had the greatest increase in capacity utilization from 2014 to 2016 also added the greatest number of new stages. **In the context of increasing capacity utilization from 2014 to 2016, it appears that demand for well-equipped soundstages in the GTHA exceeded growth in supply during that period.**
- Looking forward, this analysis finds that **over the next five years, the GTHA is most likely to need additional capacity suitable for the needs of foreign television production**. Specifically, the development of **new facilities in the GTHA should focus on increasing the capacity of tall, mid-size to large stages, with office space and digital facilities.**
  - 1.3 million square feet of soundstage space across 50 soundstages are due to come online by 2020 in the GTHA.
  - Although this new space will alleviate much of the existing pressure on capacity, Nordicity's analysis of historical and future utilization suggests that pent-up demand for foreign television production will quickly fill new space that is expected to come online in the near term.
  - However, foreign television will once again face competition due to increasing demand from foreign film production after the supply of spaces suitable for foreign film and TV production have reached their peak operating capacity.

4. Role of Future Developments in the Port Lands

Future Developments in the Port Lands | The Market Need

- As illustrated on slide 31, Nordicity finds that **there will be a continuing need for additional production space in the GTHA** over the next five years, even taking into consideration the large amount of studio space slated to come online by 2020.
- **New production facilities appear to be targeting foreign feature film production**, which has exhibited the strongest growth in recent years. Nordicity's analysis finds that growth in foreign feature film production has led to pent-up demand for foreign television production.
- In addition to film and television production, **high-tech entertainment industries are experiencing rapid global growth**, including interactive digital media, video games, AR/VR, visual effects, and animation. These industries' facility needs are closely aligned with those of foreign television production, employing a predominantly full-time workforce over longer production cycles.
- Although the addition of new space is anticipated to alleviate some strain on the GTHA's studio capacity in the near-term, **there will be a real need for additional space equipped to accommodate foreign television production and other media production industries** over the next five years.

Future Developments in the Port Lands | Facility Considerations

- To meet anticipated demand from foreign television and anticipating the complementary needs of high-growth, high-tech, and high-flex entertainment industries, the following considerations will help to ensure demand for new developments in the Port Lands.
- **Soundstage space/dimensions** will require:
  - **A variety of stage sizes** – with emphasis on **mid-sized stages** (averaging less than 20,000 sqft. per stage) including smaller stages with **green screens** for digital capture; and,
  - **Generous stage heights** – generally greater than 22 feet.
- **Ancillary services** should include:
  - **Office space for film and TV production** – at least 10,000 sqft to support traditional linear content production in the soundstages;
  - **Office space for other types of media production** – as we describe in the following section, Nordicity recommends the development of dedicated office space for other media production industries, taking into consideration that the facility should be built to accommodate an increasingly **full-time creative workforce**; and,
  - **Digital facilities** – Including ample green screen-equipped soundstages (as noted above), post production editing suites, screening rooms, and technical infrastructure to support 3D/UHD capture and processing (as well as the related data infrastructure/bandwidth).
- **Zoning** should account for:
  - The transition to an increasingly **full-time creative workforce** will require the additional consideration to making the PIC District a better place to work – for example, future development plans should consider the inclusion of entertainment and foodservice amenities, to the extent possible.

Future Developments in the Port Lands | Infrastructure Needs

In addition to specifications for the building itself, there are several considerations to make with respect to the external infrastructure required to service the site. In large part, these requirements reflect the nature of activity that the site is most likely to host in the medium- to long-term, including increased full-time employment and more technically demanding media production.

- **Digital infrastructure** will need to provide **sufficient bandwidth** for transmissions of large volumes of data, relating to increasingly high resolution (and potentially 3D) media captured on site as well as meeting the demands of interactive software development and testing.
- **Physical infrastructure** should be planned in such a way as to **host a full-time workforce**, and **facilitate the benefits of a tech cluster**. As such, the district should cater to the professional and social activities that can occur outside of work hours by ensuring the availability of local entertainment, restaurants, bars, and coffeeshops where employees at production, interactive and other creative industries can interact, cross-pollinate and innovate.
- **Transportation infrastructure** will ensure that employees and commercial enterprises have ready access to the PIC District. With Toronto's housing affordability challenges, ensuring **cost-effective and efficient public transit links to the district** will make it easier for employers to attract Toronto's most talented workers. Similarly, **parking for commercial trucks** will ensure that facilities in the district can accommodate the varied logistical needs of media producers.

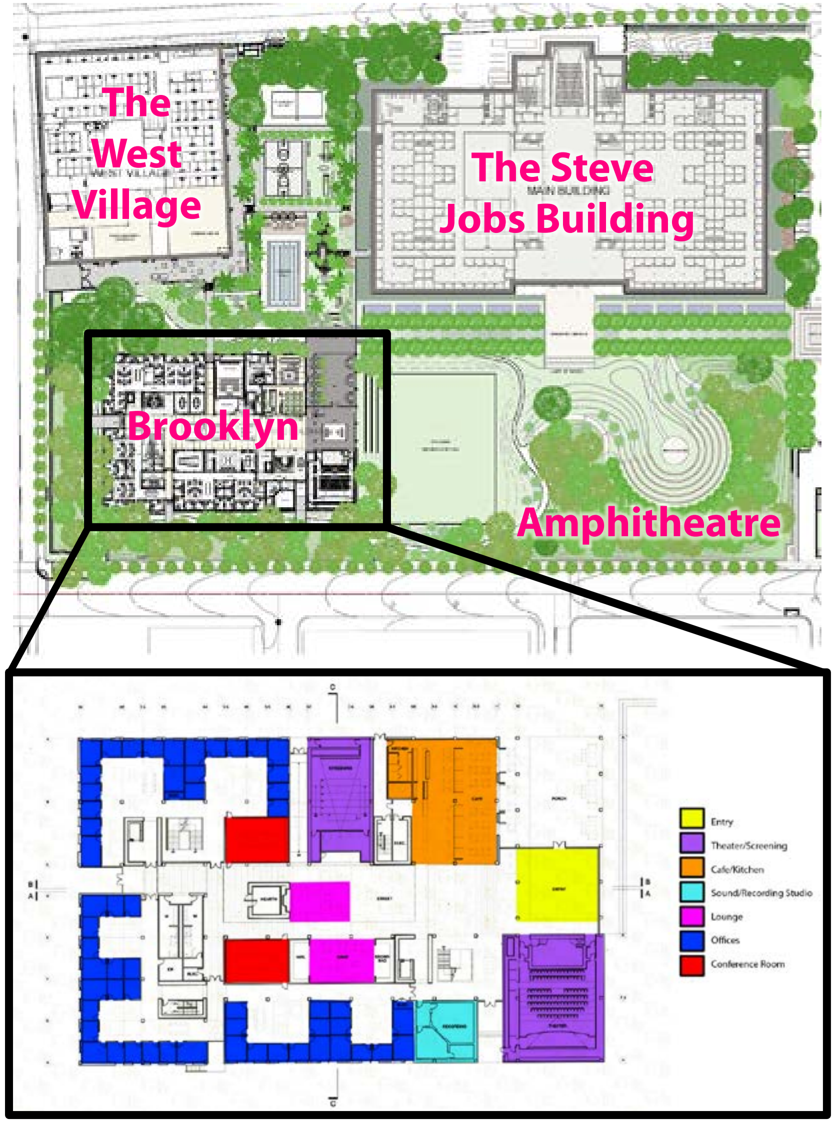
5. Facility Needs for VFX, IDM, and Animation

Facility Needs and Examples | Overview

- To assess the facility needs of animation, VFX, and digital media production studios, Nordicity reviewed the specifications of an existing facility in each of these three industries.
- This section opens with three examples of production facilities, followed by a summary of broader design themes and facility features that are common to all three industries.

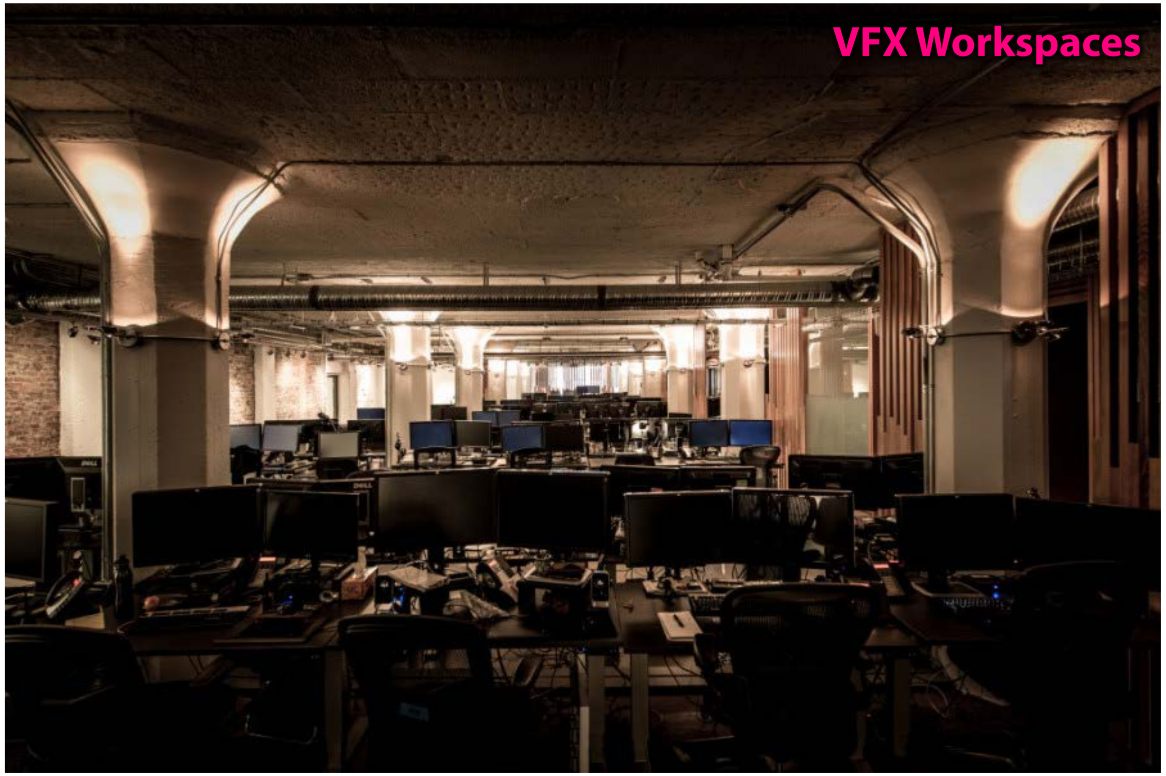
Facility Examples | Animation | Pixar HQ – Emeryville, CA

- ***The Steve Jobs Building*** (2000), at the centre of a 22-acre campus has 218,000 sqft over 2 floors and capacity for 1,000 employees.
  - Office space surrounds a cathedral-like atrium that celebrates Pixar's current projects and past awards
  - The atrium facilitates chance encounters with a central restaurant/café
  - One 600-seat and two 40-seat screening theatres
  - The facility includes a second-floor conference centre
- ***Brooklyn*** (2011), a 4-storey, 155,000 sqft facility housing up to 900 employees (floor plan on right), includes two screening rooms (purple) with office space (blue) around the perimeter.
- ***The West Village*** (2010), a 26,000 sqft warehouse retrofit, houses a fitness facility, screening and editing rooms, conference rooms, and offices on the perimeter.



Facility Examples | VFX | Industrial Light & Magic – Vancouver, BC

- ***Industrial Light & Magic's Gastown Facility*** (acquired from Pixar in 2015) has 30,000 sqft over 4 floors and can house up to 300 employees at peak capacity.
  - Work areas in Gastown's former Packing House building are open concept and feature high ceilings.
  - The Vancouver ILM branch collaborates closely with other production facilities on international projects - the facility features 6 'war rooms' used for daily team meetings with remote project collaborators.
  - Amenities include social and informal shared spaces suitable for anything from flexible teamwork to industry events.



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Facility Examples | Digital Media | EA Canada – Surrey, BC

- ***EA Canada's Headquarters*** (1998) boasts 450,000 sqft over 5 floors to house 1,300 employees.
  - 175,000 sqft of production space is accompanied by 220,000 sqft of office space
  - Open-plan work areas feature 16 foot ceilings and these production spaces surround a glass atrium 'street' for traffic.
  - The production facility includes a 38,500 sqft motion capture studio, 2 screening rooms, 14 video editing suites, a wing for audio composition (22 rooms for composing), a soccer field, basketball/volleyball courts, arcades, a cafeteria, and coffee shops.

Facility Examples | Analysis of Facility Examples

- **Walkable plan:** All of the facilities feature flat, walkable floor plans with informal meeting and gathering spaces to accommodate chance collisions/encounters. Elevators are not used as a primary means of managing people flow. Rather, wide spacious stairways are preferred for their potential to catalyze spontaneous interactions.
- **Common spaces:** All of the facilities have shared spaces, usually in a central location in the form of restaurants, cafés, or kitchens. In purpose-built facilities, where buildings were designed from the ground up, foot traffic is welcomed into naturally lit, central common areas, which are in turn linked to outdoor spaces.
- **Global teams:** Except for Pixar's Headquarters, each of the facilities reviewed on the preceding slides house operations of companies that are headquartered elsewhere. To accommodate geographically disbursed project teams, dedicated video conferencing space is essential.
- **Open-plan:** All three facilities house production employees in flexibly furnished open concept spaces with high ceilings (16+ feet) and dense workstations.
- **Technical facilities:** All three facilities feature screening rooms in a variety of sizes.
- **Amenities:** Except ILM, all of the facilities have dedicated space for employees to engage in physical activity.

Facility Needs | Architectural and Design Considerations

1. **Accommodating Scalability:** VFX, animation, and digital media companies have variable staffing needs based on their current load of large projects. Film, television, game, and other digital media properties typically require teams ranging in size from 20 to several hundred workers – if a company takes on a significant new project, staffing needs may vastly increase over a very short period of time. As a result, workstations are designed to meet workers' practical needs with a minimal footprint to ensure that capacity is available if it is required.
2. **Fostering Creative Modes of Work:** The overall design of a building is highly valued by VFX, animation, and digital media companies. In general, the layout of purpose-built facilities starts with consideration of central, shared spaces and how to maximize the potential for chance encounters. Surrounding areas are developed to complement the flow of foot traffic and provide smaller, more private areas to accommodate one-on-one and small-group interactions.
3. **Designing for Change:** Similar to the more general design considerations for creative work – VFX, animation and digital media companies typically extend their culture of dynamism to the physical spaces in which they work. More broadly, each of these industries employs a variable workforce for a variety of large projects, so it is normal for a company's spatial/infrastructural requirements to evolve over short periods of time. As such, it is important to note that building systems should be designed to permit the construction of custom spaces on a temporary basis.

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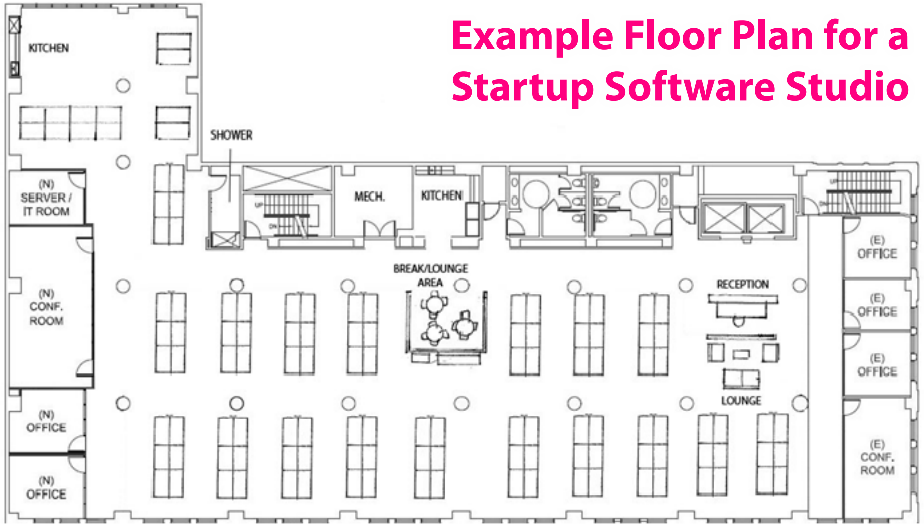
Facility Needs | 1. Accommodating Scalability

- **Scalability** is important to animation and digital media producers – tenants may initially rent space with 4 people per 1,000 sqft and quickly expand to 10.
- **High ceilings and open concepts** mitigate cramped feelings when scalable space reaches full capacity. The increasing use of group messaging/collaboration tools (instead of phone calls and face-to-face interaction) makes acoustic partitioning less of a priority.
- **Private meeting rooms** allow creative workers to interact in smaller groups when required – companies may offer a spaces ranging from lounges to bookable formal conference rooms. One landlord catering to tech companies suggests one meeting room per 1,000 sqft of workspace (i.e., per 10 workers at capacity).
- **Open collaboration space** is often modelled on coffee shops or self-serve kitchen facilities and distributed throughout the facility.



Example Floor Plan for a Startup Software Studio

Ubisoft Montreal: Dense, Open Concept Workspaces

Facility Needs | 2. Fostering Creative Modes of Work

- **Comfortable living spaces:** Creative workspaces tend to prioritize the creation of an "efficient, dynamic, and inspiring living environment" through architectural and interior design. While individual workspaces remain a fixture, creative workplaces typically feature dense individual workstations in an open plan with ample adjacent space for for people to move, play, collaborate, exchange ideas, and thus, innovate.
- **Walkability and flow:** The design of Ubisoft Quebec City prioritized *communication, interconnection and fluidity* in the facility's spatial organization. Formal and informal meeting spaces surround a central staircase.
- **'Nomadic' workspace:** More broadly, employees may be flexibly assigned to evolving roles in project teams. As a result, traditional offices, cubicles and/or assigned seating have, in many cases, given way to hot-seat workstations and casual communal workspaces.

Facility Needs | 3. Designing for Change

- Ubisoft values the ability to build spaces flexibly to accommodate the evolving needs and behaviours of its workforce – **sensors are used to analyze employee usage of collaborative space** so that underused rooms and spaces can be redesigned.
- Pixar Headquarters democratizes a similar philosophy, **allowing employees to build custom offices** (many of which involve themes such as tiki huts or castles – several designs even incorporate a second floor).

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6. Recommendations for the PIC District

Recommendations | Overview

The following slides contain a series of high-level recommendations to consider regarding the overall orientation of the Productions, Interactive, and Creative District (PIC-D), as it relates to the likely evolution of the film and TV production industry.

This analysis considers the PIC-D in the context of other media production clusters in Toronto, each with a unique 'personality.' Whereas other clusters may be better suited for large, sprawling film studios or compact domestic TV production, the PIC-D presents a unique opportunity to lay the groundwork for a **high-density**, **high-tech, high-flex media production cluster**.

To that end, Nordicity's perspective is that the PIC-D should be construed as a **flexible-use area** that balances the existing production services needs (e.g., medium to large studios with high ceilings) with emerging and future needs (e.g., office space, screening rooms, ancillary services).

Doing so will:

- Enhance the likelihood of the PIC-D will continue to be a relevant, critical element of Toronto's (and Ontario's) ability to **attract/retain production** activities;
- Position Toronto at the **forefront of the next wave of audiovisual production;** and
- Maximize the likelihood of creating the **spillover benefits** inherent to a functioning industry cluster.

Recommendations | Zoning & Regulation

From a land-use perspective, Nordicity suggests that a **flexible-use district** be considered. Importantly, the emphasis of this community should be on **employment lands** (e.g., production space, office space), and **ancillary services** (e.g., restaurants, bars, retail).

Given that the average salary for an existing film and TV was $63,400/a in 2017/18, it is unlikely that many existing workers many will be able to afford to live in the PIC-D. As such, it is not recommended that more than 25% of the PIC-D be allocated for residential space. Alternatively, purchase-support measures (e.g., loan guarantees) could be used to make developments based in the PIC-D more accessible to film and TV workers.

Nordicity's view on a flexible-use district is anchored in two observations:

1. As digital roles (e.g., digital media development, animation/VFX, etc.) grow in frequency, so too does their **method of work.** At the same time, a greater portion of the production volume is composed of longer-running TV series. The shift from short-term gig-work to full-time employment (or its equivalent) lends a greater need for more flexible, integrated zoning.
2. In order for **"clustering"** to occur (e.g., by way of incidental collisions between individuals in related industries (e.g., animation and video game development), one must ensure that there are physical venues for such spillovers to occur.

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Recommendations | Infrastructure

There are several types of infrastructure needs to consider if the PIC-D will be able to achieve its potential, namely:

- **Digital Infrastructure:** while film/TV production already relies upon (and uses) ultra-high speed internet connections, these needs will only increase over time. As such, Nordicity recommends facilitating increased access to fibre-to-the-premises be considered, including offsetting a portion of the cost of the “last mile” to any new or existing facility.
- **Physical Infrastructure:** Pragmatic considerations for flexible-use PIC-D include the needs for *sidewalks* (to facilitate informal collisions), *park/recreational/performance space* (to enhance the stickiness of the space as a destination to non-resident workers), and
- **Transportation Infrastructure:** While some audiovisual workers may live in a flexible-use PIC-D, most will not. As such, increased public transportation options should be considered. While doing so it is important to recall the negative impact that vibrations from some modes of transportation (e.g., subways, light rail) can have on production operations. Moreover, parking for commercial trucks will ensure that the district can accommodate the varied logistical needs of media producers.

Recommendations | Positioning PIC-D for the Future

In general, it is critical that the PIC-D be considered not only as a destination for film/TV production, but as potential centre for audiovisual production/development of any sort. While the commissioning of linear audiovisual products continues to increase (and shows little sign of slowing its rate of growth), the PIC-D should likely be designed for **what follows "peak linear content".**

In so doing, the district must recognize:

- The **existing needs of film and TV production** (e.g., quiet, flexible space that can be leased on a multi-year basis). These needs suggest that at least 50% of the available land should be allocated to core production needs (across all sub-districts). Other (heavy- or medium-intensity) industrial uses are likely to detract from these needs;
- **Emerging needs of linear audiovisual production** where increasingly large portion of production budgets will be allocated to animation and other digital services (e.g., motion capture); and,
- The most **likely needs of interactive digital media companies** that may located in PIC-D. Such needs include the need to advertise/market the PIC-D as a destination for "brand-name" companies in the interactive media industry (e.g., Electronic Arts, Google, etc.).

With these needs in balance, the PIC-D stands the highest likelihood of building a world-class cluster focused on the development of leading-edge audiovisual products.

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