IABM SPECIAL REPORT

SEPTEMBER 2020

Charting the uncharted - Plotting the course for the Media Technology industry

#IABMReport

Report Contents

Introduction

Strategic Industry Analysis

This report aims to give users a strategic analysis of the broadcast and media technology industry, identifying the key trends driving change in the sector in this period of enormous disruption due to the Coronavirus pandemic.

We provide a variety of information, including major trends in broadcast and media, financial indicators and technology adoption trackers to give a comprehensive overview of the state of the industry.

The information analyzed in this report is derived from both quantitative and qualitative research carried out by IABM.

> While I am confident we will get through this challenging period together and emerge even stronger, we must take necessary steps to manage the short- and long-term financial impact on our company

Bob Chapek, CEO, Disney

Source: Disney

Introduction

Charting the Uncharted

IABM carried out in-depth industry research to identify long-term industry drivers of change between March and April 2020. We believe that these media and technology drivers of change have all been accelerated by the Coronavirus pandemic, which is why we have decided to report them in this special edition of our Special Reports titled “Charting the Uncharted.” This edition focuses on charting the impact of the pandemic on the industry’s long-term drivers of change, on content supply chain investment and media technology adoption. We have carried out extensive research in the last few months to understand and chart this uncertain impact. Our objective is to provide IABM members and Global Engaged Partners with the most up-to-date market information to understand where the industry is going now and in the future.

Industry at a Glance

Brave New Digital World

The pandemic has dropped a digital bombshell on the media industry. Most companies have had to bite the bullet to defend their positions and accelerate their move to direct-to-consumer models. Only a few digital players have benefited from the effects of pandemic-induced lockdowns, both on the demand and on the supply side of media technology. In the long-term, the expedited move to digital business models may produce a polarization of the sector's already changing fundamentals. The industry-wide acceleration of established technology transitions is also set to change this industry forever, probably for the better. The pandemic has wiped out any concerns related to the adoption of digital tools and skills. It has also cemented the new relational dynamics between users and providers of media technology. Prepare for a brave new digital world to emerge after this pandemic has run its course.

This Special Report is based on hard data obtained and analysed by IABM's Business Intelligence Unit, backed up by quantitative and qualitative information and commentary from key players across broadcast and media industry. It provides authoritative, actionable insights into the way our industry is transforming, as well as pointing the way forward for its continued success.

The IABM Business Intelligence team would like to take this opportunity to wish everyone good health – and a speedy recovery if you are unfortunate enough to be affected by the Coronavirus.

About IABM Business Intelligence Unit

The Team

Lorenzo Zanni, Head of Insight & Analysis

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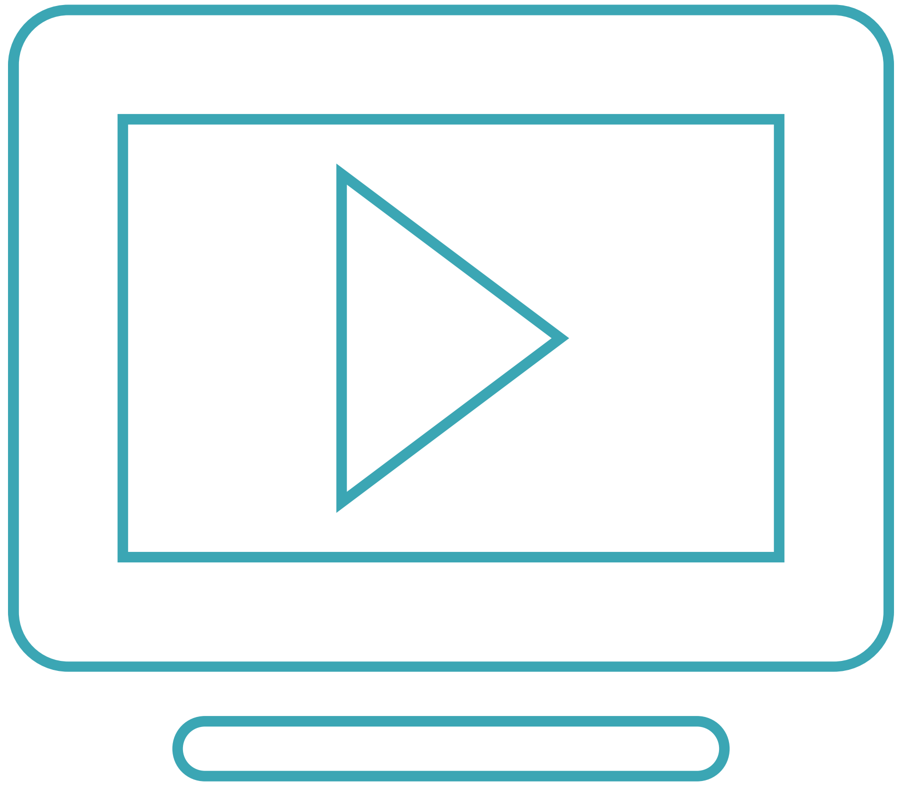
Contact us at:

insight@theiabm.org

You can share your feedback on our report using this short form. This will help us understand what we can improve

Charting Media & Technology
Drivers of Change



Comment from IABM CEO

Embracing change

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It is clear from this report that the coronavirus pandemic has compressed fundamental changes that were already slowly underway in the industry into just months or even weeks. Charting the Uncharted identifies this multi-dimensional change that is impacting Broadcast and Media fueled by the move to direct-to-consumer (DTC) business models across the industry. The propellants include the changing role of technology, the move to as-a-service, insourcing and a new generation of IT and environment-aware talent.

The coronavirus pandemic and ensuing lockdowns have driven digital subscriptions massively upwards, while traditional Pay-TV and advertising-based business models have been hit hard – especially so in relation to cancelled live sports programming. Stay-at-home mandates have also caused a fundamental shift in working patterns – and massively accelerated the industry's previously pedestrian progress towards dematerialized operations in the cloud, underpinned by as-a-service technologies and business models.

To survive the storm, traditional broadcasters have moved rapidly to supplement their output with DTC offerings, and to search for the necessary scale to compete with the digital giants through acquisition or consolidation as well as increased investment in content. The move to DTC with its thinner margins also requires increased efficiency and agility, producing a greater focus on business models. Technology has become merely an enabler for those business models, and broadcasters are increasingly turning to insourcing for better control and responsiveness. The new skills required are often being recruited from outside the industry, with traditional broadcast engineering skills becoming less and less in demand.

Peter White
CEO
IABM

Sources: IABM

Comment from IABM CEO

Embracing change (Continued)

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At a time when we are all working so hard just to keep up with the transformational changes going on all around us, Charting the Uncharted gives us a unique opportunity to stand back and take a look at the bigger picture. But making these fundamental changes to how a business operates to meet the demands of the marketplace and wider ecosystem really comes back to one thing: people - people working together with a like mind and aligned purpose and belief.

If you were used to working in a particular way and your business has been around for some time, then practices and procedures become second nature – ingrained in the company culture. And sometimes it's difficult to move your organization into a new era and a new way of working because of not only just hearts and minds being in a different place, but also legacy practices, familiarity and sheer force of habit. This is why new organizations coming into a market are much more agile and seem to be much more on point, without any legacy - without a tradition of doing things in a particular way.

They say “old habits die hard” but die they must if we are to transform ourselves, make ourselves ready for success and continue to compete. With the industry moving to direct-to-consumer, digital and service-based models, both sides of the industry need to transform themselves in a careful balancing act between legacy and new.

Charting the Uncharted gives us the information we need to measure what are we doing, how we do it, and why are doing it against the whole industry background. It is brim full of fact-based insights and I would say it is essential reading for everyone in the industry.

Peter White
CEO
IABM

Sources: IABM

Drivers of Change

Forces Disrupting the Media & Technology Industry

Both media companies and technology suppliers highlight the move to direct-to-consumer models as the most important change in the industry. It is changing everything: business models, technology and people.

Direct-to-Consumer

Tech only as Enabler

As-a-Service

The move to direct-to-consumer models is driving a change in mindsets. Media companies are focusing on business and revenue models rather than the "best" technology available. Also, it is driving a major generational shift. The new people are all about doing things more quickly, virtually, and ethically.

The move to direct-to-consumer models is radically changing technology investment, which is moving away from hardware towards as-a-service models. Media companies are also investing more in developing platforms in-house, which is leading to a re-invention of the role of suppliers, from vendors to providers.

New Generations

Insourcing

Drivers of Change

Forces Disrupting the Media & Technology Industry

Direct-to-Consumer → The pandemic has dropped a digital bombshell on the media industry. Most have had to bite the bullet to defend their positions and accelerate their move to direct-to-consumer models

Tech only as Enabler → The shutdown caused by the pandemic has forced media companies to increasingly see technology only as an enabler of business continuity and future business models

As-a-Service → The pandemic has accelerated media companies and technology suppliers' transition to as-a-service technology business models out of pure necessity

Insourcing → Despite the shutdown caused by the pandemic, media companies still want to control technology roadmaps through insourcing and direct technology investment in suppliers

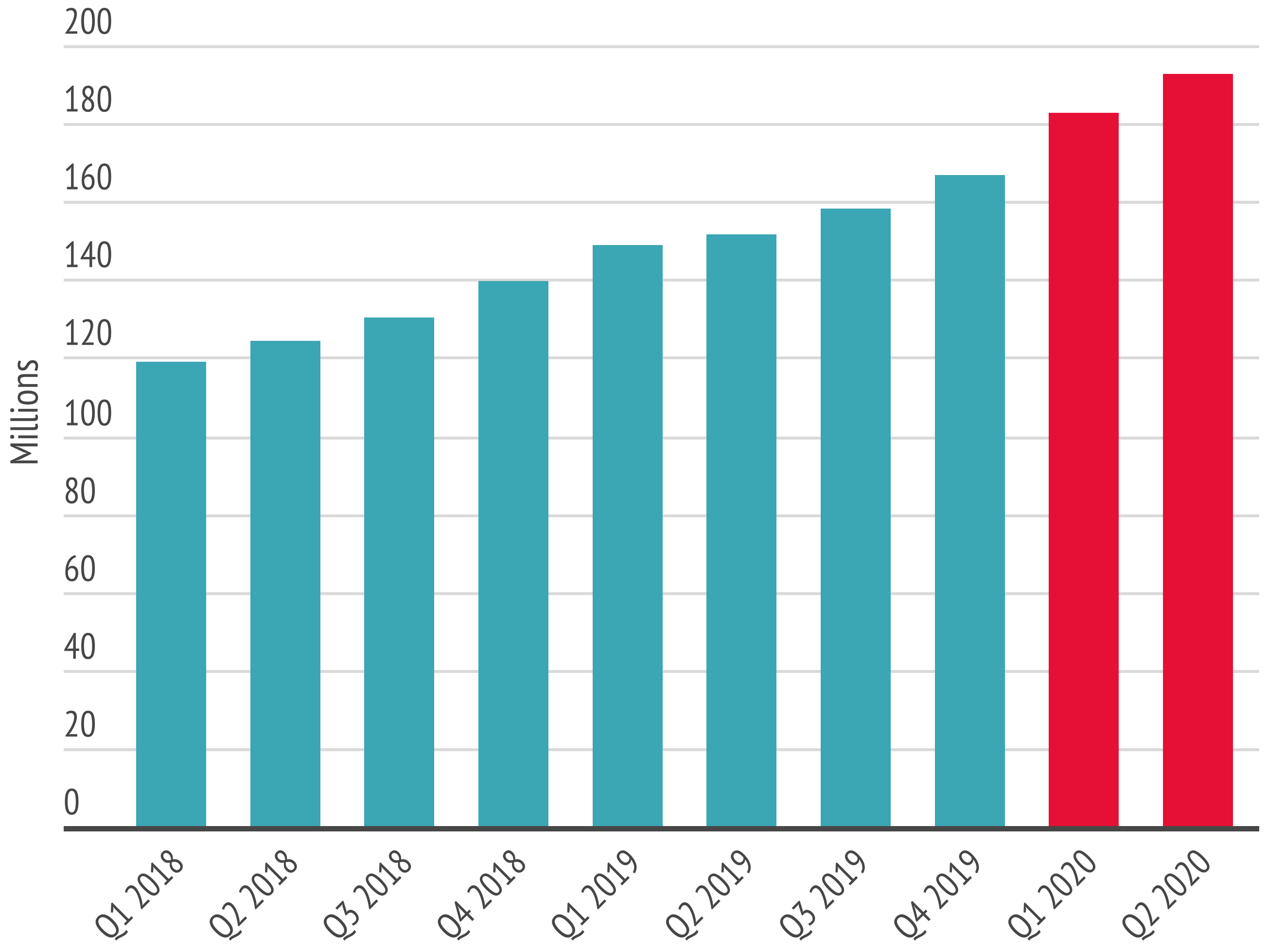
New Generations → As media companies accelerate their digital transformation, new generations of media and technology professionals are emerging

Direct-to-Consumer

Brave new digital world

The lockdowns in the second quarter of the year have driven digital services consumption worldwide while putting the industry's traditional revenue sources under pressure. Netflix added about 26m subscribers in two quarters while Disney signed up almost 30m between March and August. This is a big deal as it is making media companies increasingly focus on their already established move to direct-to-consumer business models. While streaming services reaped what they had sown in recent years, most media organizations were hit hard by pandemic-induced shutdowns. The worst-hit sides of the media business have arguably been sports and commercial broadcasting due to the cancellation of events and the slump in advertising spending, respectively. The common denominator in all these different sectors has been the move to digital workflows and remote working, which has accelerated established technology transitions but may have also produced a long-term polarization of the media industry.

Netflix' Subscribers, Q1 2018 - Q2 2020



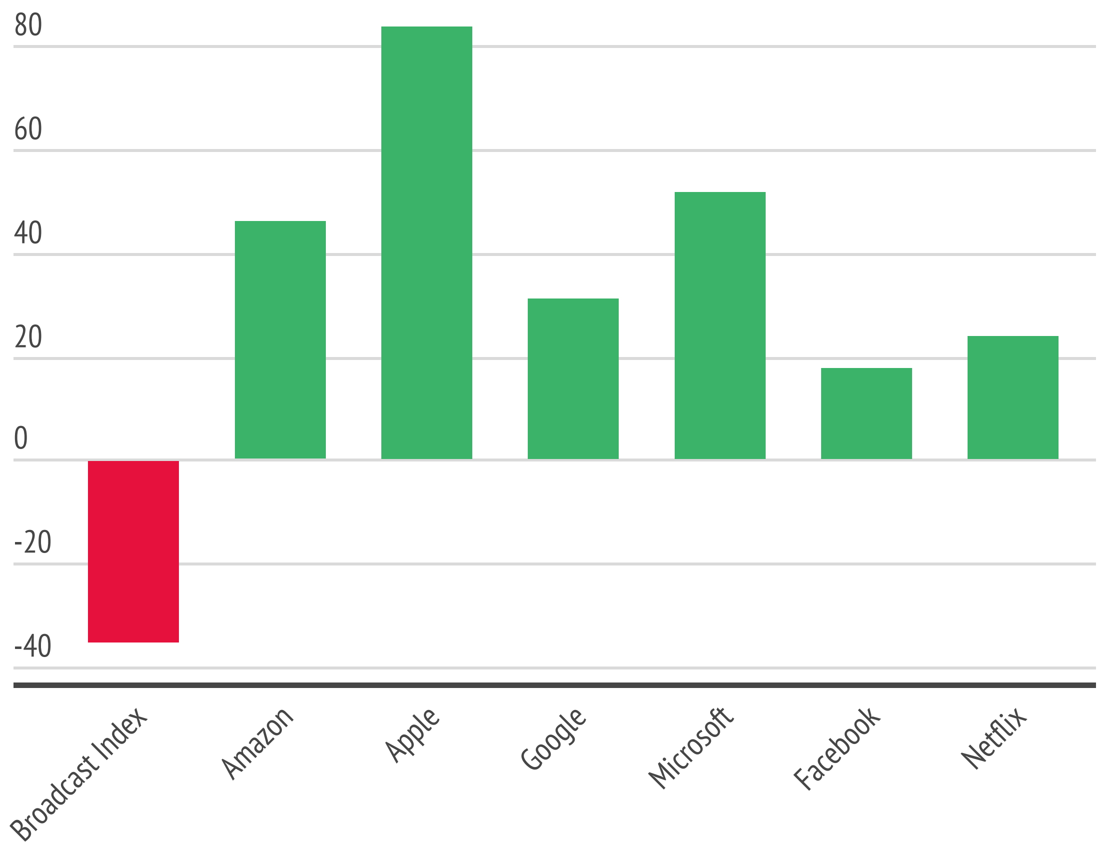
Sources: IABM, Netflix, YouTube

Direct-to-Consumer

Sectoral polarization

The pandemic has exacerbated the divide between large digital businesses and the rest of the pack. The changing perception of large technology giants is indicative of this polarization. Before the pandemic hit the world, their role and actions were being questioned by regulatory bodies worldwide - they still are now. After the pandemic hit, technology giants' digital services were hailed as salvific along with smaller providers' platforms such as Zoom's. This has been reflected by their soaring market valuations vis-à-vis other players in different industries. In the media industry, the pandemic has produced temporary effects – i.e. the different fortunes of the news and sports sectors – but has more importantly accelerated lasting and structural changes. It has rewarded organizations that had invested in digital technology in recent years while acting as a wake-up call for laggards. It has also highlighted the resilience of subscription businesses, both on the demand and supply side of media technology. We see this as just the beginning of an even more turbulent chapter for the media industry.

% Change in Monthly Closing Stock Prices (June 2019-2020)



> **As a commercially funded business, the Covid-19 outbreak has had a severe impact on our advertising revenues. And so we are taking action now to manage our costs appropriately and ensure that we both protect our staff and our ongoing ability to serve our audience**

Alex Mahon, CEO, Channel 4
April 2020

The Broadcast Index above is made up of stock data from 51 broadcasters worldwide

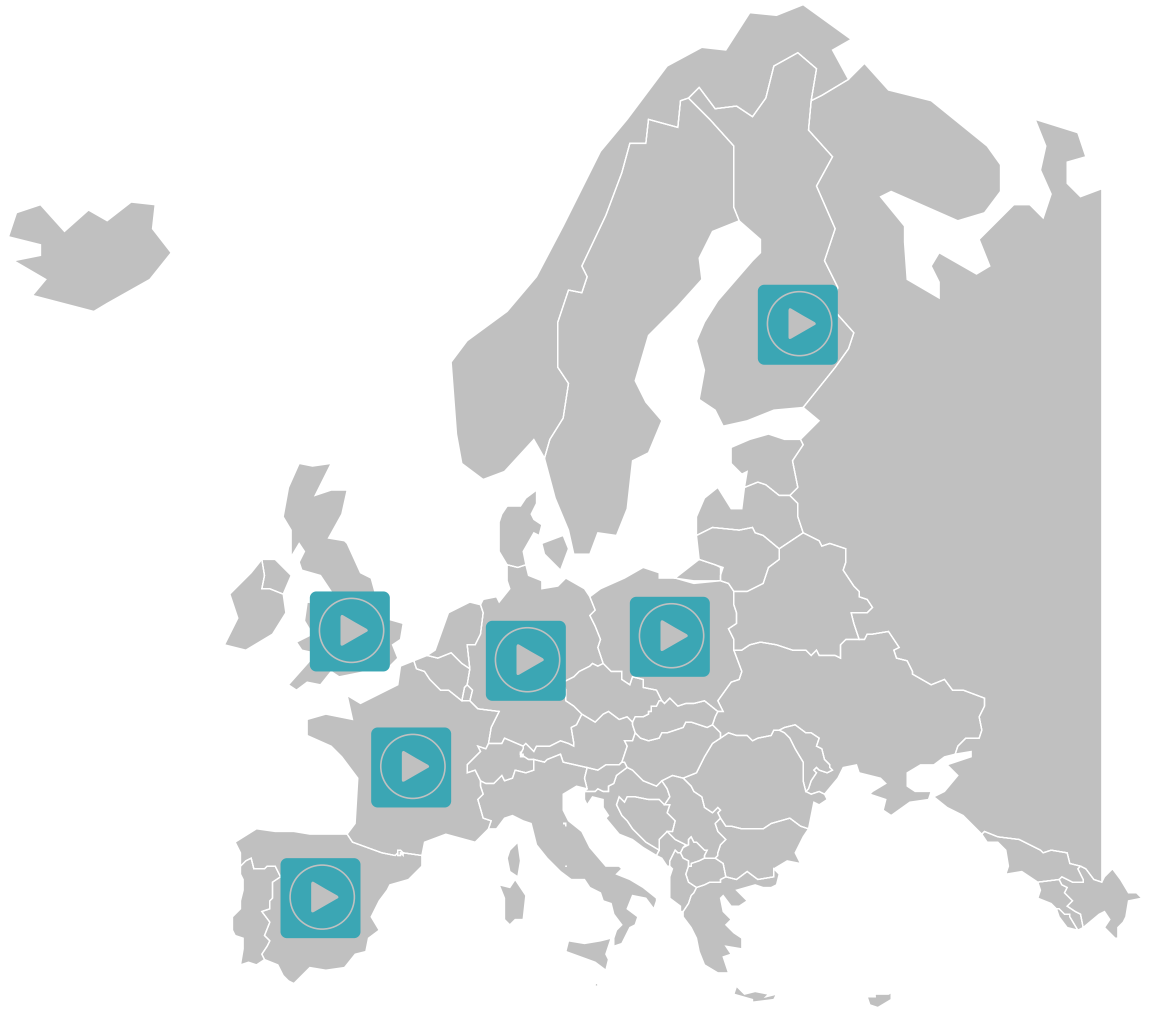
Source: IABM, Television Business International

Direct-to-Consumer

The calm before the storm

Far from us to say that this has been a calm period, but we do see the recent changes as being precursors of even bigger developments for the media industry in the next few years. Consumers, who have become more digital-savvy in recent months, will increasingly move away from traditional distribution platforms. This will prompt media companies to dedicate even more resources to digital and increasingly search for the scale needed to compete in this arena. Joint streaming and advertising initiatives will continue to act as a collective defense mechanism for small, local broadcasters while consolidation may make a comeback as soon as the financial dust settles. Original content investment, which has been slowed down by the lockdowns, should also make a comeback as it remains a formidable weapon in digital warfare. Finally, from a technology sourcing perspective, most media companies have told us that they will not go back to the way things were pre-pandemic, which will inevitably lead to a drastic re-allocation of technology spending.

Major Joint Streaming Initiatives in Europe



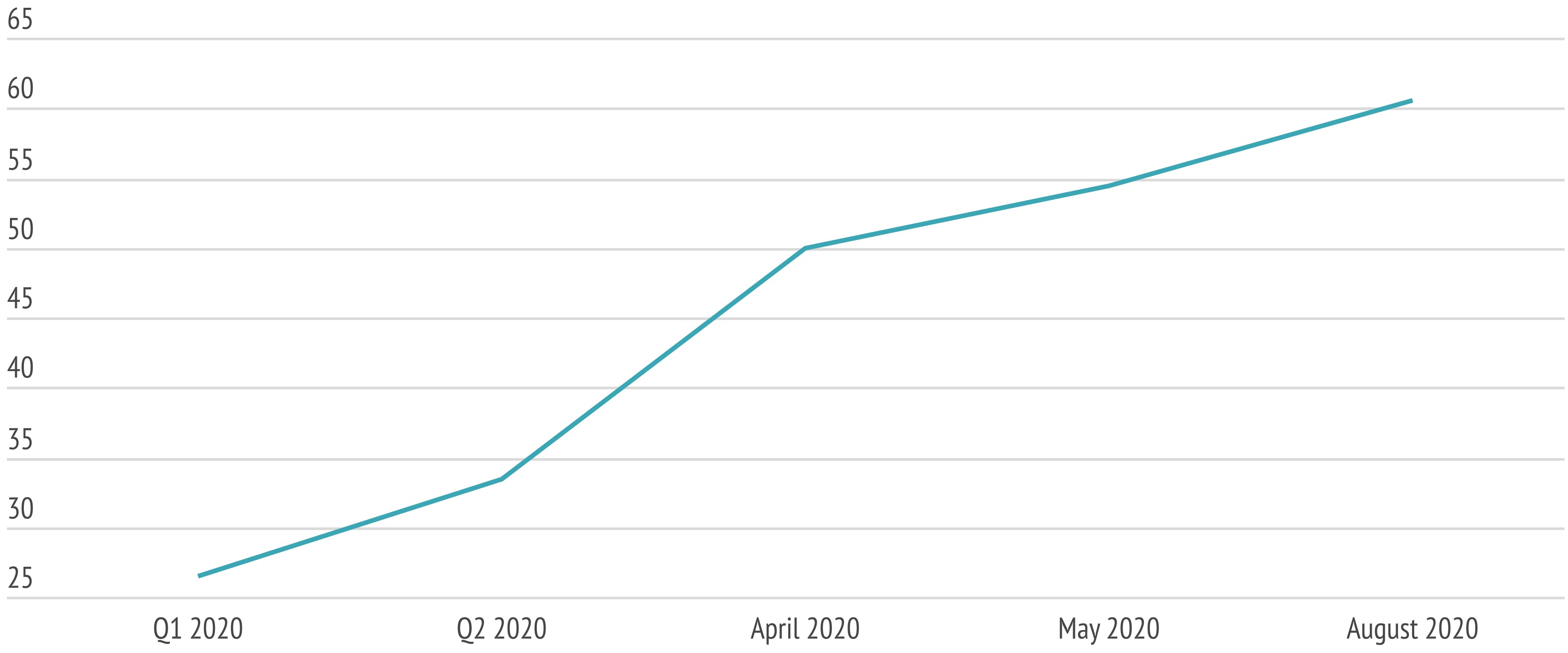
> **There is a strong case and a need for consolidation. I'm convinced that partnerships are more important than ever, especially after the coronavirus, which hurt European TV broadcasters and has helped the US streaming platforms**
>
> Thomas Rabe, CEO, Bertelsmann
> August 2020

Sources: IABM, European Audiovisual Observatory, Financial Times

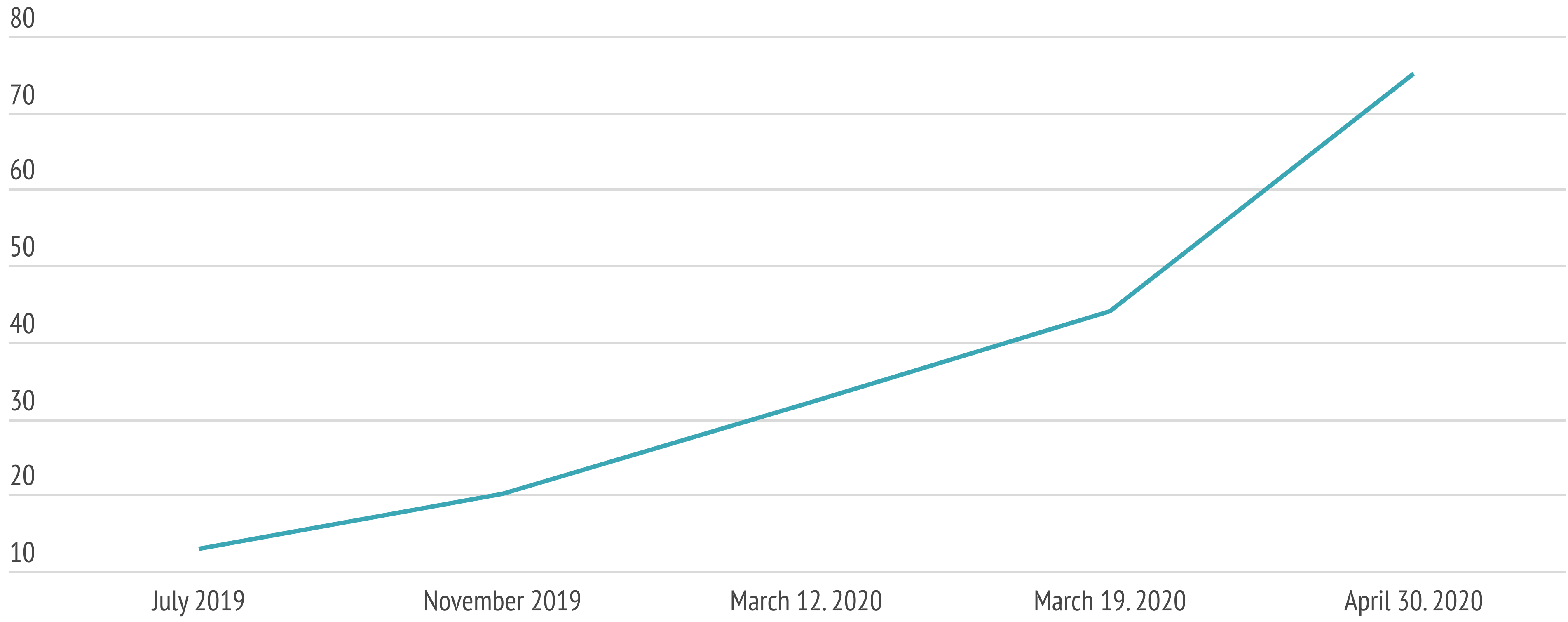
Direct-to-Consumer

Brave new digital world - Data snippets

Subscriber Growth at Disney+ (Millions)



Daily Active Users at Microsoft Teams (Millions)



Growth in OTT Streaming on Connected TVs and Streaming Devices

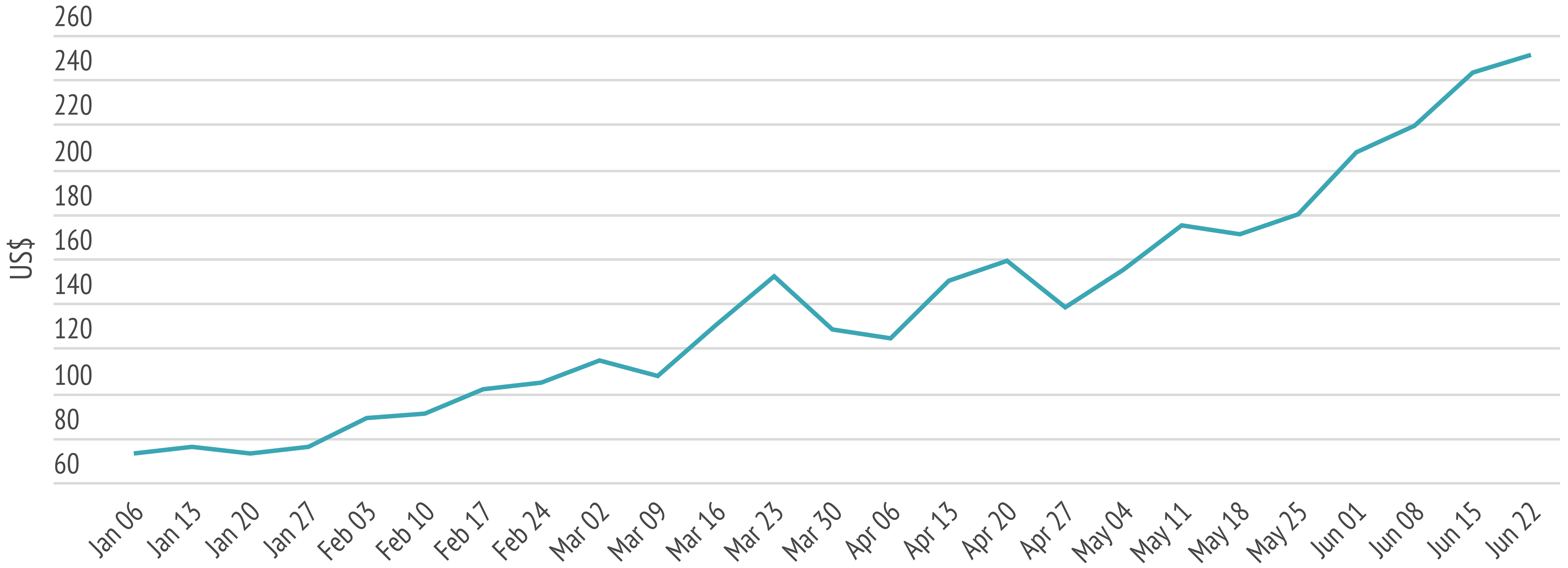
29%

YoY growth in OTT households for connected TVs in March 2020

44%

YoY growth in OTT households for streaming devices in March 2020

Price of Zoom's Stock, January-June 2020

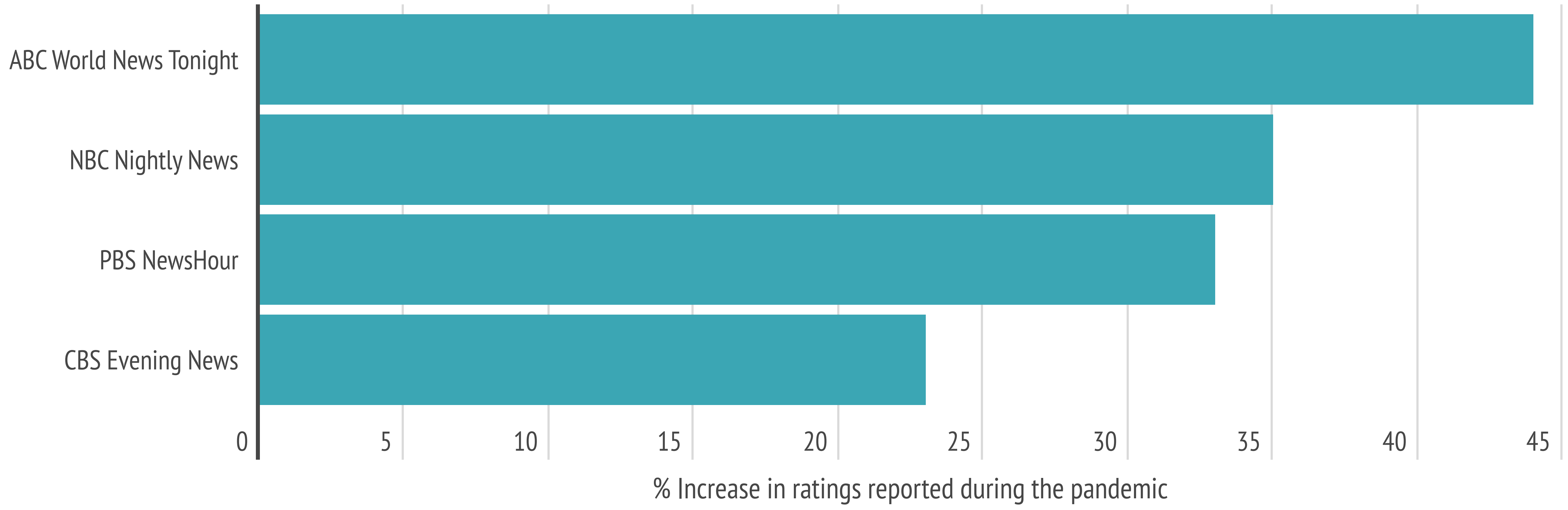


Sources: IABM, Disney, Netflix, Microsoft, Comscore

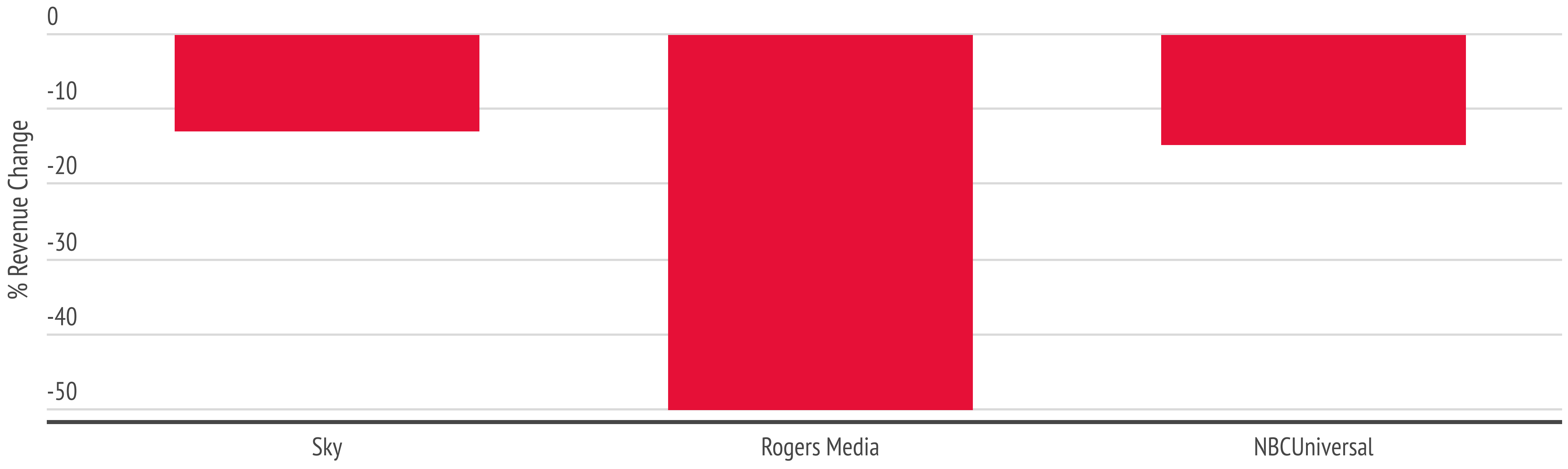
Direct-to-Consumer

Sectoral polarization - Data snippets

Ratings Performance of Selected News Channels in the US



Q2 Revenue Performance at Selected Sports Broadcasters



Traditional Revenue Models in the US

2.1 millions

Total subscribers lost by major Pay-TV operators in the US in Q1

22.3% - 29.3%

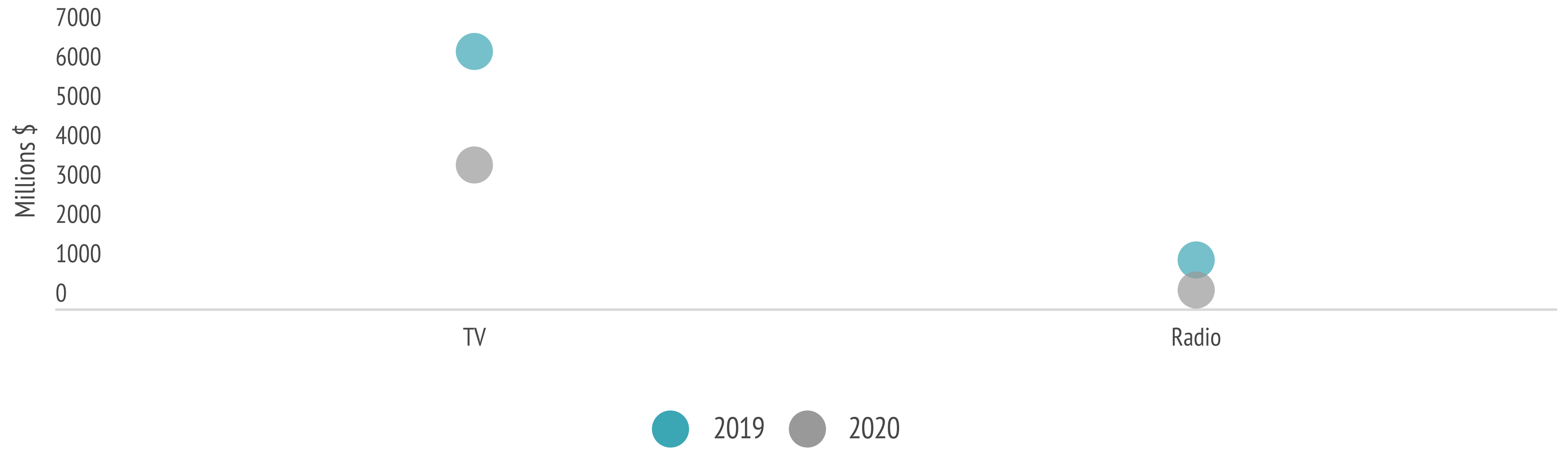
Estimated decline in US TV ad spending for H1 2020

Sources: IABM, Forbes, Dynata, eMarketer, Leichtman Research Group

Direct-to-Consumer

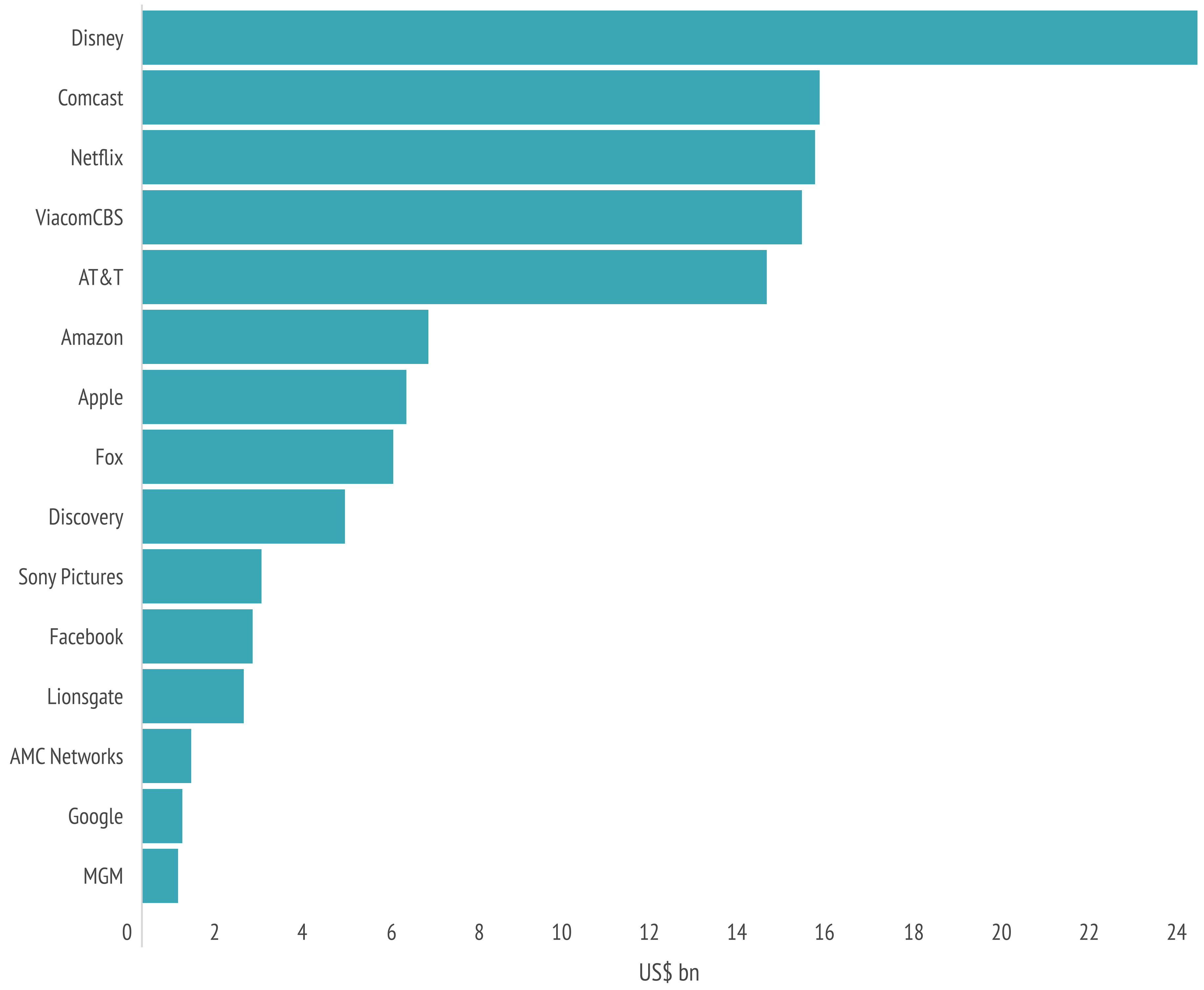
The calm before the storm - Data snippets

US Broadcast Market M&A, 2018-2020 (Top) & Major Media Acquisitions (Bottom)



Year	Acquirer	Target	Deal Value	Acquirer's Region
2016	AT&T	TimeWarner	$85.4bn	North America
2016	corus.	Shaw Media	$2.6bn	North America
2016	Nexstar	Media General	$4.6bn	North America
2017	Disney	FOX	$71bn	North America
2018	COMCAST	sky	$38bn	North America
2017	Discovery	scrippsnetworks interactive	$14.6bn	North America
2018	Nexstar	T	$4.1bn	North America
2019	CANAL+	M7	$1.1bn	Europe
2018	gray	RAYCOM MEDIA	$3.6bn	North America
2018	AT&T	otter	$1bn	North America
2019	CBS	viacom	$11.8bn	North America
2019	SINCLAIR BROADCAST GROUP	FOX	$10bn	North America

Investment in Original Content in 2019



Source: IABM, Variety Intelligence Platform, SNL Kagan

Exclusive Platinum Comments

Brave new digital world

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Memories of COVID-19 will be long and it is highly unlikely that any participant in the content delivery chain–not individual creators, not media companies nor vendors–will ever fall back into complacency after feeling such sharp pain. At the same time, the situation has reawakened our industry's latent appetite for rapid innovation, albeit in the face of unavoidable change in this case.

The upside of this ongoing experience is that it is quickly conditioning even the most comfortable among us to break the bad habits that have held our industry back from truly flourishing even during the best of times. And while some participants may have been better prepared than others, as the research indicates, the pandemic has galvanized the entire community not only to solve the common problem before us, but also heightened our sense of urgency to become better prepared to contend with the external forces that we can't control.

This is a moment in which the innovators of business and technology—whatever their motivations—are rising up. Exploration, discovery and adaptation have come at a remarkably encouraging pace amid the threat to what is becoming "the way we used to work". Notably, several TV networks, studios and post houses have remarked on their achievement of standing up remote collaborative editing schemes within days and weeks which, without the heat of the pandemic, might have taken months and years to complete.

Jeff Rosica
CEO
Avid

Sources: IABM, Avid

Exclusive Platinum Comments

Brave new digital world (Continued)

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Without question, and as the research indicates, this situation is teaching us the deeper value of subscription-based “as-as-service” technologies, especially as media companies look to normalize remote production and accelerate the pipelines that are pumping original content to more consumer platforms. However, we should be careful not to rush to the conclusion that today’s focus on exploiting these relatively new approaches for producing vastly greater amounts of content comes at the long-term expense of other plans and initiatives. We have yet to know how the effects of the pandemic will play out fully for our industry. Further, vendors have long understood that media technology budgets have been under inexorable pressure for years, which has driven some, like Avid, to forge new territory in the cloud. The pandemic simply underscores and hastens the eventual reality of a cloud-based media technology economy.

In fact, Avid’s own response to help media companies pivot to working remotely was aided in part by our early focus in cloud-based content workflows, as well as our transition to providing our creative tools via subscription. This was accomplished by a workforce that’s been defined historically by its expertise in media. Going forward, and to sharpen a crucial point of the IABM findings, it’s incumbent upon the vendor community at large to drive this paradigm shift to a much faster pace by filling the industry’s talent pool with new kinds of talent including cloud/SaaS professionals and digital natives. Overall, as we continue to use this challenging moment to prove to ourselves that we also have an appetite to change and shed our traditional media engineering culture, we’ll also attract the vital new workers who, as the research states, bring an affinity for “risk taking for the sake of experimentation.”

Jeff Rosica
CEO
Avid

Sources: IABM, Avid

Exclusive Platinum Comments

Sectoral polarization

Grass Valley has been forecasting and planning for the move of live TV to digital platforms for some time. We have partnered with major DTC streaming providers that are seeking to add more live content to their platforms. Grass Valley brings broadcast quality features and functionality to this space, improving the user experience and automating the curation and distribution of the digital properties.

Tim Shoulders
President
Grass Valley

Exclusive Platinum Comments

The calm before the storm

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These results tell the same story I am seeing, hearing and feeling. It is my view that the changes brought on by the COVID pandemic have been an accelerant, but not the core driver of the M&E strategic shifts we are observing. Most notably, the industry's push to move to permanently decentralised production models, even prior to COVID, were primarily driven by risk and cost mitigation. In addition to these drivers, other factors include access to talent, reduced on-costs, travel costs, and a younger "digital everywhere" workforce that is seeking flexibility. From a vendor standpoint, COVID accelerated the existing march toward cloud operating models, by leveraging decentralised, and disruptive technology and staffing models.

My firm belief is that content is the new goldrush. This is particularly certain during this extreme economic downturn, as escapism and validation of beliefs are sought, further driving the industrial scale art demand we see before us. The extent of consumer gravity is extraordinary, with unprecedented rapidity of growth in both media demand, and the markets to support it. But as we clearly see in these findings, it's all about the shift towards a direct-to-consumer model.

Alex Timbs
Senior Business
Development Manager
Dell Technologies

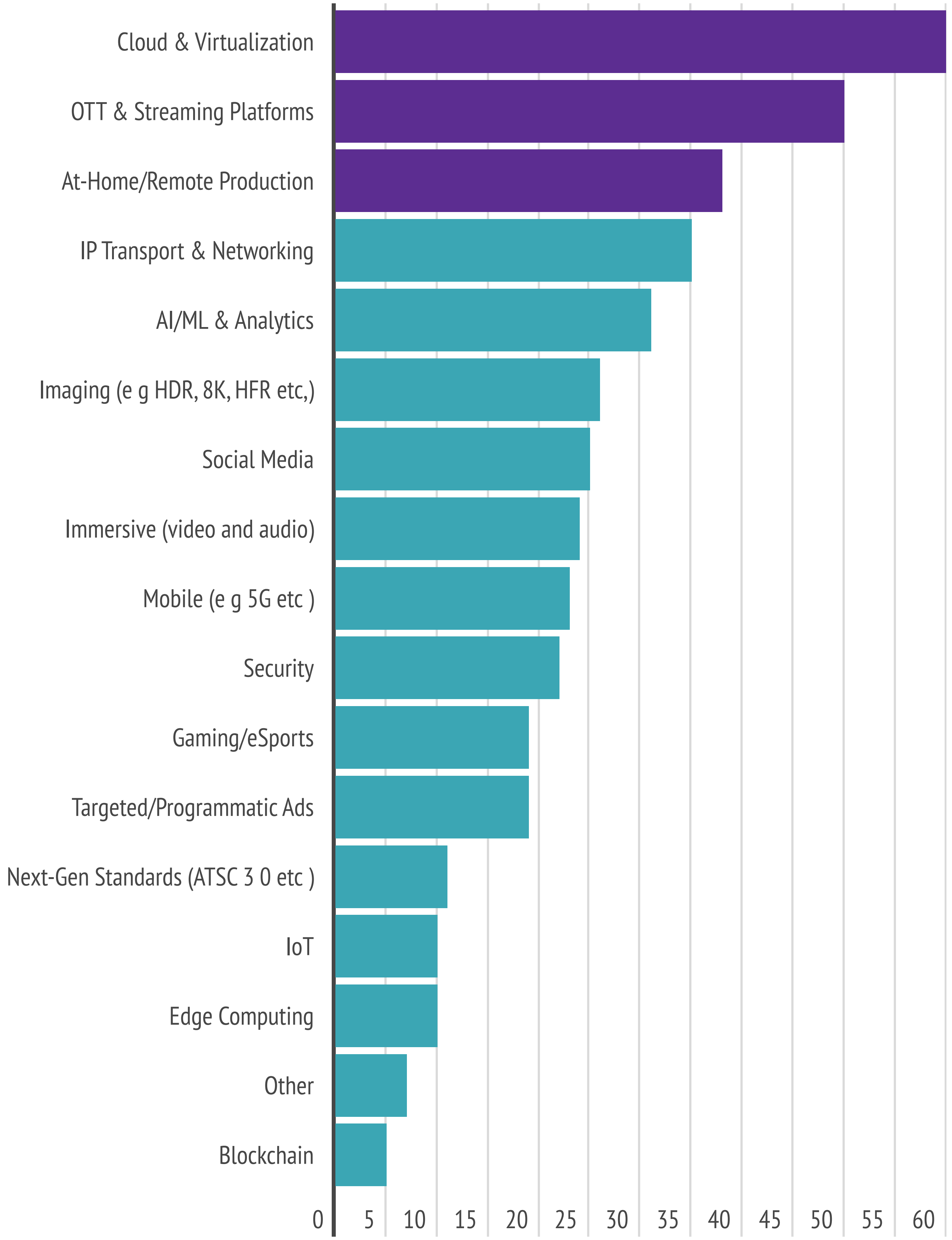
Sources: IABM, Dell Technologies

Tech only as Enabler

Business continuity

According to interviews carried out for this report, the utmost priority of most media companies in this period has been enabling business continuity. This may seem an unsurprising finding though it highlights the changing role of technology in the media industry. Technology is now being seen only as an enabler of business objectives, including business models and continuity. The business continuity crisis produced by the pandemic has taken this paradigm to the extreme as broadcasters have had to prioritize technology solutions that enabled them to continue operations in extraordinary circumstances. In sectors such as sports and news, broadcasters have had to transition to remote production models almost overnight due to the restrictions imposed by the pandemic. This is of course important, as it is enabling media organizations to become more resilient in turbulent times. However, it is less important than the development of digital business models, which remains media companies' most important long-term priority.

Most Important Priorities in Tech Roadmaps



Source: IABM

Tech only as Enabler

Digital money

Our research highlights that the move to direct-to-consumer is making media companies focus on revenue and consumer business models rather than the "best" technology available in the marketplace. This often entails a prioritization of technology solutions that are consumer-centric and have a clear business case. One broadcaster told us this year that, when sourcing a new technology solution: "it is all about revenue, churn and customer loyalty rather than picture quality." This is frequently leading to the adoption of technology that is "good enough" to unlock new digital revenue streams coupled with a reluctance to invest in non-essential infrastructure upgrades. Although advertising spending has slowed down due to the pandemic, digital advertising remains a strategic priority for media companies. The same applies to other solutions enabling them to make digital money or improve the consumer experience on new platforms. This new mindset does not only apply to consumer-facing platforms but also to the content supply chains supporting them. These are being increasingly streamlined to resemble media factories.

If you don't focus on business models, you will not be around a few years from now

Broadcaster interviewed by IABM in March 2020

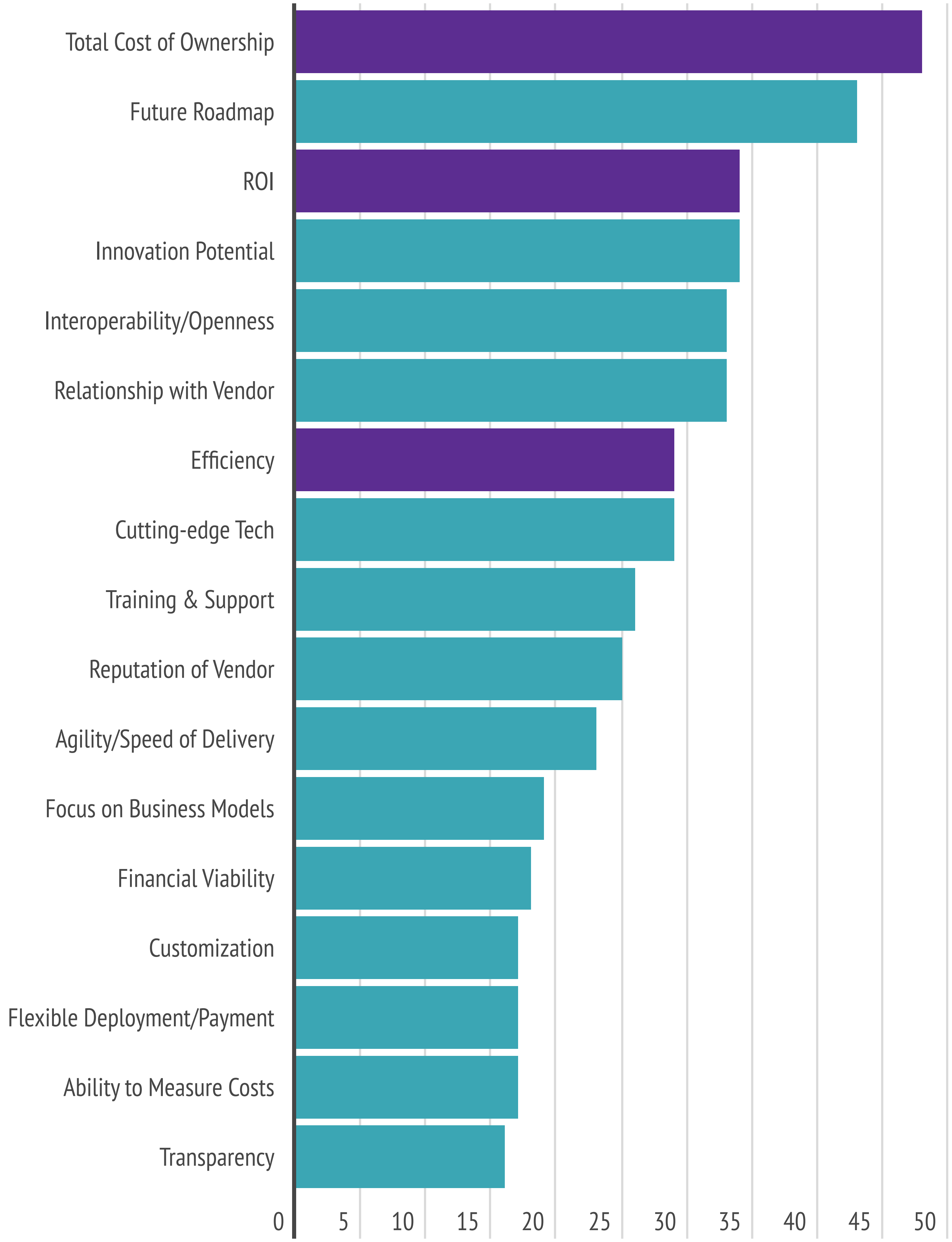
Source: IABM

Tech only as Enabler

Media factory

At the end of last year, IABM published a framework for content supply chain maturity that identified major priorities for media companies moving to next-generation content chains. These priorities include an increasing reliance on data to optimize and automate media operations, open platforms to enable access to content and technology tools as well as an increasing focus on managing risk throughout the content supply chain. As the pandemic puts revenues and technology budgets under pressure, media companies are increasingly looking at the economics of their content supply chains to increase the utilization of their resources – both content and technology resources - and improve productivity, particularly as they move to remote working models. These objectives are prompting them to look to the fringes of the industry or even outside of the traditional media sector to find innovation and adopt general-purpose technologies such as cloud and machine learning. As the adoption of these technologies is propelled by the pandemic, the move to as-a-service is in turn accelerating.

Most Important Factors Affecting Tech Sourcing

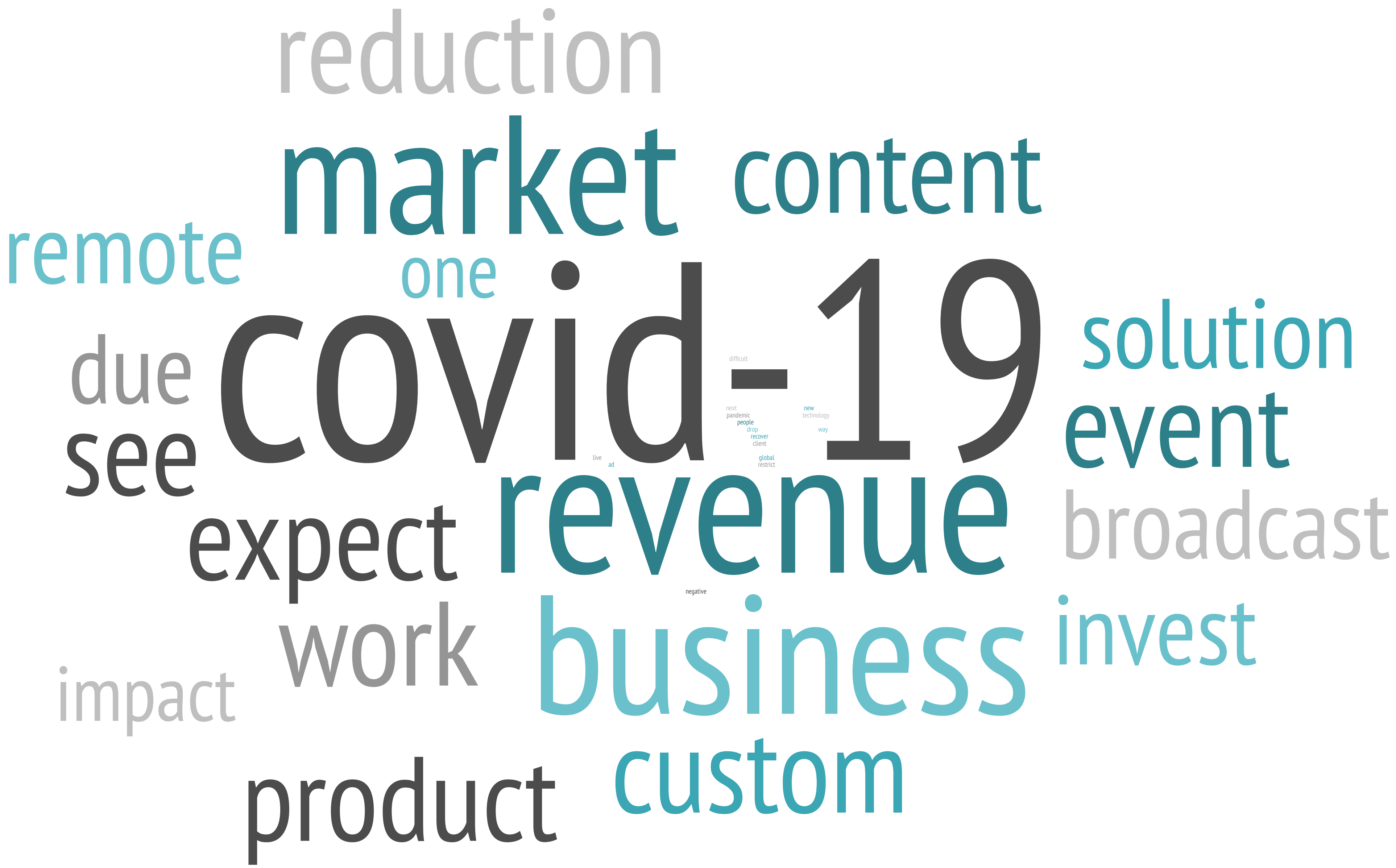


Source: IABM

Tech only as Enabler

Business continuity - Data snippets

Analysis of Media Tech Vendors' Comments



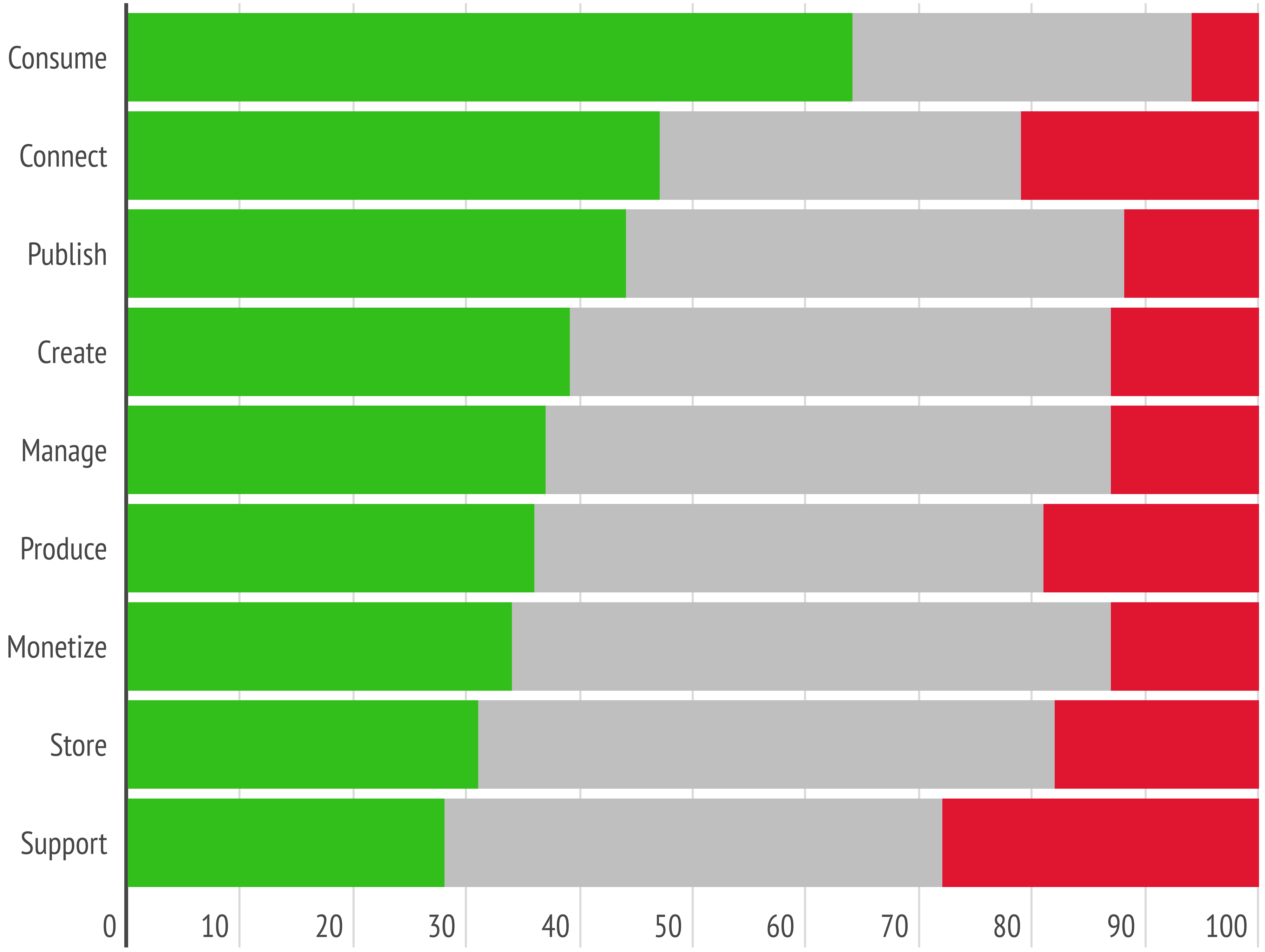
The analysis of the text comments received by IABM in the last month highlighted the severe impact of the pandemic on the industry. For example, the word "Covid-19" appeared in 25% of the comments received from media technology service providers. Negative comments highlighted the impact of the pandemic on revenue streams, mostly through the cancellation of events and the influence on advertising revenues. Positive comments focused on the move to remote workflows creating new opportunities.

Source: IABM

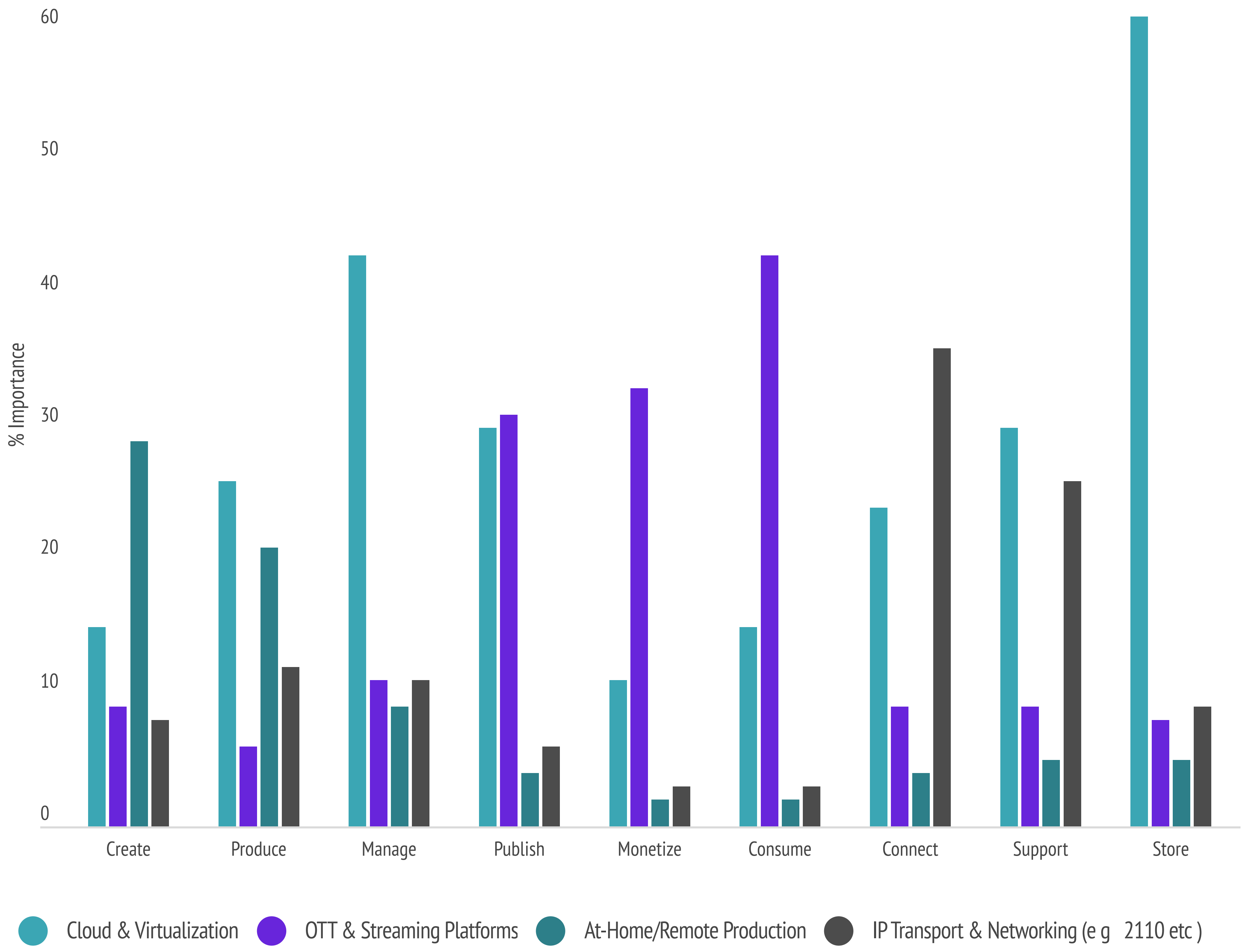
Tech only as Enabler

Digital money - Data snippets

Content Supply Chain Investment Outlook by Media Companies



Major Drivers of Investment by Content Supply Chain Segment



Source: IABM

Exclusive Platinum Comments

Business continuity

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On March 11, the World Health Organization declared the Novel Coronavirus Disease a pandemic. We are now 5 months into this worldwide pandemic and we have all been impacted in one way or another. In particular, businesses (that are able to) have been forced to send workers home with few tools to deal with working remotely.   For software companies like Telestream, most work can be accomplished by a combination of a computer, a decent internet connection and the cloud (for applications). For companies that produce and deliver video content, namely our industry, they have seen tremendous challenges with “keeping the lights on”.   The challenges are many and very, very real; live events were postponed or shut down entirely eliminating revenue streams, show production was put on hiatus also eliminating revenue streams. Reusing older, archived content is possible but files archived on-site still need to be pulled and prepared for distribution, but no one is on-site to access the content! The good news too is that consumer demand for content has never been higher.

As has happened throughout history, innovative people have stepped up and have come up with solutions to keep businesses working while unable to be physically on-site.   A big enabler of these solutions is the rise of high speed internet to the home.   With this, customers are able to remotely access equipment that is “internet ready”. And, while these internet pipes are large compared to the past, they still can’t replace the on-premise experience of being directly connected to the storage for editing, QC or just basic review of content. Hence, technology for realtime proxy generation to make editorial decisions enables customers to be at home, while the very large media files can remain on-site.   For live production and to handle sports “in the bubble”, few staff can be on-site to produce the show. In comes technology that enables TD’s, EIC’s and more to be at home producing and monitoring events. And with the latest generation of IP-enabled, robotic cameras or camera heads, camera operators can be remote as well.   For OTT distribution of content, proactive notification of errors enables remote workers to diagnose and fix network problems remotely. Again, it takes a decent internet connection.

An old saying goes that technology only exists for 2 purposes: to make you money or save you money. As we have seen in the last 5 months, our industry has risen to the challenge and technology has been the enabler to help business to survive. When we exit this current environment, all of our businesses, including Telestream, will look different but will be stronger as a result.

Dan Castles
CEO
Telestream

Sources: IABM, Telestream

Exclusive Platinum Comments

Media factory

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We began using the term “Media Factory” at Grass Valley in early 2019. When you look dispassionately at what a broadcast engineer does you see they are running a factory that captures images and sounds and transforms them into valuable stories and events. The operations to get from start to finish look very much like a traditional factory. We see our role as a technology partner is to bring our workflow expertise to bear to provide technology that is efficient and well-integrated and to eliminate bottlenecks in the production process and help our customers to deliver more media assets at a lower cost per asset.

Tim Shoulders
President
Grass Valley

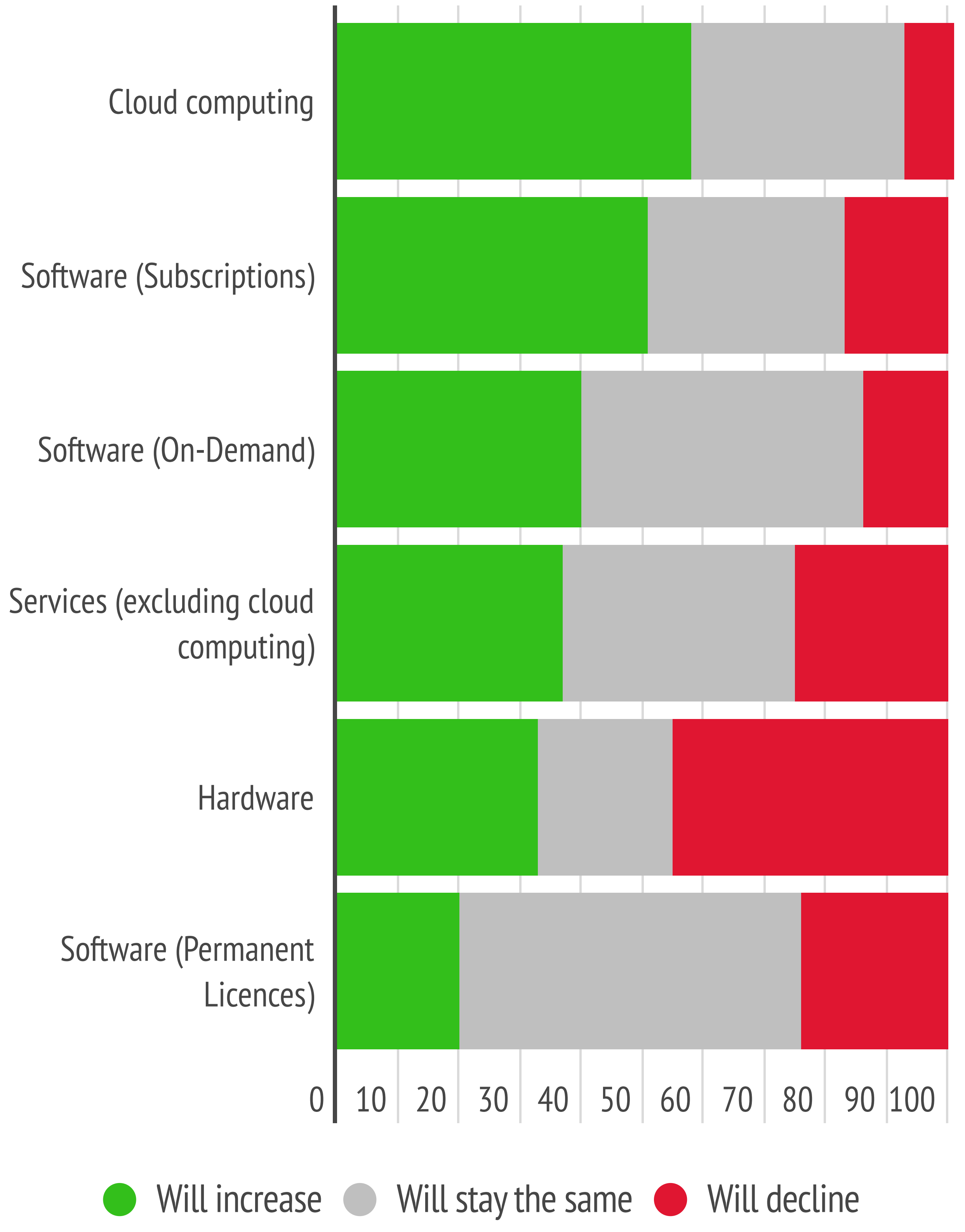
Sources: IABM, Grass Valley

As-a-Service

Acceleration

The business continuity crisis created by the pandemic has accelerated media companies' transition to as-a-service technology models. These include subscription-based and on-demand technology business models. IABM research shows that media companies were already gradually moving towards as-a-service business models before Coronavirus hit. As-a-service is more suited to the unpredictability of modern media markets, which has been taken to an extreme by the pandemic. Media companies have therefore been forced to adopt new technology tools, most of which are provided through as-a-service schemes, to enable remote working. This is evident when looking at IABM data on both sides of the industry. Technology users are moving their budgets away from hardware and legacy software and towards subscriptions, on-demand payment models, and cloud computing services. Our data on supplier revenue sources shows that companies moving to as-a-service are accelerating their transition to subscriptions and on-demand offerings to accommodate increased demand.

Media Technology Sourcing Outlook



Source: IABM

As-a-Service

Ripple effects

The transition to as-a-service offerings has well-known financial implications for the supply side of the media technology industry as companies moving from large and infrequent inflows of money to smaller and more regular payments, suffer from a painful and lengthy cashflow crunch. This crunch has been exacerbated by the pandemic-induced shock on technology demand by forcing a move to as-a-service models. Major media technology suppliers such as Avid and Harmonic highlighted this demand shock in their recent earnings calls, pointing to increasing demand in their as-a-service offerings. They also highlighted that their legacy products had suffered from a more pronounced decline in revenues. IABM analysis shows that the pandemic has negatively influenced both software and hardware revenues on aggregate, as media technology budgets have generally declined. However, companies heavily reliant on hardware and legacy software have been impacted disproportionately more by the lockdown restrictions compared to those dependent on subscriptions and on-demand revenues.

Hardware Revenue Outlook

4%

Percentage of companies saying that revenues will Increase

86%

Percentage of companies saying that revenues will Decrease

5%

Average % Increase in revenues for companies predicting a rise in revenues

43%

Average % Decrease in revenues for companies predicting a fall in revenues

Recurring revenue was strong, with growth in subscription and stable maintenance, while nonrecurring revenue from hardware and perpetual licenses was down sharply due the impact on sales of the COVID-19 pandemic

Ken Gayron,
CFO & EVP,
Avid

Sources: IABM, Avid

As-a-Service

Speed

Both the demand and supply side of media technology are increasingly focusing on speeding up the development of new technology products and platforms. Again, the pandemic has contributed to taking this change in the concept of time to an extreme. Many suppliers have told us in recent months that they have developed new products in a drastically shorter amount of time and on the back of pressing customer feedback. The absence of industry trade shows has also removed important references in the calendar of new product releases, prompting technology suppliers to move to a more continuous delivery of technology solutions. This is a cornerstone of as-a-service models. Aside from the increasing focus on speed, both media companies and technology suppliers have had to rely more on digital tools, another cornerstone of as-a-service models, due to the lack of trade shows. On the demand side, a plethora of companies identified the adoption of internet technologies for collaboration as one of the most important changes for the future of their organizations. Another important change relates to their propensity to insource technology development.

44%

Of suppliers say that R&D investment will increase

”

Development times have changed dramatically

Supplier responding to our Media Tech Business Tracker

Source: IABM

As-a-Service

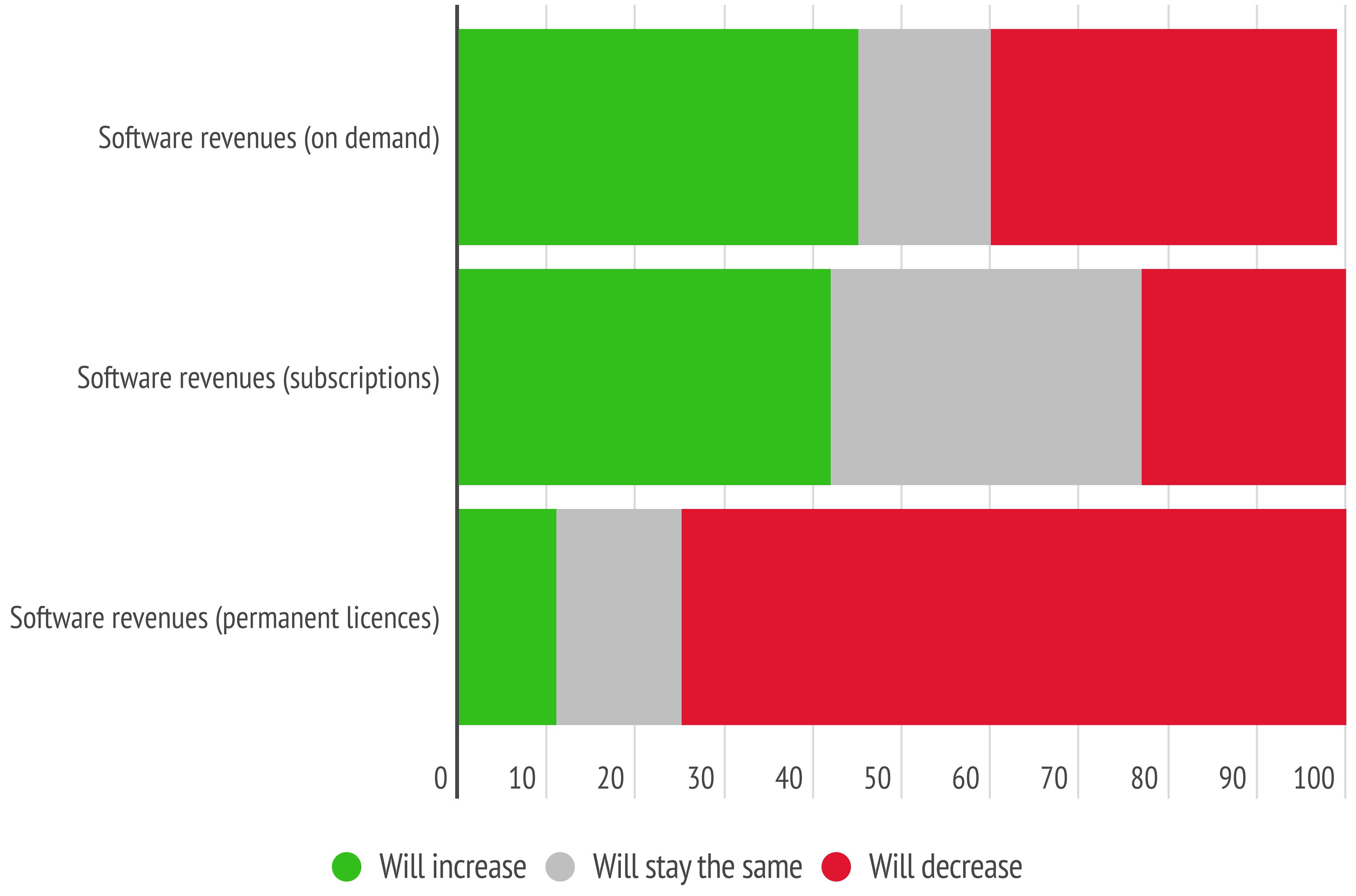
As-a-service - Data snippets

Selected Comments from Media Technology Suppliers

"Propoportion of subscription and on-demand are increasing so should overtake permanent licenses"

"We are the middle of a transition to SaaS and recurring revenue models. We are moving our hardware product towards virtualization of software on COTS hardware"

Impact of Coronavirus on Software Revenue Outlook



Exclusive Platinum Comments

Acceleration

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We have seen many media companies accelerating the adoption of IP based workflows because of the pandemic. Technology has allowed remote production that would have been impossible 10 years ago by using various SaaS solutions for significant portions of their media workflow along with cloud services for content management and delivery. Naturally, technology suppliers are evolving faster to more “as a service” offerings on COTS platforms, which allows them to better manage their technology platform, product support and user experiencing by reducing bespoke hardware requirements and meeting their customer’s needs.

With the rapid deployment of direct to consumer technologies across the globe, common technology stacks and tools to enable the exploitation of content is THE SINGLE MOST IMPORTANT currency that a media customer can have in today’s environment. Successfully designing and deploying this in a thoughtful way will yield tremendous advantages that make even the most bullish CFO excited about the tremendous benefits that will be found.

The nature of media professionals has always been to adapt their skills to match the logical direction technology can take us--from Black and White to color to HD, 4K and onto 8K. Today’s media engineering professionals are challenged by the speed of change and becoming highly specialized software and IT professionals building advanced IP workflows.

Kevin Collins
President
Diversified

Sources: IABM, Diversified

Exclusive Platinum Comments

Speed

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Diversified has seen an uptick in requests for several different facets of assistance to enable the proliferation of media to enable additional direct to consumer opportunities:

- Workflow: Media companies have millions of hours of content and the large majority of divisions that own that content are subdivided, making optimization of workflows impossible without changes to the organization, the ownership of process, and the standardization of workflows. We have assisted in each area
- Technology: Content owners are burdened with disparate content storage systems, some not always compatible with others based on file format, connectivity, accessibility, and metadata mapping
- Services: More than ever, content owners of all sizes are in search of outsourced and assisted services to help mine and manage the “media warehouses” that exist. As capital and Opex has come under enhanced scrutiny around internal spending, leveraging 3rd party services has become more attractive and cost-effective
- Consulting: “Have content, build start up”…Many content repository owners are chasing the proverbial pot of gold as they try and capitalize on the direct to consumer trends. We have provided assistance for our clients inclusive of total cost of ownership analysis, technology implementation studies, connectivity mapping recommendations, and programmatic workflow and operations support

Jason Kornweiss
VP & GM,
Emerging Technology and Solutions
Diversified

Sources: IABM, Diversified

Exclusive Platinum Comments

Speed (Continued)

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Diversified has seen a marked and purposeful departure of capital spending towards physical and infrastructure related “upgrades and end of life refresh” components and systems as media owners are steering working capital and operating expense towards technology enablement strategies and services:

- **Cloud: Many customers are looking to leverage cloud services to exploit the work from home normality that has hit the industry. On prem vs off prem cloud, public vs private cloud, hosted vs 3rd party cloud...these are all areas that we advise our clients and the solutions vary drastically based on use cases and business model**
- **Disaster Recovery: No one expected this type of virtual disaster, as many DR systems have been built for physical building compromise with failover in mind. Clients are rethinking what disaster recovery means and are more than ever entertaining 3rd party services as one of the means to achieve compliance in a cost effective, agile, and scalable way**

Jason Kornweiss
VP & GM,
Emerging Technology and Solutions
Diversified

Sources: IABM, Diversified

Insourcing

Scale and control

Media companies continue to want to control the development of their technology platforms to make them flexible, even after the advent of the pandemic. To find control of and scale in technology development, media companies are increasingly likely to insource it. According to IABM research, the origin of this propensity to insource is a significant disconnect between demand and supply of direct-to-consumer technology when this transition first started. The unpredictability of the direct-to-consumer market led some users to consider existing solutions not fit for purpose and re-allocate investment towards insourcing technology development. IABM research shows that this is continuing now as the market has become even more chaotic and unpredictable due to the pandemic. Scale and control are even trumping "best-of-breed" in some cases with media companies prioritizing solutions that cover several parts of the content supply chain to safeguard integration and consolidate spending in a turbulent time.

48%

Of media companies say that internal technology development investment will increase

70%

Of media companies still prefer "best-of-breed" solutions

Source: IABM

Insourcing

Investment

As mentioned earlier, insourcing has focused on the direct-to-consumer technology area where media companies have acquired streaming and advertising technology suppliers to propel the launch of their digital offerings. At the end of April 2020, in the middle of the pandemic, WarnerMedia acquired The Widget Company, a Dutch streaming technology provider, to support the launch of HBO Max in May. Comcast and Fox acquired two ad-supported streaming services (Xumo and Tubi respectively) in the first quarter of 2020 not only to bet on the AVOD market but also - and perhaps more importantly - to acquire the streaming and advertising technologies controlled by these companies. Strategic acquisitions of technology suppliers remain a popular tool to accelerate insourcing inorganically and may rise if financial disruption puts some suppliers in danger. However, most media companies continue to report an increasing investment in organic in-house capabilities to develop technology solutions. This is in turn changing the relationships users have with their suppliers.

Acquisitions of Technology Platforms

Acquirer	Target	Main Area	Year	Value
RTL	SpotX	Ad Tech	2014	$360m
RTL	Smartclip	Ad Tech	2016	undisclosed
RTL	Yospace	Ad Tech	2019	$33m
VIACOMCBS	PlutoTV + another new AVOD service	Streaming Platform	2020	$340m
AT&T	AppNexus	Ad Tech	2018	undisclosed (reportedly $1.6-2b)
AT&T	Clypd	Ad Tech	2019	undisclosed
AT&T	The Widget Company	Streaming Tech	2020	undisclosed
COMCAST	FreeWheel	Ad Tech	2014	$360m
COMCAST	Visible World	Ad Tech	2015	undisclosed
COMCAST	Metrological	Streaming Tech	2019	undisclosed
COMCAST	Xumo	Streaming Platform	2020	$100m
Disney	BAMTech	Streaming Tech	2017	$2.6b
FOX	TrueX	Ad Tech	2014	$200m
FOX	Tubi	Streaming Platform	2020	$440m
AT&T	Canopy	Ad Tech	2020	undisclosed

Source: IABM

Insourcing

Relational dynamics

Increased insourcing by technology users translates into a change in the role of suppliers from sellers to partners and service providers, streamlining the backend of the content supply chain and providing technical support for buyers' direct-to-consumer platforms. Interviews conducted for this report highlighted that these relationships are becoming the norm particularly after the advent of Coronavirus. The pandemic has stressed the importance of deep partnerships between the two sides of the industry to deal with difficult times. These partnerships are built on trust and velocity as well as the achievement of specific business objectives, as evidenced earlier in this report. Many media companies told us that they will support their strategic partners through this turbulent period no matter what. As mentioned earlier, this support can also transform into direct investment when a supplier is on thin ice. Increased investment in software development is also leading to a radical change in the skillset of media technology professionals.

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First and foremost, I look for a culture of full openness and transparency

Pierre Fortin,
VP Media Technology and Operations,
Rogers Broadcast & Media
Interview with IABM, April 2020

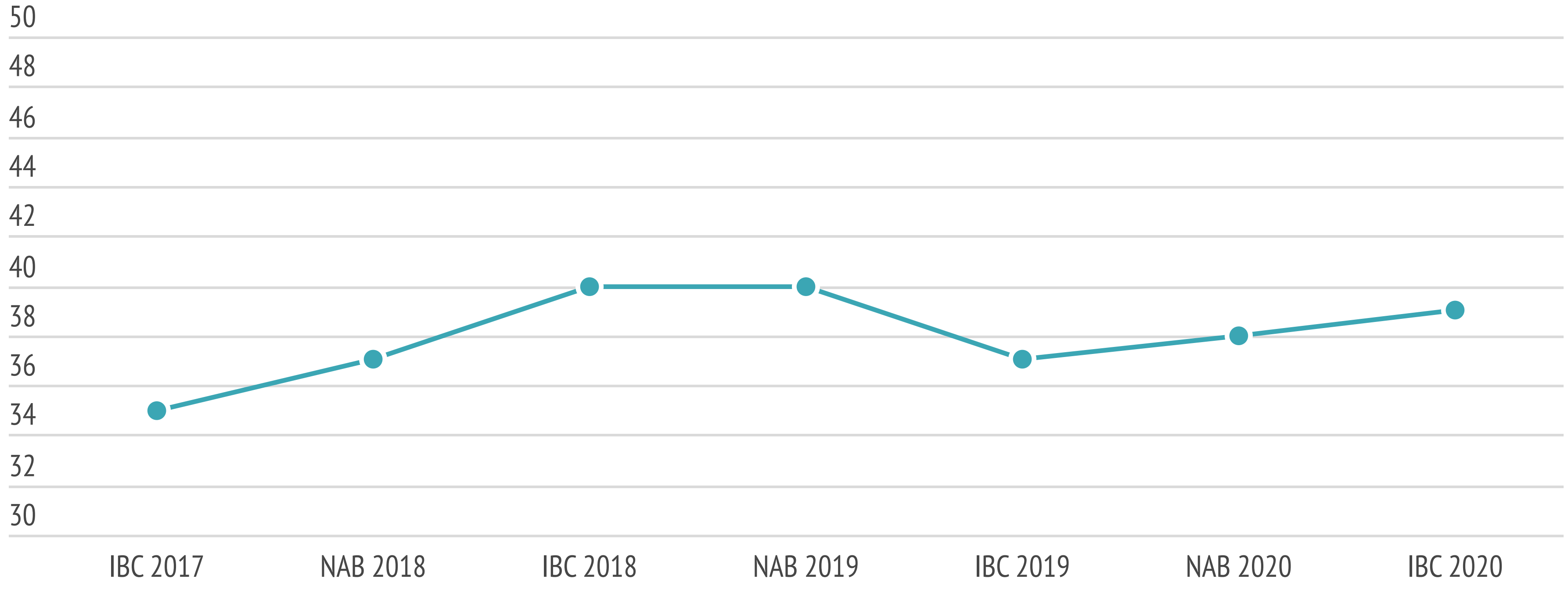
Watch the full interview at:
https://theiabm.org/in-conversation-with-rogers-broadcast-media/

Source: IABM

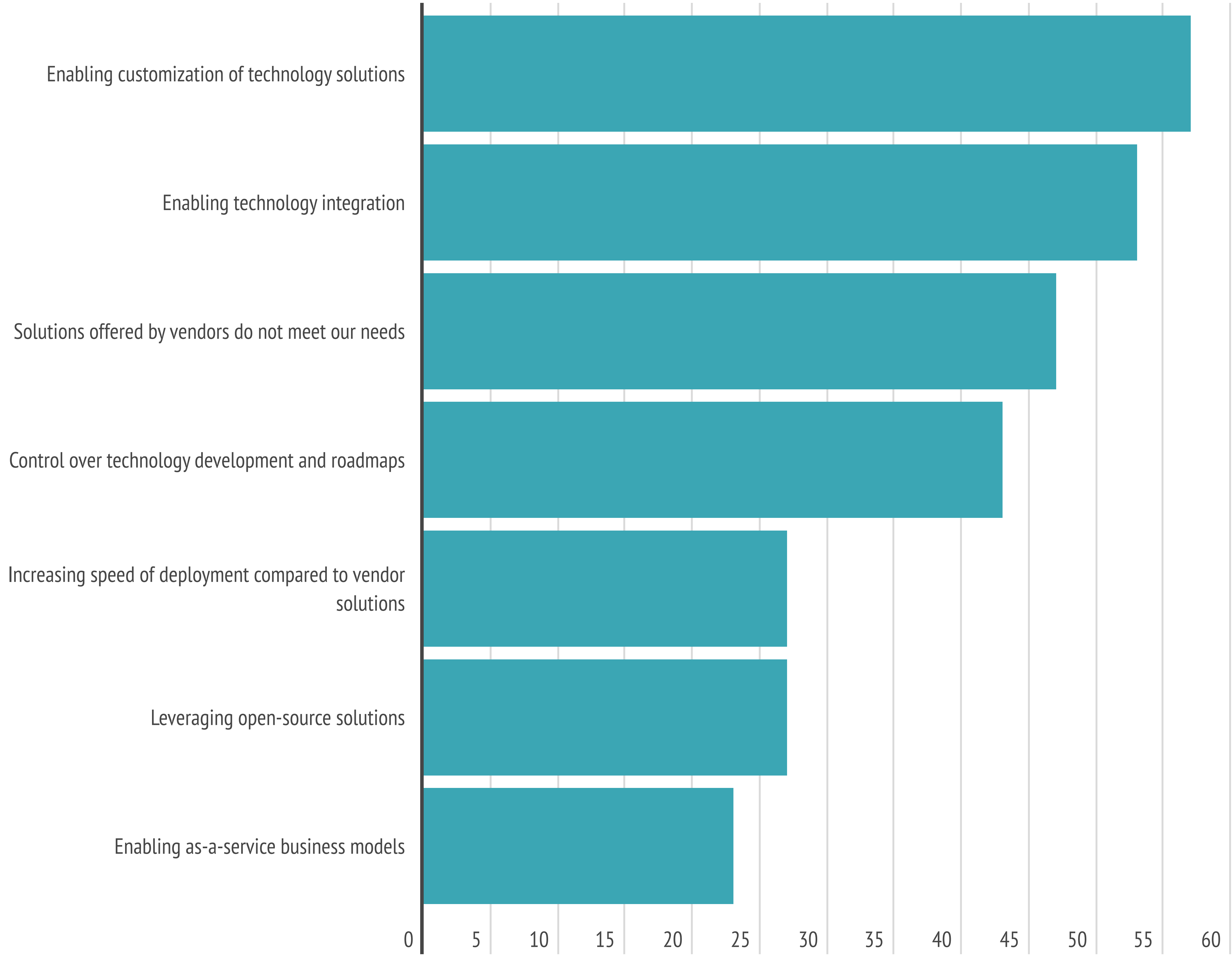
Insourcing

Insourcing - Data snippets

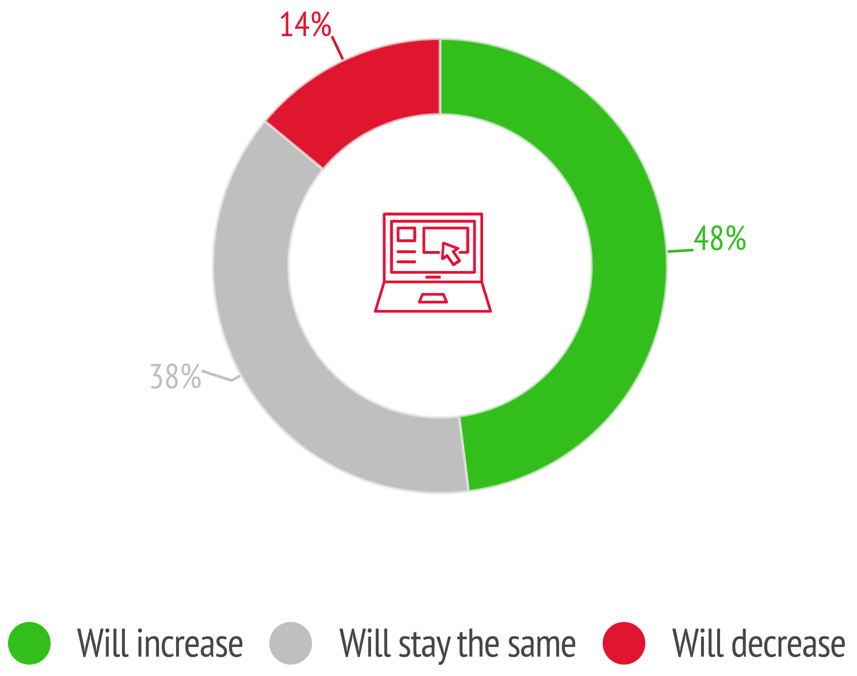
Average % of Solutions Built In-house



Main Reasons to Insource



Software Development Investment Outlook

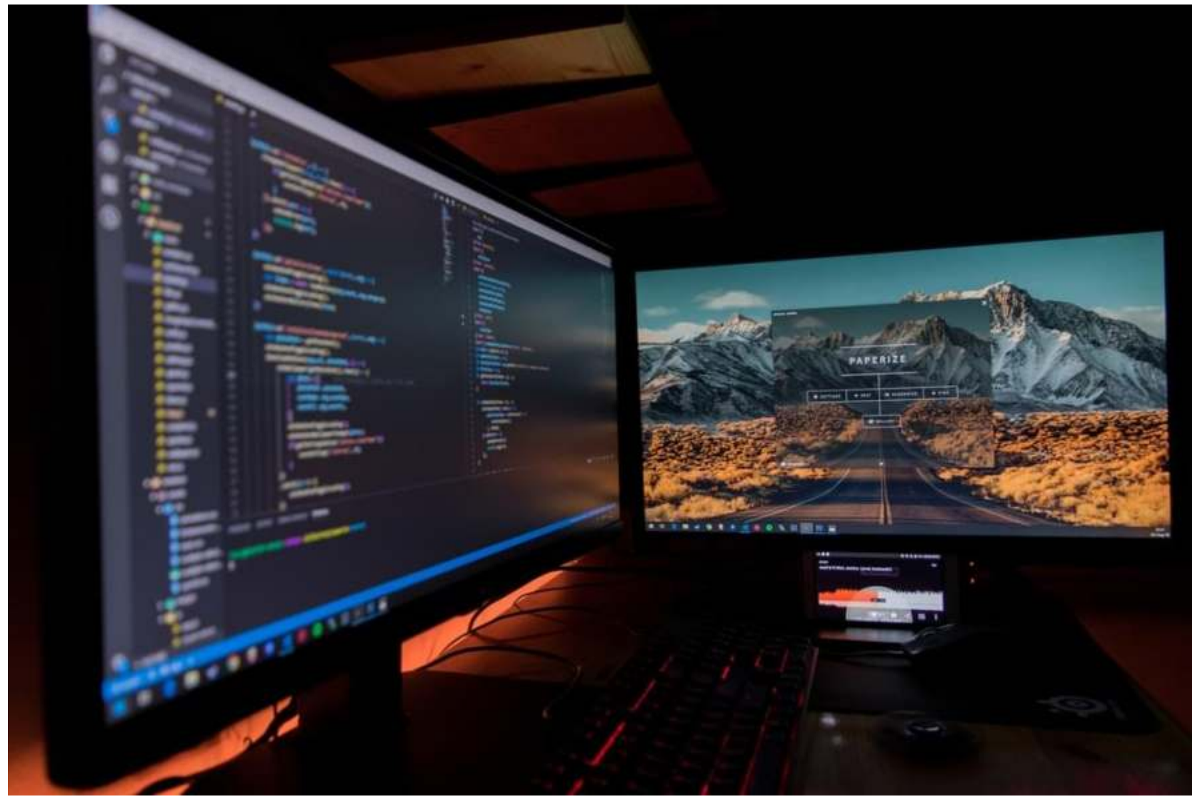


Source: IABM

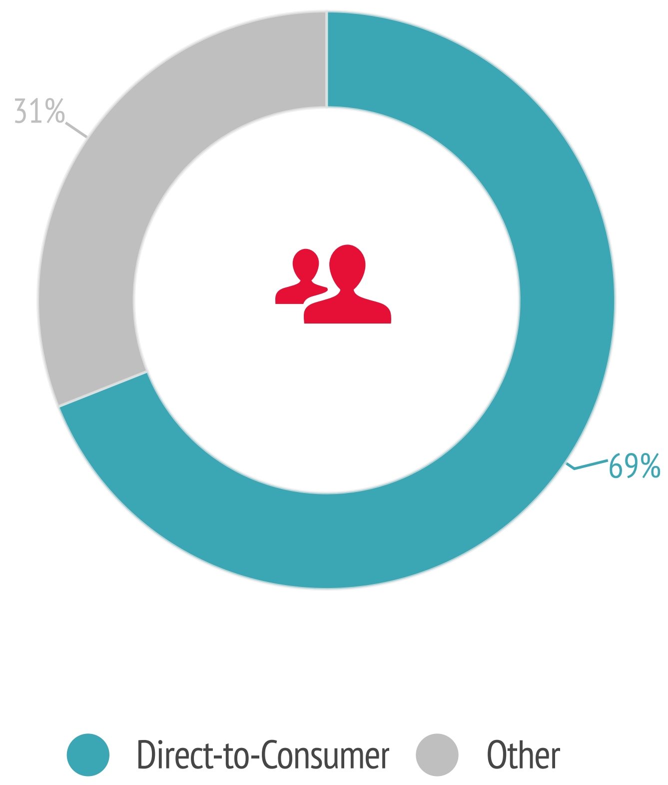
New Generations

Direct

As often argued by IABM research, the move to direct-to-consumer platforms is prompting media companies to radically transform their organizations. This not only includes a change in the business and technology fundamentals of their enterprises but also a change in the fundamentals of their workforce. Interviews conducted for this report highlighted that skills such as software engineering, cloud architecture, UI/UX design and data science are becoming more important for media organizations. This entails the entry of a new generation of media technology professionals into the industry. This generation has wider business and technology skills that are applicable to different sectors, hence making the media industry compete with other verticals for its talent. When moving to direct-to-consumer offerings, media companies are more likely to cut existing staff and acquire new skillsets in this process. This is very relevant as the new generation will make technology sourcing decisions relatively soon. A similar trend is happening on the supply side, which is adapting to the demand-driven transition. The new generation is virtual and focused on ethical business.



Share of Tech Job Openings at Disney on 3 August 2020



Sources: IABM, Disney

New Generations

Virtual

The pandemic has prompted a radical and possibly irreversible move of workflows to remote working. From a people and technology perspective, this is a big deal. Both people and technology are adapting to the new paradigm together. As argued throughout this report, the forced move to remote working is accelerating an already established transition to digital workflows for media organizations. In this process, the value of digital skills is rising significantly as media companies increasingly rely on professionals capable of building and managing technology that enables remote access. The pandemic has stressed the importance of a digital-first mentality, including the love for risk-taking for the sake of experimentation which would once have been so at odds with the traditional media engineering culture. This is also affecting suppliers as they move to as-a-service business models. In a sense, the once isolated media technology sector is being absorbed by a wider technology industry as the adoption of general-purpose technologies rises. This is in turn making the sector more dependent on macro digital trends.

When trying to attract talent in data science and engineering they [the best engineers] are drawn to the new exciting tools [now that ITV has moved toward cloud technology], when we don't have a huge amount of legacy to deal with. It's not quite a clean slate, but they have the chance to come in and shape it themselves

Andy Burnett, Director of Online Technology and Operations, ITV April 2019

Source: IABM

New Generations

Ethical

Last year, Business Roundtable announced the release of a new statement signed by 181 major CEOs which widened the scope of the modern corporation beyond pure shareholder value. In the declaration, the signatory CEOs committed "to lead their companies for the benefit of all stakeholders." Fast forward one year and ethical issues such as diversity and sustainability have become key corporate values. The pandemic, which may have worsened these issues due to its polarizing nature, has also put a spotlight on safety and contributed to strengthening this trend. Facebook knows this well as hundreds of its employees staged a virtual walkout in June 2020 to protest Trump's controversial posts on the platform. As new generations enter the industry more quickly, these corporate values are just going to be more relevant than ever before. In the media sector, broadcasters have launched a variety of diversity and sustainability initiatives in the last few years consistent with this trend. Media and technology companies should not disregard ethical issues when planning their future to avoid the risk of falling behind other verticals competing for the same skills.

Recent Diversity & Sustainability Initiatives

Q4 2019
BBC appoints new diversity lead

Q1 2020
ProsiebenSat.1 creates sustainability department

Q2 2020
Sky and BBC commit investment to diversity

Q3 2020
ITV's Diversity Plan, ViacomCBS' new content policy & Sports sustainability initiative

> **Every company depends on the environment, and we have a responsibility to protect it. We are taking action now – because the world can't wait**
>
> Jeremy Darroch, Group CEO, Sky
> Sky's 2019 Bigger Picture Report

Source: IABM, Sky