IABM

SPECIAL REPORT

NAB SHOW 2019

#IABMReport

iabm

Identifying key trends driving change in the sector ahead of NAB Show 2019

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Introduction

Strategic Industry Analysis

This report aims to give users a strategic analysis of the broadcast and media industry, identifying the key trends driving change in the sector ahead of NAB Show 2019.

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.

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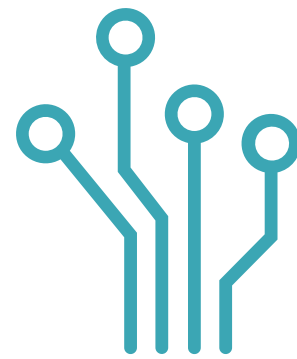
While media firms were still debating whether content or distribution was king, digital technology completely altered the behavior, expectations and power of consumers, making them the ultimate authority to whom even kings must bend the knee

Bob Iger, CEO, Disney

NAB Show 2019 - Industry at a Glance

Change is Everywhere

2019 is a defining year for the broadcast and media industry. The battle for digital eyeballs will become even fiercer as Disney officially breaks up with Netflix to launch its own streaming service after the rollout of ESPN+ in 2018. Apple will join the battle as it prepares to launch its first streaming service this year. As investment in content continues to grow, media companies continue to search for scale to respond to their deep-pocketed digital rivals. Scale must be accompanied by efficiency, speed and personalization in this brave new digital world, which is fueling a technology transition to transform broadcast and media companies into content factories capable of delivering video to any platform. Media technology suppliers continue to strive to keep up with their customers' requirements.

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.

Drivers of Change
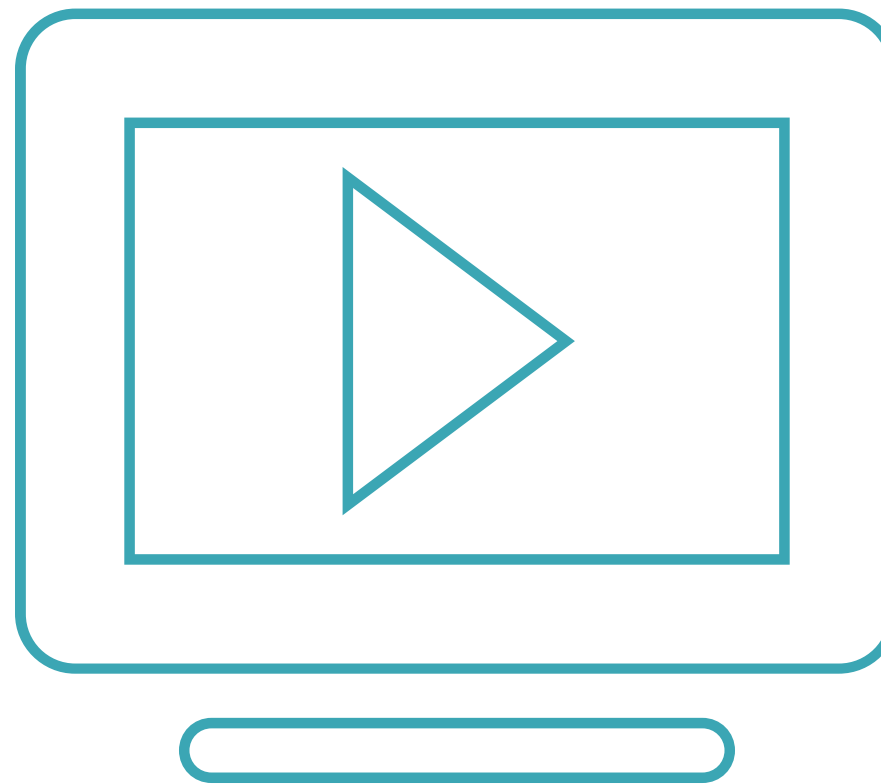
Drivers of Change

Forces Disrupting the Media Industry

Digital Warfare → Traditional and new media companies continue to launch streaming offerings to attract digital eyeballs. Welcome to the new media battlefield.

Digital Inflation → As the number of digital outlets increases and investment in content skyrockets, only a few will keep up with the giants while others rise to appeal to niche audiences

Digital Speed → Everything is quicker in the brave new digital world as consumers' expectations reach new levels. Media companies are responding to this shift by streamlining their operations

Digital Warfare

Conflict Escalation

In 2019, Disney is throwing its full weight into creating a streaming platform to rival Netflix with the launch of Disney+, an OTT SVOD offering, in September. The service will include high-end programming from Disney-owned brands such as Pixar, Marvel, Star Wars and Fox, which was acquired by Disney at the end of 2017. According to Disney's CEO, Bob Iger, the service's price will be substantially lower than Netflix's due to its initially smaller content library. Disney+ is predicted to reach almost ten million subscribers by next year, about 5% of the current number of Netflix subscribers. On another front, technology giant Apple should join the battle for digital eyeballs with its first streaming service. Apple, which has been recruiting talent to boost its original content capabilities, sees streaming as part of a company-wide strategy to increase its reliance on digital services as smartphone sales wane. Broadcast and new media are gearing up for the streaming wars.

The WAR has started

Disney+

10,000
Subscribers by 2020

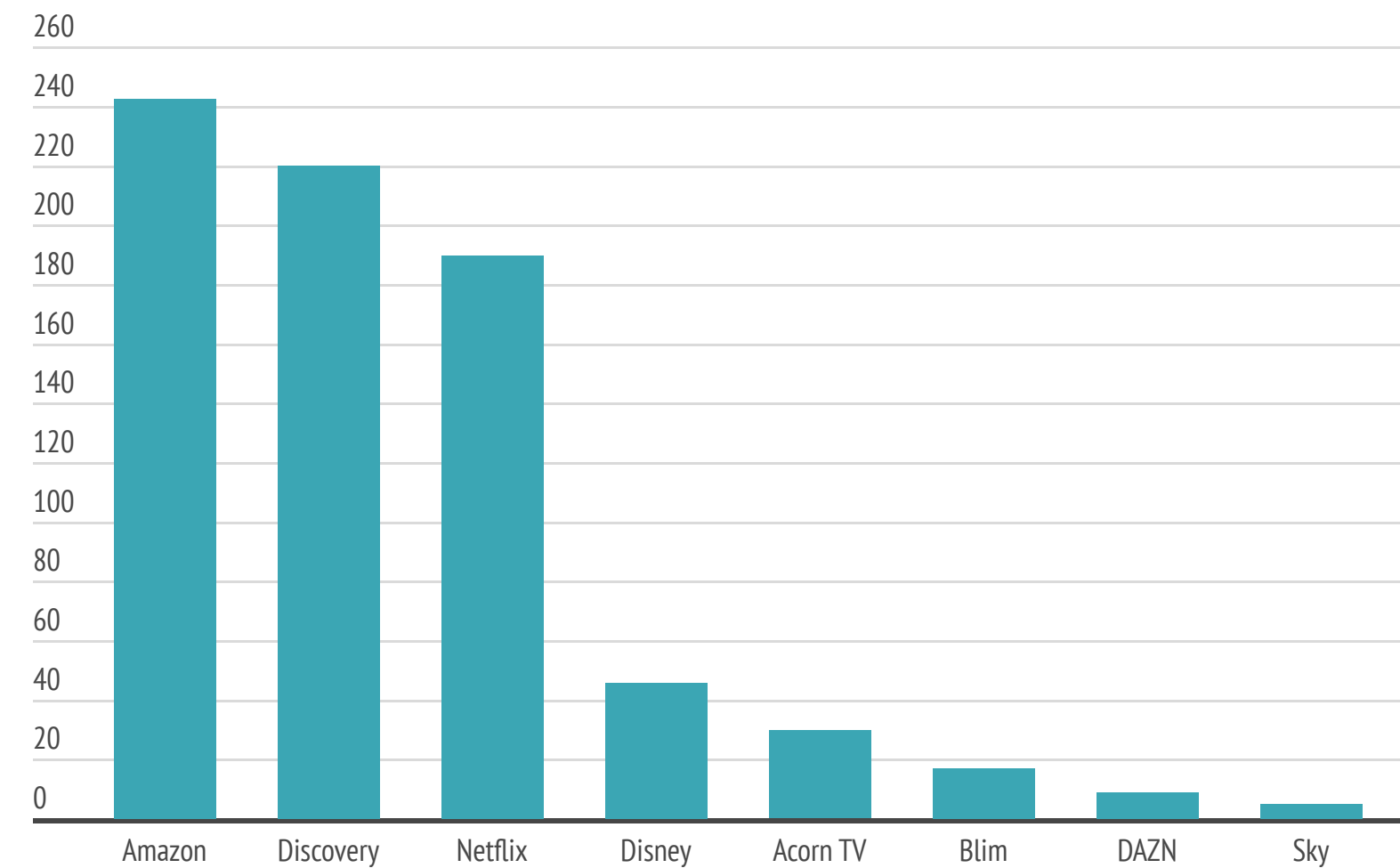NETFLIX

200,000
Subscribers by 2020

Digital Warfare
Worldwide Battle

The battle for digital eyeballs does not know geographical borders as media companies continue to expand into new territories. In February 2019, news outlets reported that the BBC and Discovery, two major media companies, were in talks to launch a joint streaming service that will be available in all major international markets aside from the UK and China. This offering would include their joint natural history and wildlife programming. The BBC had already launched BritBox, a streaming service focused on British content and created in conjunction with ITV, in the US and Canada, about two years ago. Comcast is also plotting a global streaming service after the acquisition of Sky, which enabled the telecom giant to expand into Europe. In sports, DAZN is adopting a similar approach to Netflix, aggressively expanding into different international markets. Many other media companies are looking at geographical expansion as they continue to search for scale.

Worldwide Presence

Bar chart showing worldwide presence: Amazon (~237), Discovery (~215), Netflix (~185), Disney (~42), Acorn TV (~26), Blim (~13), DAZN (~6), Sky (~3)

Digital Warfare

Alliances

Major media companies like the BBC, Discovery, ITV and ProSieben.Sat 1 have partnered to launch joint streaming services and match the financial firepower, content investment and reach of new media and big tech companies. Viacom-owned Paramount has instead taken Netflix's side when it signed an exclusive deal with the streaming giant in 2018. In advertising, similar partnerships have sprung up to combat the digital dominance of Google and Facebook. These alliances are shaping the future of the broadcast and media industry, a future in which scale and collaboration are key. Going OTT alone is a costly and risky business as shown by Disney and Netflix's recent experiences. Disney's costs have relentlessly risen since its expansion into streaming as recent investments have taken a toll on its financials. Netflix announced at the start of 2019 that it expects to burn $3bn in free cash flow this year as a result of its binge-spending on content.

Partnership Between Media Companies to Launch Streaming Services

> I am delighted that the BBC and ITV are working together on something truly special - BritBox. A new streaming service delivering the best home-grown content to the public who love it best

Tony Hall, Director General, BBC

Digital Inflation

Content Bonanza

In digital warfare, content is proving to be a major weapon to attract digital subscribers. Investment in content is reaching new levels as demonstrated by recent deals in the broadcast and media industry. Netflix, who spent a whopping £12bn on content in 2018, is set to increase its investment to $15bn in 2019. Apple's Tim Cook recently said to investors: "we will participate in the original content world" after announcing deals with TV stars such as Oprah Winfrey and production houses such as A24. Google's biggest rise in investment for 2018 came from increased spending on original content for YouTube aimed at creating a digital subscription business. As highlighted earlier, Disney is spending more on content for both its upcoming Disney+ and Hulu, which became majority-owned by Disney following the Fox acquisition. As demand for content rises, content producers continue to enjoy the bonanza and raise prices, sparking a digital inflation.

Number of Original Scripted Series In The US
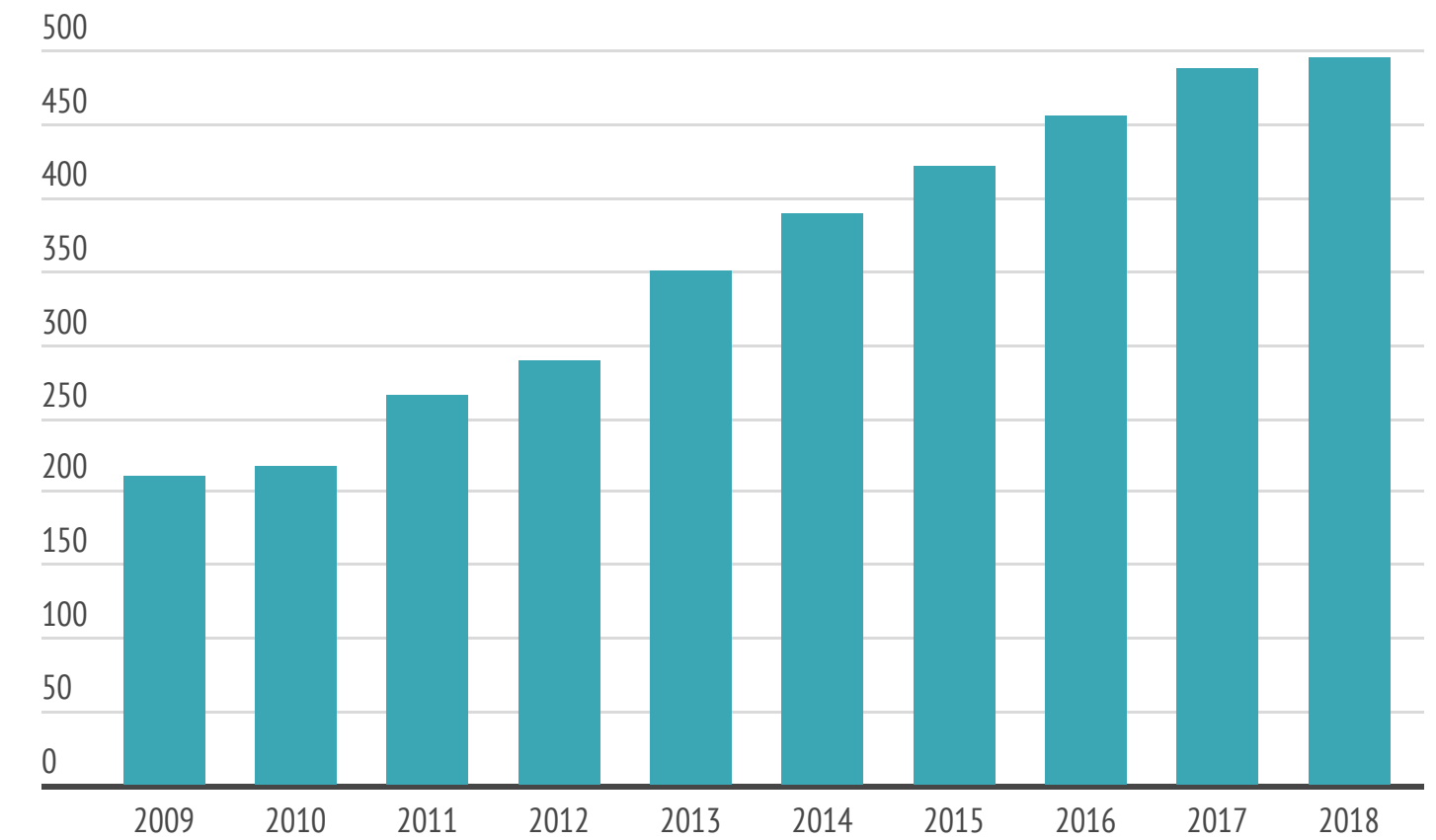
Given the success of Hulu so far in terms of subscriber growth and the relative brand strength and other things too like demographics, we think there's an opportunity to increase investment in Hulu notably on the programming side
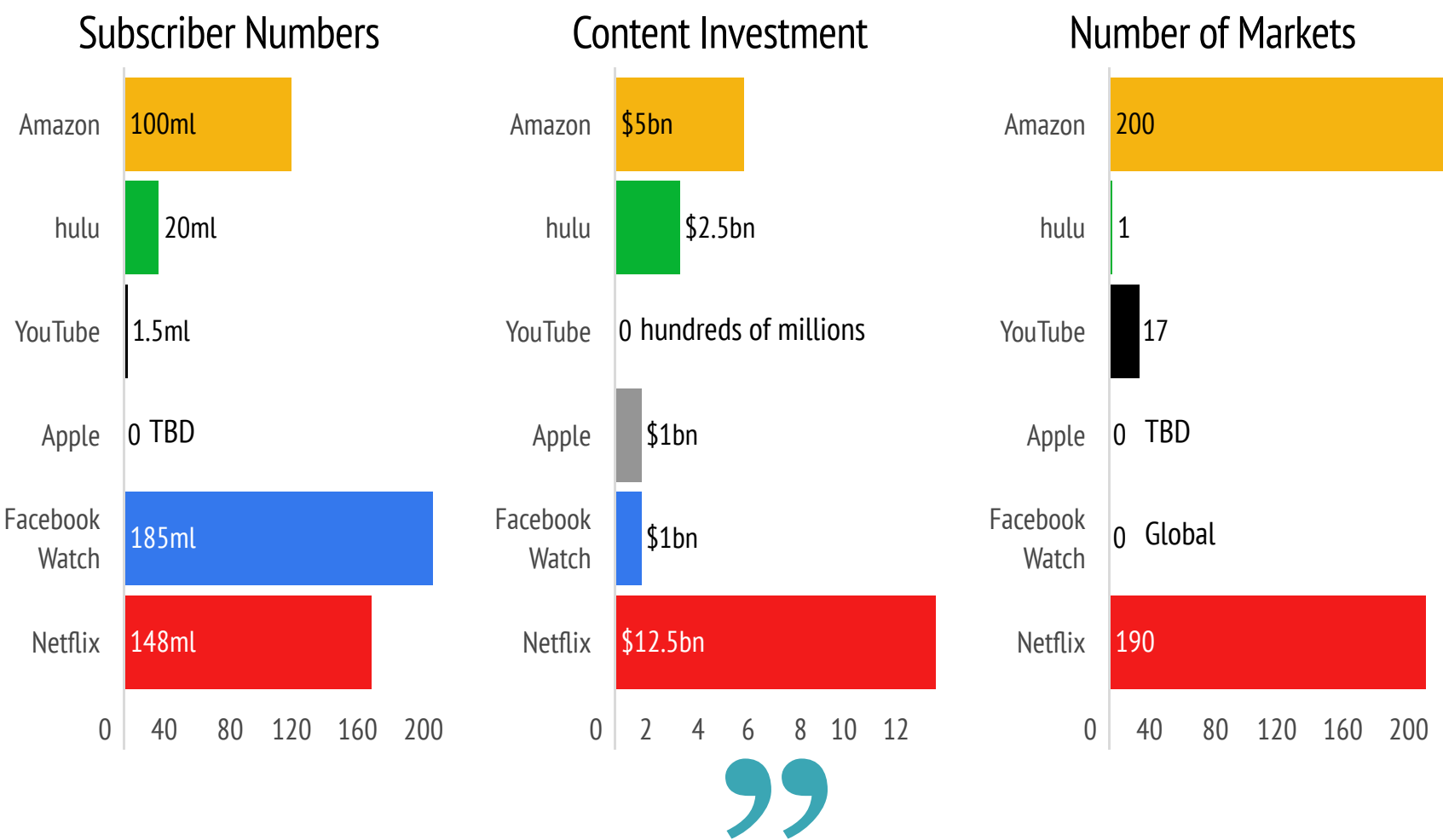
Bob Iger, CEO, Disney

Digital Inflation

Content Fragmentation

The digital inflation sparked by the streaming wars, along with the fall in content distribution costs, is not only leading to an investment bonanza but also to a fragmentation of the content available to digital eyeballs. For example, the fall in distribution costs has favored the rise of YouTube stars and influencers capable of attracting millions of viewers (and Dollars). The rise in the number of streaming offerings is a source of increased competition and viewership fragmentation. This has major implications for broadcasters that range from branding to the personalization of consumer experiences. As content proliferates on multiple platforms, the need to stand out is becoming greater than ever. Therefore, this is also translating into an important technology spending shift as we will argue later in this report. Viewers, who are faced with an infinite number of content choices, will be lured by scale or focus.

Streaming Services Stats In 2018

Subscriber Numbers

Service	Value
Amazon	100ml
hulu	20ml
YouTube	1.5ml
Apple	0 TBD
Facebook Watch	185ml
Netflix	148ml

(axis: 0, 40, 80, 120, 160, 200)

Content Investment

Service	Value
Amazon	$5bn
hulu	$2.5bn
YouTube	0 hundreds of millions
Apple	$1bn
Facebook Watch	$1bn
Netflix	$12.5bn

(axis: 0, 2, 4, 6, 8, 10, 12)

Number of Markets

Service	Value
Amazon	200
hulu	1
YouTube	17
Apple	0 TBD
Facebook Watch	0 Global
Netflix	190

(axis: 0, 40, 80, 120, 160, 200)

In this fragmented landscape, providers have to know how to attract and keep their subscriber base. Ultimately it is up to industry players to help them find what they want to watch, when they want to watch it

TiVo

Source: Medium

Digital Inflation

Content Divide

Content fragmentation is also exacerbating the digital divide between companies going big and those going niche. Media outlets like Netflix and Disney are going after big audiences by providing a varied slate of content that includes everything from drama to animation and documentaries. There will also be, though, a parallel war between niche outlets appealing to specific content needs and communities of interests. The barriers to entry to the latter market are indeed lower as demonstrated by the rise of niche OTT offerings in recent years. Recently, major English Premier League (EPL) teams have been in talks to launch their own OTT offerings to cater to their fans and defy traditional distribution outlets. As mentioned earlier, recent initiatives by some broadcasters such as the BBC, ITV and Discovery also aim to appeal to niche audiences such as those passionate about history and wildlife programming.

2 Million
Subscribers in 2018

700,000
Subscribers in 2018

100,000
Subscribers in 2018

"

Netflix and Amazon are trying to be everything to everyone, but we believe that many consumers are still seeking services that cater to their passions

Soumya Sriraman, North America President, BritBox

Digital Speed

Velocity

Velocity is the new focus of media companies and a consequence of digital warfare and inflation. Consumers' expectations have shifted forever towards online consumption of media fueled by its convenience and their growing impatience. Viewers want to be able to access and binge-watch content online at home and on the go without any quality of service issues. This means that costs are rising and media companies are required to roll out new services and channels much more quickly than they have historically been used to doing. As we will argue in the next section of this report, this is prompting them to drive velocity through efficiency. Increased efficiency is being achieved through the automation of some workflows and the deployment of disrupting emerging technologies such as the cloud, artificial intelligence and blockchain.


"

[The iPlayer] is the way people will consume the BBC in the future. We need more content there and for longer. This is no longer a catch-up service... it's a destination

Tony Hall, Director-General, BBC

Source: Mirror

Digital Speed
Personalization

The shift in consumers' expectations coupled with the need for standing out in a crowded marketplace is leading to the increased personalization of media experiences. This is another major priority for media companies as they transition from a one-to-many to a one-to-one model. This transition has also major implications for technology investment as media companies shift their focus from legacy technology and hardware to software and consumer-facing tools capable of delivering personal experiences such as apps and user interfaces, and emerging devices such as virtual assistants. Recently, the drive towards personalization has also hit the content sphere as Netflix launched Bandersnatch, an interactive movie that puts the viewers in control, at the end of 2018. Consumers are increasingly in control of the direction of the media industry.

From

To

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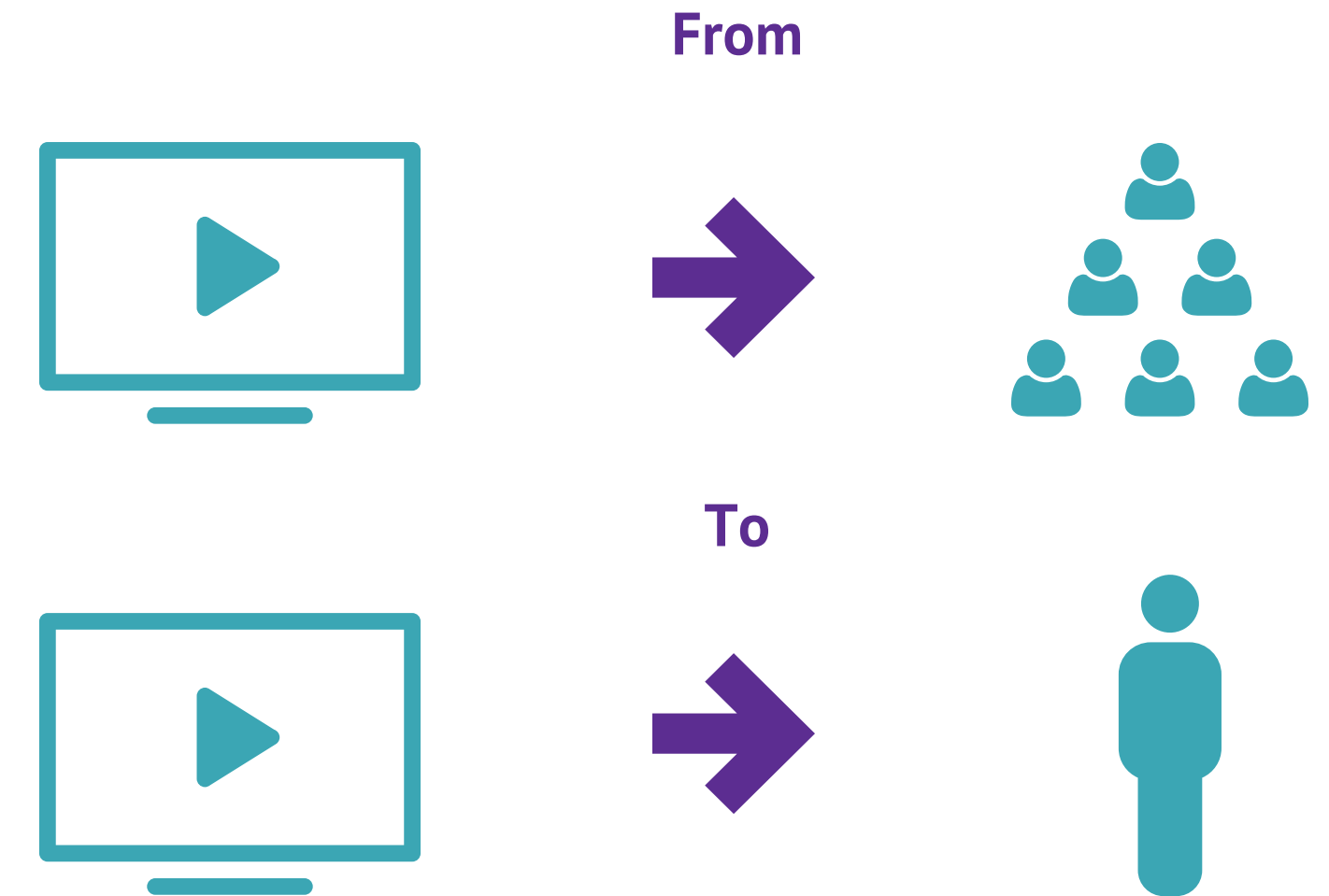
Everyone understands the importance of multiple devices reaching directly to your consumer. Now, it's about personalization and really engaging and keeping your viewers in the OTT space.

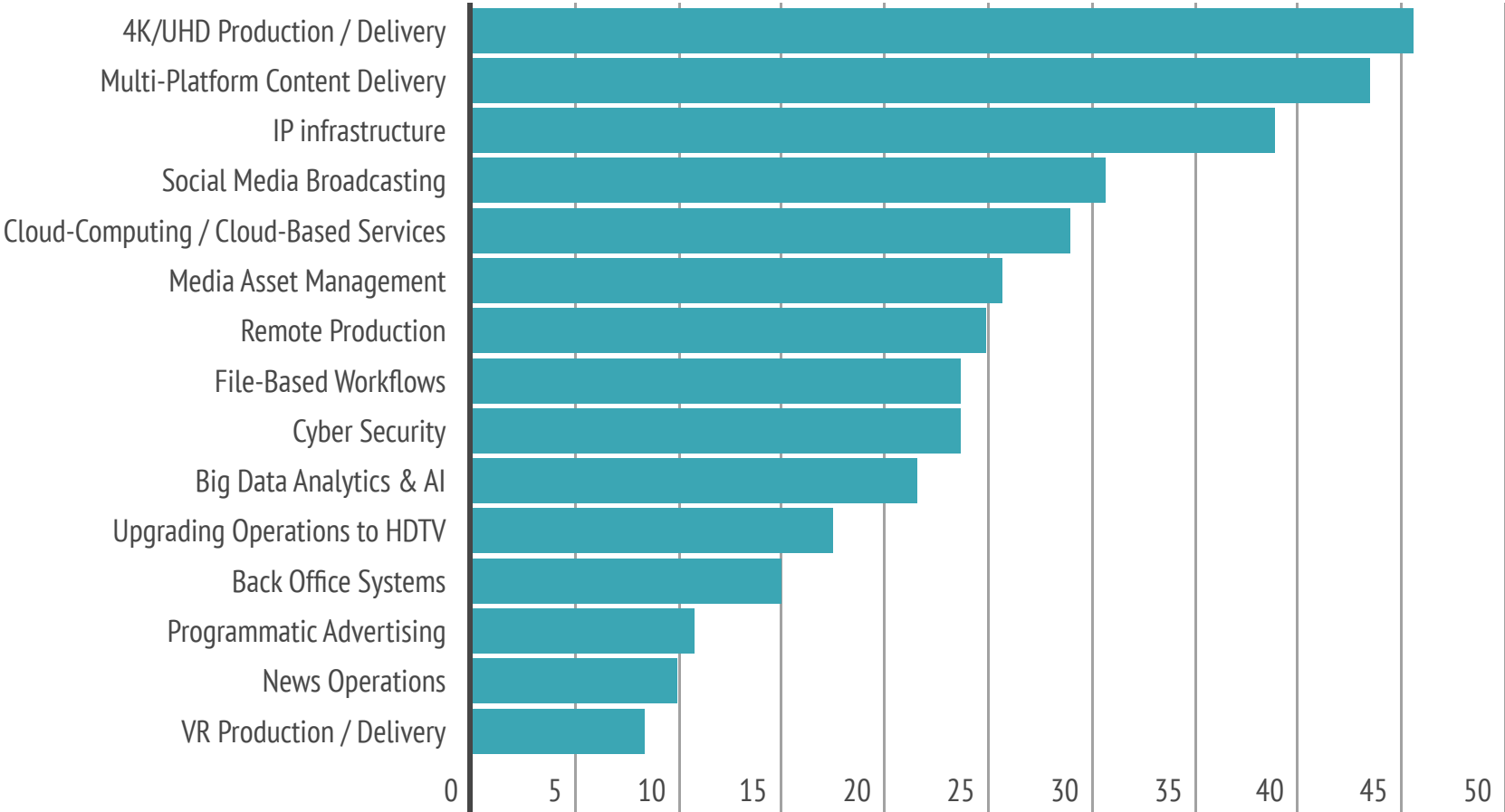Phil Green, Senior VP Business Development, Endeavor Streaming

Digital Speed
Platformization

Change, in all its forms, has brought about a platformization of the broadcast and media industry. Media companies are now managing and distributing content on different platforms – both virtual and physical – to reach consumers. For example, the digital transformation that Disney is undergoing is bringing its content to different direct-to-consumer platforms, including the upcoming Disney+, ESPN+ and Hulu, as well as existing traditional distribution outlets such as Pay-TV operators. As a result of this, complexity is greatly increasing from both a business and technology perspective. As we have seen in this section, the industry platformization has introduced new drivers of change. These have translated into shifting technology buying trends, which we will examine in the next section. This change is unprecedented.

Media Tech Priorities

Priority	Value
4K/UHD Production / Delivery	~47
Multi-Platform Content Delivery	~44
IP infrastructure	~40
Social Media Broadcasting	~32
Cloud-Computing / Cloud-Based Services	~30
Media Asset Management	~27
Remote Production	~26
File-Based Workflows	~25
Cyber Security	~25
Big Data Analytics & AI	~23
Upgrading Operations to HDTV	~19
Back Office Systems	~17
Programmatic Advertising	~12
News Operations	~11
VR Production / Delivery	~10

Source: Disney, IABM

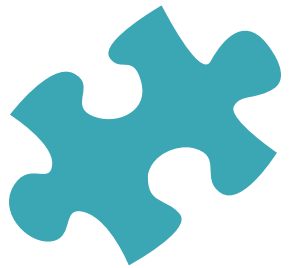# Buying Trends

Buying Trends

Trends on the Demand-Side of Media

Media Factory

The need for digital speed is prompting media companies to transform their organizations into media factories capable of delivering content to multiple platforms and devices

The Workflow Puzzle

In media factories, workflow is everything. Workflows need to be tightly integrated and pieced together to function effectively and move to next-generation content chains

In the Driving Seat

To build integrated content chains and achieve digital speed, media companies are increasingly driving technology development, by themselves or in partnership with suppliers

Media Factory
Agile Efficiency

Competition, content and platforms are growing, requiring media companies to become media factories that manage and distribute greater volumes of content as quickly as possible. As a result of this, technology buying is shifting to solutions that deliver digital speed. Many media companies told us that one way to achieve digital speed is driving workflow efficiencies throughout their content chains.

Some of them are focusing on efficiency drivers such as automation, cloud-based workflows and remote production to be faster and more productive while keeping costs down. In the brave new digital world, the value of a technology solution is assessed by buyers against these criteria: it either opens unexplored opportunities such as new revenue streams and quicker service deployment or enables them to carry out existing activities at lower costs. The industry drivers of change have caused this shift and paved the way for the adoption of new technologies.
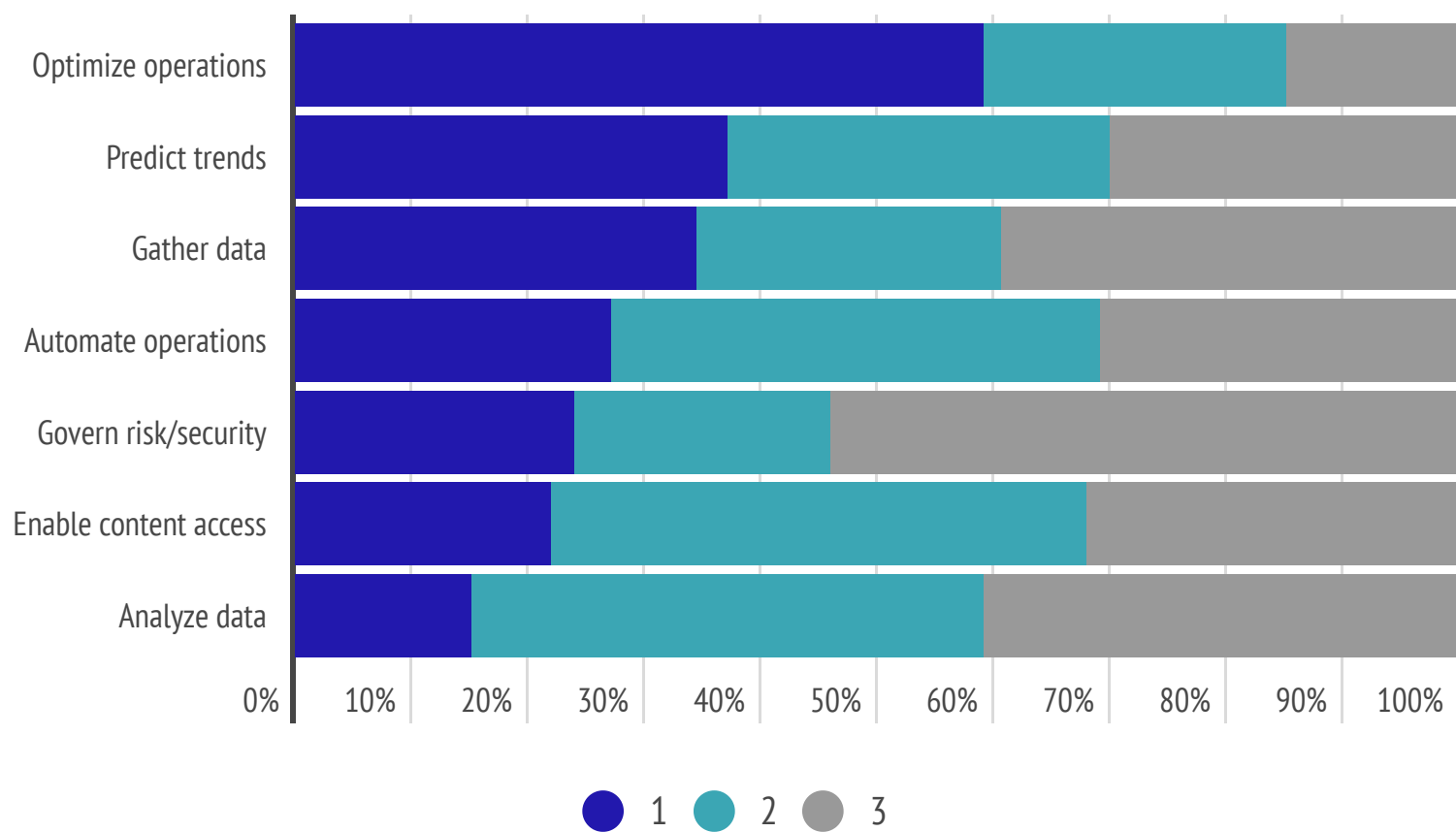

Strategic Drivers of Purchase
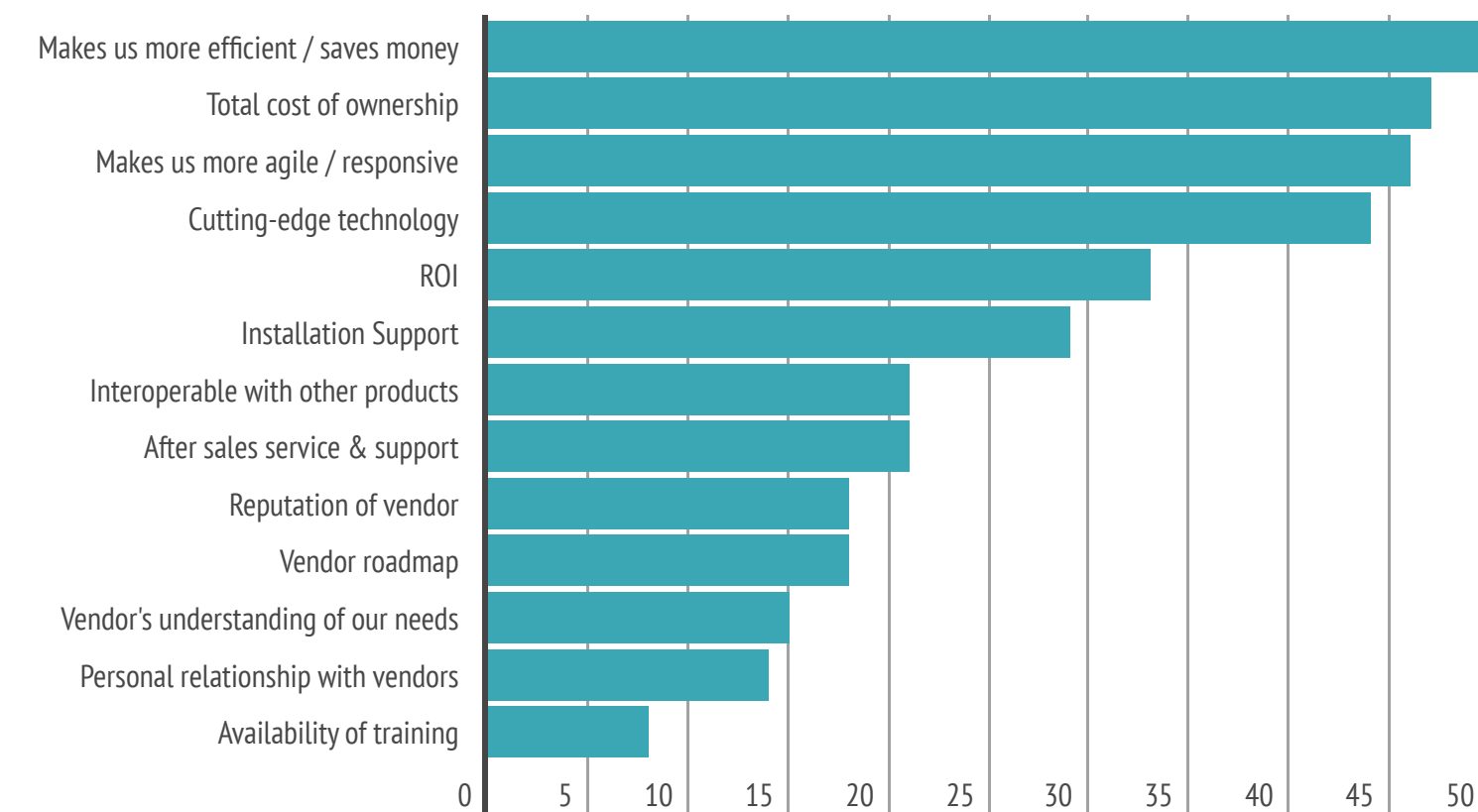
Source: Pexels, IABM

Media Factory
Data

Data is becoming an increasingly important asset for media factories and driving the deployment of technologies that are enabled by or enable it. As companies move to direct platforms, the importance of consumer data in powering decision-making is growing. Increasingly, emerging technology solutions try to take this into account. It's not just about the consumer though, as the move to the cloud is giving media companies access to a wealth of data on their operations. This data is a goldmine and media companies want to leverage it in different parts of their content chains to drive automation, business analytics and business rules that deploy virtual machines depending on demand – more on this in our next sections. This is a true media technology revolution, which is introducing complexity.

Priorities in Managing Content Chain

Legend: 1 (dark blue), 2 (teal), 3 (grey)

Categories (top to bottom): Optimize operations, Predict trends, Gather data, Automate operations, Govern risk/security, Enable content access, Analyze data

X-axis: 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

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One of the key methods by which we have continued to strengthen our ratings portfolio is by cross-promoting across our brands, having invested in data science and advanced analytics to improve our marketing efficiency
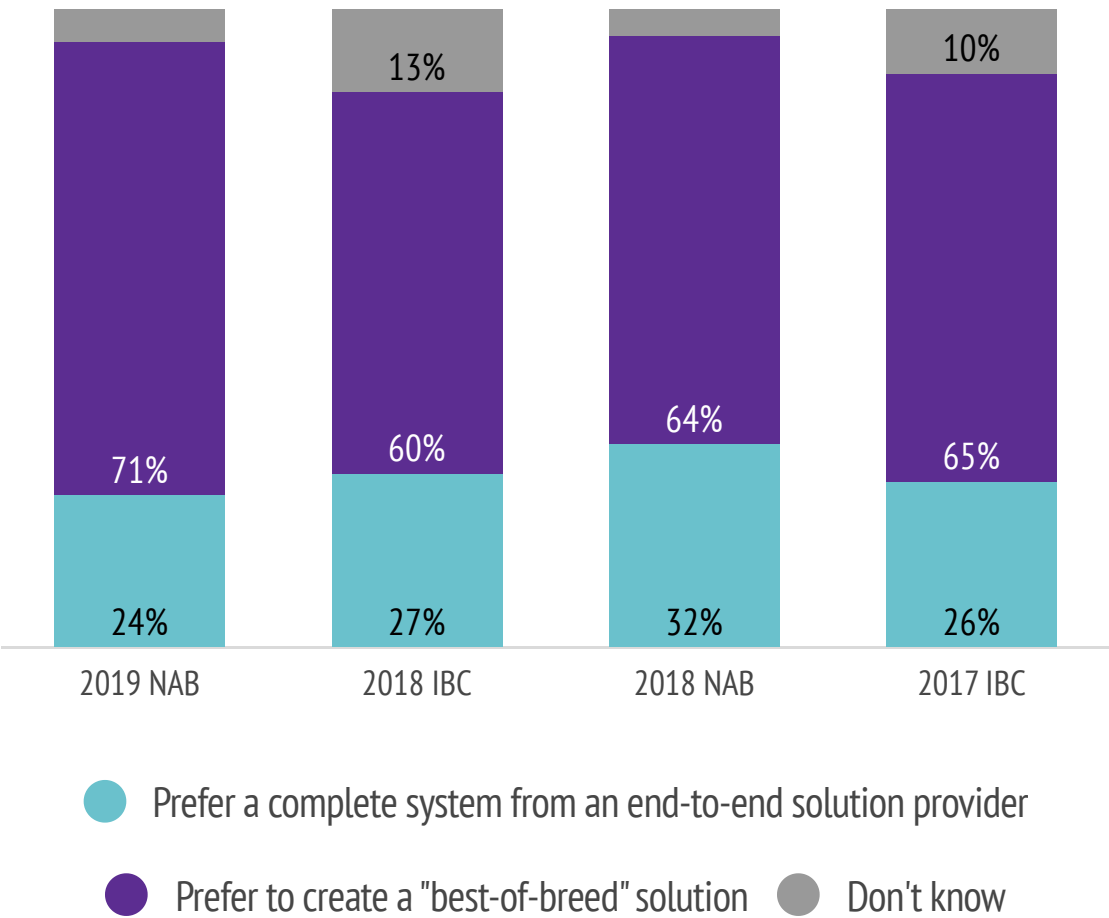
David M. Zaslav, President & CEO, Discovery, Inc.

Source: IABM, Seeking Alpha

The Workflow Puzzle
Complexity

Media companies are increasingly focusing on workflows and how these are designed to make sure they eliminate silos within their organizations and develop next-generation content chains. Their objective is to move to content chains that do not prioritize linear or OTT distribution but are agnostic and flexible. As the market dynamics continue to shift and buyers adopt new technologies such as the cloud and IP networking, complexity is increasing with some of them requiring a high degree of customization and features built on top of existing solutions. Some media companies explicitly told us how this is becoming an issue when they are looking for a new solution, particularly in some of the critical parts of the content chain as we will see later. What they want is the best-of-breed solutions that solve specific problems, and they have continued to tell us that in recent times. Then, it is about piecing the workflows together.
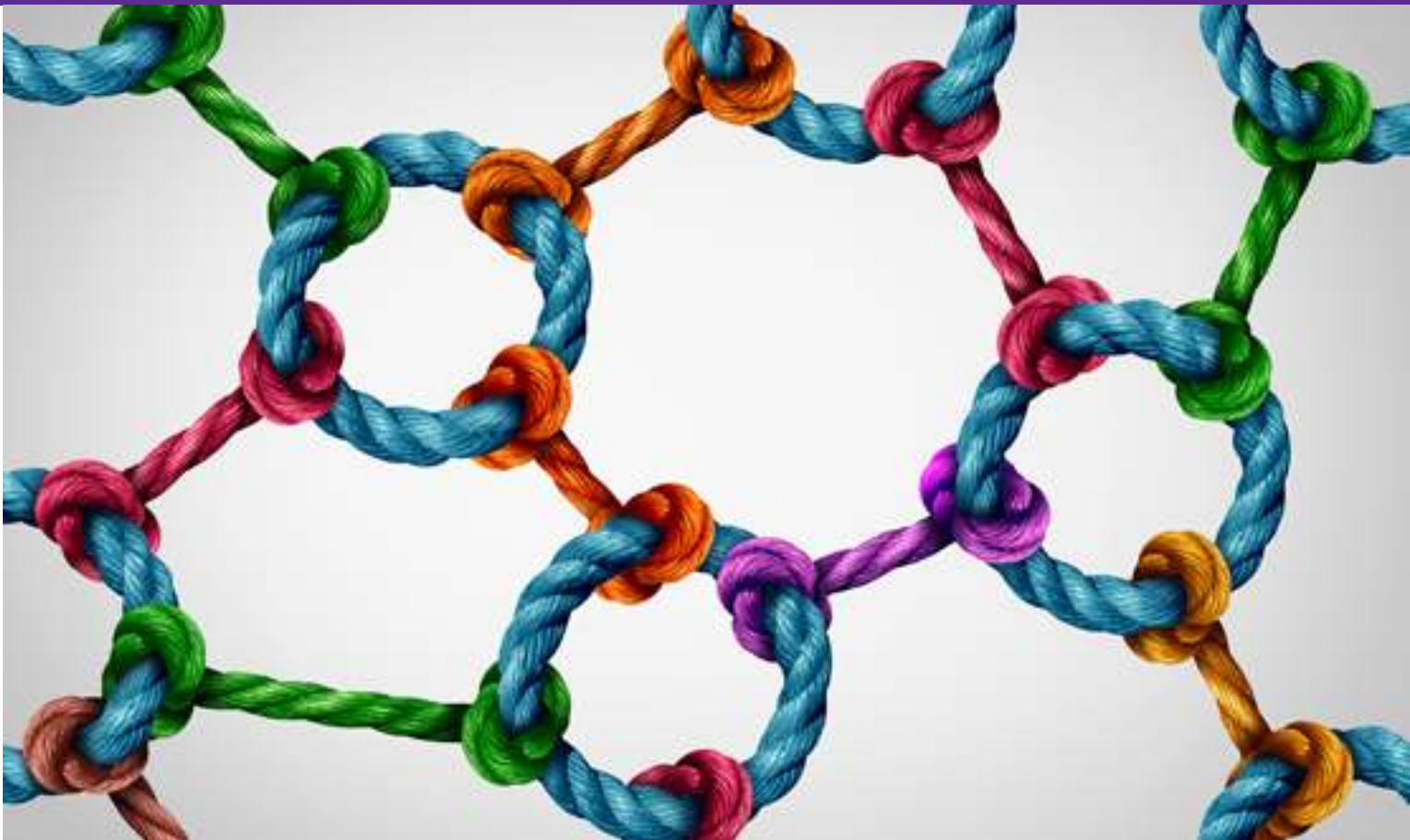

Media Tech Preferences

	2019 NAB	2018 IBC	2018 NAB	2017 IBC
Don't know		13%		10%
Prefer to create a "best-of-breed" solution	71%	60%	64%	65%
Prefer a complete system from an end-to-end solution provider	24%	27%	32%	26%

● Prefer a complete system from an end-to-end solution provider

● Prefer to create a "best-of-breed" solution   ● Don't know
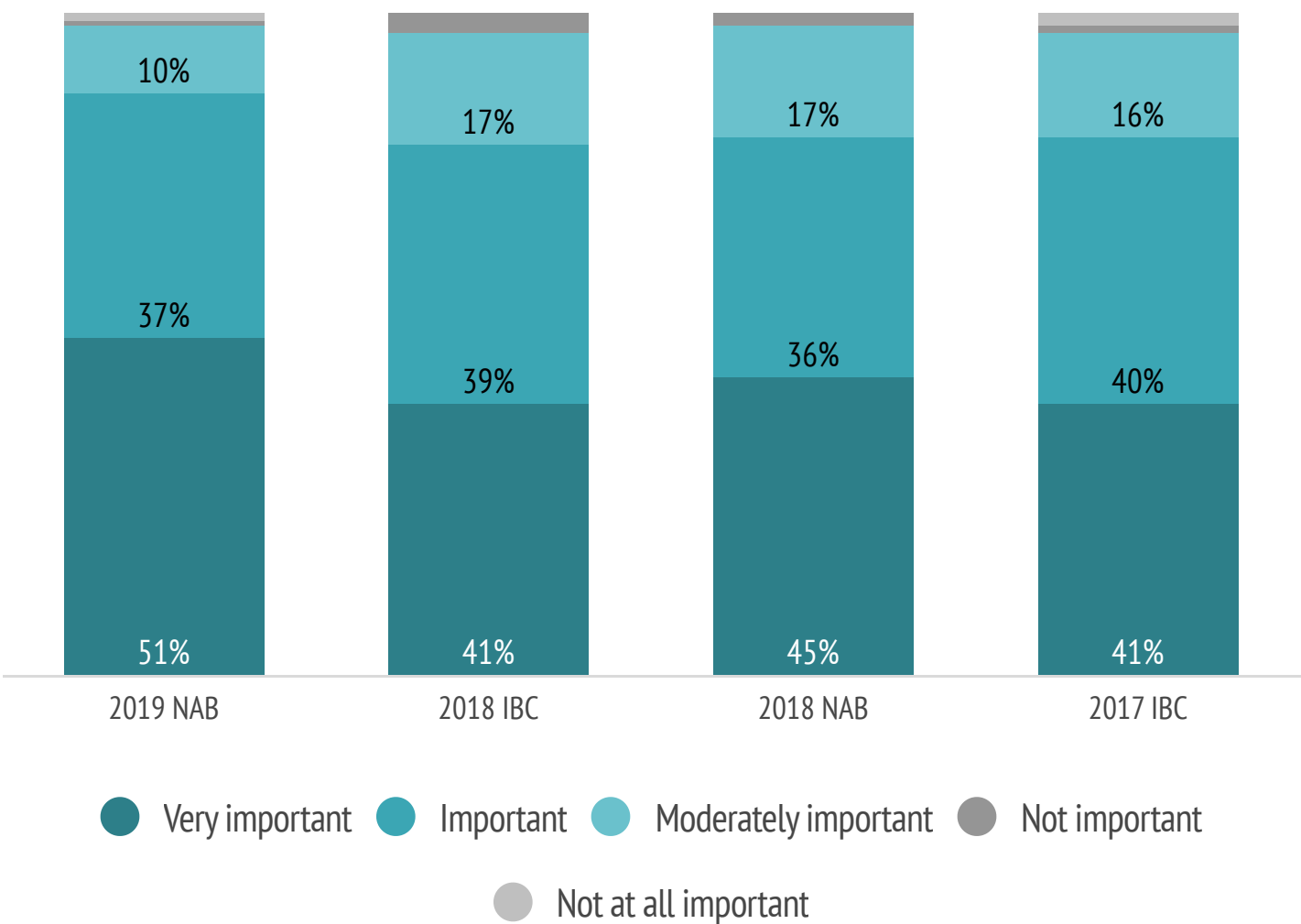
Source: Pexels, IABM

The Workflow Puzzle
Integration

As software and best-of-breed become commonplace, the need to integrate different workflow solutions together is crucial in media factories. As shown by IABM data, interoperability remains a key priority for an overwhelming majority of buyers. Some of the new tools to achieve that are microservices as well as an increased reliance on APIs to piece together the rising number of software tools used by media organizations. Adoption of microservices is increasing as demonstrated by IABM data and one of their most widespread use cases is achieving interoperability of operations. On APIs, Margaret Craig, CEO, Signiant told us: "It's the software equivalent of broadcast engineers running cables in the hardware world. APIs are the new BNC cables." In development and integration, media companies are working both by themselves and more closely with suppliers.

Importance of Interoperability

	2019 NAB	2018 IBC	2018 NAB	2017 IBC
Moderately important	10%	17%	17%	16%
Important	37%	39%	36%	40%
Very important	51%	41%	45%	41%

● Very important ● Important ● Moderately important ● Not important

● Not at all important

Source: IABM

In the Driving Seat
BIY

The need for digital speed, integration and customization is prompting media companies to build technology by themselves if they can't find anything suitable in the marketplace. Some media companies are building internal technology capabilities through acquisitions or direct investment in emerging technology vendors and service providers. Examples of media companies that have done this include Disney, RTL, Comcast and ProSieben.Sat 1. These acquisitions generally aim at boosting technology capabilities in future revenue-generating activities such as SVOD or advanced advertising. Others are boosting their software development teams to build new solutions or customize existing vendors' offerings. Generally, buyers do need to get closer to suppliers through partnerships.

Investment in SW Development in Next 2-3 Years
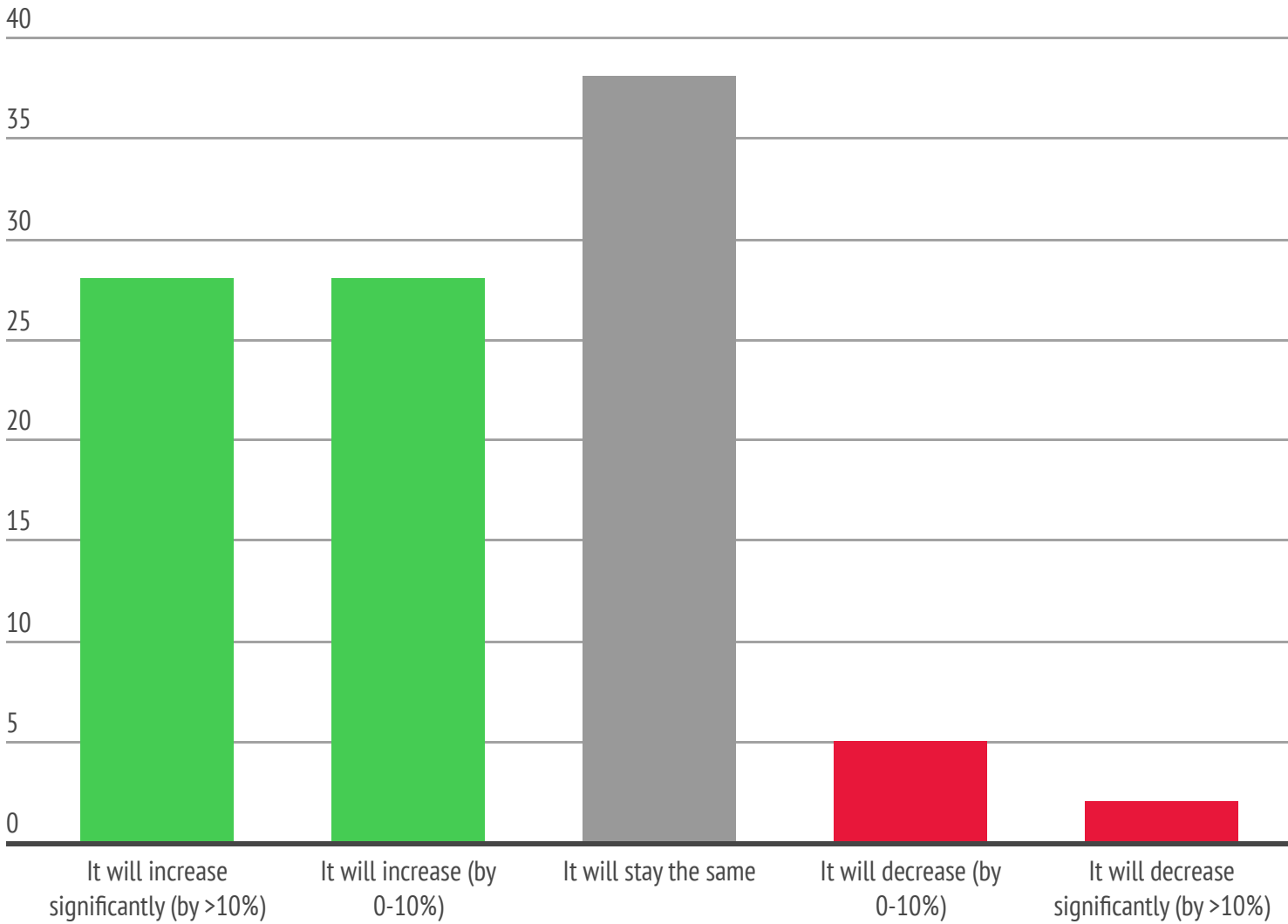
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We are not looking for products anymore, we are looking for partnerships where product development is driven by our requirements

European Broadcaster

In the Driving Seat

Partnerships

As complexity has increased compared to the past, partnerships have grown in importance. Buyers have now a front row seat in future technology development, driving roadmaps along with suppliers. Increased consolidation on the demand side of the media technology business and the move towards software – which has spurred the transition to ongoing relationships between buyers and suppliers - have strengthened this trend. Suppliers are increasingly adapting to this trend. New deployments increasingly feature co-development of technology solutions by both buyers and sellers in a collaborative environment. The rise of IT technology and the changing dynamics in the industry have favored the rise of partnerships and a move to a service-oriented approach. Suppliers are trying to adapt to survive in an increasingly turbulent marketplace.

% of Solutions Built In-house

NAB 2019	IBC 2018	NAB 2018	IBC 2017
40%	40%	37%	35%

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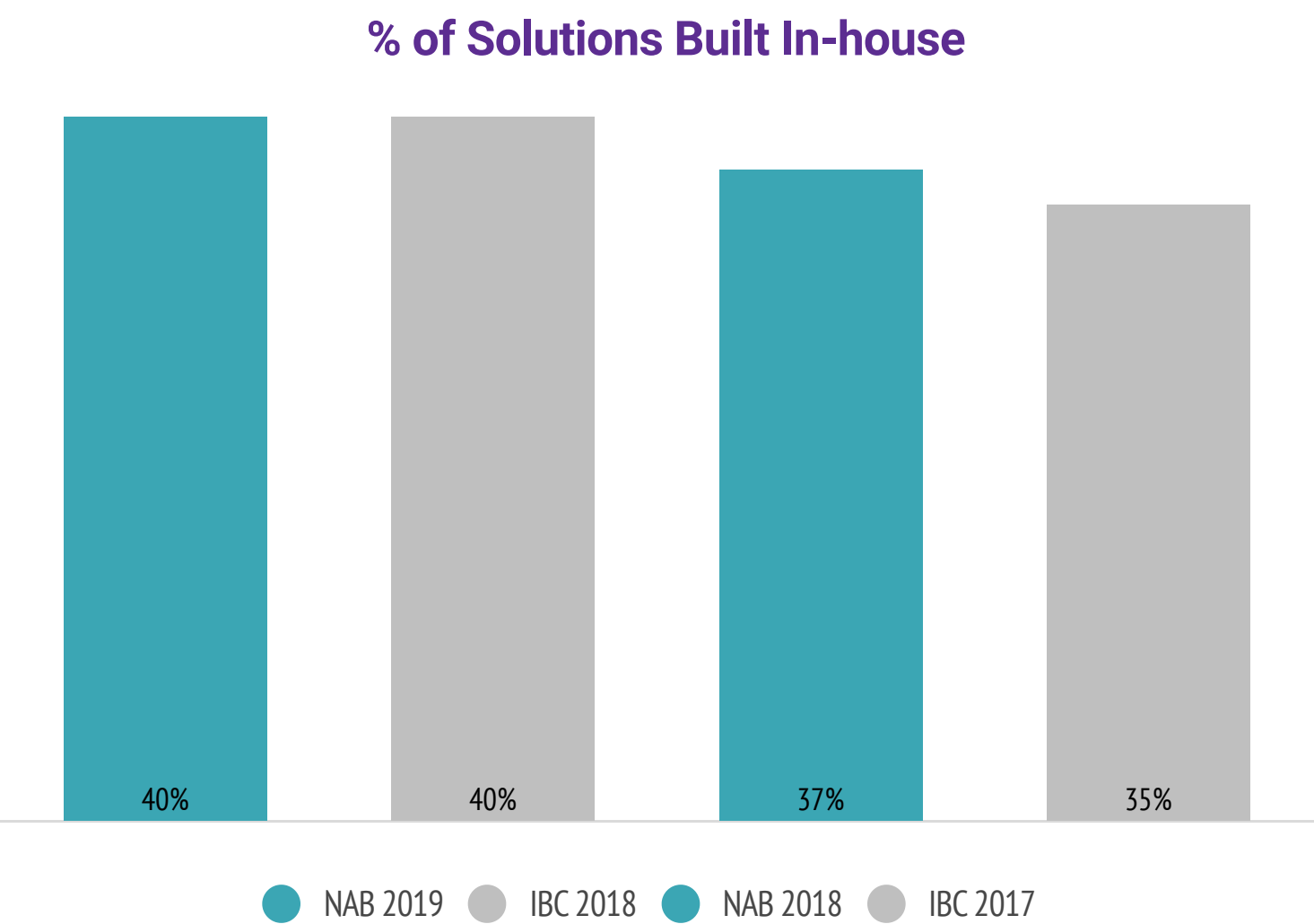
The acquisition strengthens our leadership positions and expands us both globally and into important growth areas. Massive is a brilliant company and a fine addition for Deltatre

Giampiero Rinaudo, Co-Founder and CEO, Deltatre

Supply Trends

Supply Trends

Trends on the Supply-Side of Media

Lost in Translation

As the industry increasingly shifts towards software and the cloud, media technology suppliers continue to strive to transform their organizations by transitioning to new offerings
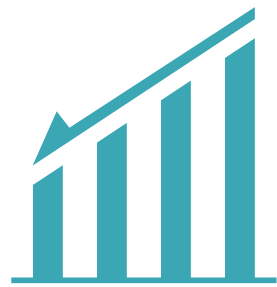
Digital Deflation

The move to software and the cloud continue to exert pressure on suppliers' financials as they move to subscriptions and consumption-based payment models
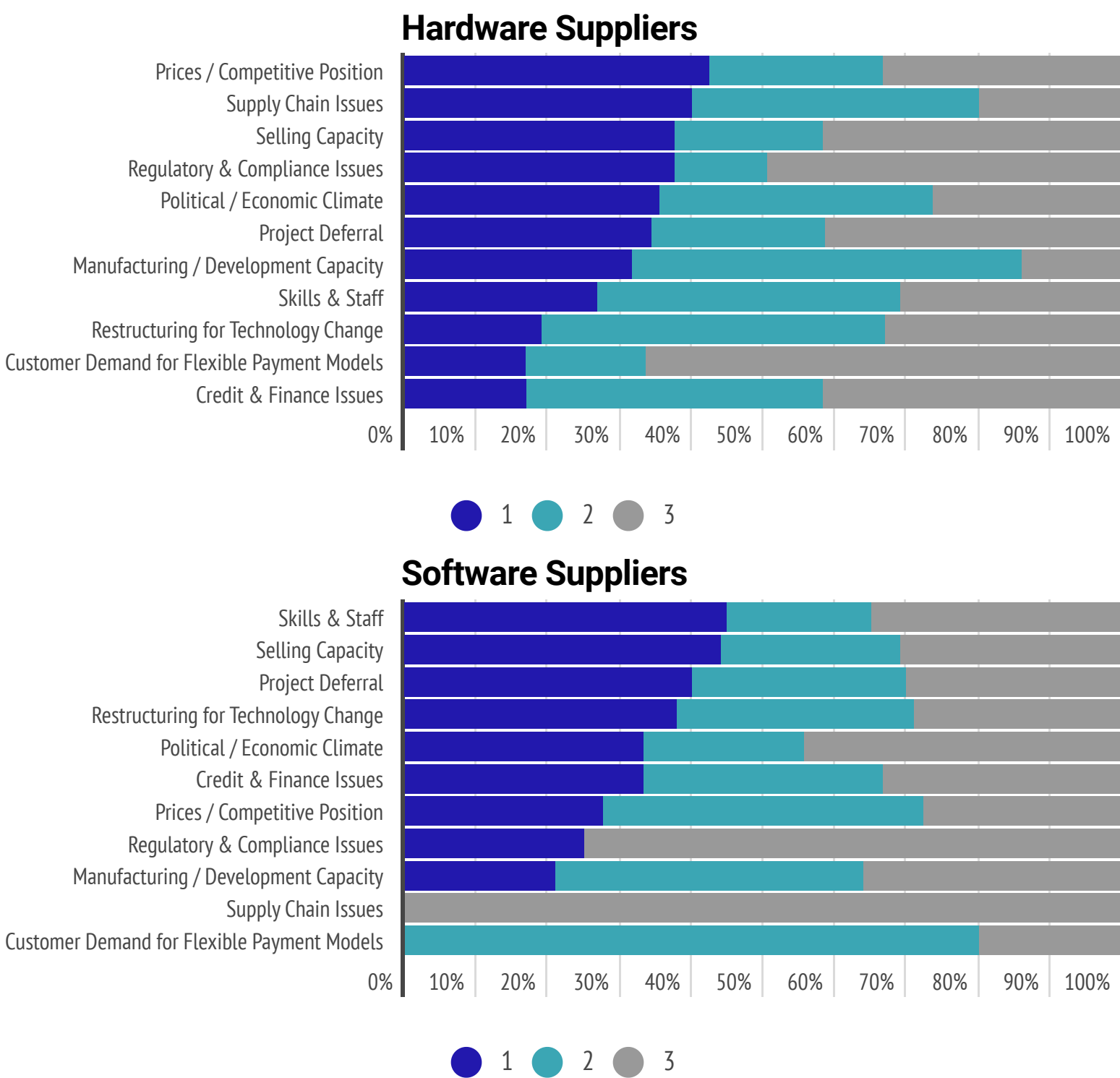
Convergence Zones

As broadcast and AV technology converge, some suppliers are transforming themselves by going after adjacent sectors

Lost in Translation

Leaving Legacy

Demand continues to shift from legacy to digital technology including everything from cloud-based and AI tools to apps and user interfaces. This shift is becoming more marked, prompting some suppliers to radically transform themselves as demand for legacy wanes. The drivers of change described before are aggravating uncertainty in technology buying with many suppliers telling us how project postponements are taking a toll on their businesses. Rising geopolitical and economic tensions are also not helping as evidenced by some of suppliers' comments in our recent surveys and interviews. However, general media technology investment is rising as shown by our data. We have found that some suppliers have managed to radically shift to new offerings while others are still lost in translation. This is evident from buyers' comments highlighting that some vendors are replicating old workflows in the brave new digital world.

Primary Growth Constraints

Hardware Suppliers

Prices / Competitive Position
Supply Chain Issues
Selling Capacity
Regulatory & Compliance Issues
Political / Economic Climate
Project Deferral
Manufacturing / Development Capacity
Skills & Staff
Restructuring for Technology Change
Customer Demand for Flexible Payment Models
Credit & Finance Issues

1 2 3

Software Suppliers

Skills & Staff
Selling Capacity
Project Deferral
Restructuring for Technology Change
Political / Economic Climate
Credit & Finance Issues
Prices / Competitive Position
Regulatory & Compliance Issues
Manufacturing / Development Capacity
Supply Chain Issues
Customer Demand for Flexible Payment Models

1 2 3

Source: IABM

Lost in Translation

New Models

The new models demanded by buyers require vendors to transition to software subscriptions and consumption-based payments. This transition is underway at some major broadcast and media technology suppliers as evidenced by our research and public announcements. The transition to new models continues to drive consolidation in the industry as well. R&D investment also continues to focus on cloud-based technology (for software suppliers) and IP technology (for hardware suppliers). R&D investment continues to be high as the industry bets on new emerging technologies such as AI - AI is the second most important priority in R&D for software suppliers.The rise of new technology provision models has also opened the industry gates to a new generation of suppliers.

Revenue Outlook

Software revenues (permanent licences): 41% | 21% | 18%
Software revenues (subscriptions): 33% | 21% | 33%
Software revenues (on-demand): 20% | 26% | 46%
Hardware revenues: 48% | 21% | 23%
Other revenue sources (customer support, training & maintenance): 50% | 33%

Software revenues (permanent licences): 41% | 33%
Software revenues (subscriptions): 60%
Software revenues (on-demand): 35% | 28% | 33%
Hardware revenues: 23% | 28% | 35%
Other revenue sources: 57% | 27%

Core service revenues: 51% | 23%
Product revenues: 32% | 21% | 21%
Other revenue sources: 43% | 40%

> The transition toward an all-IP workflow is rapidly gaining traction in our industry based on the significant workflow efficiencies and cost savings that it provides

Ian Graham, Senior Vice President of Sales, EMEA and LATAM, Harmonic

Digital Deflation
Transition

The new models rely on a radically different financial balance that prioritizes OPEX over CAPEX – smaller, monthly (or daily) cashflows rather than larger upfront payments. This transition often entails an initial financial shortfall that may be difficult to implement (or accept) at some organizations. It also entails a complete re-organization of investment around the new cashflow paradigms. As relationships move from transactions to partnerships, the focus move on continuous engagement with technology users throughout the year with ongoing customer support and education becoming key. Some suppliers have successfully made this shift and this has been reflected by higher industry revenue and profit rates. However, there is still room for improvement.

Sales & Profits in the Media Technology Industry

Legend: Profit Growth, Sales Growth
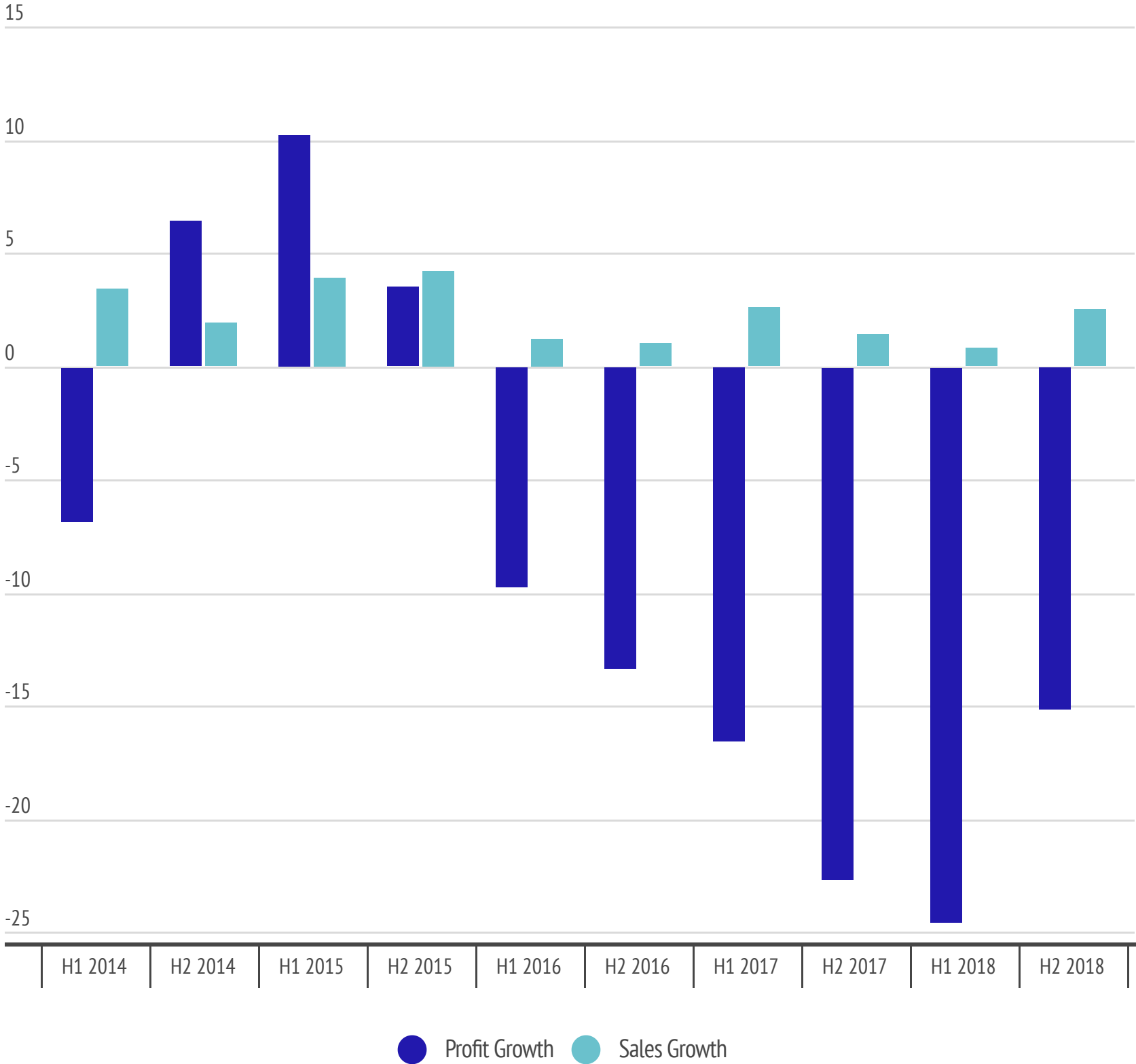
Digital Deflation
Commoditization

Some industry sectors are increasingly under pressure by technology commoditization and rising competition from new entrants while buyers demand new features and functionalities. This double pressure on revenues and costs is prompting vendors to make changes in their offerings. One natural consequence of this is the decrease in selling prices with a simultaneous increase in volumes in the case of hardware sales. Another trend sees some vendors differentiating their offerings by developing end-to-end solutions that cover different content chain needs to lock customers in their solutions. However, as highlighted before, media organizations still prefer best-of breed solutions. This disconnect is prompting some traditional vendors to go after new markets adjacent to broadcast and media.
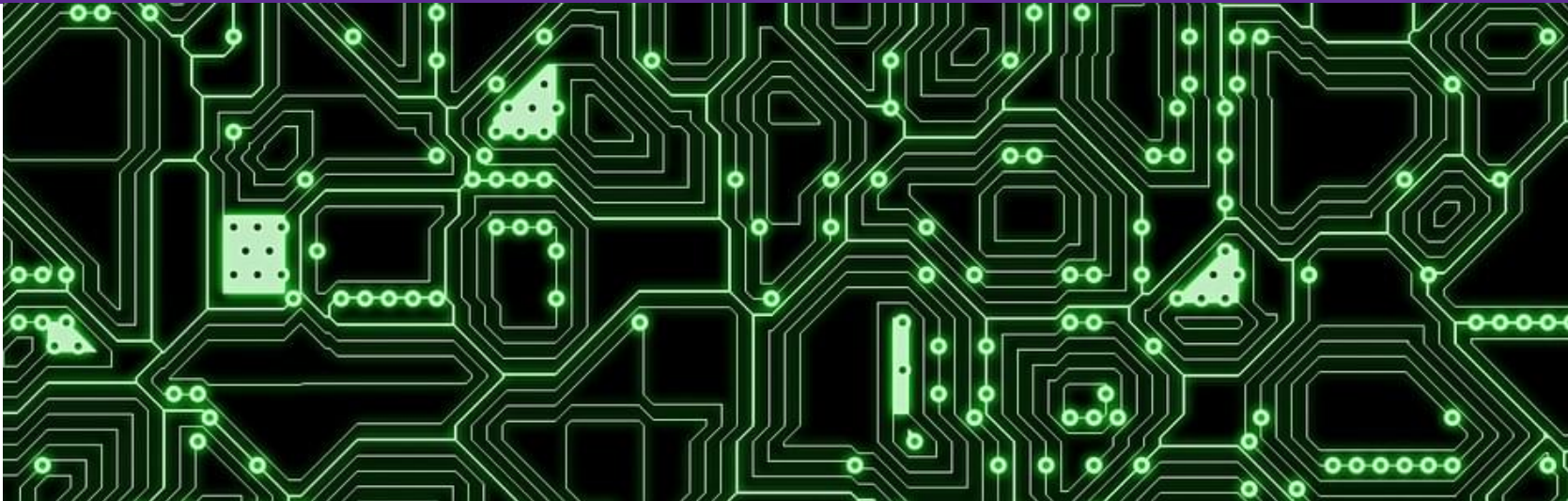
Costs & Prices - Last Six Months

Selling Prices

	H1 2017	H2 2017	H1 2018	H2 2018
Reduced	32%	38%	27%	33%
Stayed the same	54%	50%	56%	56%
Increased	14%	13%	17%	12%

Labor Costs

	H1 2017	H2 2017	H1 2018	H2 2018
Reduced	17%	11%	23%	10%
Stayed the same	52%	60%	46%	58%
Increased	31%	29%	31%	32%

Material Costs

	H1 2017	H2 2017	H1 2018	H2 2018
Stayed the same	64%	76%	66%	59%
Increased	31%	22%	31%	37%

● Increased ● Stayed the same ● Reduced

Source: Council of Europe, IABM

Convergence Zones
New Lands

As broadcast and AV converge, some traditional technology suppliers are looking for alternative sources of growth in the buoyant AV market. Some of these suppliers told us that they are actively going after new markets as the legacy broadcast sector stagnates. For example, the IP convergence in the transmission market is opening new markets for manufacturers in that area. One supplier even told us that they have started pitching broadcast standards such as SMPTE 2110 to the AV market. In production, the commoditization of technology is prompting vendors to launch solutions that appeal to adjacent sectors that are increasingly relying on video. An example of this is sports organizations who are adopting low-cost production technologies.

Broadcast

AV

"
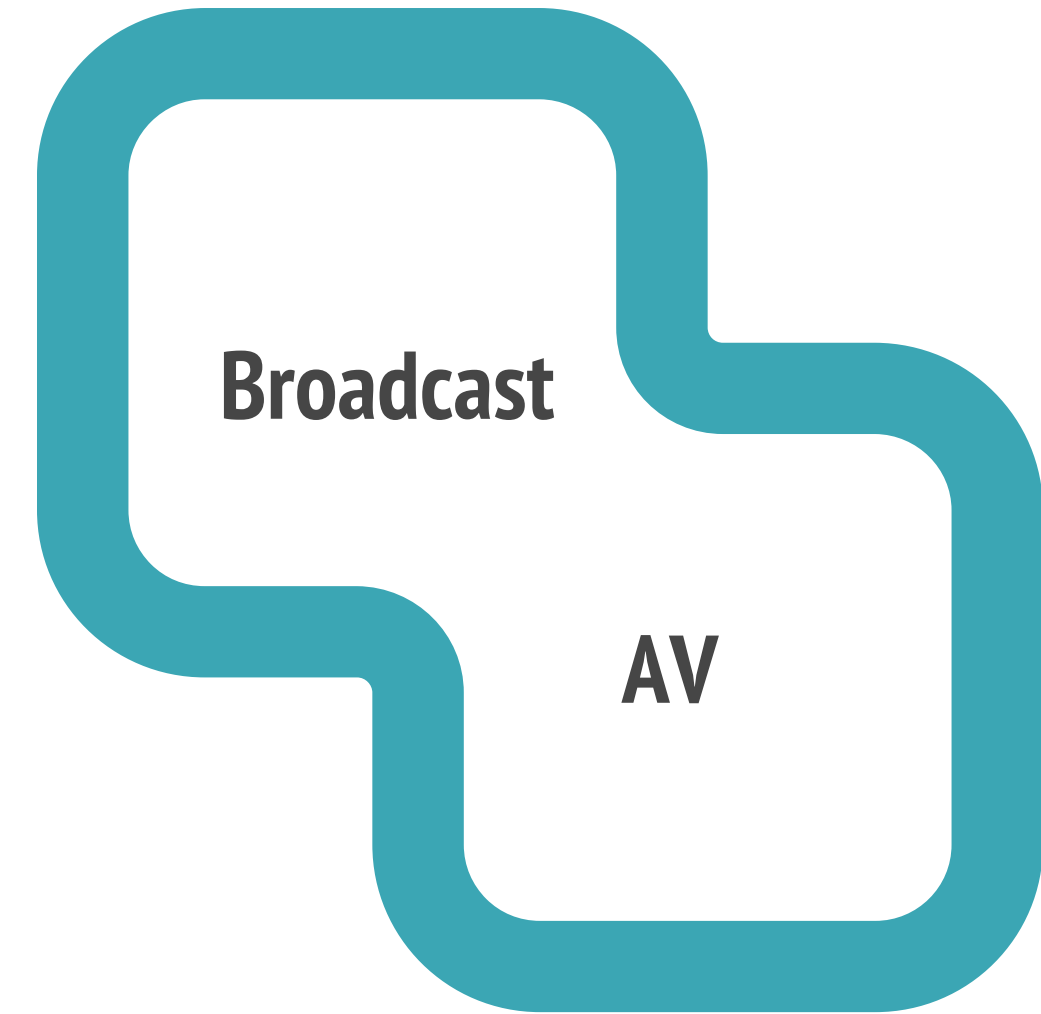
The emergence of broadcast tech into AV will drive up quality, potentially ..
There is a natural marriage between the two industries, but as with any marriage it will take a bit of give-and-take on both sides to deliver a happy ever after

James Keen, Marketing Manager, Tripleplay Services

Convergence Zones
Future Markets

As evidenced by our data, some of the most promising new markets include eSports, security monitoring, telecoms and sports. As the boundaries between broadcast and these adjacent sectors become blurred, these have come to represent important growth areas. As one would expect, these markets have radically different needs compared to broadcast and media, requiring suppliers to adapt their marketing and selling practices. For example, EVS has actively developed a strategy to address the needs of the eSports market with new initiatives such as the partnership with ESL, an eSports organizer and production company. As highlighted before, sports companies are also increasingly adopting media technology. Future markets are awaiting media technology suppliers.

Parallel Markets

Legend: ● Growing ● Stable ● Declining

"
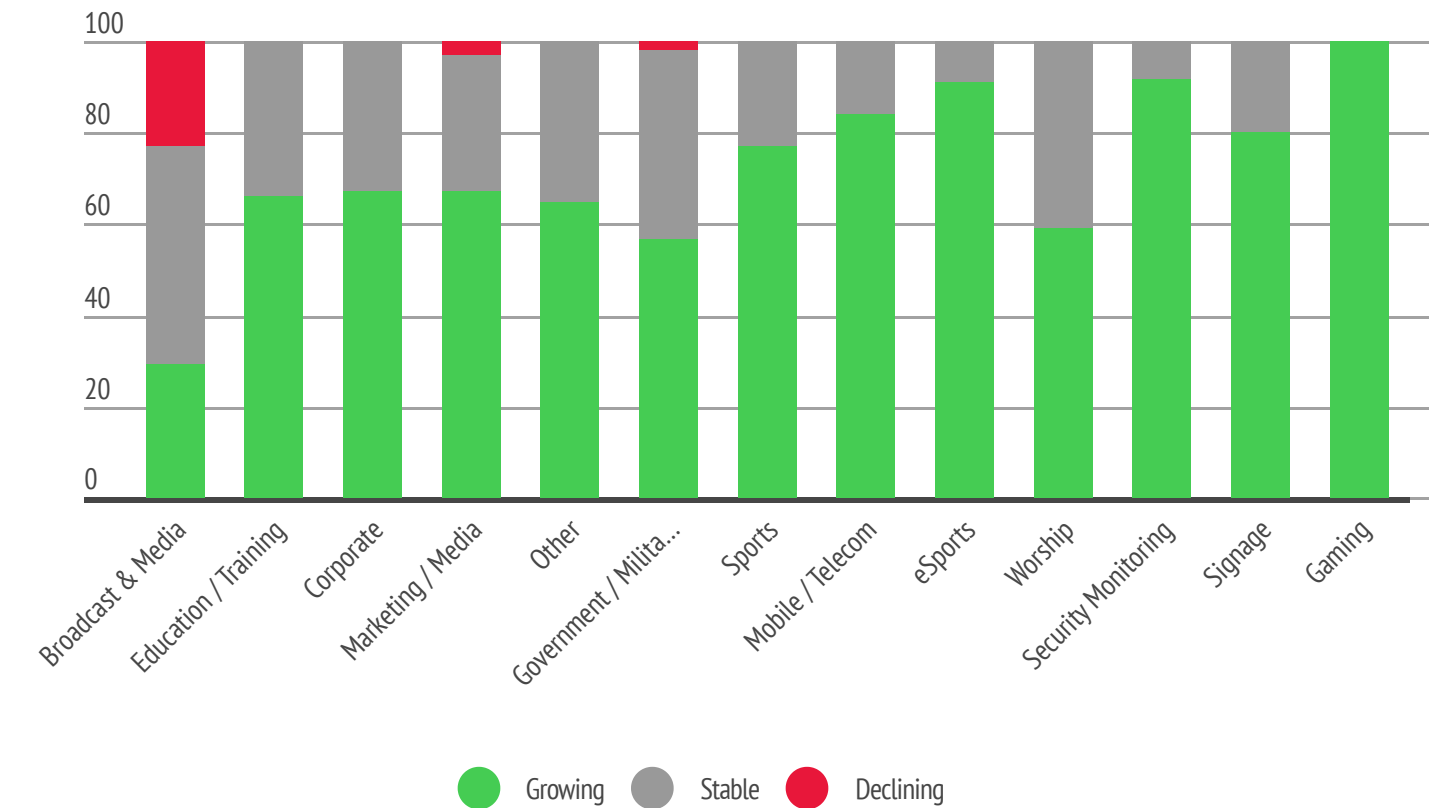
Esports is an increasingly important market for EVS. Key events in the esports calendar are being delivered to tens of millions of people online. This means the market now sits alongside stadiums, sports teams and governing bodies as a group of users that can greatly benefit from the deployment of broadcast-quality video equipment

Nicolas Bourdon, SVP Marketing, EVS

Source: IABM, EVS

Content Chain Investment Analysis

The BaM Content Chain®

Our Investment Compass

IABM's new industry model will guide us in this journey through the Content Chain. In this special analysis, we will present media companies' new priorities and deployments in six supply chain blocks:

1) Create
2) Produce
3) Manage
4) Publish
5) Monetize
6) Consume

For more information on our Supply Trends Report, click here

Content Chain Investment Trends

Emerging Investment Analysis, from Content Creation to Consumption

CREATE	PRODUCE	MANAGE	PUBLISH	MONETIZE	CONSUME
Original acquisition and creation of raw content	Production processes, including post-production	Managing and preparing completed content for publication and archive	Publishing, playing out and distributing linear and non-linear content	Managing business processes for content rights, royalties and advertising	Enabling consumption of content on consumer-facing devices, apps and platforms
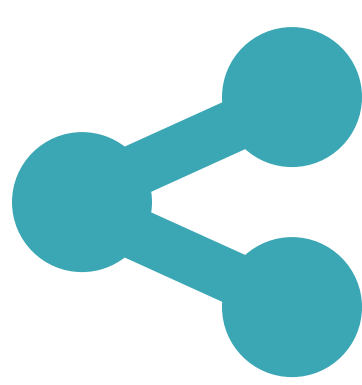
A Content Chain View

Most Important Drivers of Technology Demand: Create

SDI to IP Transition

Remote Production

Upgrade to Immersive Formats (UHD, VR etc.)

Workflow Automation

Multi-Platform Content Delivery (OTT, mobile, social media etc.)

Customer In-house Deployments (BIY)

Next-Generation Wireless Technologies (5G)

Customer Consolidation

Asset Optimization (Centralization, Utilization etc.)

Commoditization

Other

A Content Chain View

Most Important Drivers of Technology Demand: Produce

Remote Production

SDI to IP Transition

Workflow Automation

Multi-Platform Content Delivery (OTT, mobile, social media etc.)

Upgrade to Immersive Formats (UHD, VR etc.)

Asset Optimization (Centralization, Utilization etc.)

Customer Consolidation

Adoption of AI/Machine Learning

Virtualization (Cloud, Microservices, SDN etc.)

Other

Next-Generation Wireless Technologies (5G)

Commoditization

Upgrade to Next-Generation Terrestrial Standards (ATSC 3.0, DVB-T2 etc.)

Customer In-house Deployments (BIY)

A Content Chain View

Most Important Drivers of Technology Demand: Manage

Workflow Automation

Asset Optimization (Centralization, Utilization etc.)

Multi-Platform Content Delivery (OTT, mobile, social media etc.)

Virtualization (Cloud, Microservices, SDN etc.)

Adoption of AI/Machine Learning

SDI to IP Transition

Customer Consolidation

Remote Production

Other

Upgrade to Next-Generation Terrestrial Standards (ATSC 3.0, DVB-T2 etc.)

Next-Generation Wireless Technologies (5G)

A Content Chain View

Most Important Drivers of Technology Demand: Publish

Multi-Platform Content Delivery (OTT, mobile, social media etc.)

Virtualization (Cloud, Microservices, SDN etc.)

SDI to IP Transition

Upgrade to Immersive Formats (UHD, VR etc.)

Adoption of Programmatic / Targeted Advertising

Workflow Automation

Asset Optimization (Centralization, Utilization etc.)

Customer Consolidation

Upgrade to Next-Generation Terrestrial Standards (ATSC 3.0, DVB-T2 etc.)

Next-Generation Wireless Technologies (5G)

Other

Adoption of AI/Machine Learning

Commoditization

Remote Production

Customer In-house Deployments (BIY)

A Content Chain View

Most Important Drivers of Technology Demand: Monetize

Multi-Platform Content Delivery (OTT, mobile, social media etc.)

Adoption of Programmatic / Targeted Advertising

Asset Optimization (Centralization, Utilization etc.)

Adoption of AI/Machine Learning

Workflow Automation

Virtualization (Cloud, Microservices, SDN etc.)

Upgrade to Next-Generation Terrestrial Standards (ATSC 3.0, DVB-T2 etc.)

Customer In-house Deployments (BIY)

Customer Consolidation

Next-Generation Wireless Technologies (5G)

Commoditization

A Content Chain View

Most Important Drivers of Technology Demand: Consume

Multi-Platform Content Delivery (OTT, mobile, social media etc.)

Next-Generation Wireless Technologies (5G)

Adoption of AI/Machine Learning

Workflow Automation

Upgrade to Immersive Formats (UHD, VR etc.)

Other

Customer Consolidation

Asset Optimization (Centralization, Utilization etc.)

Virtualization (Cloud, Microservices, SDN etc.)

Remote Production

Create

Under Pressure

In Create, media technology users continue to upgrade their cameras to higher resolutions and immersive formats. In this block of the content chain, demand is benefiting from the increased investment in content production by media companies but, at the same time, it is being stifled by rising competition from emerging players and pressure from technology commoditization, as evidenced by our Supply Trends Report. Technology suppliers are responding to this by increasingly expanding into new markets, from both a product and geographical perspective. Interestingly, compared to our previous survey, remote production has overtaken immersive formats as the second most important priority. This reflects an increasing adoption and awareness of remote production as well as a decreasing focus on immersive formats such as UHD and VR in content creation. The top priority remains the transition from SDI to IP as media companies progress with this.

Top 3 Investment Drivers

SDI to IP

Remote Production
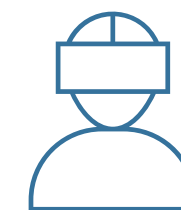
Immersive Formats

Produce

Remote Production

Like in Create, remote production is increasingly more important in this part of the content chain. Compared to our previous survey, remote production has overtaken both the transition to IP and workflow automation to become the most important driver of spending in this segment. Like in Create, the increased demand for content by broadcasters and new media companies is not always accompanied by increasing revenues due to technology commoditization. Workflow automation remains very important, particularly in sports, as more technology companies launch automated production solutions. Cloud and virtualization are fourth in the ranking. More technology suppliers have launched end-to-end production solutions built around the cloud and targeted at adjacent market segments – this is linked to Create. In post-production, the cloud is enabling new business models built around resource flexibility, access, collaboration and relocation for users although adoption depends very much on the use case.
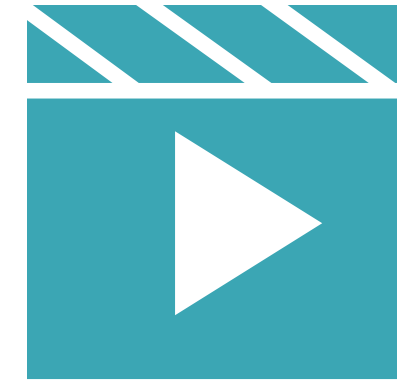
Top 3 Investment Drivers

Remote Production

SDI to IP
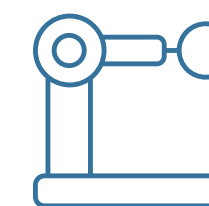
Workflow Automation

Manage
Efficiency

Demand for content management systems has significantly grown in recent years as efficiencies gained through these products can translate into widespread savings throughout the content chain. Increased demand has been met by increased competition, and consequent price compression. Workflow automation remains the top priority in this segment and this is also linked with the increased adoption of AI by users – more on this in our Technology Adoption Trackers. Technology suppliers have looked at integrating functionalities from AI specialists or cloud service providers in their systems - use cases of AI in content management include routing workflows such as metadata tagging. Interestingly, asset optimization and centralization has overtaken multi-platform content delivery as the second most important trend in Manage. This block of the content chain is all about efficiency as noted earlier. As content has become a global business, demand for localization solutions has also exploded favoring the rise of service providers in this area.
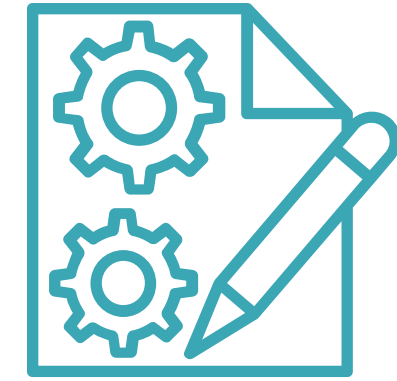
Top 3 Investment Drivers
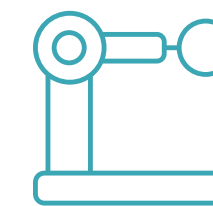
 Workflow Automation

 Asset Optimization

 Multi-Platform Delivery

Publish

Going Virtual

In Publish, the shift in viewing habits has prompted broadcasters to repurpose their investment to OTT – this is the most important spending driver in Publish. The adoption of cloud-based technology has contributed to this trend – according to our data this is the second most important spending driver in Publish. Major deployments have included Discovery's move of its linear playout operations to the cloud. This has exacerbated revenue growth in this segment as products have either been replaced or hit by pricing pressures. The upcoming introduction of 5G technology promises to further disrupt this sector – although this is yet to become a relevant spending driver for suppliers. Demand for internet distribution has exploded as evidenced by our data. OTT has attracted large investment as a result of this and some media companies have tried to internalize OTT capabilities (e.g. Disney's acquisition of BAMTech and Endeavor's acquisition of NeuLion).
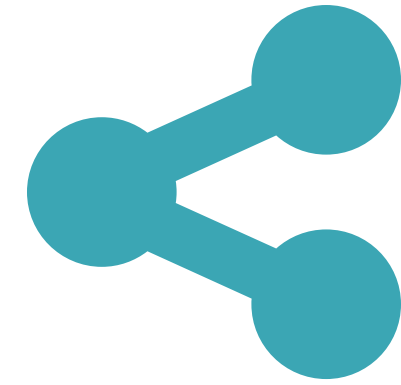
Top 3 Investment Drivers

Multi-Platform Delivery

Virtualization

SDI to IP

Monetize

Strategic Focus

The never-ending growth of OTT coupled with the challenges of monetizing content in an online world has spurred the growth in Monetize. Multi-platform content delivery has overtaken programmatic advertising at the top of the ranking. However, programmatic and advanced advertising remain very important as demonstrated by recent acquisitions by media companies (e.g. iHeart Media buying Jelli and RTL buying Yospace). However, adoption of programmatic advertising remains at an early stage in the industry. The adoption of AI is considered the third most important trend in this segment. In Monetize, AI can help a great deal by augmenting advertising effectiveness – a lot of radio broadcasters in the US have invested in this – and improve relationships with subscribers in SVOD models. In fact, despite advancements in advertising technology, SVOD remains so far the most established business model in the OTT world.

Top 3 Investment Drivers

Multi-Platform Delivery
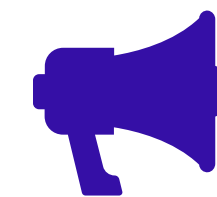
Programmatic Advertising

AI/Machine Learning

Consume

Rising Interest and Investment

Like in Monetize, investment is significantly rising in Consume as media companies increasingly go direct-to-consumer. Not surprisingly, multi-platform content delivery tops the ranking of spending drivers followed by 5G, Immersive Formats, Virtualization and AI. In this block of the content chain, investment in AI is rising as media companies increasingly crunch consumer data to provide better services, including better content recommendations. Some companies mention the importance of virtual assistants and voice recognition technology to resolve the personalization challenge - ownership of these devices growing fast thus attracting interest. 5G is an interesting one as media companies are increasingly looking at it to distribute their content direct-to-consumer. In fact, some broadcasters that want their content on all devices and platforms (including driverless cars!) are liaising with consumer electronics manufacturers to make this happen.

Top 3 Investment Drivers

Multi-Platform Delivery

AI/Machine Learning

5G

Technology Adoption Trackers

Technology Adoption Trackers

Emerging Technology Adoption in Broadcast & Media
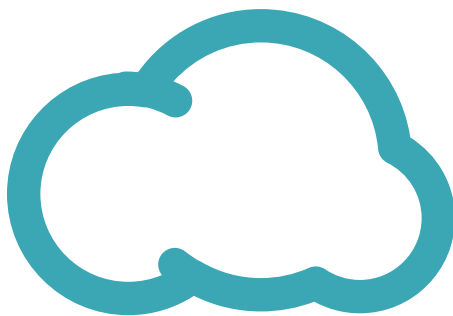
Cloud

Artificial Intelligence

IP

UHD

VR

Blockchain

For more information on our Media Tech Trends Reports, click here
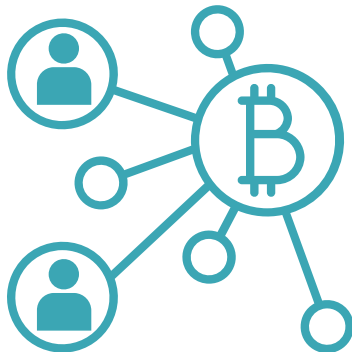
Cloud
Cloud Adoption Tracker

% of companies that have adopted it

We are already doing it today	Very likely
Somewhat likely	Unlikely
Not at all likely	
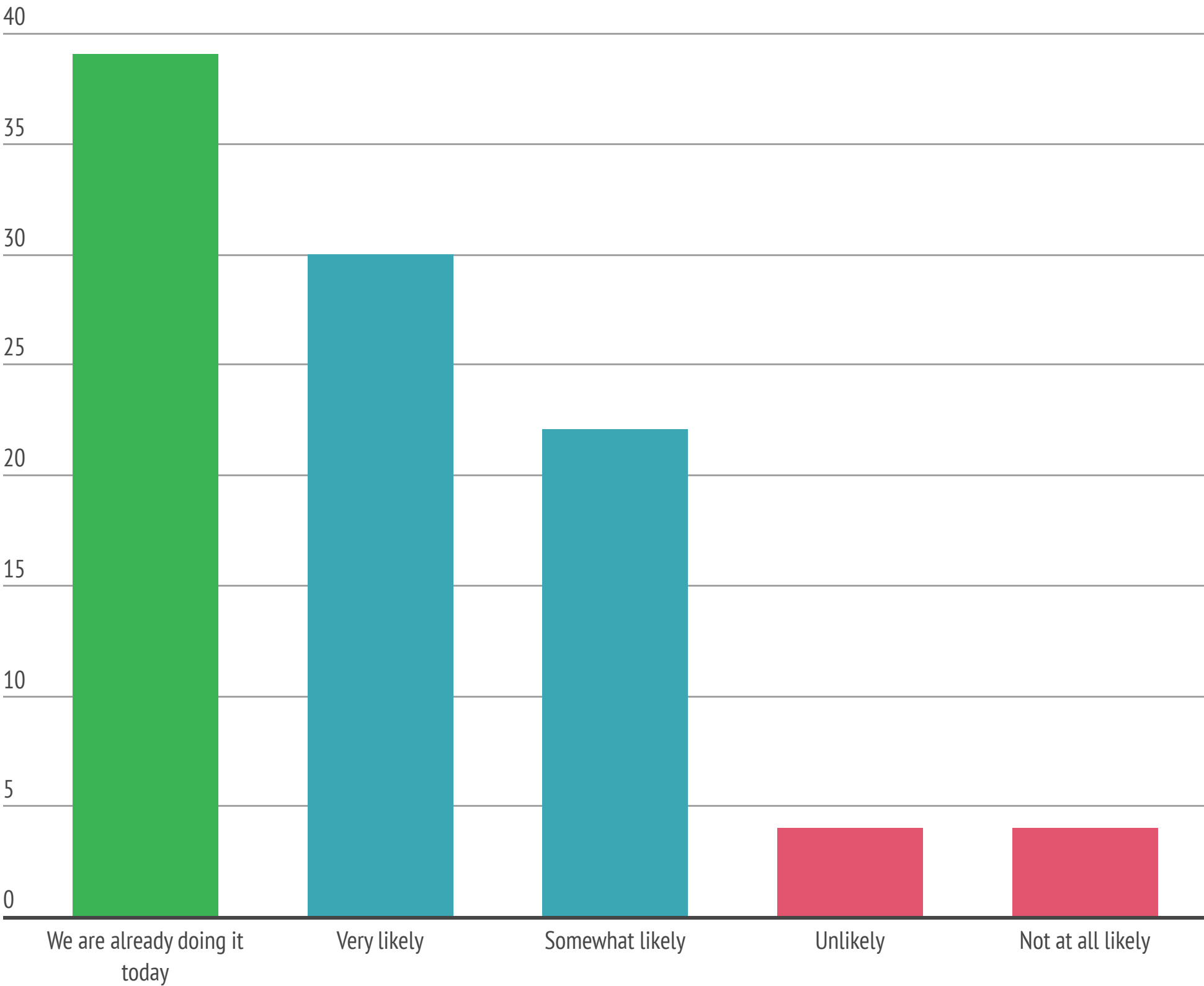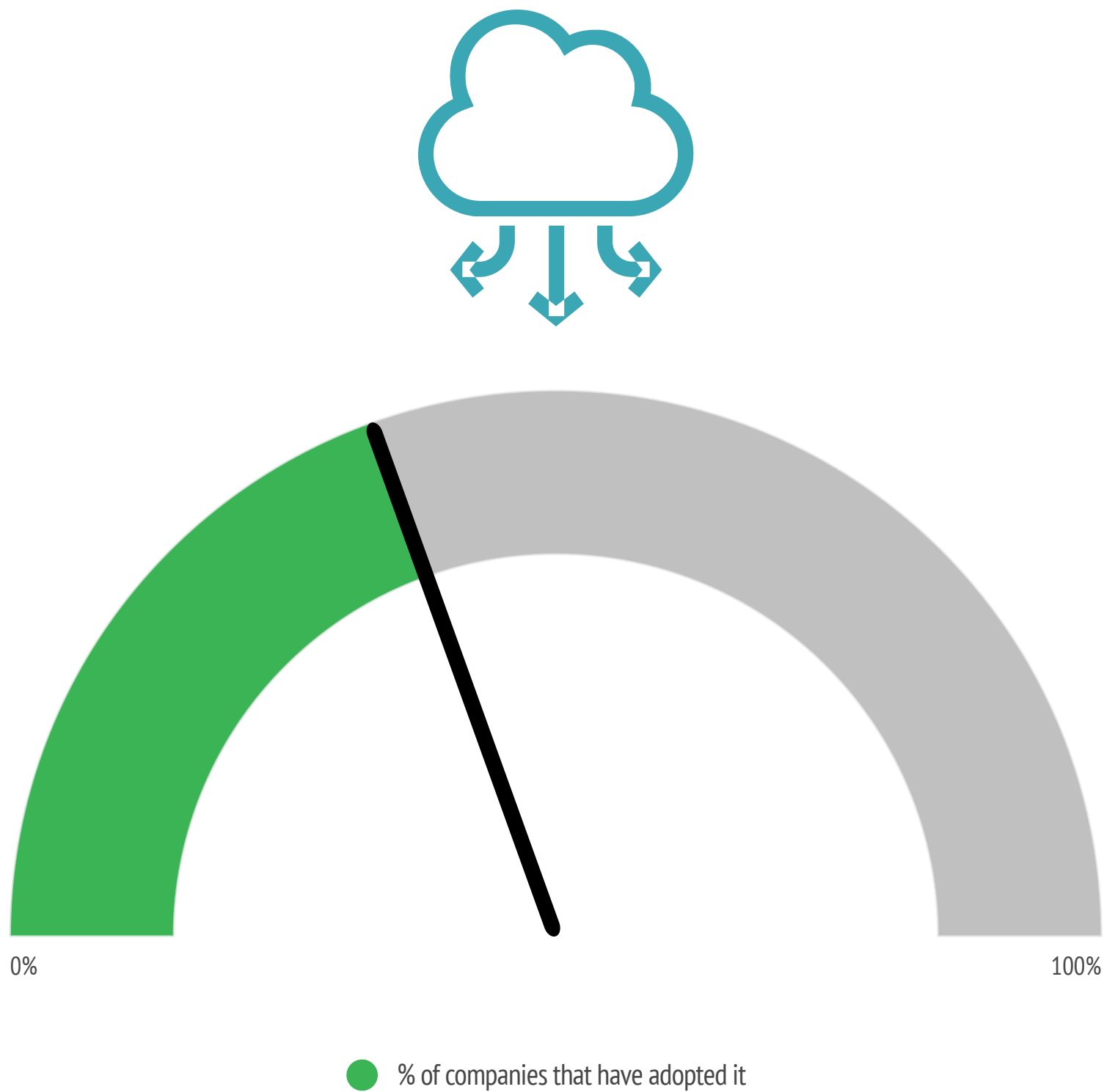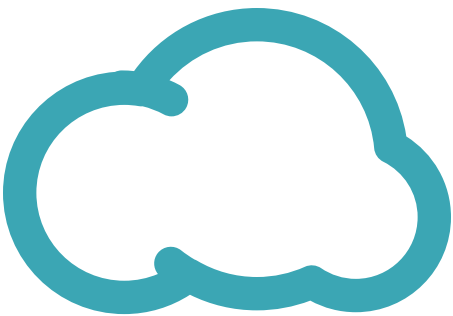
Cloud

Cloud Outlook

According to IABM data, adoption of the cloud continues to increase. By deploying cloud-based services, media companies can dramatically reduce time-to-market for their services – thus increasing revenues - and flexibly adjust resources by moving to consumption-based pricing. Major media companies such as Discovery and Vice moved to the cloud to streamline content distribution, although this area remains at an early stage of cloud adoption. In other parts of the content chain such as post-production, the cloud is at a more advanced stage of adoption. On the supply side, major cloud providers have continued to expand their media-specific services and prop up investment in their infrastructures. Despite this level of investment, most media companies remain concerned about security in the cloud. Media companies have so far shown a preference for hybrid and private cloud solutions - adoption of public cloud has been limited to some specific applications, although its adoption is growing. Cloud growth is set to continue during 2019 as media technology users streamline their operations.
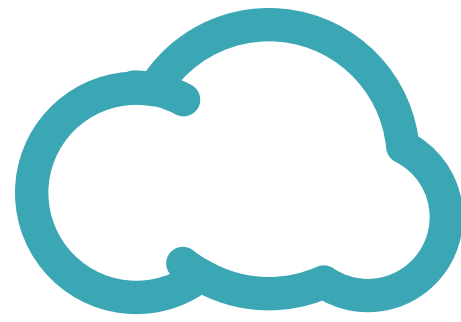
3 Cloud Highlights
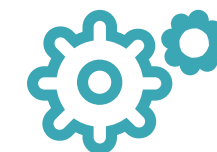
48%
of companies want to apply cloud to Manage workflows

43%
of companies prefer private cloud-based deployments

45%
of companies saying security is an important barrier to cloud adoption

AI
AI Adoption Tracker

0%   100%

● % of companies that have adopted it

| We are already doing it today | Very likely | Somewhat likely | Unlikely | Not at all likely |

Source: IABM
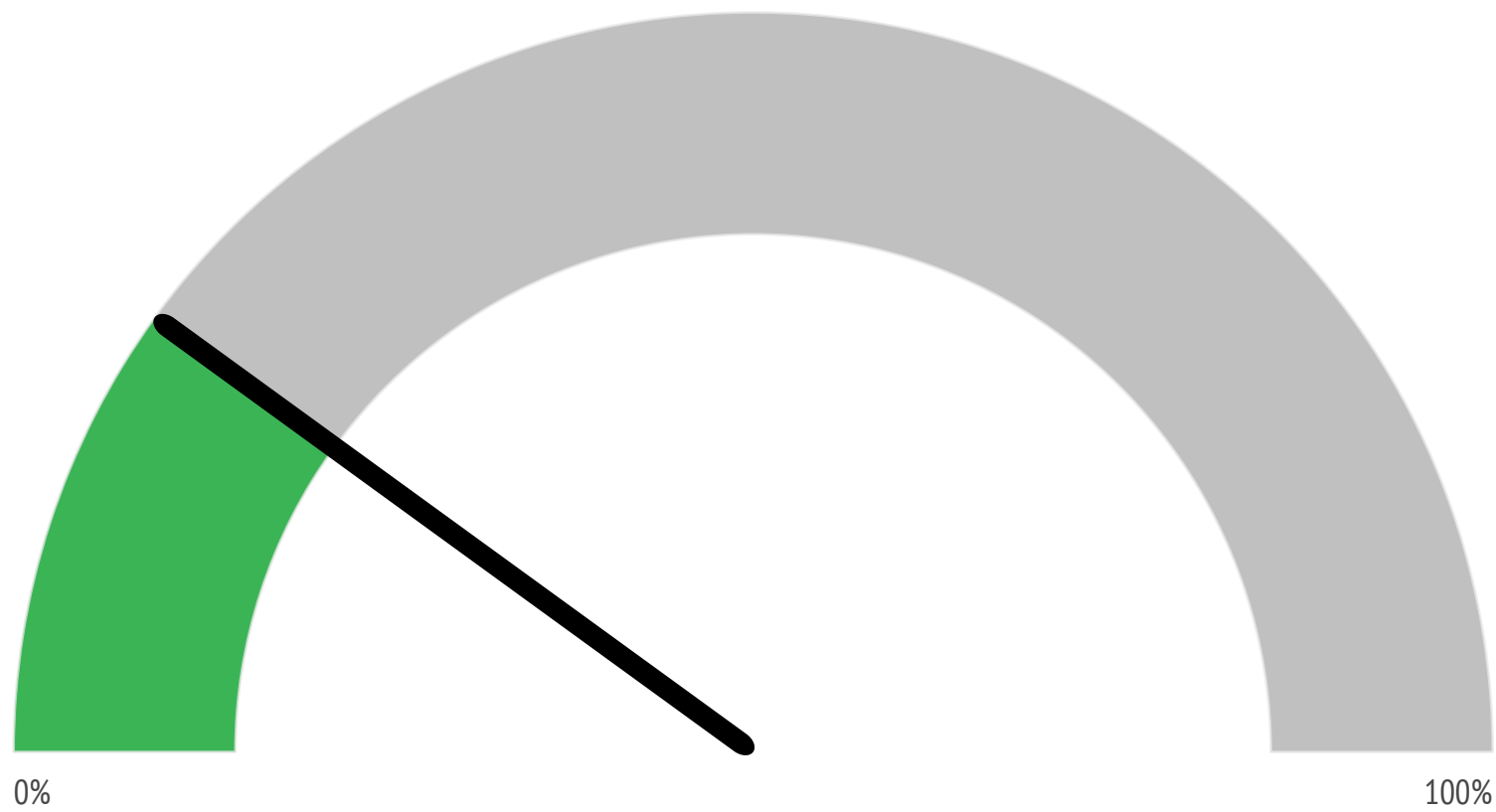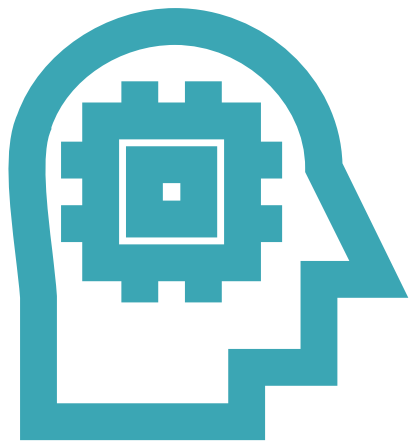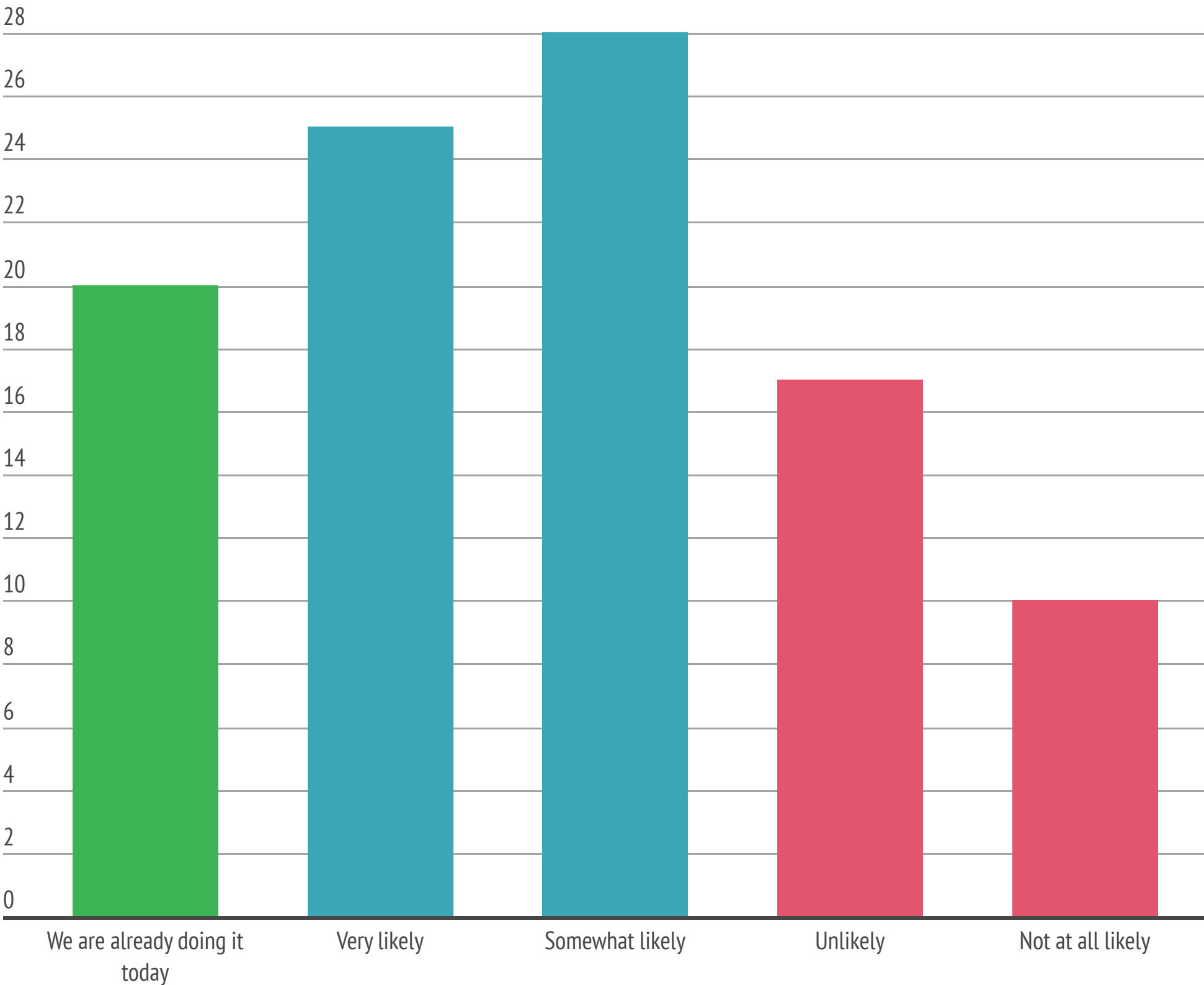
AI

AI Outlook

AI applications in the broadcast and media industry are growing and, according to our data, adoption has significantly increased in recent years. The primary drivers of adoption of AI technology is the opportunity to automate routine workflows and gaining increasing insights into audiences – increasingly important in a direct-to-consumer model. Content management is the natural area of application for AI as it enables media companies to automate a variety of routine activities including content tagging, archive search and transcription. AI tools such as those provided by AI specialist platforms mostly rely on the public cloud - companies such as Google, Amazon and Microsoft combine their AI services with their cloud computing offerings. These can also be used also in monetization workflows. For example, US radio broadcasters such as Cumulus Media, Univision and Beasley are leveraging AI capabilities for advertising intelligence and operational efficiency. We expect AI adoption to grow further in 2019 as broadcasters continue to leverage the technology for a variety of use cases.
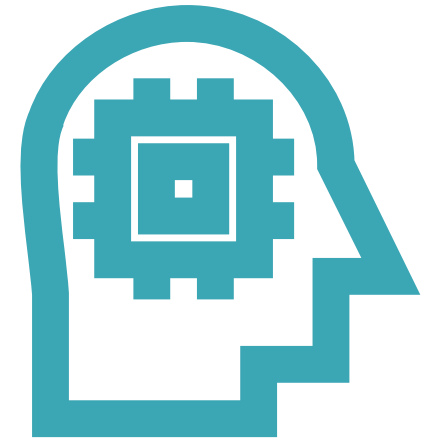
3 AI Highlights
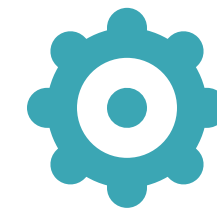
56%
of companies want to apply AI to Manage workflows

58%
of companies consider Cost of Deployment as the main barrier to deploy AI
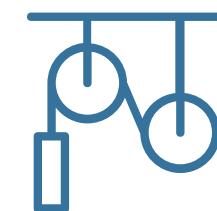
49%
of companies prefer leveraging cloud service providers' capabilities for AI deployment

IP

IP Adoption Tracker

0%
100%

● % of companies that have adopted it

We are already doing it today	Very likely	Somewhat likely	Unlikely	Not at all likely

Source: IABM
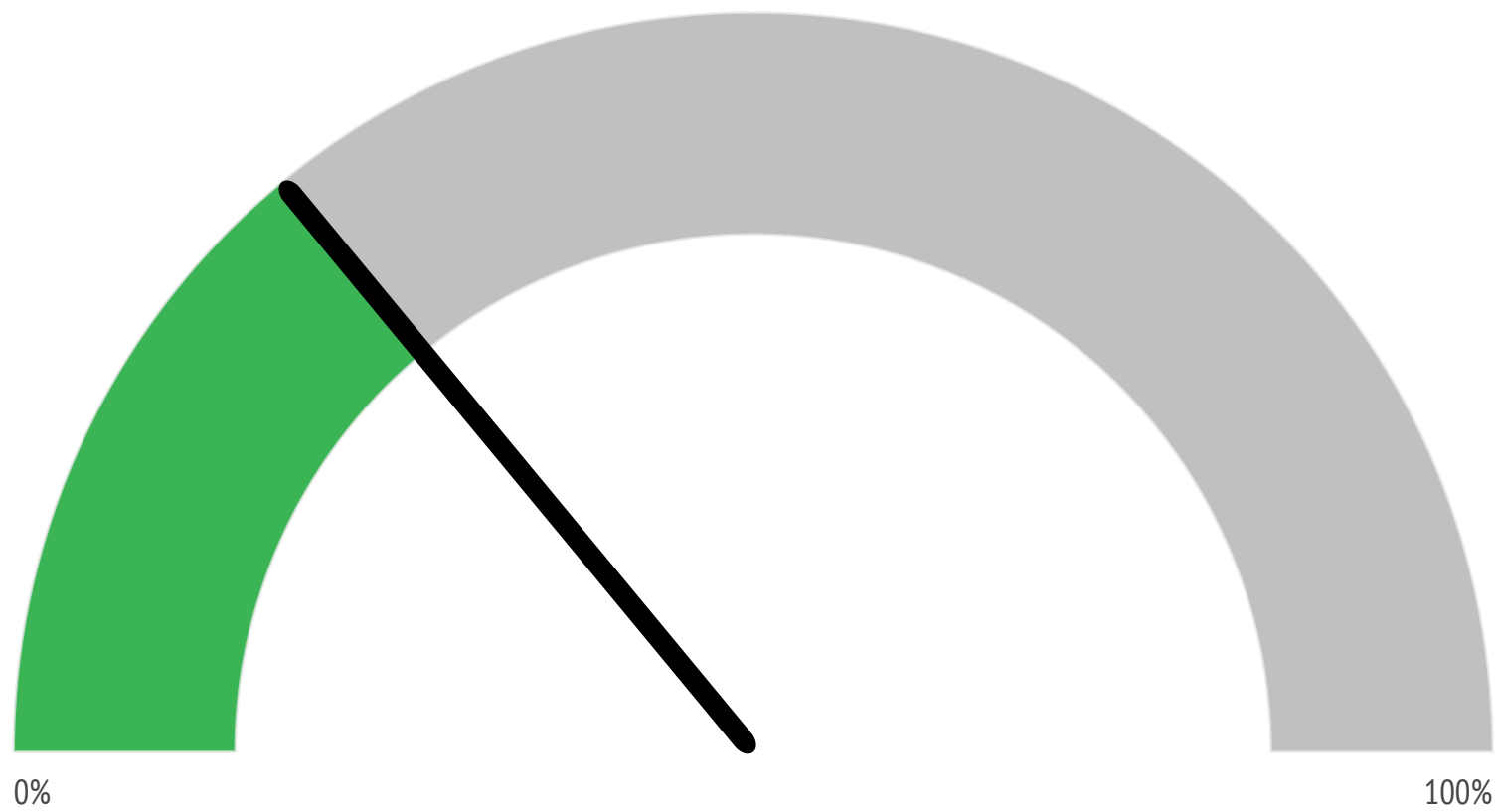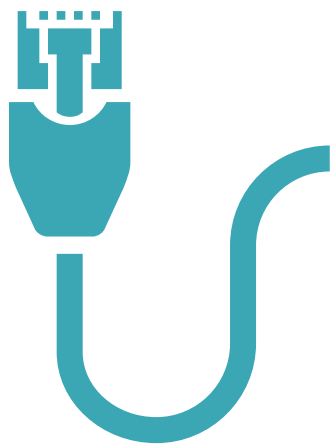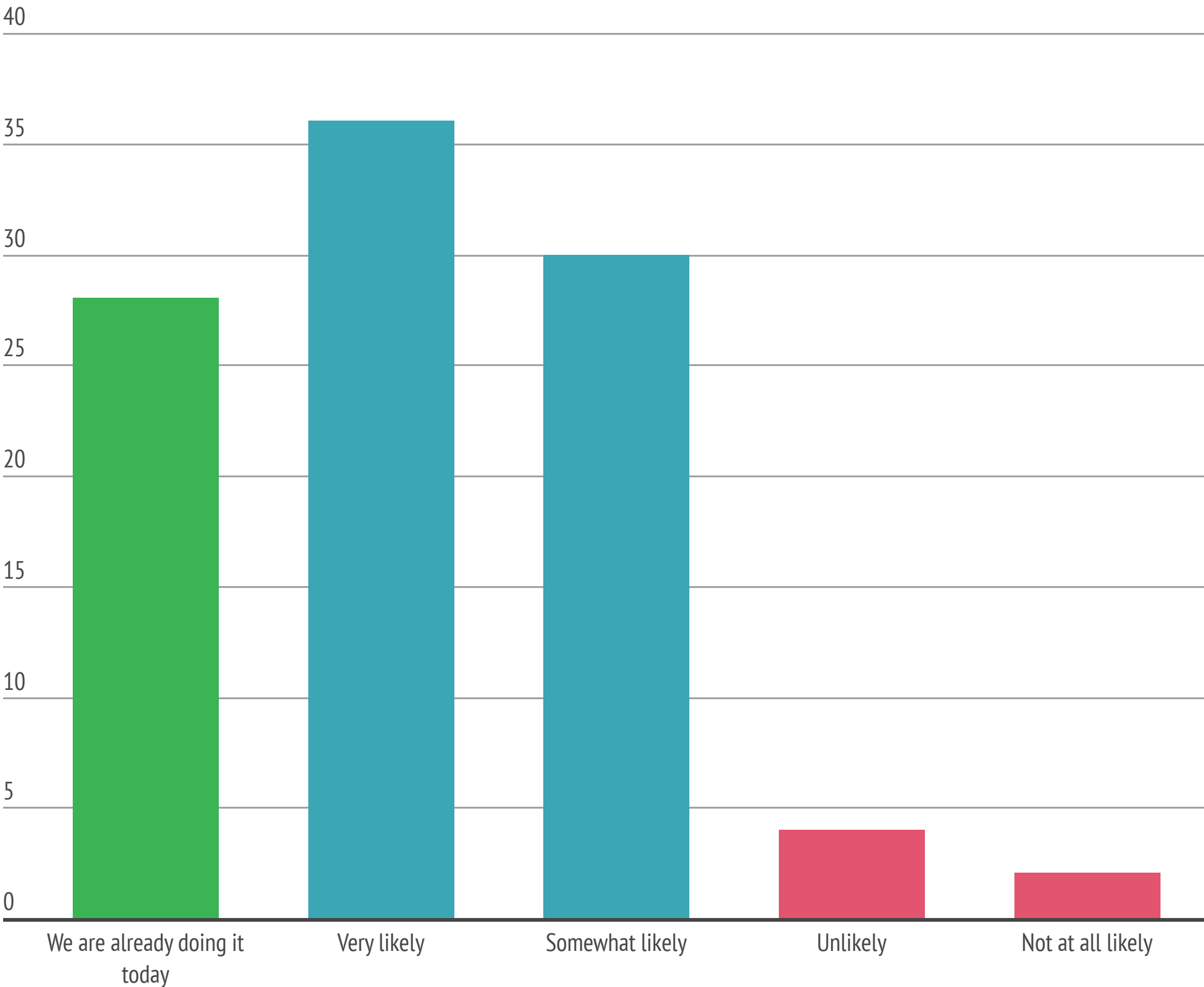
IP

IP Outlook

With the arrival of an open solution for IP, we expected more growth in the adoption of IP technologies at broadcast organizations. IP adoption remains at an early stage, particularly in live production environments, where only major broadcasters have transitioned to the new standard. The costs of IP equipment have gone down significantly; the remaining challenges relate to dealing with complexity and skills. Some of the major live IP facilities were built by Telemundo, RTL, TV Globo, Sky Italia and the BBC among others. Telemundo built a $250m facility that uses SMPTE 2110 - this was opened in April 2018. TV Globo and Sky Italia moved to hybrid SDI-IP workflows in 2018. BBC Wales is moving to a new IP-based facility in Cardiff in 2019. According to AIMS, there have been over 200 IP installations using SMPTE 2110 and SMPTE 2022-6. IP is being deployed to enable infrastructure virtualization, asset centralization, format flexibility and efficiency-boosting activities such as remote production. We expect IP adoption to continue to grow at stable pace in 2019.
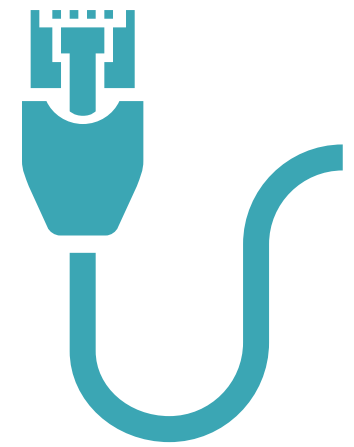
3 IP Highlights

51%
of companies saying less than 40% of their technology infrastructure has transitioned to IP
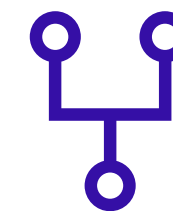
44%
of companies deployed/plan to deploy IP for UHD content
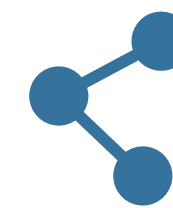
6%
of companies saying they are unlikely to transition to IP

UHD
UHD Adoption Tracker

0%

100%

● % of companies that have adopted it

We are already doing it today	Very likely	Somewhat likely	Unlikely	Not at all likely

Source: IABM
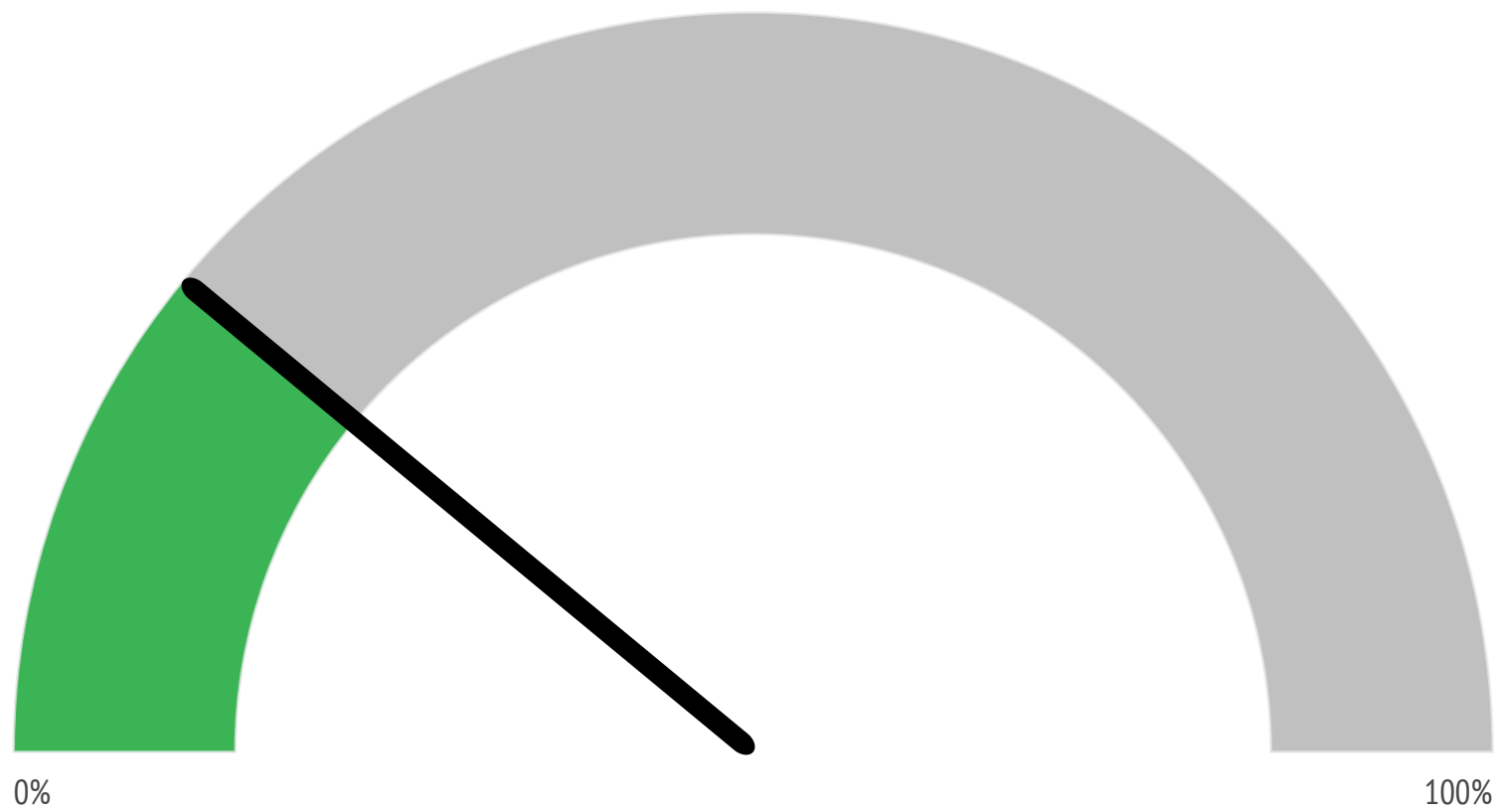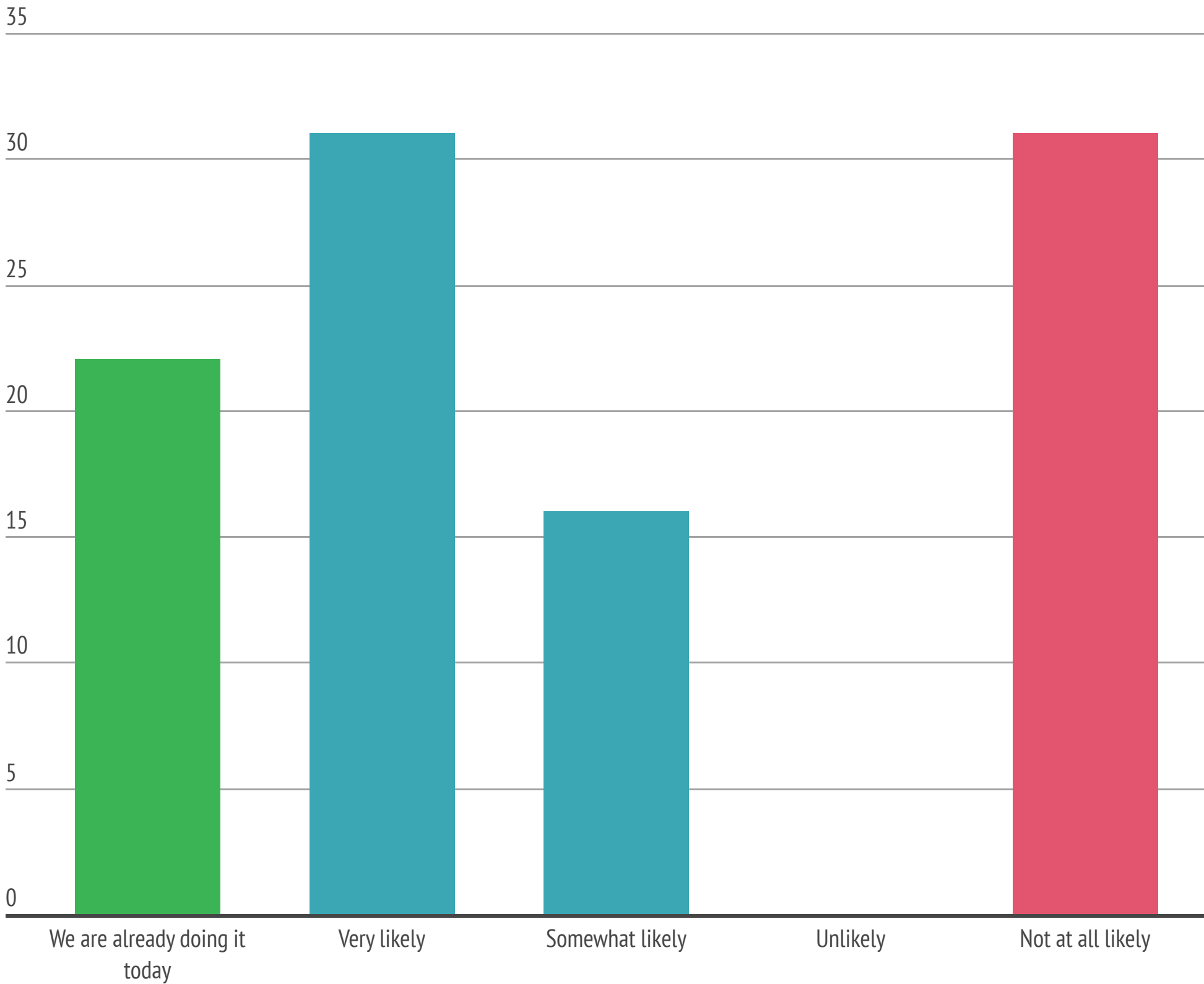
UHD

UHD Outlook

UHD adoption by broadcasters has been slower than expected for a variety of reasons. These have included high deployment costs and uncertainty over consumer adoption. Also, UHD adoption is linked with IP deployments - broadcasters have been generally reluctant to go UHD with SDI due to its lack of flexibility. Although both consumer and IP adoption have grown, UHD has remained a niche market for Pay-TV operators to differentiate their offerings and increase subscription revenues. Despite the slow adoption, UHD channels has continued to grow in 2018 as major sporting events such as the Winter Games and the FIFA World Cup have prompted broadcasters to launch offerings – sports remain the major application area for UHD. Major broadcasters such as the BBC and NBC broadcast these events in UHD – not without challenges. In the production sector, UHD has also become an established format as major OTT players such as Netflix and Amazon now demand content only in UHD. In 2019, we expect UHD adoption to continue to grow although this is not a priority for most broadcasters.

3 UHD Highlights

73%
of organizations prefer to combine HD with enhancements rather than 4K
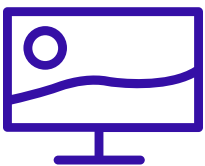
95%
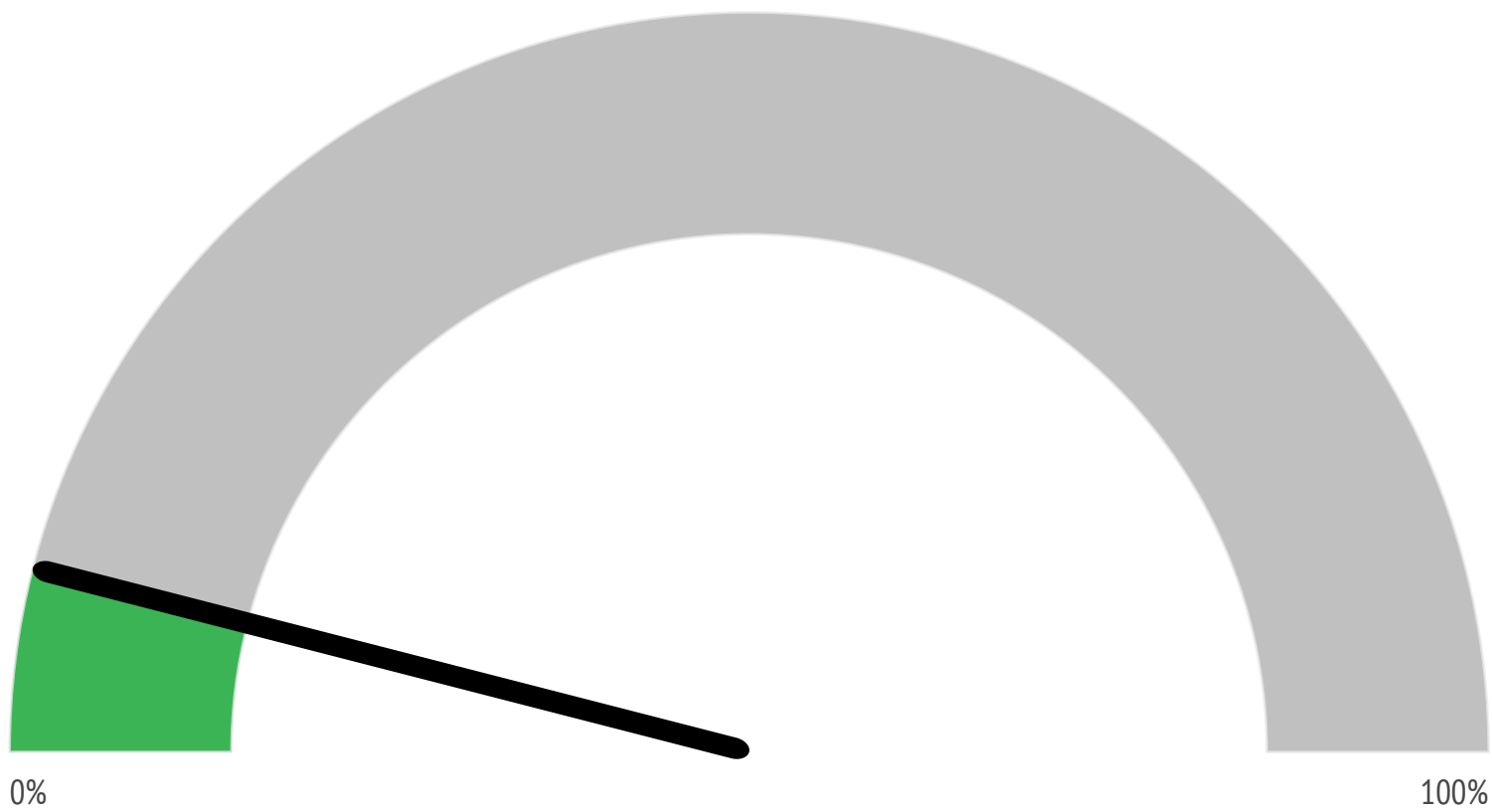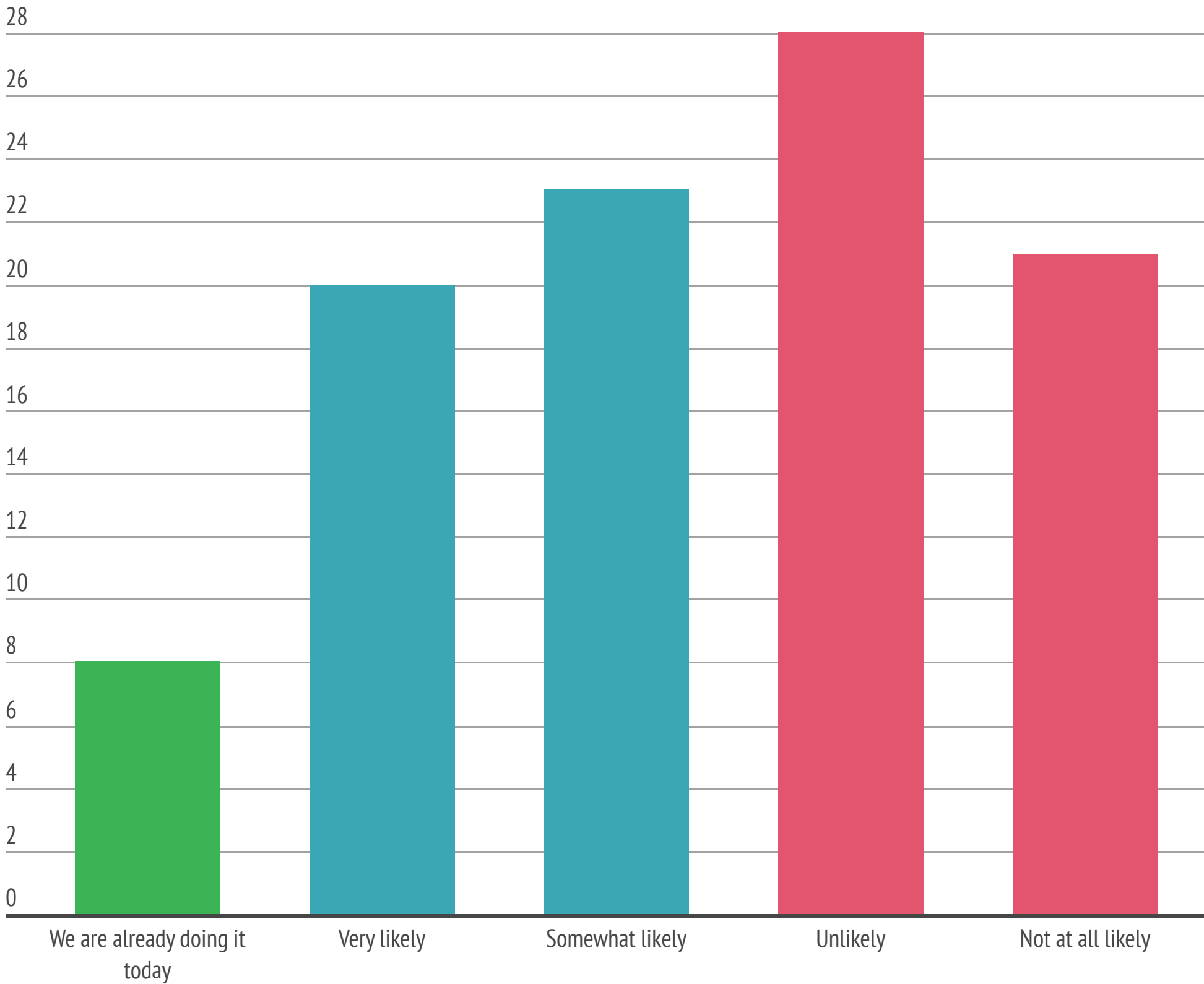of organizations say HDR is their preferred enhancement
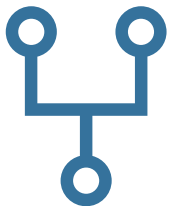
31%
of organizations have no plans to launch UHD offerings

VR

VR Adoption Tracker

0%   100%

● % of companies that have adopted it

| | We are already doing it today | Very likely | Somewhat likely | Unlikely | Not at all likely |

VR

VR Outlook

Like UHD, most VR applications have focused on live sports. As a result of this, spending on VR has also been correlated with the occurrence of important live sporting events such as the FIFA World Cup. In sports and other applications, VR production can be extremely complex and costly. Despite this challenge, the production and post-production sectors continue to be very interested in the immersive format. Most VR deployments have seen broadcasters (and leagues) partnering with VR specialists such as NextVR and Jaunt VR. Broadcasters have generally struggled to monetize their investment in VR – one of main reasons behind the low adoption of VR is the lack of certainty around the business models supporting it. Consumer adoption has continued to be slow despite repeated price cuts by major device suppliers such as Facebook. VR content is generally fragmented on a plethora of apps and devices, which is also not helping adoption. Feedback from broadcasters continues to show low interest in this technology aside from sports and we therefore expect VR adoption to remain stable in 2019.
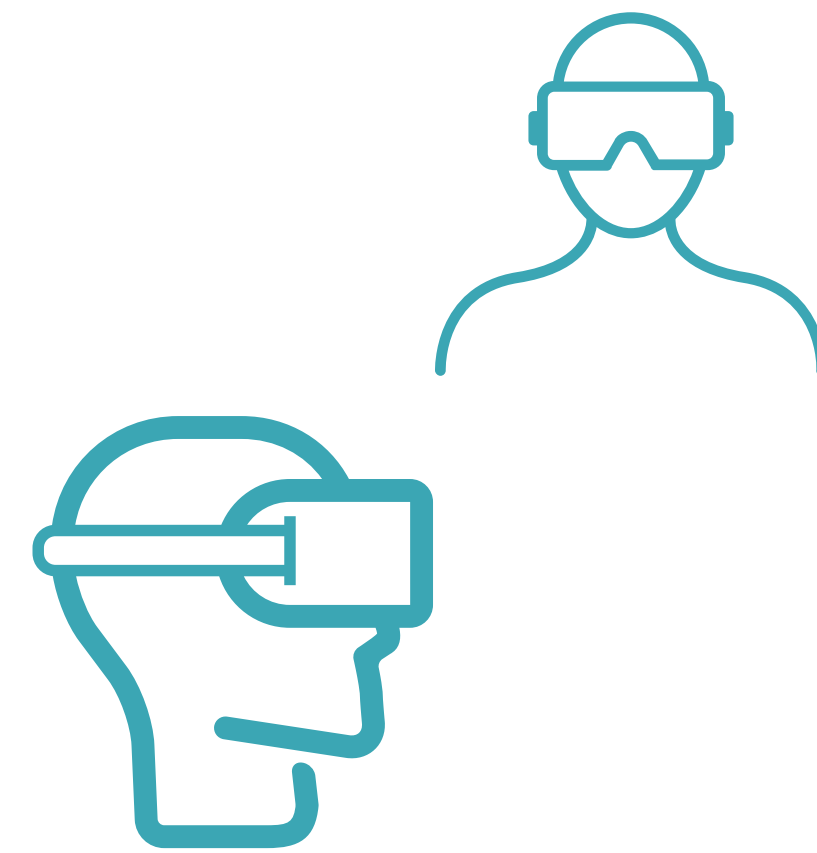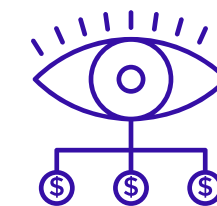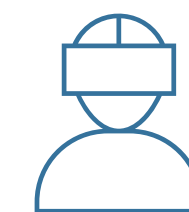
3 VR Highlights

29%
of organizations monetize/plan to monetize VR through subscriptions

6%
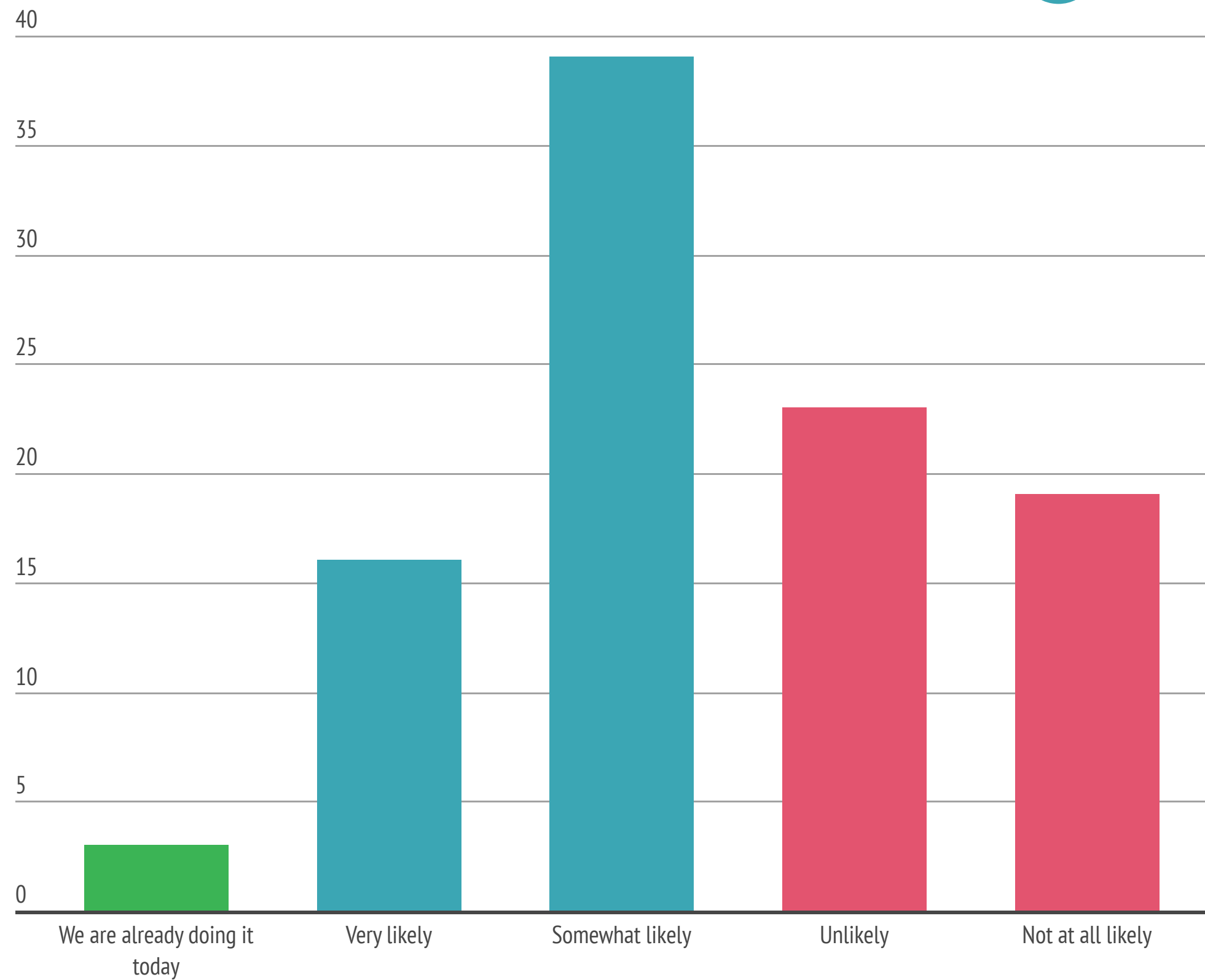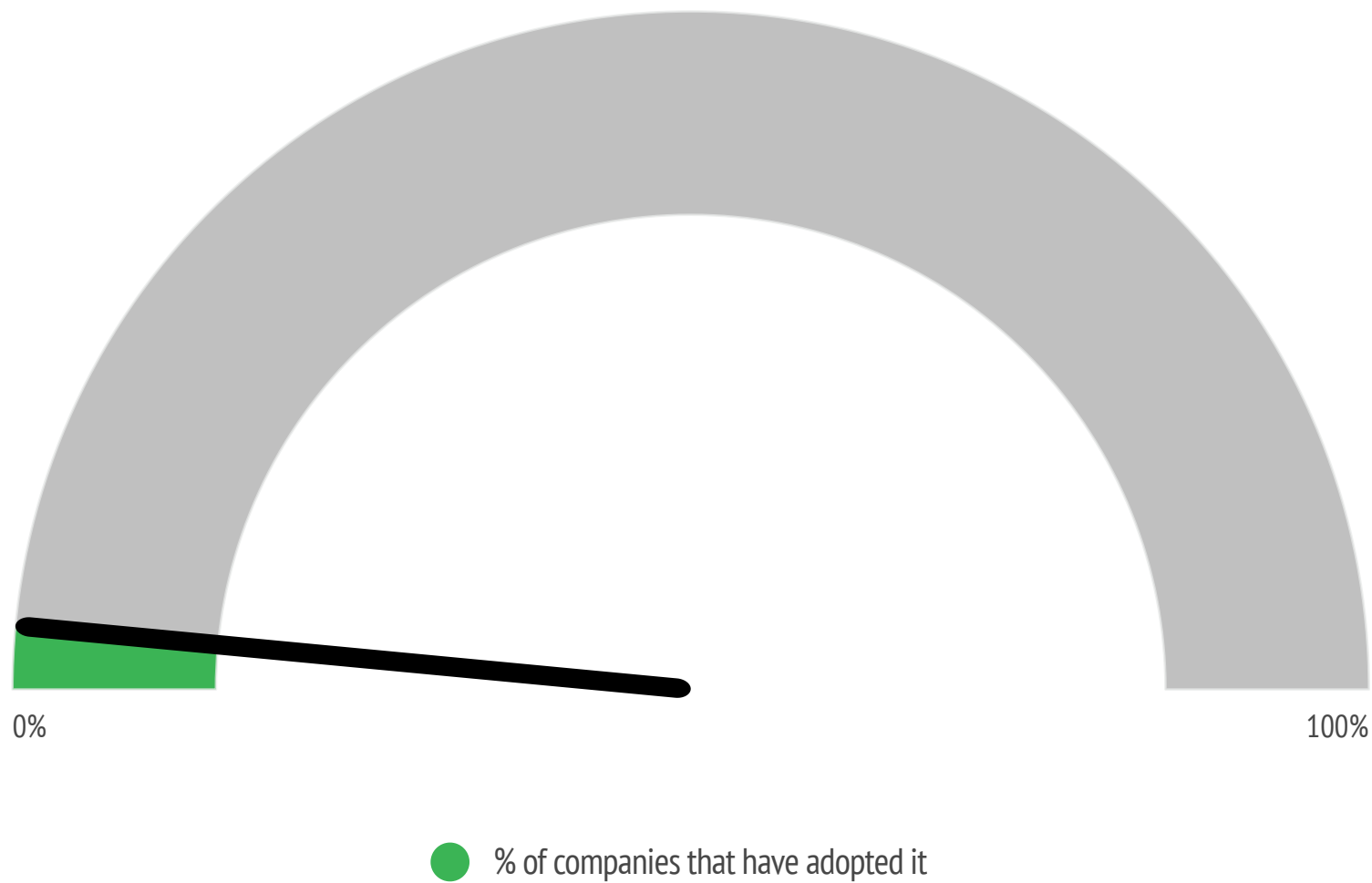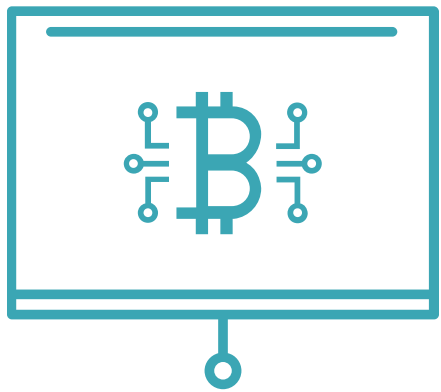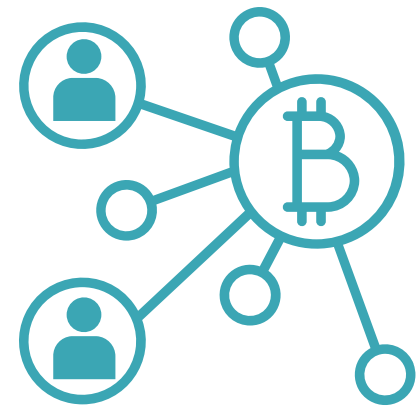of organizations monetize/plan to monetize VR through Pay-per-View/EST

29%
of organizations are not planning to monetize VR video

Source: IABM

Blockchain
Blockchain Adoption Tracker

% of companies that have adopted it

| We are already doing it today | Very likely | Somewhat likely | Unlikely | Not at all likely |

Blockchain

Blockchain Outlook

Blockchain holds great promise in broadcast and media but remains at a very early stage of adoption. Blockchain is a trust enabler due to its decentralized nature and provides tracking and transparency capabilities. In advertising, blockchain can enable a private network of advertising buyers and sellers to pool their data together – without actually sharing it. Comcast Advanced Advertising Group announced in 2017 that it would allow ad buyers to make purchases for its linear and digital inventory on a new platform powered by blockchain. In 2018, Comcast announced that it would roll out a blockchain-based advertising solution dubbed Blockgraph aimed at better matching advertisers with audience data. In rights management, blockchain can be used by content owners to track assets. In 2018, Arqiva announced that it was teaming up with blockchain start-up JAAK to work on a rights database powered by blockchain. Although blockchain promises disruption for the sector, we expect broadcasters to continue to experiment with the technology in 2019. This experimentation will focus on blockchain's low-hanging fruits: advertising and rights management.
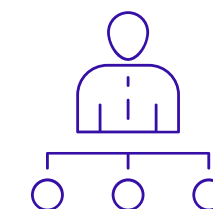
3 Blockchain Highlights
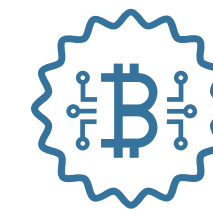
3%
of companies have adopted Blockchain

55%
of companies are likely to adopt Blockchain

20%
of companies are likely to apply Blockchain to Monetize workflows