

TRENDS REPORT

THE DIGITAL PUZZLE

Piecing Back Together the Content Value Chain

INTRODUCTION: CONTENT WINS...AGAIN

THE MAJOR TECHNOLOGICAL INNOVATIONS AND NEW DIGITAL STRATEGIES THAT HAVE MARKED THE LAST FEW YEARS HAVE LED TO SIGNIFICANT CHANGES IN THE AUDIOVISUAL INDUSTRY AROUND THE WORLD. IN FACT, THEY HAVE REDEFINED INFRASTRUCTURES, USES, RELATIONSHIPS WITH THE AUDIENCE, BUSINESS MODELS, AND THE COMPETITIVE ENVIRONMENT.

While most of the big names in the industry have adapted to the new digital ecology, some fundamental guestions remain:

How has the new audiovisual value chain been reconfigured? Which players are best positioned to make the most of it?

These questions served as the framework for the 2017 edition of the Trends Report in which the Canada Media Fund examines the value creation opportunities that have emerged from this major industrial reorganization. The digital environment has become a virtual battleground, where competitors battle each other to seize the best opportunities and to position themselves in the evolving value curve.

While previous Trends Reports have provided opportunities to dissect a range of transformative phenomena that remain relevant and evolving, this edition focuses on four fronts: technology and innovation, consumer habits, business models, and markets and competition. We will discuss the following trends, and analyze the opposing forces and the interests involved:

- > Content distribution in the Discovery Oligopoly era. Will the dominant platforms tighten their grip on the Web and the discovery of content? The next tool in the struggle to control user attention: artificial intelligence.
- > The race for winning content is on. In an era of overabundance, what types of content stand out? Live, drama, and children's programming are content to bet big on.
- Diversity is a winning business model. While diversity raises crucial social and political issues, there are also many business opportunities for the taking.
- > Towards a new global playing field: the new centres of influence for consumption, content, and investment. The giants of Silicon Valley and Hollywood are no longer the only ones calling the shots. New hubs are emerging in other areas, especially in the Asia-Pacific region.

Notwithstanding the current lack of clarity around creating value in this ever-changing digital economy, one value vector is clear: content. Because the digital revolution is first and foremost about the exponential potential in the modes of production, distribution, and consumption of media content.

Subjects covered in previous reports include the move from television to online viewing, the professionalization of user-created content, virtual and augmented reality, game watching, eSports, artificial intelligence, the internet of things (IoT), Big Data, the blockchain technology, the monetization of live content, and crowdfunding

INTRODUCTION (continued)

In the television sector, this has resulted in a proliferation of Over the Top services (OTT), 'TV Everywhere,' and other on-demand viewing models, combined with the prolific production of user-generated content. These new production and distribution avenues have created a content offering unprecedented in audiovisual history and have built up new demand for exclusive, original and quality content that stands out. According to the research team at the American FX channel, the number of original TV series increased by more than 200% in the last six years, reaching a peak of 455 new series broadcast² in 2016. The stratospheric increase in supply that started in 2010 is mainly attributed to streaming video services (with Netflix out in front).

The years going forward are very promising indeed. With the burgeoning popularity of video games and the advent of virtual reality, augmented reality, and mixed reality, narrative experiences will become increasingly diverse and immersive, stepping up the solicitation of all our senses. These experiences will further expand the offering and compete with other audiovisual content to capture their share of user attention spans.

The stakes are sky-high. As The Boston Consulting Group noted in its The Value of Content report, the global television industry generated US\$530 billion in 2016 (in advertising dollars, subscription fees and public funding), 70% of which is directly attributable to the content economy³.

"BUT ONE THING IS CERTAIN: CONTENT WILL BE AT THE CENTER OF WHERE THE INDUSTRY GOES FROM HERE. AND THOSE WHO OWN AND CONTROL THE CONTENT WILL HELP STEER THE DIRECTION."

- THE BOSTON CONSULTING GROUP THE VALUE OF CONTENT 2016

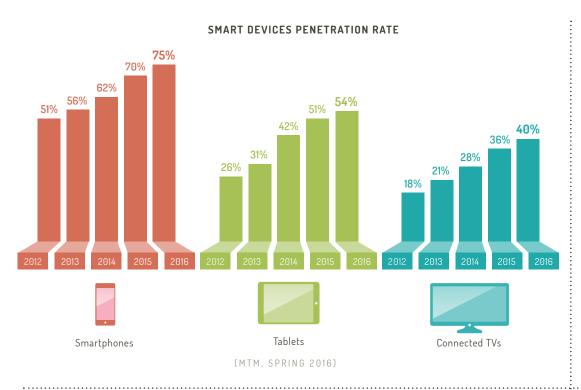
This quote reminds us that the "content" factor will continue to influence the economic landscape and policy decisions over the next few years. More importantly, it raises the fundamental question that guides the thinking in this report: who will benefit from the new equilibrium in the content value chain?

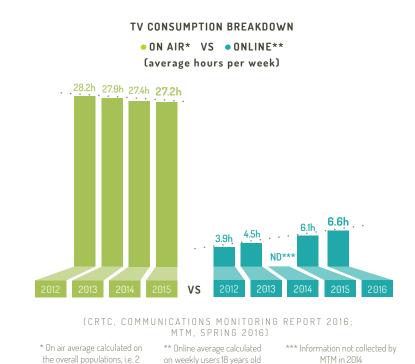
² According to the research authors, these estimates exclude the following categories: library, daytime dramas, non-English Language, children's programs and short-form content (less than 15 min) but includes recently-produced imports.

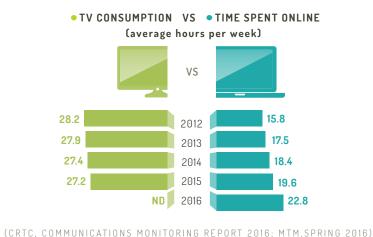
³ As opposed to the infrastructure economy or cable technology. Editor's note

DASHBOARD

All data refer to the Canadian market, unless otherwise indicated







ONLINE TV CONSUMPTION BREAKDOWN PER DEVICE (% of population, data from 2015 to 2016)

and older

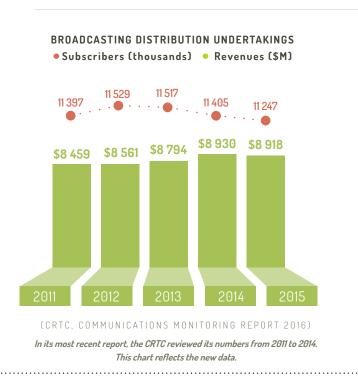


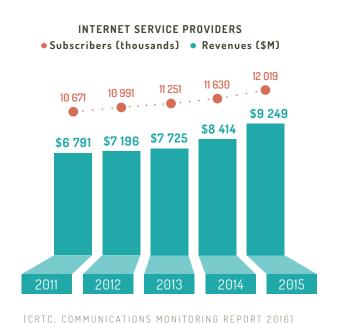
years and older

17 % **> 20%** Connected TVs

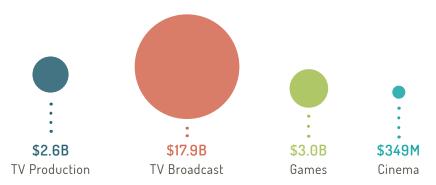
(MTM. SPRING 2016)

DASHBOARD (continued)





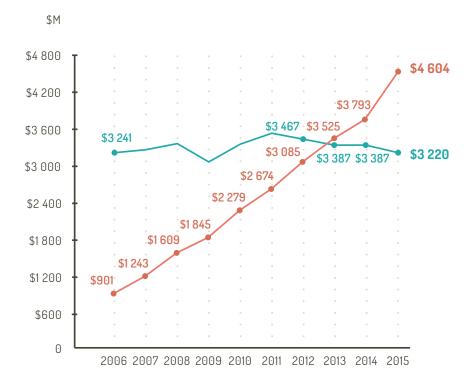
SIZE OF PRINCIPAL SCREEN-BASED ECONOMIES



(CMPA, PROFILE 2015; CRTC, COMMUNICATIONS MONITORING REPORT 2016; ESA CANADA, ESSENTIAL FACTS ABOUT THE CANADIAN VIDEO GAME INDUSTRY, 2016)

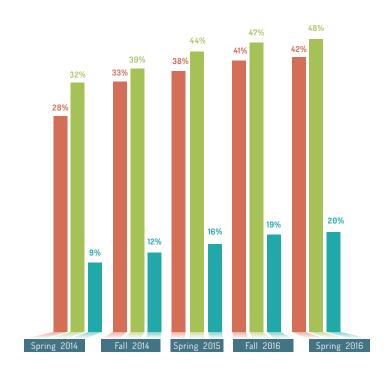
DASHBOARD (continued)





(IAB CANADA, CANADIAN INTERNET ADVERTISING REVENUE SURVEY 2015-2016)

NETFLIX SUBSCRIBERS National average Anglophones Francophones



(MTM, SPRING 2016)



On the TECHNOLOGY AND INNOVATION front

- Content distribution in the Discovery Oligopoly era

Anticipated some six years ago, the evolution of an online environment dominated by a handful of platforms controlled by big players seems to have materialized. resulting in what some call a 'discovery oligopoly.' The next battlefield for control of consumer attention will be artificial intelligence (AI). The challenge for the content industry will be twofold. On one hand, companies must adapt to the demands of a small group of online overlords that controls AI's talent and technology - the foundations of the smart superplatforms of tomorrow. On the other hand, the growing body of user data, essential to the effective functioning of AI tools, will confront the industry with new technical and regulatory issues relating to cybersecurity and the protection of information.

"AS MUCH AS WE LOVE THE OPEN, UNFETTERED WEB, WE'RE ABANDONING IT FOR SIMPLER,

SLEEKER SERVICES THAT JUST WORK."

- CHRIS ANDERSON, AUTHOR AND ENTREPRENEUR, 2010

In 2010, Chris Anderson and Michael Wolff predicted the demise of the open web, arguing that with the rise in mobile consumption, users would evolve into semi-enclosed digital ecosystems, 'walled gardens' dominated by apps and controlled by a small group of major players. While this prediction is being challenged today – people like Greg Satell make the point that it's only by interconnecting these ecosystems that players can gain dominant positions – it is now widely held that the prognostications of Anderson and Wolff are well on their way to becoming a reality for the media industry.

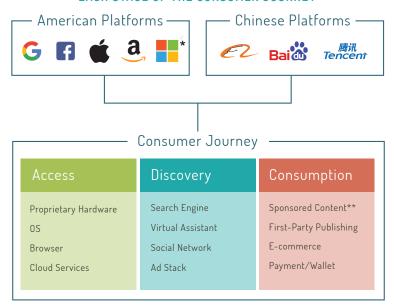
Indeed, a number of trends covered in our reports over the years confirm this:

- > Dramatic growth in consumption on mobile devices, increasing the use of apps to the detriment of web browsers.
- > Concentration of user attention on a limited number of digital access points (the most popular apps, dominant messaging platforms and social media).
- > Fierce competition between media and technology giants, characterized by increasingly vertical integration aimed at controlling the development, production, and distribution of content.

At a presentation given at the WSJLive Conference on October 25, 2016, research firm Activate noted that we are rapidly moving towards a **Discovery Oligopoly**, that is, an oligopoly whose characteristics we had already described, to a large extent, in our 2015 The Big Blur Challenge

> "A handful of discovery platforms have become the Discovery Oligopoly, controlling each stage of the consumer journey."

THE DISCOVERY OLIGOPOLY CONTROLS EACH STAGE OF THE CONSUMER JOURNEY



*Microsoft social network capability through LinkedIn **Includes recommended products, sponsored tweets, sponsored articles, etc.





On the TECHNOLOGY AND INNOVATION front (continued)

- > "The Discovery Oligopoly uses discovery algorithms and sponsored content deals to pick winners, forcing everyone who wants to reach a user to buy their way to prominence."
- > "Major platforms dictate increasingly strict discovery requirements for media creators during each platform shift."
- > "Overall, discovery dominance translates into revenue Google and Facebook are expected to command 73 % of each additional digital ad dollar over the next three years."
- > "Successful content platforms build sophisticated curation engines into their offerings or integrate with third-party virtual assistants."
- > "Nurturing fan culture and developing communities are some of the few ways for media companies to overcome the Discovery Oligopoly's user control."

Think Again: Tech and Media Outlook 2017, Michael Wolf/Activate, WSJ Live, October 25, 2016

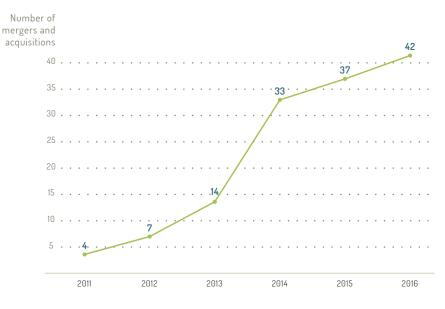
A recent trend illustrates how this evolution towards a discovery oligopoly has intensified. Major conglomerates are redoubling efforts and investments to take the lead in the development of artificial intelligence, a technology that can bring the almost infinite mass of Big Data under control and translate it into dollars. Over US\$2.1 billion has been invested in AI start-ups since 2010 (US\$1.3 billion in 2015 alone), a strong indication that the majors see huge growth potential in this technology. According to CB Insights, the pace of mergers and acquisitions in the artificial intelligence sector has increased 700% between 2011 and 2015. In total, close to 140 companies were bought since 2011, with more than 40 acquisitions in 2016 alone.

ARTIFICIAL INTELLIGENCE QUARTERLY TIMELINE OF MERGERS AND ACQUISITIONS

(1st quarter 2011 to 3rd quarter 2016)

THE DISCOVERY OLIGOPOLY IS IMPOSING INCREASINGLY STRICT DISCOVERABILITY REQUIREMENTS ON CONTENT CREATORS

Search Engine Optimization	Firs-Party Publishing	Bot Applications
> Evolving SEO requirements require publishers to constantly tweak content in order to guarantee discovery.	> Discovery on social platforms requires loosening control over the ad stack and sharing advertising revenues.	> Voice-control bots (e.g. Siri) and search widgets (e.g. Google Now) pull content from pre-determined sources and publishers.
> Favors larger publishers with advanced technical capabilities and awareness of most recent Google/Bing updates.	> Recent Facebook algorithm tweaks favor user-generated content over publisher content.	> Discovery alorithms on these platforms will grow in influence.



CBINSIGHTS (CB INSIGHTS, 2016)

https://www.cbinsights.com/blog/top-acquirers-ai-startups-ma-timeline/



On the TECHNOLOGY AND INNOVATION front (continued)

With Google and Apple in the lead, just a few players now share control over the talent and intellectual property that underpin the technology that will power the smart platforms and hyper-personalized virtual assistants of tomorrow. This level of concentration is a real concern in terms of scientific development. While most of the leaders offer their open source AI software so anyone can use it to build their own applications, they're very careful not to share the data that gives them their competitive edge. Without this data, the value of artificial intelligence software is next to nothing. Limiting full access to their technology because of business imperatives puts innovation and knowledge transfer at risk.

"THE VALUE OF DATA GOES UP EVERY DAY THAT AI ADVANCES. AT SOME POINT THERE WILL BE A MARKET FOR IT. DATA IS GOING TO HAVE MORE VALUE IN THE FUTURE AND WE WILL BUILD ECONOMIES ON OUR DATA, DATA WILL BECOME A CURRENCY."

-DAVID KENNY, GENERAL MANAGER OF IBM'S WATSON DATA CRUNCHING SERVICE, 2016

In light of its recent rapid advances, artificial intelligence is more and more likely to be the subject of ethical debates. In fall 2016, Microsoft, IBM, Facebook, Google, and Amazon announced the creation of the "Partnership on Artificial Intelligence to Benefit People and Society" to develop best practices in AI, improve public understanding of the technology, and create a platform for advancing discussion of Al's impact on people and society.

In the content industry, using artificial intelligence to analyze user data can greatly improve content discoverability, and, in the process, the user experience. A US study found that 60% of respondents would be 'very likely' or 'fairly likely' to disclose personal information to access personalized content recommendations, 69% of them indicating that recommendations help them navigate and prioritize the overabundance of content. Many, however, said they were uncomfortable about providing personal information to obtain service. With the proliferation of cyberattacks and database violations, data security remains a major concern. Canadian companies, in turn, must become increasingly concerned, especially if they plan to expand their international presence. Many will be called upon to collect, store, and process larger and larger amounts of user data, while facing complex regulatory frameworks related to the confidentiality of data, with frameworks varying from one jurisdiction to another.





(PONEMON INSTITUTE, 2016)

(WEBSENSE, 2014)

DATA SECURITY: COLOSSAL CHALLENGES FOR REGULATORS

"AS DATA EXPLODES. DATA SECURITY CONCERNS EXPLODE."

- MARY MEEKER, VENTURE CAPITALIST, 2016

As major multinationals tighten their grip on the globalized digital universe, regulators are concerned about net neutrality, international data transfer agreements, maintaining free competition, and protecting their citizens. In fall 2016, the White

House tabled a plan on the current state and future applications of artificial intelligence. The plan discusses public policies related to AI, impact on citizens, and actions to consider. The accompanying report recommends that the educational system include ethics, security, and protecting individual privacy as integral parts of artificial intelligence, automated learning, and computer and information sciences programs. In the summer of 2016, the United States and the European Union signed a new agreement in principle allowing US companies to continue to collect, use, and disclose personal information on European citizens. The agreement was necessary to allow American companies to store personal data on

European citizens since the US legislative framework does not offer a level of protection for personal information that meets EU standards. The Federal Communications Commission (FCC) also recently adopted new provisions to limit the ways that Internet service providers can use customer data. In Canada, the Department of Public Safety and Emergency Preparedness recently held a public consultation on **cybersecurity** to assess how to take advantage, in government policies and cyber security programs, of changes in digital technology that have an impact on safety, the economy, and Canadian society. Given the accelerating rate of change in the AI sector, debates like these have only just begun.

On the CONSUMER HABITS front

- The race for winning content is on

At the global level, consumer demand has crystallized around three categories of content: drama series, youth programming, and live content. To meet this demand, technology and media majors have been engaged in a war for original content, with an added battle for control of live content, the last bastion of traditional television. In the headlong rush for live content, digital players are concentrating their investments on technology that has already proven itself with the competition.

> "AS VIEWERS GAIN MORE CONTROL OF THEIR PROGRAMMING GRIDS, THE OWNERS OF NON-ESSENTIAL AND NON-LIVE CONTENT ARE AT SIGNIFICANT [RISK]. EITHER YOU ARE LIVE AND LARGE ... OR DEAD."

> > - MOFFATTNATHANSON ANALYST MICHAEL NATHANSON, 2016

Social media and over the top television (OTT) services use a variety of features to attract consumers: services and content accessible on all devices, video in 4K resolution, parental controls, or downloading content for offline viewing. However, quality and exclusive live content remains key in differentiating the various offerings in the fiercely competitive battle for the video-on-demand space.

WINNING OVER TODAY'S AUDIENCE WITH LIVE CONTENT

This is a trend that is well established: the online giants are betting big on live content to attract and retain users. Meerkat (which did not survive the competition and finally took its app off market in October 2016) and Periscope had already started making some waves when they were launched in winter 2015. Since then, those waves have morphed into tsunamis. The online leaders, like YouTube and Facebook, as well as smaller players, like Instagram and Vimeo, are now duking it out to bring millions of live content fans in. And in doing so, the major online players are behaving more and more like traditional broadcasters.

Different strategies are being used in attempts to dominate the market. One of the

most popular strategies is getting the rights to broadcast sporting events. Facebook was hoping to get the rights to broadcast 10 NFL games from the 2016-2017 season, but Twitter made the winning pass to ensure its sustainability. Meanwhile, Yahoo reached an agreement with the NHL to broadcast free games online for the 2016-2017 season, one year after becoming the first online player to broadcast an exclusive NFL game. And it's not just sports that the online giants have set their sights on. They're also aiming to broadcast any and all newsworthy events, like the three US presidential debates that generated 8.5 million viewing hours live on YouTube.

To get content and grow its platform, Facebook has also appealed directly to wellknown publications. The New York Times and Buzzfeed each received US\$3 million to use Facebook Live. So, it's no coincidence that one of the first live videos to be a smash hit on Facebook was Buzzfeed's exploding watermelons, capturing hundreds of thousands of online eyeballs.

On the CONSUMER HABITS front (continued)

THE GROWING POPULARITY OF ESPORTS

Over the past year, the eSports phenomenon, covered previously in our trends reports, has grown dramatically and shows no sign of slowing down. Global revenues for 2016 are estimated at US\$493 million, up 51.7% from 2015. North America accounts for 36% of revenues, making it the largest market ahead of China. Estimated today at just over 290 million fans (including about 5 million in Canada), the global audience is in full-growth mode and is expected to consume at least 6.6 billion hours of eSports content annually by 2018. With numbers like that, it's no surprise that many players are out to win a share of the online gaming industry, which until recently was Twitch's exclusive domain. YouTube Gaming was launched in 2015 and ESPN.com launched a vertical dedicated entirely to the coverage of video game competitions at the beginning of 2016. And since spring 2016, Facebook and Twitter have been going all out to sign broadcast agreements of their own for live eSports events. With revenues estimated at US\$1.128 billion for 2019, the interest of online leaders and traditional media alike is anything but declining.



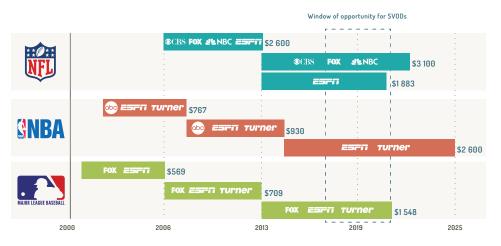
At the same time, social media are forever announcing ongoing improvements in their online broadcasting tools. And often as not, as soon as one new option works well on one platform, it's also offered by a competitor. YouTube, for example, adds the capability of streaming live from its app (like Periscope and Facebook), while Facebook and Periscope include a new function that adds dynamic masks to cover the faces of those who broadcast live (a function that, itself, closely resembles Snapchat's filters). Given the great similarity in services offered, it's the number of users, financial capacity, and, above all, content exclusivity that will determine who wins in the end.

MIGRATING FROM TELEVISION TO ONLINE VIEWING

By presenting major events live, the online players are hunting for viewers in traditional TV land. That way, social media could accelerate the transition of audiences from TV viewing to consumption online. And it's a trend that's bound to accelerate, especially since broadcast rights to many US sporting events will be up for grabs in 2019. Any online player ready to bet big could beat traditional broadcasters and win the race over sporting rights.

On the other hand, online platforms will still face huge obstacles when it comes to broadcasting live, especially with respect to transmission reliability, image quality, data consumption costs for streaming long-form videos, and monetizing content.

TIMELINE: BROADCAST RIGHTS BY SPORT 2000-2025 (US\$M)



(ACTIVATE, COMPANY DATA, SNL KAGAN 2016)

On the CONSUMER HABITS front (continued)

The battle for live content, the last bastion of traditional TV, is still in its infancy. But before they can position themselves as a real alternative to the small screen, online players must make a lot of right moves, like mastering the live streaming of sporting events or implementing new monetization tools.

OTT MAKES THE RULES

Two other kinds of content are also highly coveted, especially by major OTT players, to attract and retain audiences: drama series and children's programming. This trend impacts the value formerly assigned to each category of TV programming. As the value of midtier content continues to collapse, niche and top rated content continue to soar in value.

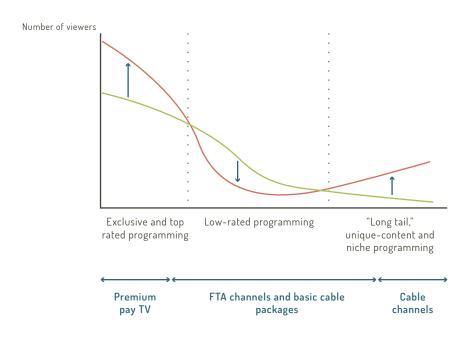
Indeed, the expansion in the number OTT platforms increases the buyer pool, and these new players are willing to pay big bucks for the quality content they want. As proof, HBO invested US\$1.8 billion in top rated content acquisition in 2016, an increase of 20% over the previous year. In summer 2016, Amazon announced that it upped its investment in all types of video content by 200% and will have tripled the number of its original productions by the end of 2016. Not to mention Netflix, which will lay down the stunning sum of US\$6 billion to produce 1000 hours of original content in 2017.

The resources invested by OTT services reflect the strategic importance of having a distinctive catalogue offer to meet the increasingly great expectations of consumers.

The accelerating pace of investment from OTT players pushes up the value of content, putting extra pressure on traditional broadcasters, forced to pay even more than they did before. In the US, the CEO of CBS says that the strategies put in place by the large video-on-demand services to enhance their original content portfolios "have driven production costs up to astronomical levels." Considering the overabundance of content, the multiplication of access points, and the flexibility offered by viewing-ondemand, the value associated with each type of content is being recalibrated. The way Netflix has parcelled out investments in recent years indicates that high-end drama series and children's programming are currently reigning at the top of the hill in the content value chain

TOP-RATED AND UNIQUE CONTENT IS BECOMING MORE VALUABLE. WHILE MIDTIER IS LESS ATTRACTIVE

FUTURE CONSUMPTION CURVE
PRESENT CONSUMPTION CURVE



(BOSTON CONSULTING GROUP, 2016)

https://www.bcgperspectives.com/content/articles/media-entertainment-digital-revolution-disrupting-tv-industry

On the CONSUMER HABITS front (continued)

THE WINNING FORMULA

Not unexpectedly, dramatic series will go after the lion's share. Because blockbusters like House of Cards from Netflix or Transparent from Amazon have what it takes to reel in new subscribers, they're at the heart of the OTT success strategy. Drama series and children's programming lend themselves well to time-shifting and binge watching – two widely accepted consumption habits with Canadians of all ages – and they have long shelf-lives compared to factual content.

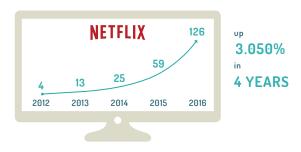
Children's programming has the added benefit of a continually renewed audience and helps shape the consumption habits of future generations. Together with drama series, it is the basis of the subscription services strategy to maintain and increase the subscriber base, while keeping the churn rate low. The decision to unsubscribe from a service is more difficult to take when the service is low-cost, advertising-free, and has something for everyone in the family, including children.

"WE ARE DOUBLING DOWN ON KIDS AND FAMILIES."

- TED SARANDOS, CHIEF CONTENT OFFICER, NETLIX, 2016

Drama series and kids programs are not only popular formats in local markets, they generally export well, too. They make the most of the trend towards content globalization, and answer the go-go growth ambitions of major OTT services. If Englishlanguage productions are seen as easily exportable, the proliferation of platforms and the associated production boom help to cultivate an audience for content that reflects local culture, which explains the success of *Narcos*, an original Netflix production. filmed almost entirely in Spanish.

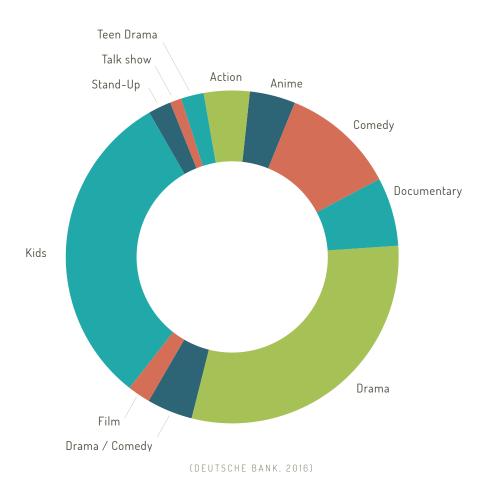
NUMBER OF ORIGINAL PROGRAMS COMMISSIONED BY NETFLIX



(THR RESEARCH, 2016)

HOURS OF ORIGINAL CONTENT COMMISSIONED BY NETFLIX TO DATE





On the BUSINESS MODELS front

- Diversity: a winning business model

Beyond the political issues it raises, diversity is a winning business model. Adapting the content offer by focusing on cultural diversity and gender equality means reaching a wider audience, promoting the development of technologies for all, and, ultimately, generating greater profits.

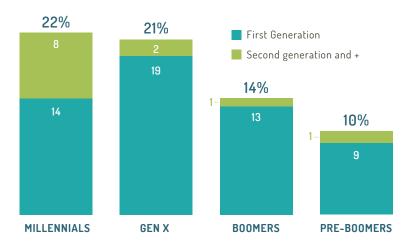
> "WE CHAMPION THE DIVERSITY OF OUR INDUSTRY, NOT JUST BECAUSE IT'S THE RIGHT THING TO DO. BUT BECAUSE DIVERSITY MATTERS FOR BUSINESS."

- JOHN FITHIAN, PRESIDENT-CEO OF THE NATIONAL ASSOCIATION OF THEATRE OWNERS, 2016

Audiences today and tomorrow have never been so diverse. Not only is one in five Canadians from a visible minority, but more than 240 ethnic origins were reported in the 2011 Census of Statistics Canada. And the trend is gaining momentum. In 1981 only one in 20 Canadians said they belonged to a visible minority. In fact, it's the millennials in Canada and the US that make up the generation with the greatest cultural mix.

MILLENIALS ARE THE MOST CULTURALLY DIVERSE GENERATION

(% of Population by Visible Minority Status, 2011)



(STATISTICS CANADA, 2011 NATIONAL HOUSEHOLD SURVEY)

Thanks to the international expansion of the online majors, viewers from the four corners of the earth are added to the North American ethnocultural mosaic. Netflix is now available in more than 190 countries and YouTube has already launched a regional version of its service in 88 countries. This new, highly diversified market represents an enormous source of potential revenue for producers and creators alike, provided, of course, they can come up with the goods to satisfy such a wide-ranging audience. In this way, diversity becomes an important vector of growth and a vital asset for doing business.

To take advantage of this opportunity, it's necessary to modify the content being offered. Keith Le Goy, president, international distribution, for Sony Pictures Television, sums up the situation this way: "We need to tell stories that appeal to people all across the globe. [...] People want to hear and see and connect with stories that resonate with their lives and their experiences of who they are." By building in greater diversity in casting characters, and scenarios, you make it possible to reach more viewers because your content echoes what goes on in their daily lives.

Major players have already started changing the ways they approach casting. Netflix chief content officer, Ted Sarandos, explains: "Meeting the demands of that increasingly international audience naturally entails a more inclusive and representative approach to casting". Which is why the video-on-demand giant feels it's made the right bet by presenting programs like Marco Polo and Masters of None, among others, that feature actors of Asian origin.

On the BUSINESS MODELS front (continued)

The same is true of the National Association of Theater Owners in the US: "The more that movie casting looks like the world, the more the world goes to the movies," says the association's president, John Fithian. He cites Furious 7, as a good example. The distribution is multicultural, the scenario unfolds all over the planet, and the film has become one of the biggest box office hits of all time. This echoes the results of a Hollywood diversity study conducted in 2016 by the University of California, Los Angeles (UCLA), where a direct link was made between distribution diversity and the success of a film or television show. According to the authors, content that racks up the biggest numbers in movie theatres and the best ratings is the kind that reflects the diversity of American society.

Alongside the issue of cultural diversity is, of course, that of equality between men and women. This challenge again presents important business opportunities, and this is particularly evident in the mobile video games sector, where women today represent one of the main growth drivers. In fact, women represent an increasingly important share in the gaming industry in general. While it is true that there are still more men than women playing video games, the gap has been narrowing over the years. The Canadian Entertainment Software Association estimated that 38% of players in Canada were women in 2011. This percentage rose to 49% in 2016.

TECHNOLOGIES FOR EVERYONE

Diversity is especially important when it comes to the development of new technologies. By including a greater variety of voices and opinions in creating a product, process, or service, you ensure that it reaches out to as many consumers as possible. The White House has also targeted diversity as a key issue in the development of artificial intelligence: "[Producing AI by and for diverse populations] helps to avoid the negative consequences of narrowly focused AI development, including the risk of biases in developing algorithms."

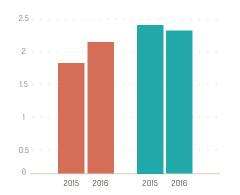
While the risk of bias in algorithms is sometimes difficult to detect, bias in the production of technology products is much more obvious. This is particularly true of headsets and accessories designed for virtual reality applications. Preliminary studies indicate that virtual reality causes more nausea in women than it does in men. According to research conducted at Brown University in the US, this may be due to design considerations that don't take account of the differences in the ways each sex perceives movement.

WOMEN ARE A SIGNIFICANT GROWTH VECTOR IN MOBILE GAMING IN THE UNITED STATES



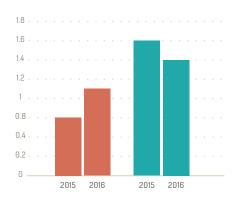
AVERAGE REVENUE PER USER

(US\$)



AVERAGE MOBILE GAMING TIME PER WEEK

(hours)



(NIELSEN 2013)

On the BUSINESS MODELS front (continued)

Finally, building on diversity not only helps creators and producers reach larger audiences, it also has a direct influence on a company's performance. A number of studies show that there is an actual correlation between the level of diversity and parity inside a company and its economic output.

DIVERSITY'S DIVIDEND

What's the likelihood that companies in the top quartile for diversity financially outperform those in the bottom quartile*?

GENDER-DIVERSE COMPANIES ARE



FTHNICALLY DIVERSE COMPANIES ARE



MORE LIKELY TO HAVE BETTER FINANCIAL RETURNS

*Results show likelihood of financial performance above the national industry median.

(MCKINSEY, 2016)

BEYOND GENERATIONAL SEGMENTATION: THE RISE OF THE PERENNIALS

"GEOGRAPHY, AGE, AND GENDER? WE PUT THAT IN THE GARBAGE HEAP."

- TODD YELLIN, NETELIX'S VP OF PRODUCT INNOVATION, 2016

As noted in our previous reports, it's primarily teenagers and young adults who switch from traditional television to television content that's accessible on all screens - anywhere and anytime. On the other hand, a growing number of analysts believe these new consumption patterns transcend generational divisions.

Perennial is the word now used to describe people who are always

technologies and in trying to push the envelope no matter what age they are.

The word connotes a transgenerational approach that promotes segmentation based primarily on the preferences and common values of a specific consumer group.

This approach is already used by Amazon and Netflix. Their recommendation system, based on the myriad of data generated by consumers, relies more on user types than on a person's age. And the online leaders are not the only ones who favour this approach: audience measurement specialists, like Nielsen, also categorize consumers according to their preferences and lifestyles.



On the MARKETS AND COMPETITION front

- Towards a new global playing field: the new centres of influence for consumption, content, and investment

The impact of the digital revolution and globalization continues apace: changes in consumer habits and user expectations, expansion of global distribution markets, changes in business models and investment flows. However, the influencers we know - Silicon Valley and Hollywood, in particular - are no longer the only ones calling the shots. New hubs are emerging elsewhere, especially in the Asia-Pacific region (APAC), and China, in particular, which has become an increasingly important player in technological development, investment, and coproduction. Africa, Latin America, and the Middle East are also markets of mounting interest to Canadian companies. The development of new business relationships and strategic information on emerging markets will be of critical importance to the success of Canadian firms and content exports.

> "IS IT POSSIBLE THAT, WITHIN THE NEXT YEAR, THE MOST POWERFUL PEOPLE IN HOLLYWOOD WILL BE BASED IN SUCH DIVERSE AND UNLIKELY ENTERTAINMENT MECCAS AS DALLAS AND DALIAN, CUPERTINO AND SHENZHEN, MOUNTAIN VIEW AND PHILADELPHIA, SUNNYVALE AND BEIJING?"

> > - DAVID BLOOM, COLUMNIST, 2016

Of course, the traditional business partners of Canadian content companies, including the United States and Western Europe, are still fundamental. These remain dominant consumer markets and major buyers of entertainment content. But it's also true that our creative industries can now turn to other markets of increasing influence.

Already the UK, the world's second largest exporter of television and film content, is mobilizing its creative industries to encourage them to make inroads into the massive APAC market. According to the Confederation of British Industry (CBI), 66% of the world's middle class will reside in this region by 2030. The CBI also pointed out that imports of creative goods and services in APAC increased by 300% between 2003 and 2012. The market for television and mobile applications is experiencing very strong growth in the region, which is already the most important market for the video game industry.

WORLDWIDE SPENDING ON TELEVISION CONTENT IN 2015* (US\$)		
United States > \$43B	South Korea > \$2.6B	
Western Europe > \$38.6B UK (\$10.7B), Germany (\$7.3B),	Australia and India > \$2.4B	
France (\$6.6B), Italy (\$4.6B)	Mexico > \$1.5B	
Japan > \$9.8B	Brazil > \$1.4B	
China > \$8.4B	Russia and Turkey > \$900M	
Canada > \$3.4B		

*Expenditure on TV programming (original programming and acquisitions) across free-to-air, pay TV and online

(WORLD TV PRODUCTION REPORT 2016, IHS MARKIT)

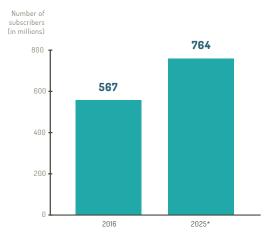


THE GROWING IMPORTANCE OF APAC IN MEDIA AND ENTERTAINMENT MARKETS

PAY TV

Number of pay TV subscribers in the Asia Pacific region in 2016 and 2025 (Million)

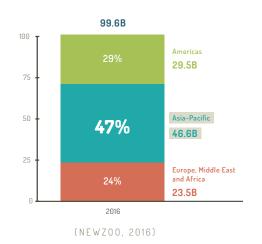
* estimates

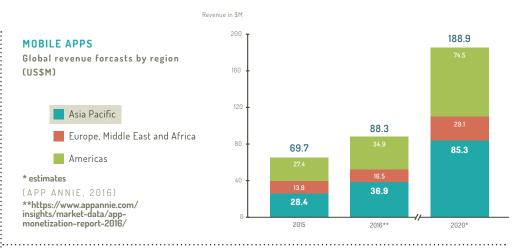


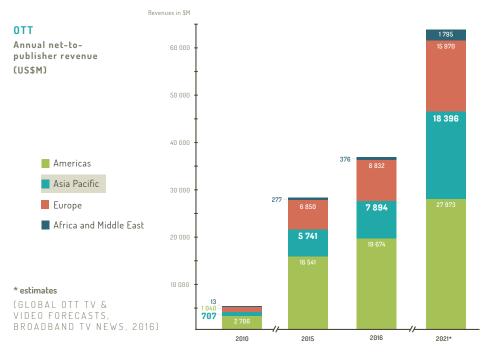
(MEDIA PARTNERS ASIA. © STATISTA 2016)

GAMES

2016 global market per region (US\$B)









China, in particular, is becoming more and more the market no one can ignore. It continues to draw in new technological and consumer paradigms with global influence. Chinese messaging services such as WeChat (more than 800 million users) redefine the multi-user platform model by integrating multiple features, chatbots, e-commerce, and instant payments. In an article published in *The New York Times* in August 2016, technology specialist Paul Mozur noted: "Already in China, more people use their mobile devices to pay their bills, order services, watch videos and find dates than anywhere else in the world. Mobile payments in the country last year surpassed

those in the United States. (...) China's largest internet companies are the only ones in the world that rival America's in scale."

Access to the Chinese market is considered difficult for a number of reasons: complex regulations, quotas, and the specific cultural consumption preferences of its people. Nevertheless, many companies have managed to successfully distribute their content in China, including several notable Canadian examples, particularly in the youth content sector.

THE MARKET IN CHINA: FACTS AND FIGURES

- > Population: 1.4 billion
- > The No. 1 retail market worldwide, projections of over US\$7.086 trillion annually in 2020 (compared to US\$5.5 trillion for the United States).
- > 710 million online and 656 million mobile users
- > The three leading APAC television operators are Chinese: China Radio & TV, China Telecom, and BesTV combined had 275 million subscribers in 2015, and their combined subscriber base should grow by 14% over the next 5 years.
- > The online video market is expected to increase by 400%, from 22 billion yuan (US\$23.5B) in 2015 to 96.2 billion yuan (US\$14B) in 2020.
- > The gaming market, the largest on the planet, is worth US\$24.4 billion (compared to US\$23.5 billion in the United States) - 25% of the world total.

CANADIAN SUCCESS IN CHINA

- ➤ In 2012, the National Film Board of Canada and the Chinese company Phoenix New Media launched NFB ZONE, the first digital channel dedicated to the distribution of Canadian films in mainland China.
- > After launching on Chinese public broadcaster CCTV, eOne's Peppa Pig made its debut on iQiyi, Youku, and Tudou VOD platforms in October 2015. Total of 5.4 billion views in 10 months. This popular children's show was subsequently shown on Tencent VOD, LeEco, and Mango TV.
- > In 2016, 9 Story Media Group sold broadcast rights to its successful animated series Wild Kratts to CCTV and signed several digital distribution agreements with major Chinese platforms (Youku, Alibaba, CNTV, iQiyi, LeTV, PPTV, SMG).
- > Vancouver-based Big Bad Boo also sold its animated comedy 1001 Nights to CCTV in 2016. The show is broadcast to an audience of 340 million children under age 12.
- In 2016, DHX sold over 2400 hours of children's content to VOD platforms (Best TV, SiTV, Mango, PPLive, Youku, iQiyi).



China's strategic importance is not only because of its huge domestic market. China today is a first-class business partner and an increasingly important player in the global coproduction and investment network. For proof, just look at the international expansion of the major Chinese players in the content industry and the strong desire of their Hollywood counterparts to forge closer ties with China's investment community. As early as 2012, American producer Jeffrey Katzenberg founded Oriental DreamWorks with the support of Chinese investors to produce animated films in China for the export market. Three years later, Warner Bros. announced the creation of the Flagship Entertainment Group, a joint venture with China Media Capital to produce Chinese films for local and global markets.

And Hollywood is not the only one trying to connect with Chinese investors. For months now, Pact, the association of independent UK producers, has been hard at work opening up new avenues for collaboration and coproduction in China. Australia and New Zealand are also turning to China, especially for the coproduction of youth and factual content as well as documentaries. Image Nation Abu Dhabi recently partnered with the China Intercontinental Communication Center to launch a US\$300 million fund for television and film content from the United States, China, and around the world.

CHINESE GIANTS POSITIONING THEMSELVES ON GLOBAL COPRODUCTION AND INVESTMENT MARKETS



This conglomerate has been multiplying its international acquisitions in the entertainment sector since 2012:

Television and film production

> Legendary Entertainment acquired for US\$3.5 billion, Dick Clark Productions for US\$1 billion.

Movie theatres

> Odeon, UCI Cinemas, Hoyts, and AMC Entertainment (the latter acquired for US\$2.6 billion)

Wanda plans to set up a multi-billion-dollar fund to invest in productions from the six major Hollywood studios. The company will also build the largest studio in the world, Qingdao Movie Metropolis, on China's northeast coast, at a cost of US\$8.2 billion. Foreign productions that come there to work will be eligible for a 40% production credit.



After the launch of an initial US\$300 million content fund in July 2016, Alibaba announced in October that it would create a new media and entertainment investment group that will invest over US\$7 billion in content creation over the next three years. That same month, Alibaba became a shareholder in Amblin Partners. the company founded by Steven Spielberg: the two companies intend to collaborate on film production and distribution worldwide.

htc

: In July 2016, HTC joined up with 36 other investors to launch the Virtual Reality Venture Capital Alliance, a US\$17 billion fund (as of February 2017) dedicated to advanced technology enterprises and virtual reality content. Later, in the fall. HTC announced that it would expand its Viveport Arcade program outside China: new facilities will be set up in the US and Europe.

腾讯 Tencent

No. 1 worldwide in video games and owner of WeChat, Tencent has major ambitions for its television-movie division: investments in productions by Legendary Entertainment, equity in STX Entertainment and IM Global, and joint ventures with WME-IMG and Time Warner in the entertainment, sports, and feature film sectors. Cheng Wu, head of Tencent Pictures, says: "I hope in the future we will have more and more Chinese companies investing in Hollywood and more U.S. companies investing in China."



Other markets, from Africa and Latin America to the Middle East, are also booming. Many of them are already major producers and exporters of television content. Turkey, Israel, and Argentina are three good examples that guickly come to mind. And the consumption of content in these regions is thriving. It's no wonder Africa has attracted so much attention in recent months (see box).

More than ever, the development of business relationships in APAC, Latin America, Africa, and the Middle East, as well as strategic information on these markets, will be of critical importance to the success of Canadian content export initiatives.

EXPONENTIALLY EXPANDING MARKETS

Middle East and Africa

- > Pay TV: 54 million subscribers or more by 2021 (+67% over 2015)
- > SVOD: Revenues of US\$1.24 billion by 2021 (+1000% over 2015)

Latin America

- > Pay TV: 84 million subscribers by 2021 (+16% over 2016)
- > OTT: Revenues of US\$3.59 billion by 2021 (+212% over 2015)

A Canadian success story

In fall 2016, the producer and distributor 9 Story Media announced that it had sold more than 500 hours of kids and family programming to various broadcasters serving Spanish-language audiences in Mexico, Uruguay, Chile, Central America, the Caribbean, and the US.

AFRICA: A MARKET WITH GREAT PROMISE

"IF YOU'D BET ON THE 'NETFLIX OF AFRICA' (IROKOTV) FIVE YEARS AGO. YOU'D HAVE MADE A 3.000% RETURN."

- YOMI KAZEEM, JOURNALIST, 2016

Consumption of audiovisual content is growing rapidly in Africa thanks to increased connectivity and the proliferation of mobile devices: the number of connected smartphones increased by almost 200% between 2014 and 2016 (226 million connections) and Ovum expects that there will be 1 billion mobile broadband internet connections on the continent by 2021. New African on-demand services are proliferating: iROKOtv, ShowMax, Trace Play, and the French-language Afrostream platform...

It's no mystery why a global communications giant like Ericsson is interested enough in the African market to launch Nuvu, its own ondemand content service. The platform will feature African television series and films, and a whole host of international content. Ericsson acquired some 2500 hours of content from major distributors including Viacom, Mattel, and Canada's DHX Media.

What's especially attractive for Canadian companies, is that Africa presents opportunities for both Englishlanguage and French-language content. Deutsche Bank noted that, in 2016, the French group Canal Plus experienced remarkable growth in Africa (a revenue increase of 20% in the third guarter compared to a drop of over 6% for metropolitan France). Like analysts at the big German bank say, "Africa is booming."

CHALLENGES

- > Content producers increasingly must adapt to the demands of the online giants who control the talent and technologies that discovery platforms are based on (Chapter 1).
- > While the content industry collects more and more user data to ensure the smooth functioning of intelligent platforms and services, it faces growing challenges in cybersecurity and personal data management (Chapter 1).
- > All good ideas are quickly picked up and copied by players with the deepest pockets (Chapter 2).
- > While broadcasting live content online is gaining in popularity, it does provide technical challenges for producers who want to invest in it, including bandwidth requirements, transmission reliability, and image quality (Chapter 2).
- > Efforts to ensure better representation of diversity and gender equality should not be seen as a risk but as important vectors for growth in the content industry (Chapter 3).
- > To develop content for reaching wider audiences, it's necessary to broaden the talent pool in front and behind the camera and in all stages of production, from creation to marketing (Chapters 3 and 4).
- > To ensure successful marketing and distribution of content, the industry must develop new business relationships and rely on relevant strategic information in emerging markets (Chapters 3 and 4).

OPPORTUNITIES

- > The development of artificial intelligence will make it possible to optimize the discovery of content and the exploitation of user data to effectively link content with its target audience. Companies that collect user data as part of their business operations will be better equipped to take advantage of the information, for example, in their distribution or R&D activities (Chapter 1).
- > The value of certain content categories will increase significantly: live, serialized drama, and youth programming. In addition, the migration of live content online will allow industry players to diversify their digital portfolios and enhance their cross-platform offerings (Chapter 2).
- > The growing popularity of electronic sports confirms the category's commercial value. eSports are of interest to a huge audience of young users who have opted out of Pay TV, and are paving the way to new sources of advertising revenue. This presents opportunities for both the gaming industry and content providers (Chapter 2).
- > Taking into account Canadian diversity will open up new commercial avenues (Chapter 3).
- > There are many opportunities to be seized (development, coproduction, export) in new regions for Canadian industry, particularly in emerging markets where content consumption is in full-growth mode. Some of these markets also represent new and very attractive sources of financing and investment (Chapter 4).

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