



IABM REPORT

MEDIA FACTORY ECONOMICS

Decoding Value Paradigms and Cloud
Operating Models

IN PARTNERSHIP WITH

DELL Technologies

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Report Contents

Click on the icons below to go to specific sections.
Use the purple icon on the top-right of every page to return to this table of contents.



Introduction



Decoding Value Paradigms



Decoding Cloud Operating Models



Appendix

Introduction

Media Factory Economics



This report delves into one of the major long-term drivers of change in the media industry, identified by IABM in its Special Report published in September 2020: viewing technology only as an enabler. The research puts the spotlight on this specific structural driver of industry change, analyzing the ultimate business, technical and creative values that technology is enabling as well as one of the rising operating models behind them: the cloud model. Our main objective is decoding these topics to shed more light on the economics underpinning media factories.

The broadcast and media industry has experienced a dramatic change of technology values due to the gradual rise of digital players in the sector. While the industry was historically built around major upgrades aimed at improving the quality of the media served to consumers, in recent years, consumers have taken a front seat in determining media companies' definition of quality, which has become multi-dimensional. Quality is now arguably not only about imaging but also about convenience, experience, relevance, and speed. As the COVID-19 pandemic continues to put revenues and technology budgets under pressure, adding this to external competition, media companies are increasingly looking at the economics of their media factories to be capable of best matching consumers' changing expectations, particularly as they move to remote working models.

Introduction

Media Factory Economics



In this environment, it is of utmost importance to understand the framework through which different media companies and senior decision-makers define value when sourcing a new technology solution for their media factories.



Digital has changed everything in media

IABM research has shown that media factories are increasingly moving to cloud-based operating models, with this transition experiencing a marked acceleration out of necessity due to the pandemic. Many media companies have reported that cloud is now the top technology priority in their roadmap, with wide-ranging implications for operational and economic models in the industry as well as on the ecosystem of players making up the sector. While cloud models promise a plethora of operational benefits for media companies, they also pose challenges when it comes to the economic blueprints underpinning them as well as the complexities created by the relative immaturity of the cloud computing market.



Including technology sourcing values



And the tools to achieve those values

Introduction

Media Factory Economics



In Part 1 of the report, we examine what purposes technology is enabling today (the “What”), looking at various value paradigms in the industry as well as putting these models into different contexts through a specific, tree-based framework. More specifically, in this section of the report, we analyze how different players in the media industry go about defining the value they are looking for from technology solutions.

In Part 2 of the report, we dissect the media operating models that are underpinned by the cloud. Firstly, we look at how media companies are moving to the cloud and the challenges posed by this transition (the “How”). Secondly, we moved onto analyzing the reasons behind the decision to move media operations to the cloud (the “Why”) and look at the methods through which media companies are planning to address some of the challenges posed by this transition.

This research is based on a hybrid set of sources, including IABM’s data-driven insights into the business of media technology (e.g. IABM Media Tech Business Tracker), IABM’s ongoing interviews with technology decision-makers as well as research conducted specifically for this study. Specific sources include a short survey focusing on the two topics examined in this report and a series of in-depth interviews conducted with major media companies on these issues. More information on this can be found in the appendix.






Decoding Value Paradigms



This first section of this report is focused on analyzing the value paradigms behind technology sourcing in the media industry

The next page contains a table of contents for this section



-  **Digital has made Value Paradigms Multi-Dimensional**
-  **Value depends on context and culture**
-  **Value is now guided by an overarching principle**
-  **What Values**
-  **Media Tech Decision Trees**

Decoding Value Paradigms



Digital has made Value Paradigms multi-dimensional

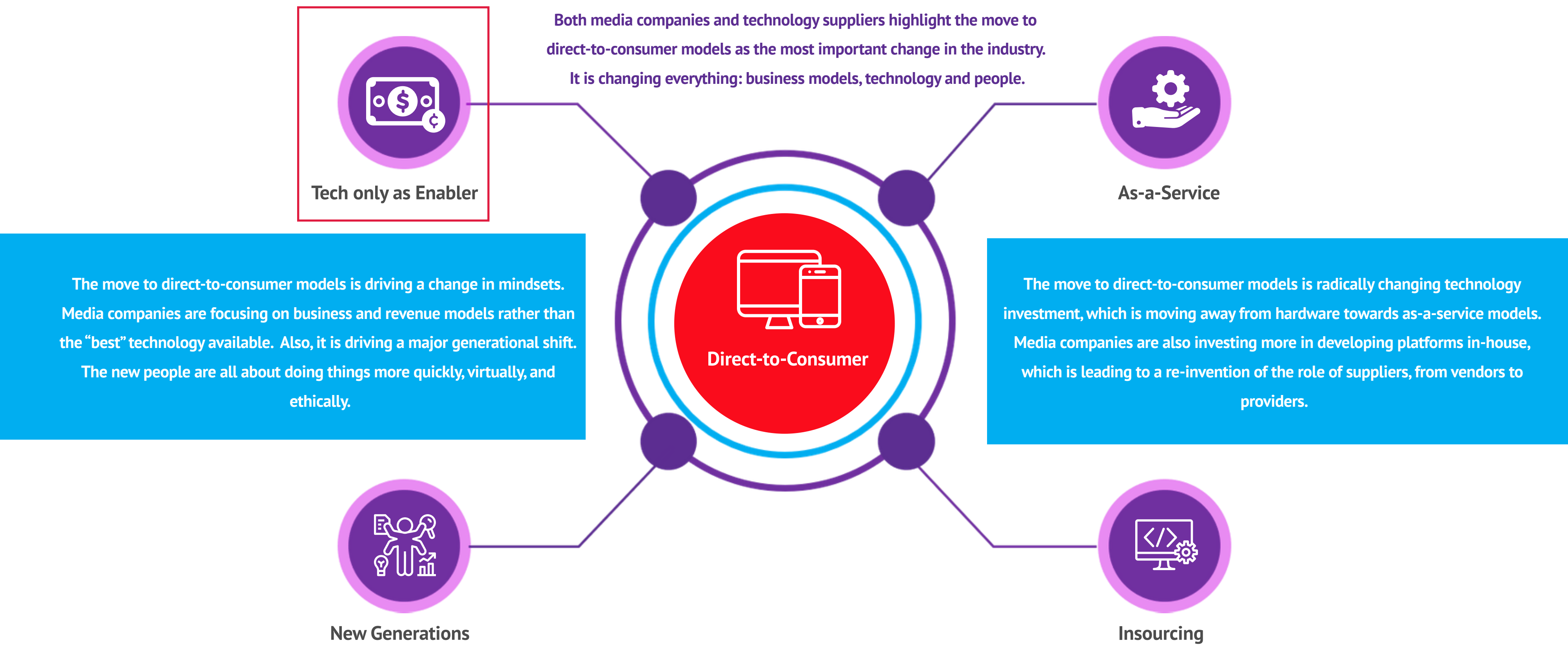
The advent of digital platforms in the media industry has dramatically changed and complicated the definition of the values media companies seek from technology solutions. Historically, technology values in the broadcast and media industry were straightforward to define, with major transitions like the one to digital broadcasting and HD guiding investment in new technology. The values simply lay in optimizing these transitions to improve the quality of images served to viewers.

The dramatic change in value paradigms can be traced back to the advent of direct-to-consumer (DTC) models, as highlighted in IABM's Special Report published in September 2020. DTC exerted pressure on the media industry's main revenue models and caused an irreversible shift in consumer expectations. The words spoken by Bob Iger, former CEO and current Chairman of Disney, after Disney's bet on DTC, well capture this trend, particularly when it comes to consumer expectations:

“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.”

Decoding Value Paradigms

Digital has made Value Paradigms multi-dimensional - Framework for Change



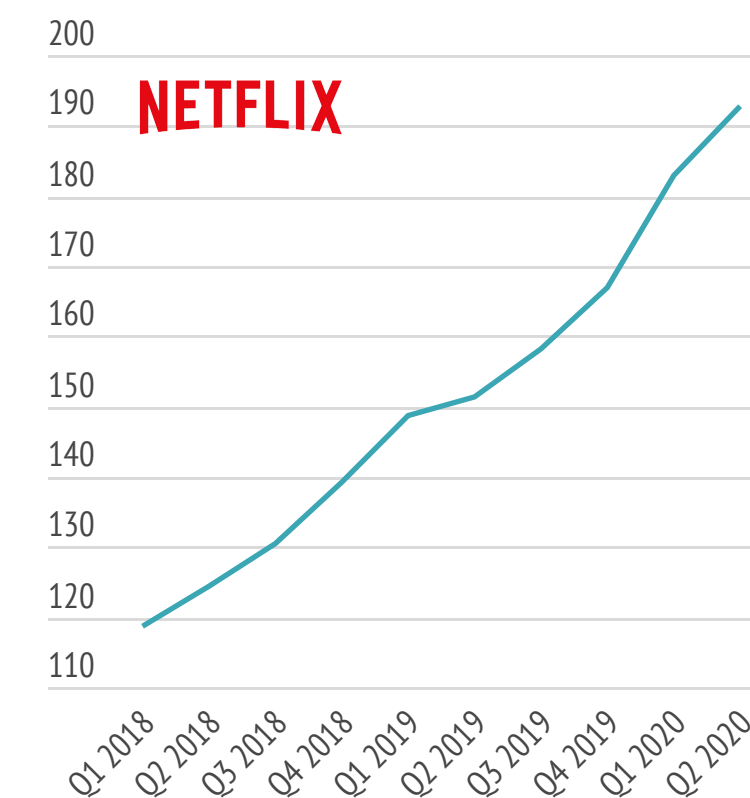
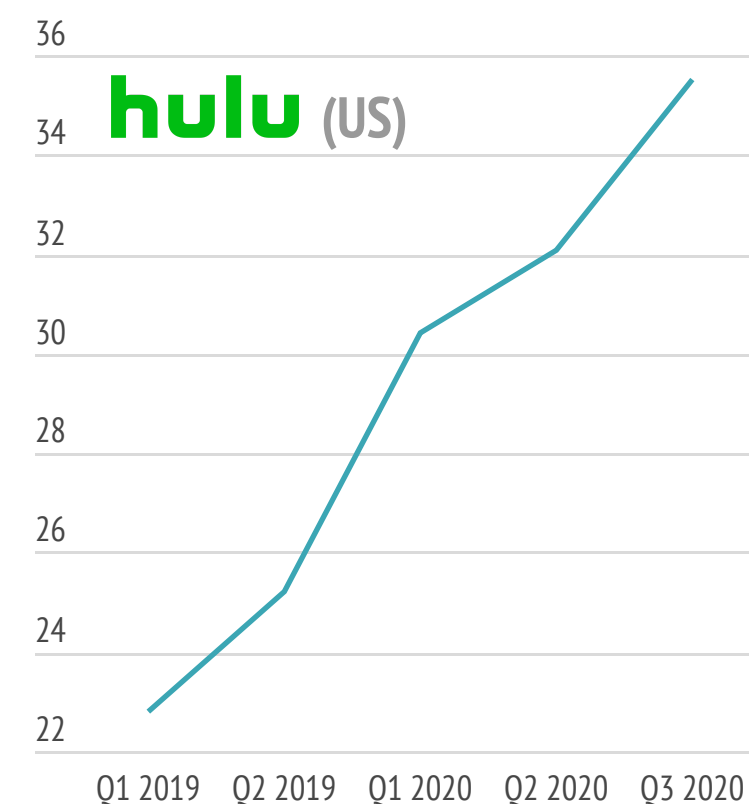
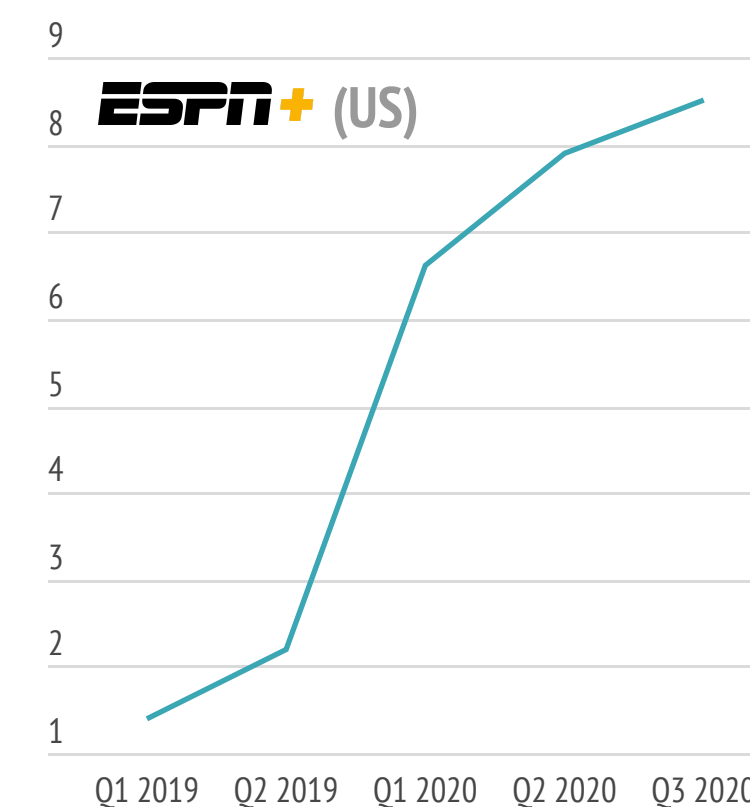
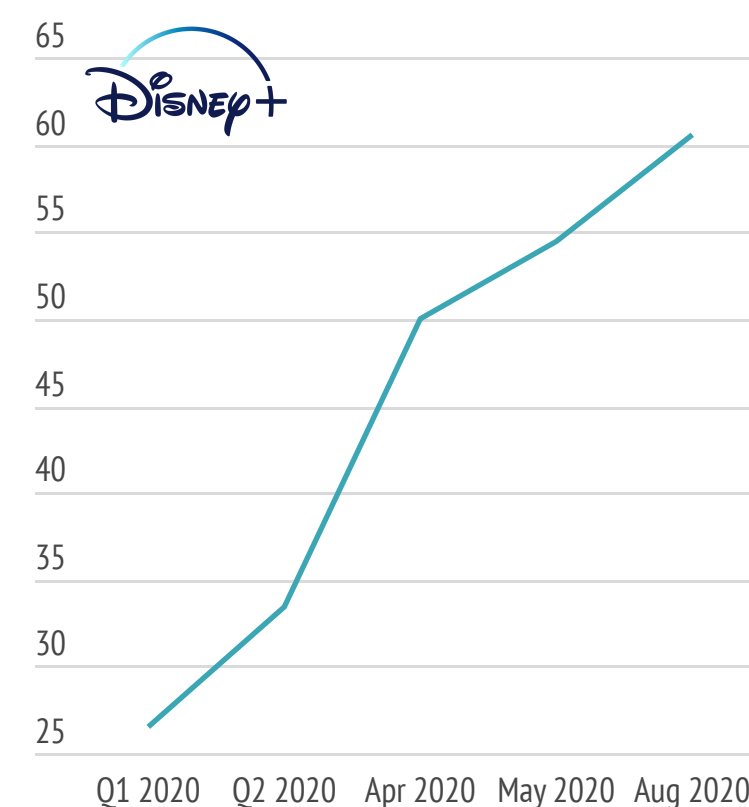
Decoding Value Paradigms

Digital has made Value Paradigms multi-dimensional



The increasing importance of consumers and DTC models has blurred media companies' definition of the values they seek from technology and stretched the concept of quality. Media companies today seldom talk only about imaging and mostly mention interactivity, consumer experience, personalization, and the ability to quickly act on consumer changing needs. These values are intrinsically digital, implying a developed influence of digital technology on media companies' culture. These values are also satisfying specific business objectives, which is consistent with viewing technology only as an enabler. This shift is progressing as general-purpose technologies become commonplace at media companies. In our opinion, the COVID-19 pandemic has accelerated this trend, with media companies realizing that consumers in most cases did not notice the slight degradation of quality in production standards caused by the extraordinary circumstances.

Subscriber Growth at Major Streamers (Millions)



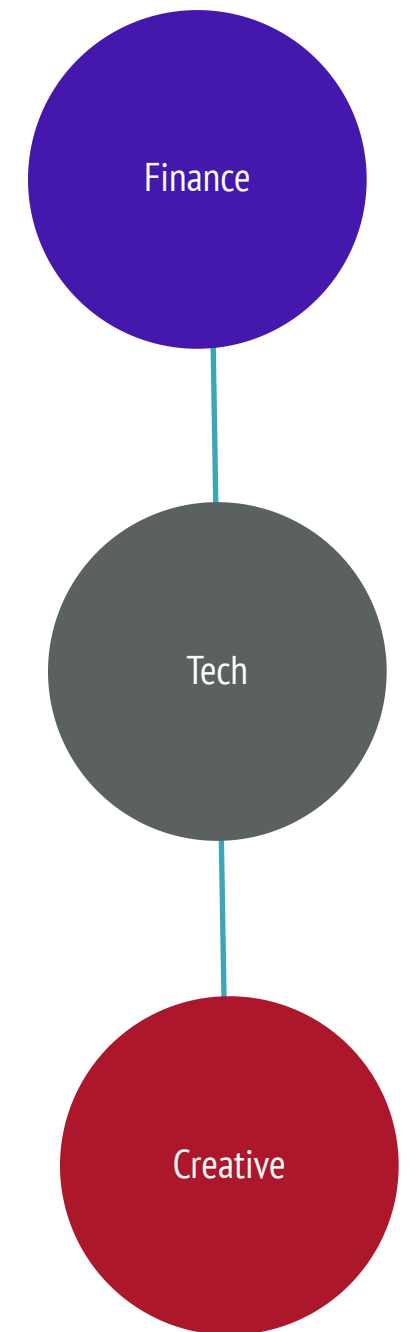
Decoding Value Paradigms

Value depends on context and culture



Value paradigms have become complex multi-dimensional models. These models are also dependent on the context and culture they belong to. These two aspects contribute to determining the weightings given to different business objectives. As an example, a media company where engineering and technology is conceived as a tool to enable creativity will give more importance to technology's capability to drive creative innovation. A company whose technical leadership has embraced the values brought by digital will rather focus more on consumer experiences and fast experimentation.

In all cases though, guidelines come from the top of the organization which makes sure that personnel commit to technology sourcing decisions that follow the culture of the organization. Moreover, in all cases, both the organizational structure and the chain of decision-making should be clearly defined to avoid flawed technology sourcing. As an example of this, collaborative decision-making across different departments such as technology, production and finance whose incentives are clearly aligned is thought to be conducive to positive results when it comes to technology sourcing.



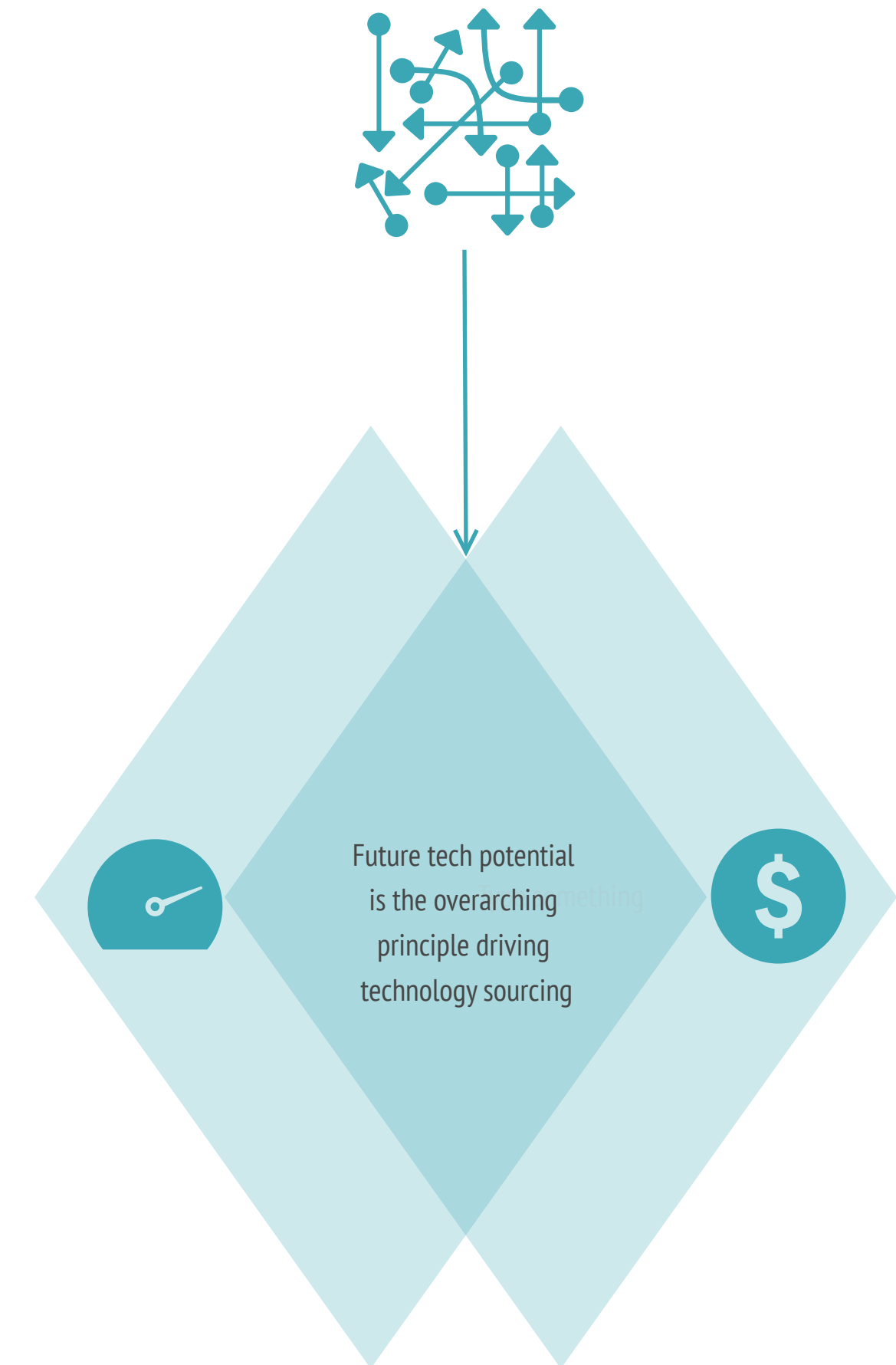
Decoding Value Paradigms

Value is now guided by a new overarching principle

Before analyzing the paradigms of value sought by media organizations, we will highlight what is the overarching principle guiding all decisions in technology sourcing: the future. With DTC and digital contributing to increasing complexity and unpredictability in the once straightforward and predictable media ecosystem, preparing for the future has become the overarching focus of media companies. This is consistent with IABM's research, which shows that two of the top four factors influencing media technology purchasing decisions are "Future roadmap" and "Innovation potential." This overarching principle is devoid of any short-termism and goes well beyond upgrading infrastructures to make them compliant with the latest technological standard. The words "future" and "potential" really capture this mentality with media companies admitting their willingness to incur some downside now (in the form of increasing costs or complexity, for instance) to gain future potential. This potential lies in the flexibility and toolset provided by general-purpose technologies such as cloud, whose operating models are analyzed in Part 2 of this report.



Digital Chaos & Unpredictability



Decoding Value Paradigms

What Values? - Values in Technology Sourcing

After an explanatory preamble focused on the origins and principles driving today’s value paradigms, we will look at which of these are important in different contexts. We will do so relying on the specific survey on technology values distributed by IABM between October and November 2020. In the survey, we first asked respondents to select the values they were looking for from technology solutions. We provided a variety of options that are often cited by media organizations as business objectives they aim to achieve when sourcing technology. For most respondents, “Increasing agility and speed of operations” is an important value to be sought from technology solutions. This is followed by “Saving money/reducing costs” and “Creating new revenue opportunities.” It is interesting to note that “Increasing innovation potential” comes as fourth most important value for most respondents, underlining the overarching principle in technology sourcing described earlier. Other values such as “Reducing operational risks” and “Reducing operational complexity” rank lower in this list, which could be viewed as somewhat surprising given the increasing risks and complexities emerging from new technologies and market dynamics.



Top Values in Media Tech Sourcing

Company Type

Saving Money / Reducing Costs

Top value for Technology Vendors

Creating New Revenue Opportunities

Top value for Technology Service Providers

Saving Money / Reducing Costs

Top value for Media/Production Companies

Content Supply Chain

Increasing Speed/Agility

Top value for companies in Creating & Producing Content

Increasing Speed/Agility

Top value for companies in Moving & Managing Content

Saving Money / Reducing Costs

Top value for companies in Distributing & Monetizing Content

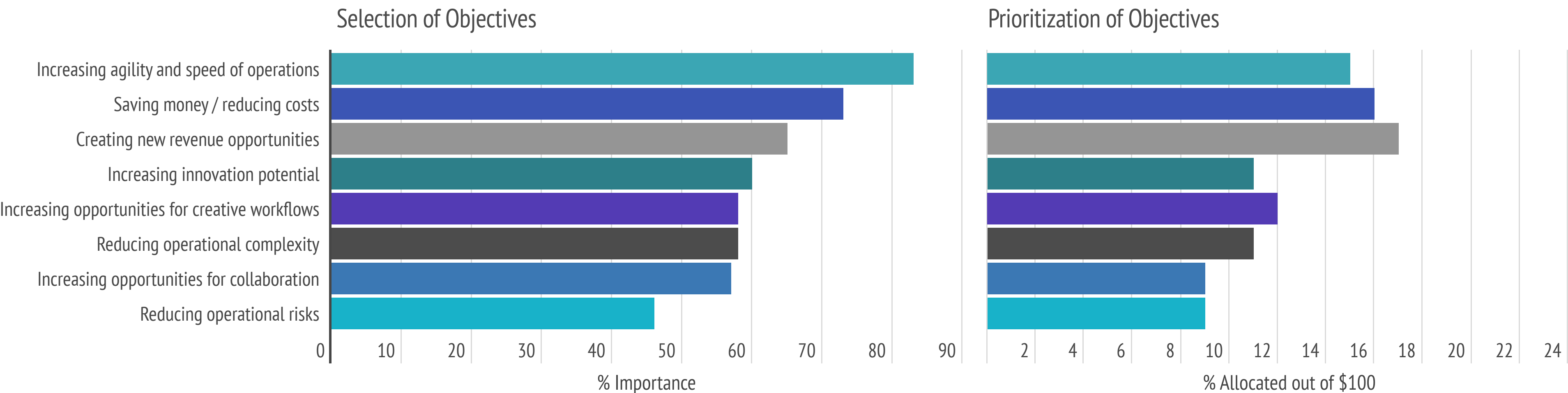
Decoding Value Paradigms



What Values? - Prioritization of Values

We then asked respondents to prioritize these values by making them assign a budget of \$100 to the different elements contributing to overall value in technology sourcing. When asked to prioritize values, respondents allocated more money to “Creating new revenue opportunities,” which jumped from #3 to #1, and to “Increasing opportunities for creative workflows,” which moved up from #5 to #4. The bottom three values in the ranking remained the same even after the prioritization.

Values in Media Tech Sourcing



Decoding Value Paradigms

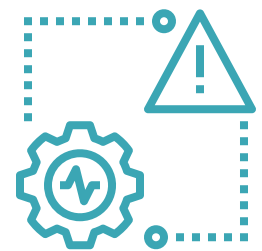
What Values? - Insights from Prioritization



The increasing importance of “Creating new revenue opportunities” is consistent with IABM’s recent research on viewing technology only as an enabler. In the IABM Special Report published in September 2020, we said 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.”



The prioritization of “Increasing opportunities for creative workflows” highlights that content, and making great content, is still a very important value to the industry. This is in turn consistent with the sector throwing more money at content investment in recent years.



The bottom three values highlight that media companies are perhaps prioritizing enabling the new over managing the risks and complexities that this involves.

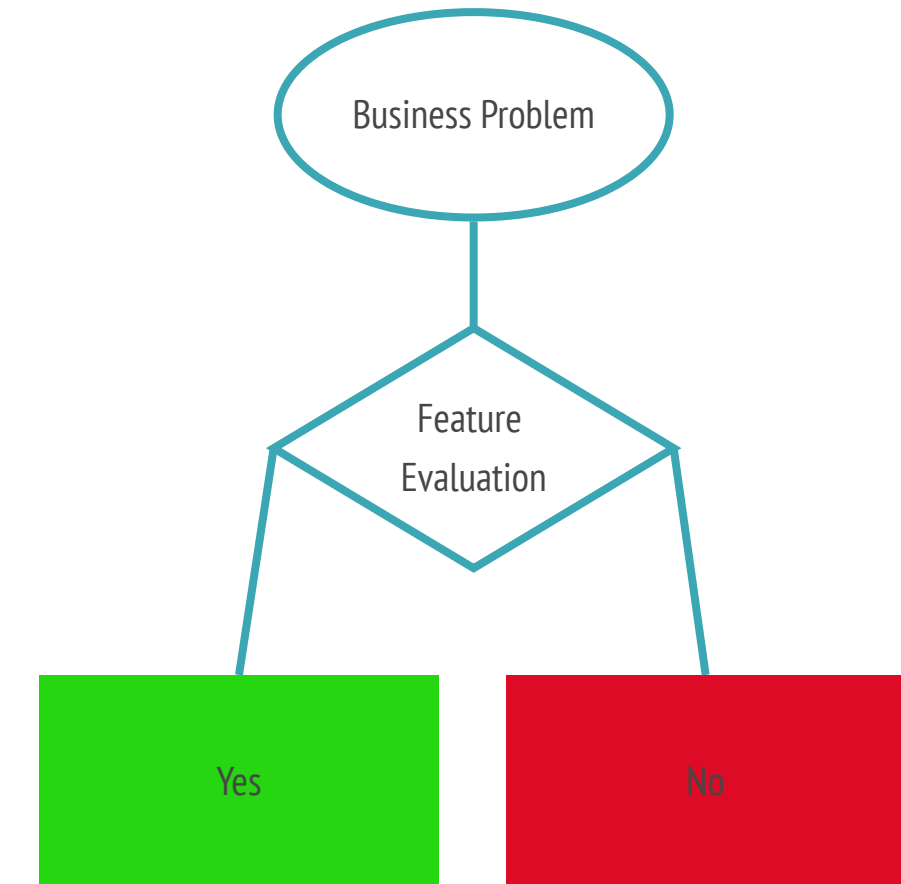
Decoding Value Paradigms

Media Tech Decision Trees



The framework above is important to understand the most important objectives that media companies seek to achieve. However, interviews with senior technology executives at media companies evidenced that decision-making for media technology sourcing is extremely complex. One media company's description of the steps taken to evaluate new technology solutions resembled a convoluted decision tree. The variables accounted for by technology decision trees are specific to each company but here we have tried to formalize those that most decision-makers consider. Before doing that, it is worth noting that technology decision trees are dynamic, hence they contain a sort of time loop whereby decisions are constantly re-evaluated over time. A good example of this is a specific solution, which was not available in the marketplace at the time a sourcing decision was made, becoming available. This leads technology decision-makers to re-evaluate their past decision (e.g. building a functionality in-house) given current circumstances. Now, we will analyze seven variables considered by typical media companies and then build some simplified decision trees based on two of them.

**Media Tech Decision Trees
originate from media business
problems**



Decoding Value Paradigms

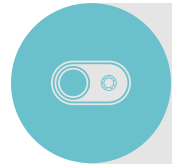
Media Tech Decision Trees - Features



Strategic value: does the solution have strategic value for my organization?



Availability: is the solution provided by any technology suppliers?



Enabling value: what should the solution enable my organization to achieve?



Business model: is the solution offered through a flexible payment model or a long-term commitment?



In-house build: is an in-house build for the solution feasible and sustainable?



Market demand: · is there significant market demand for the solution?



Activity demand: what type of demand patterns does the activity have?

Decoding Value Paradigms

Media Tech Decision Trees - Features



Strategic value

This refers to the ability of the technology to fit media companies' strategic plans, which is consistent with the overarching principle of technology sourcing outlined before. Many media companies look at both the potential of a technology and its future adaptability as well.

Availability

This refers to the availability of a technology solution in the marketplace – i.e. whether a vendor currently provides it and if not, is it currently on any vendor's product development roadmap – and if so, when will it be rolled out as a tested product.

Enabling value

This refers to the technology sourcing values outlined previously, whether it is about saving money or increasing agility of operations.



Business Model

This refers to the payment method for the technology solution. Depending on the specific application and the activity requisites, media companies will be more interested in pay-as-you-go payment schemes. However, they might also be interested in locking into a technology long-term if they think they are going to need it over a sustained period (or that it is not easily substitutable) and worry about the support of an as-a-service offering. It is worth noting that Business model includes the time commitment and kind of support provided as well.

In-house build

This means the possibility to build the solution internally. As demonstrated by IABM research in other reports, this is much more likely to happen in large and developed organizations that possess the technology fundamentals to sustain in-house spending. An in-house build is considered only if a solution is not available – see above – and if market demand for it does not justify a partnership with a vendor. It is also worth noting that in-house builds often entail developing specific elements that are part of a technology solution. IABM research shows that this is often done for customization or for integrating different components of the underlying solution.



Market demand

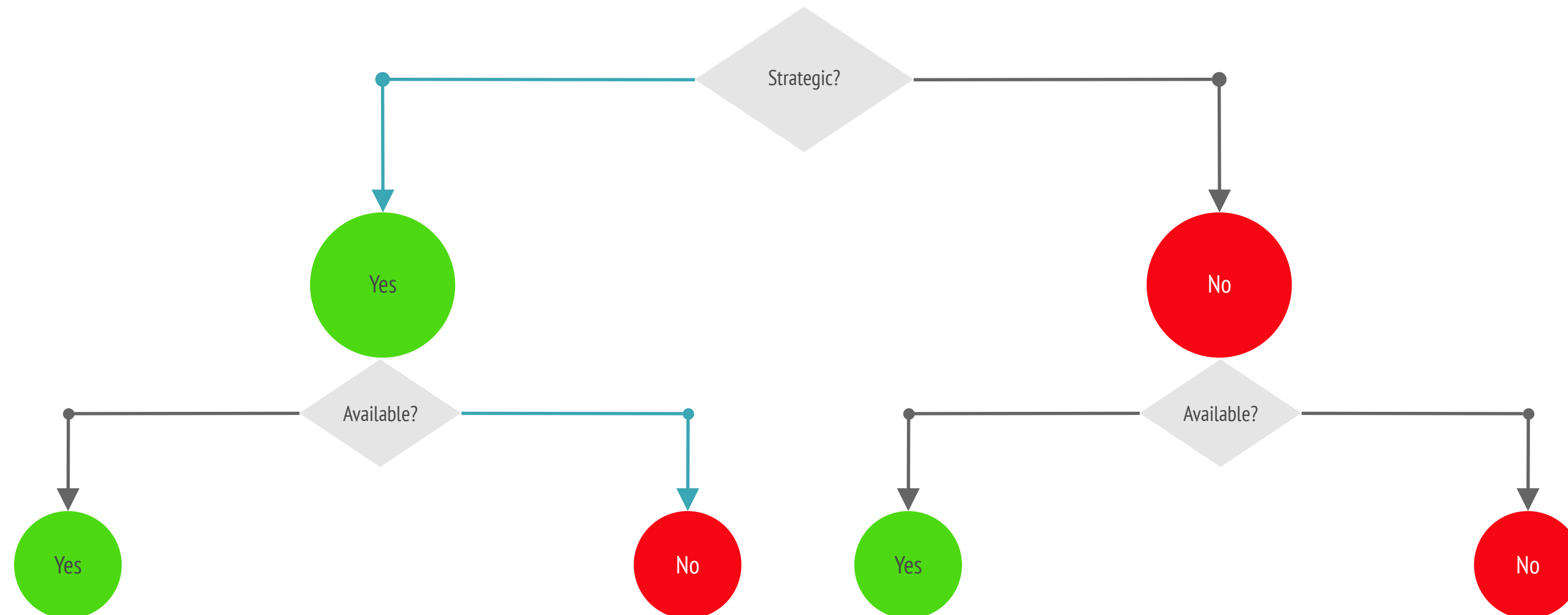
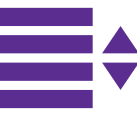
As hinted above, Market demand refers to the market's appetite for one specific solution. Media companies would evaluate this to understand if there is the potential to talk to a suitable vendor about it. The importance of market demand underlines the relevance of collaboration between different media companies as well as between media companies and technology suppliers.

Activity demand

This refers to the requisites and specificities of different kinds of activities and use cases. For example, media companies will look at metrics such as demand patterns, predictability, latency requirements, financial expenses etc. in different activities to inform technology decision-making. It is important to note that, increasingly, activity demand is considered holistically, as part of a wider ecosystem of processes and workflows. This means that media companies will look at the configuration of a wider set of workflows that are interlinked to make their decisions. They might build something in-house to bridge the integrational gap between two operational sets, they might focus on cloud-based deployment in zones of the chains that exhibit unpredictable peaks and troughs in demand or where agility and adaptability are key.

Decoding Value Paradigms

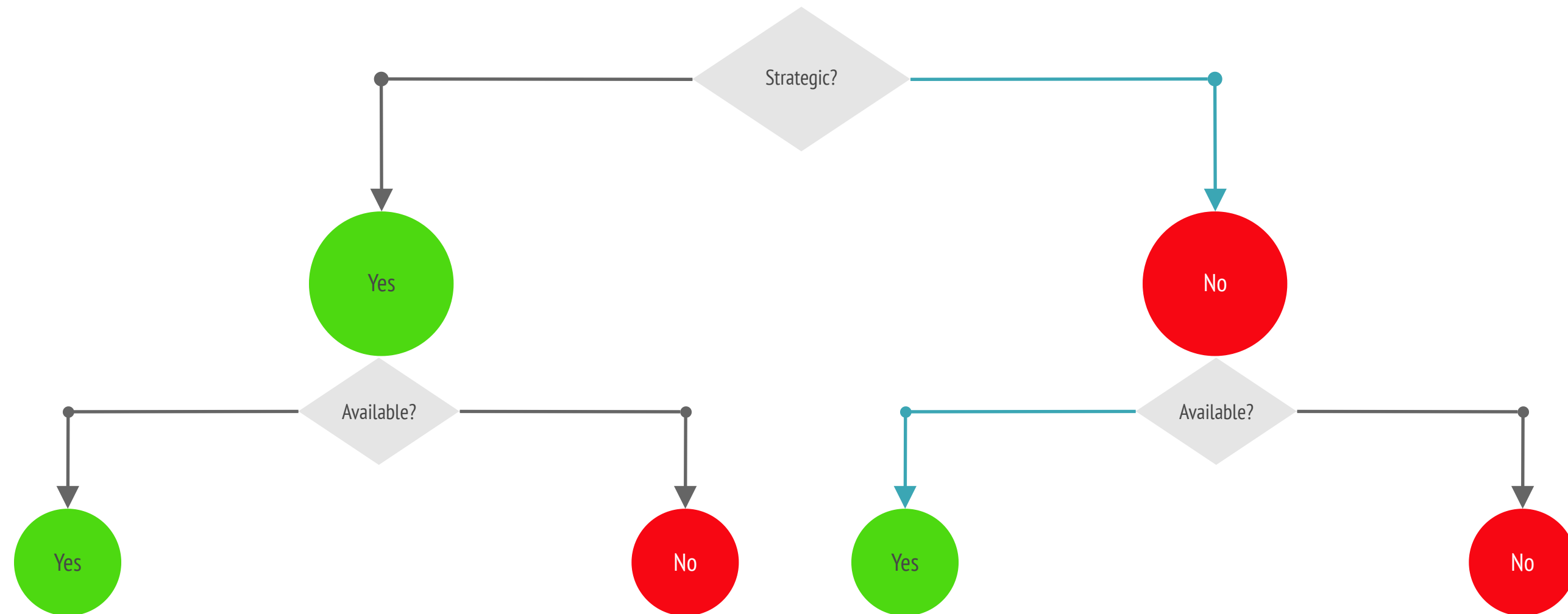
Media Tech Decision Trees - DTC Platform



The decision tree for a DTC platform or an element of it will be of high strategic value to most media organizations. Therefore, media organizations looking at technologies related to a DTC platform will be likely to prioritize values such as increasing operational agility or creating new revenue opportunities, even if these come with a higher bill. We refer to this as the creational value of a new technology solution. If the tech stack is available in the marketplace, media companies will buy it and prioritize it in their budget – deprioritizing other elements, as evidenced in the examples below. Otherwise, they will build a portion (or all of it) in-house or, alternatively, work in partnership with a vendor to include the solution in its roadmap – should there be enough market demand for it. In terms of business model, media companies will prefer long-term commitments in this case as they will want to lock in the technology for the future.

Decoding Value Paradigms

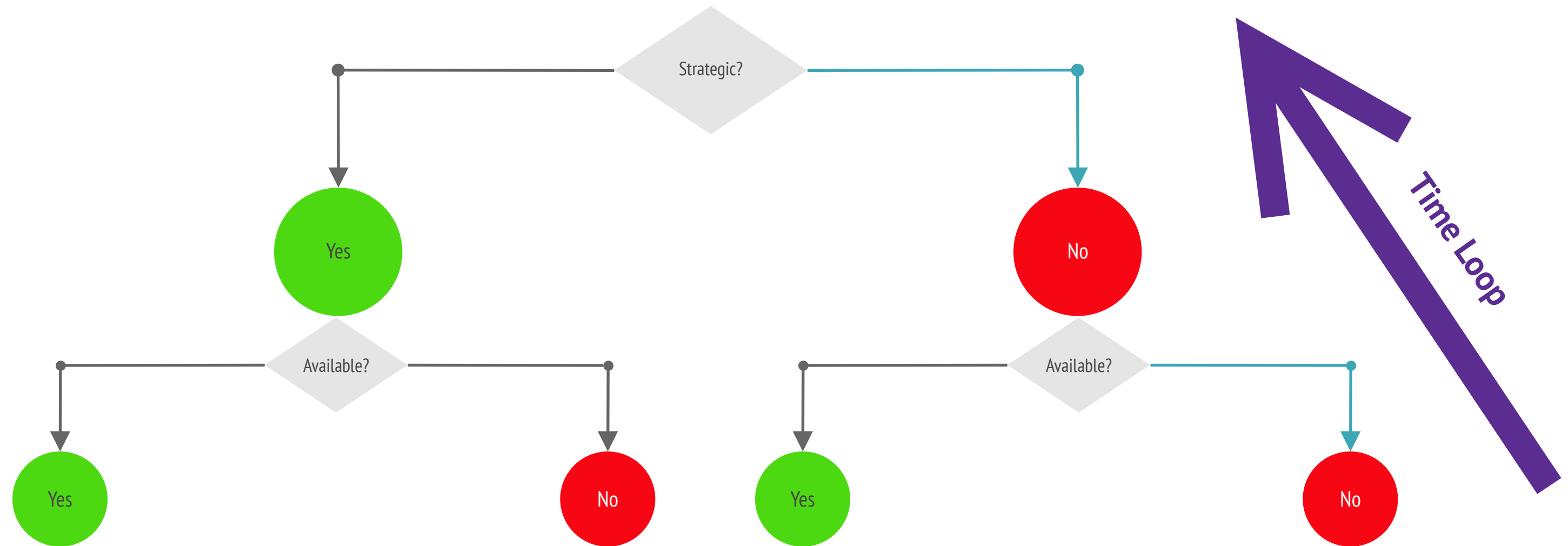
Media Tech Decision Trees - Refreshing Tech



The decision tree for refreshing technology that is not of strategic value will be more tactical and focused on value for money. In this case, media companies will be more likely to focus on the substitutional value of a new solution, prioritizing technologies that save them money more quickly. This decision-making framework often applies to temporary fixes as well, which is why we conceive it as more focused on the short-term. The short-term focus will affect the business model as well – most media companies will not want to be locked into a cheap solution or an easy fix, with some companies mentioning that they are willing to spend more to avoid a long-term commitment on these purchases. If an easy in-house fix to the problem is possible, some media companies may well still consider this though. Working in partnership with a vendor is not usually an option in this case – it is not worth the hassle.

Decoding Value Paradigms

Media Tech Decision Trees - Tech Experiment



The decision tree for running an experiment, or service whose duration is uncertain at the time of the launch, will also be more tactical and likely to rely on technology that is “good enough” to make it happen. In the decision tree above, we have assumed that a media company could not find what it looks for in the marketplace and decided to build something basic quickly in-house. In this case, media companies will go through an experimental phase and reappraise value after some time to determine if the new service can be moved to the strategic bucket. Therefore, this framework for decision-making is skewed towards the short-term but can turn into a long-term bet if certain circumstances are met.

Decoding Value Paradigms

Media Tech Decision Trees



Media tech decision trees are extremely important to understand for media companies and technology suppliers alike. For media companies, it is important to have a structured framework through which optimal decisions can be made. For media technology suppliers, it is important to understand this framework to meet media companies' dynamic expectations and avoid any value disconnect.




Decoding Cloud Operating Models



This second section of this report is focused on analyzing the reasons and models behind, as well as challenges of, cloud-based media operating models.

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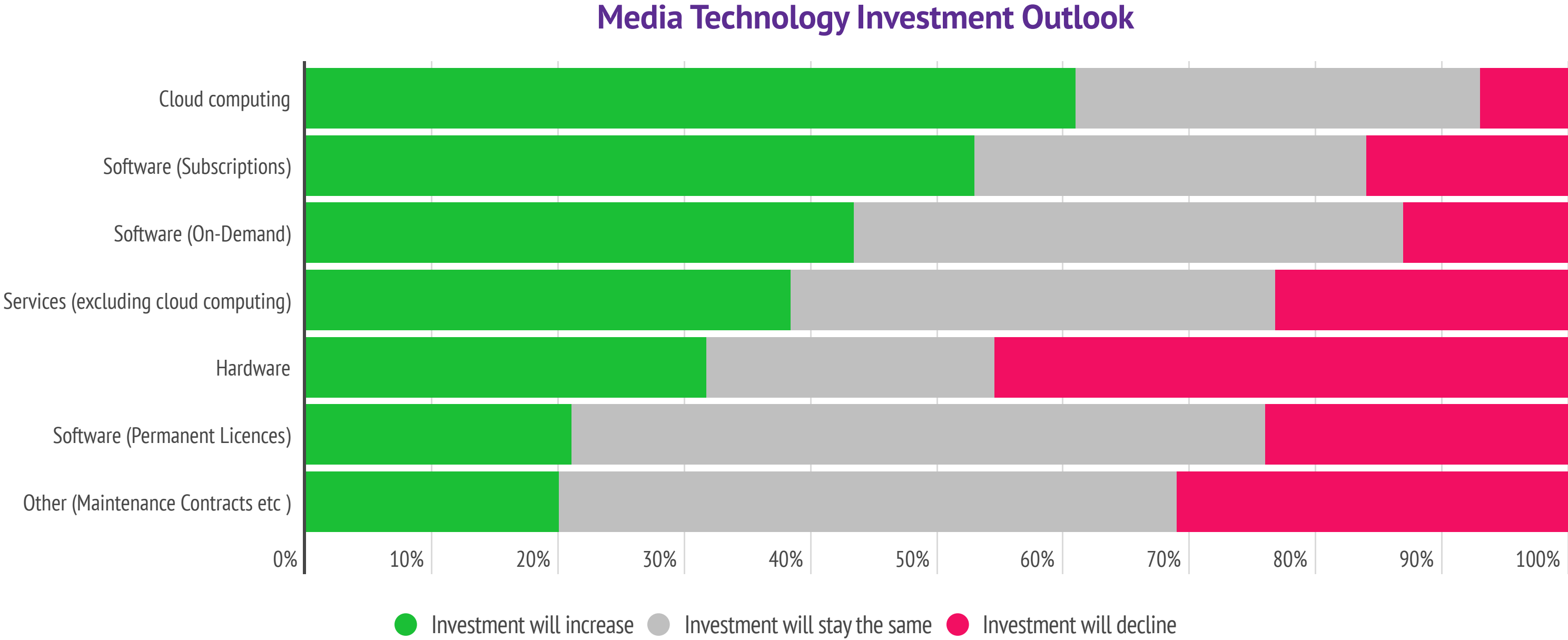
-  **Demand for Cloud in Media is significantly rising**
-  **How is Cloud being adopted in media workflows?**
-  **Why is Cloud being adopted in media workflows?**
-  **Cloud & Value Paradigms**
-  **The Unresolved Dilemmas**

Decoding Cloud Operating Models



Demand for Cloud in Media is significantly rising

According to IABM’s latest data, cloud computing represents the fastest growing category of investment for media companies. 61% of media companies said that they plan to increase investment in cloud computing resources in the next year, which was followed by software subscriptions and on-demand services often provided on top of a cloud infrastructure.

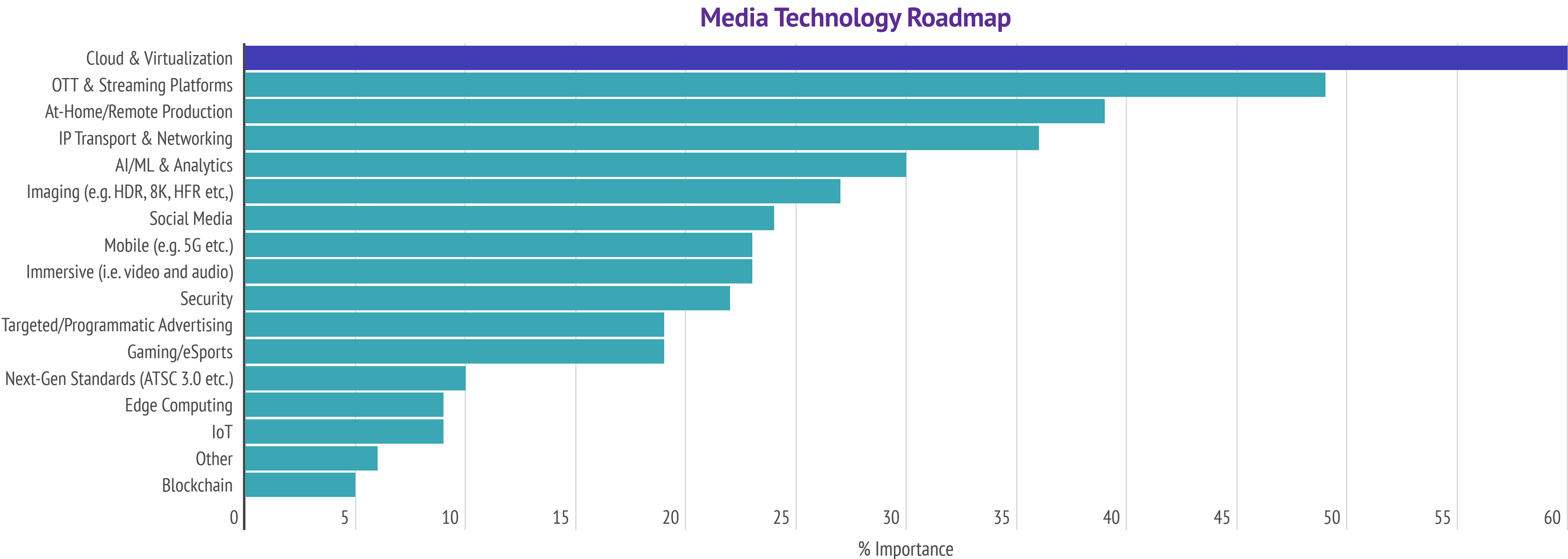


Decoding Cloud Operating Models



Demand for Cloud in Media is significantly rising

Cloud is also the top-ranking technology in both media companies and technology suppliers' roadmaps, which underlines its importance in the industry's future.



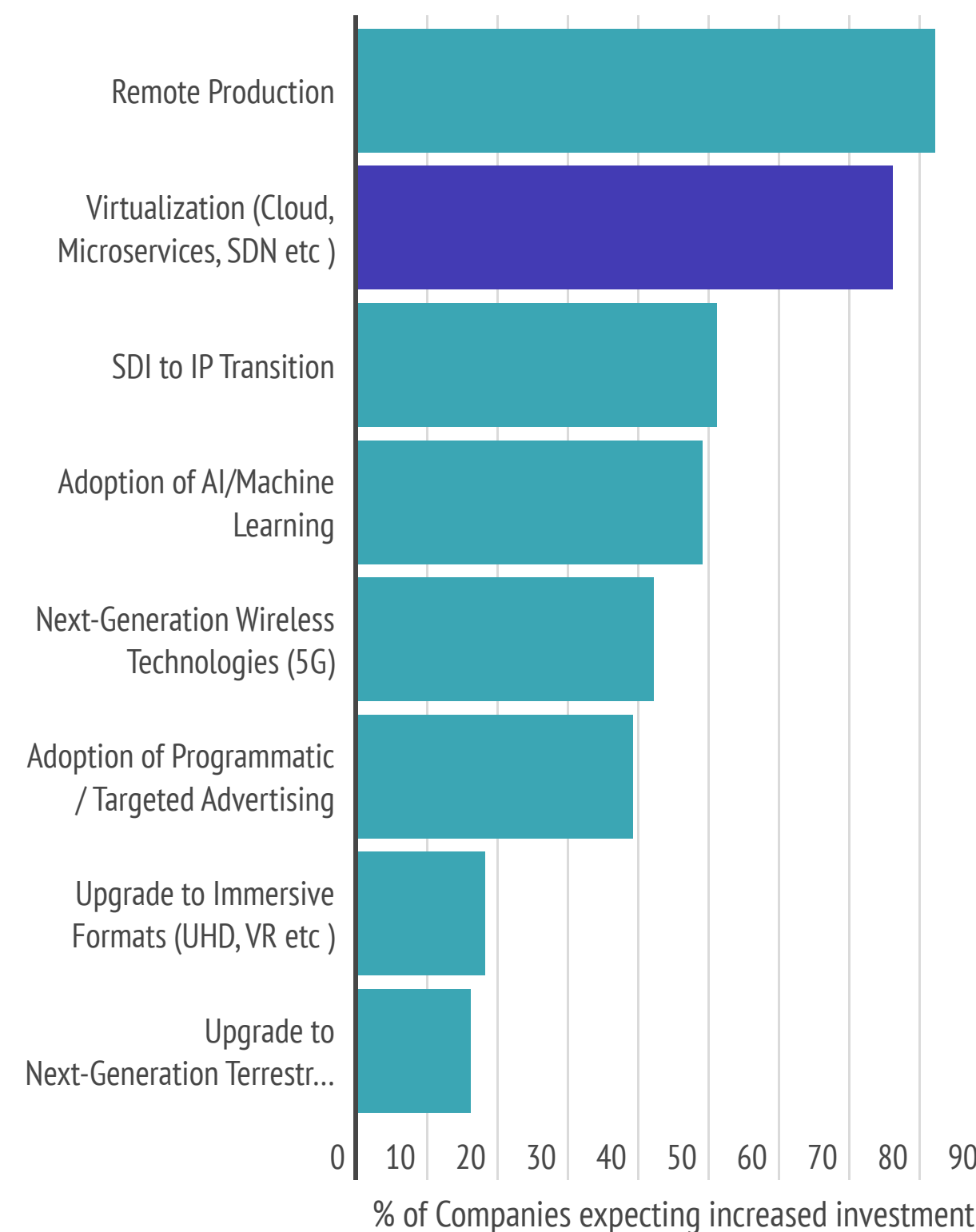
Decoding Cloud Operating Models

Demand for Cloud in Media is significantly rising

In terms of areas of application, IABM research shows that, while cloud is impacting all BaM Content Chain® segments, content management and publication are the two predominant sets of media workflows where cloud is being implemented. Interviews with media companies highlight that this is indeed the case, particularly for their digital and on-demand offerings. The COVID-19 pandemic that has hit the world in 2020 has accelerated media companies' move to cloud operating models. It has done so by breaking down the risk barriers that were preventing some technology users from moving to cloud-based operations. IABM Coronavirus Impact Tracker shows 76% of media and technology companies expect investment in virtualization, which includes cloud, to increase due to the pandemic affecting their operational models. With so many data points pointing to an acceleration in the transition to cloud operating models, it is increasingly important for both media companies and technology suppliers alike to understand how to truly make them work in media.



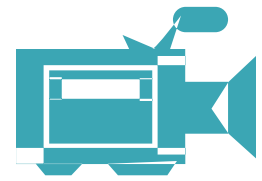
COVID-19 Impact on Media Tech Investment



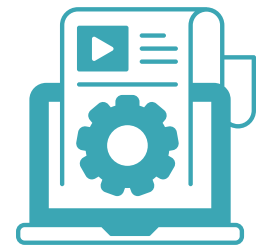
Decoding Cloud Operating Models



Demand for Cloud in Media is significantly rising - COVID-19 & Cloud in the Content Supply Chain



In Creating & Producing Content: Media companies have increased their reliance on remote editing as well as generic internet technologies that enable virtual collaboration (e.g. Zoom, Teams, Slack). Remote editing solutions adopted in this period have been often integrated suites featuring publishing functionalities to enable media companies to quickly post content over the internet and on social media channels.



In Managing & Moving Content: Media companies have focused their investment on building an infrastructure that enables remote collaboration and content transport. This has often translated into increased spending on virtual file acceleration technologies, for example. More investment has also focused on digital archiving to enable remote content access and editing to a distributed workforce.



In Distributing & Monetizing Content: The main trend has been the increase in streaming consumption, which has forced media companies to make new investments in infrastructure needed to accommodate this increasing demand, including cloud. Some media companies have also told us how they are concentrating on user interfaces and data analytics solutions focused on consumer data to stand out in a crowded marketplace.

Decoding Cloud Operating Models



How is Cloud being adopted in media workflows? - Media preference for Hybrid Workflows is increasing operational complexity

After having established the patterns in demand for cloud in media, it is worth exploring the most common models and challenges related to the adoption of this technology in media. According to IABM's latest data and qualitative research, most media companies prefer hybrid models for cloud deployment in media operations. This preference for hybrid is really two-fold:



Hybrid infrastructures: 45% of media companies prefer mixing various deployments when implementing cloud technology. This includes public and private cloud deployment as well as on premises infrastructure, depending on the use case and whether cloud is suited to it. This is consistent with media companies' preference for best-of-breed technology solutions rather than one-size-fits-all approaches.



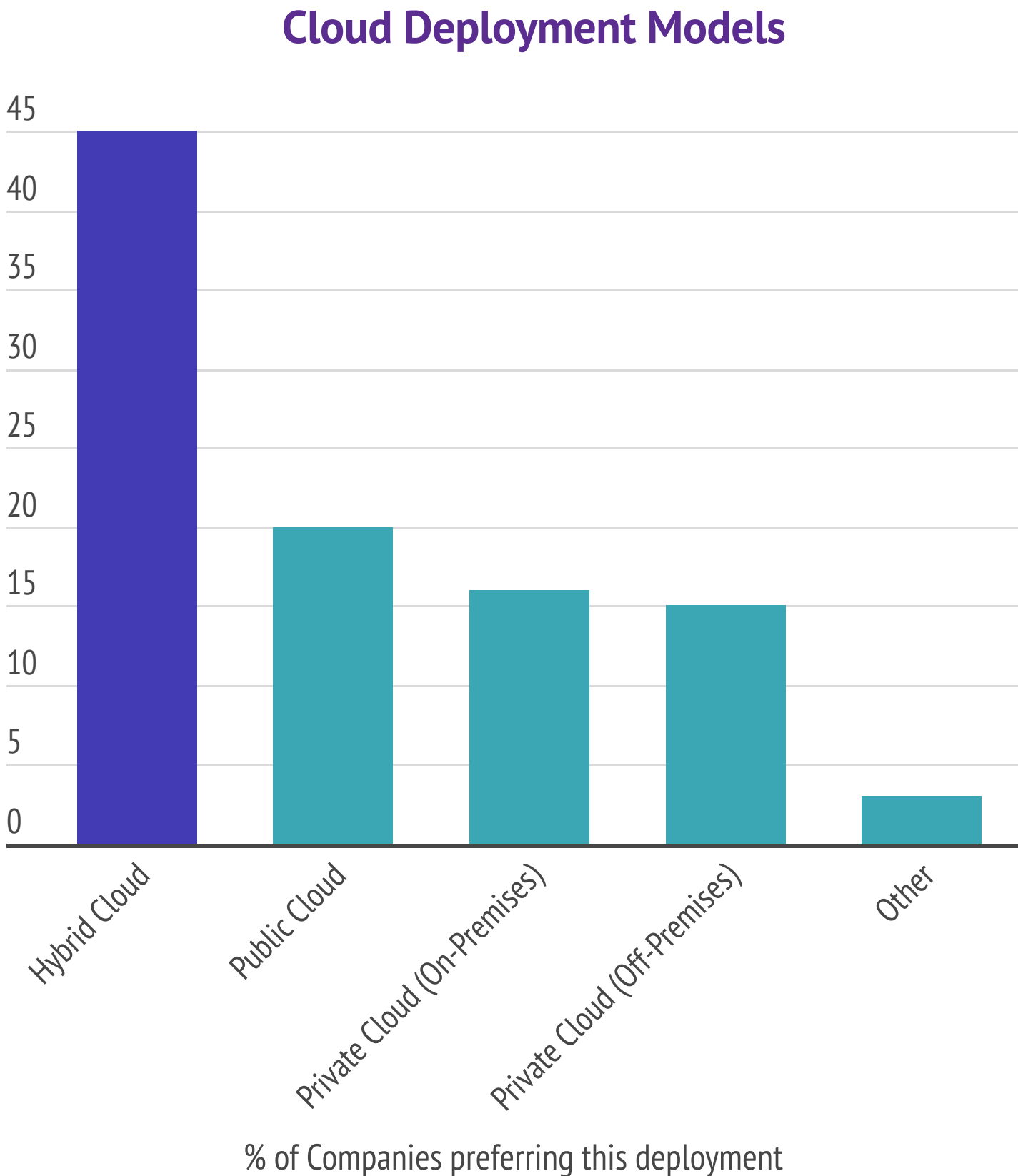
Multi-cloud: Media companies also prefer to work with multiple cloud service providers. IABM research on this topic is clear, showing that most of them prefer to avoid lock-in to one single cloud vendor and, again, leverage best-of-breed solutions. However, most media companies highlight that optimal multi-cloud workflows are not achievable today due to the cost of moving content between different cloud service providers' environments and the lack of integration between them. Most of them are addressing this issue by using separate cloud service providers, side by side, for different sets of workflows (e.g. video and data-driven workflows).

Decoding Cloud Operating Models



How is Cloud being adopted in media workflows? - Media preference for Hybrid Workflows is increasing operational complexity

Both these hybrid approaches contribute to radically increasing operational complexity by fragmenting infrastructure management and investment. Take costs in a multi-cloud deployment setting as an example. When workflows and projects are spread across multiple platforms each having its own billing system and pricing model, media companies may find the estimation of overall cloud expenditure more difficult. The same applies to technical resources spread across public and private clouds as well as on-premise infrastructures. Aside from budgeting challenges, a hybrid approach to cloud deployment increases complexity by burdening organizational areas such as vendor and infrastructure management as well as demanding more eclectic architectural skillsets at media organizations. Media companies participating in our in-depth interviews admitted to this limitation of the hybrid model.

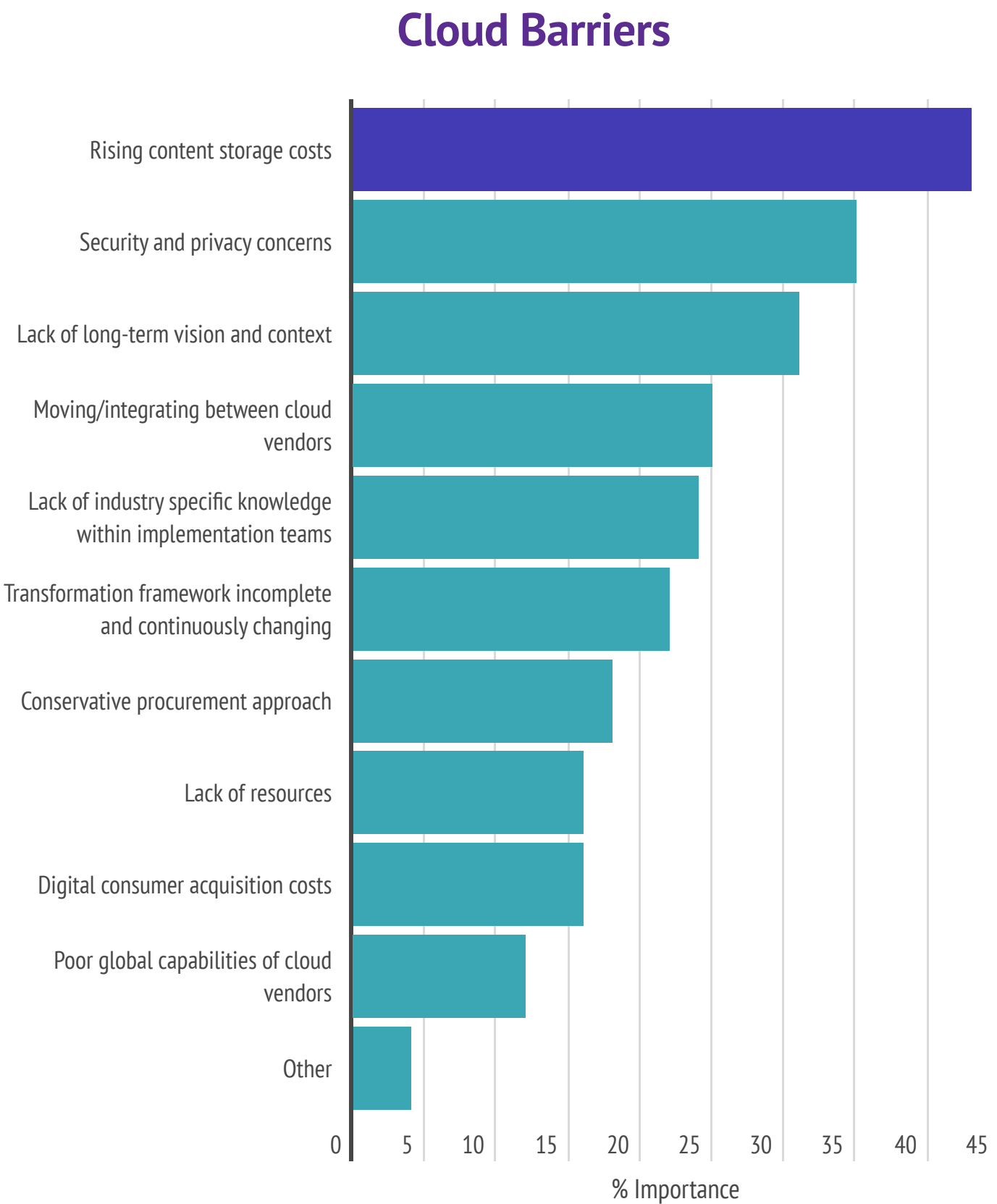


Decoding Cloud Operating Models



How is Cloud being adopted in media workflows? - Cloud economic models in Media present challenges as well

Aside from operational complexity, which contributes to increasing the costs of cloud deployment, it is widely recognized that public cloud economic models are more suited to media activities characterized by peaks rather than sustained demand. In other words, public cloud is considered more suited to applications that have intermittent and unpredictable usage – i.e. dynamic or “bursty” workloads. The economic challenge is a relevant one for the media industry which deals with “heavy” files, and can lead to high bills (due to egress charges). According to IABM research, “Rising content storage costs” represent the top barrier preventing media companies from moving to the cloud – you can see that integration (i.e. multi-cloud model) is the fourth most important barrier. Media companies participating in our in-depth interviews admitted to this limitation of public cloud models as well. They also said that this was the main reason why cloud was so far being implemented in areas characterized by peak activity (e.g. digital on-demand platforms).



Decoding Cloud Operating Models

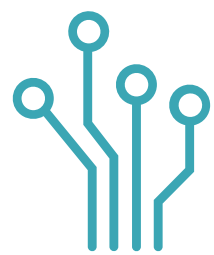


How is Cloud being adopted in media workflows? - Cloud demands Media Transformation, which is itself a challenge

While this section is laser-focused on the economics of cloud, including its intrinsic complexity and challenging media economic models, it is worth highlighting other challenges that pertain to the organizational, cultural, and technical domains:



Talent & Culture: Interviews with media companies highlighted that cloud demands a transformation of people and culture at their organizations. This includes new technical skills as well as a new mentality more accustomed to both experimenting and failing fast.



Technical demands: as evidenced earlier, media workflows have special requisites when it comes to technical metrics such as latency and throughput in specific applications, and particularly in production and live scenarios. These were also recognized as challenges by media companies in our interviews with them.

In the following pages, we will take these challenges into account as well. In fact, the rest of this section moves onto analyzing the reasons behind the decision to move to the cloud, as well as delving deeper into media companies' views on these challenges.

Decoding Cloud Operating Models



Why is Cloud being adopted in media workflows? - Main drivers for Cloud adoption

If cloud operating models pose so many challenges, why are media companies increasingly investing in them? The following is a structured review of the reasons behind cloud in media evaluated against the challenges posed by this transition. We also include an analysis of cloud operating models and media companies' value paradigms outlined in Part 1 of this report.

The main drivers behind cloud adoption mirror the main factors influencing general technology purchasing identified by IABM research. The top driver of cloud adoption is the overarching principle of technology sourcing highlighted in Part 1 of this report: the future. This is reflected by “Future roadmap” and “Innovation potential” being the second and fourth most important factors influencing technology demand, respectively. As mentioned at the start of this research report, preparing for future media dynamics is of utmost importance for media companies, and cloud is considered the ideal technology that enables them to do so through flexibility. “Total cost of ownership,” the most important factor influencing technology sourcing, is also thought to be an important driver for cloud adoption as evidenced by research participants. Despite the challenges related to cloud economic models, media companies believe that cloud can bring operational efficiencies that outweigh its costs. These, along with increased agility of operations, were highlighted as the most important drivers for cloud adoption.

Decoding Cloud Operating Models

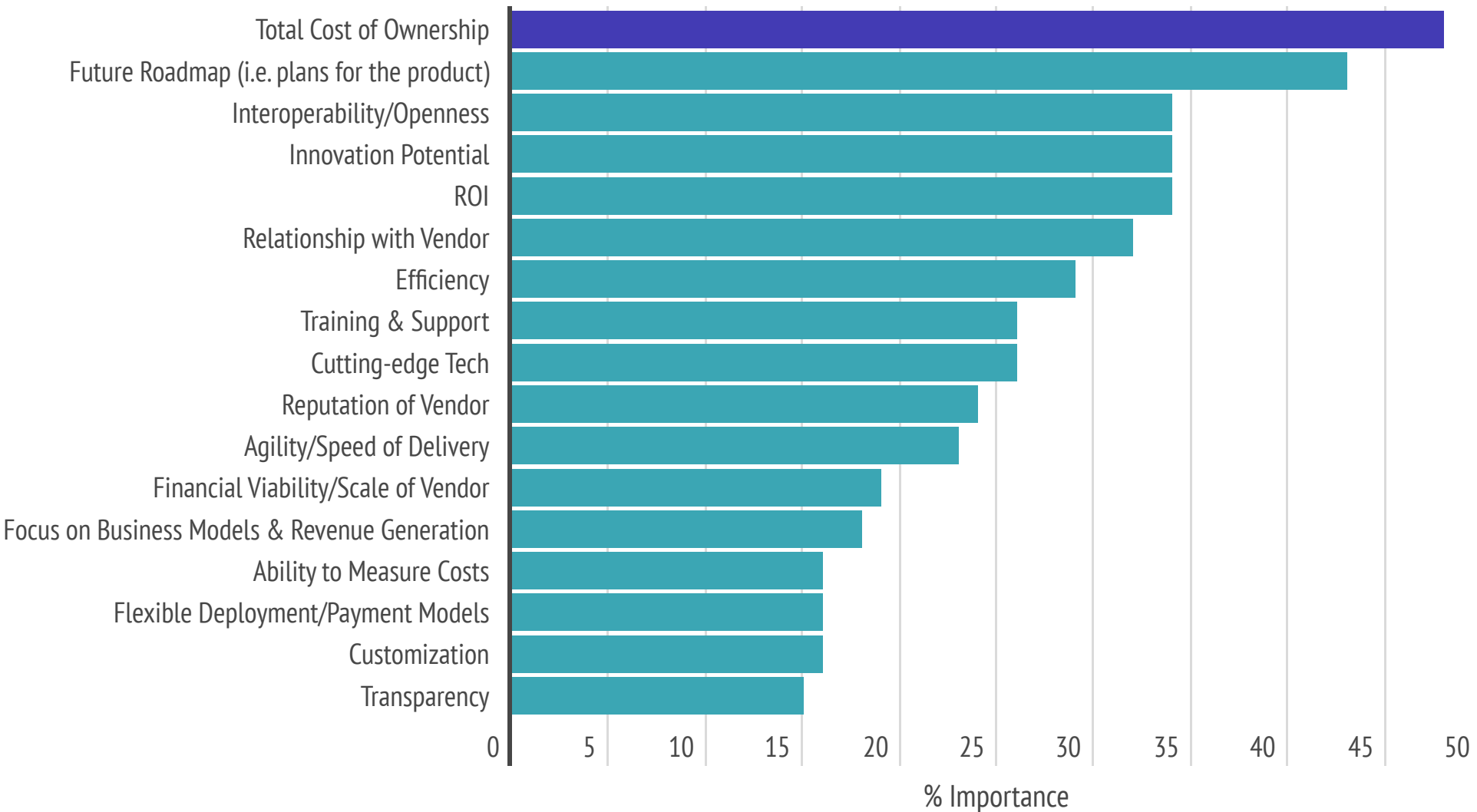


Why is Cloud being adopted in media workflows? - Main drivers for Cloud adoption

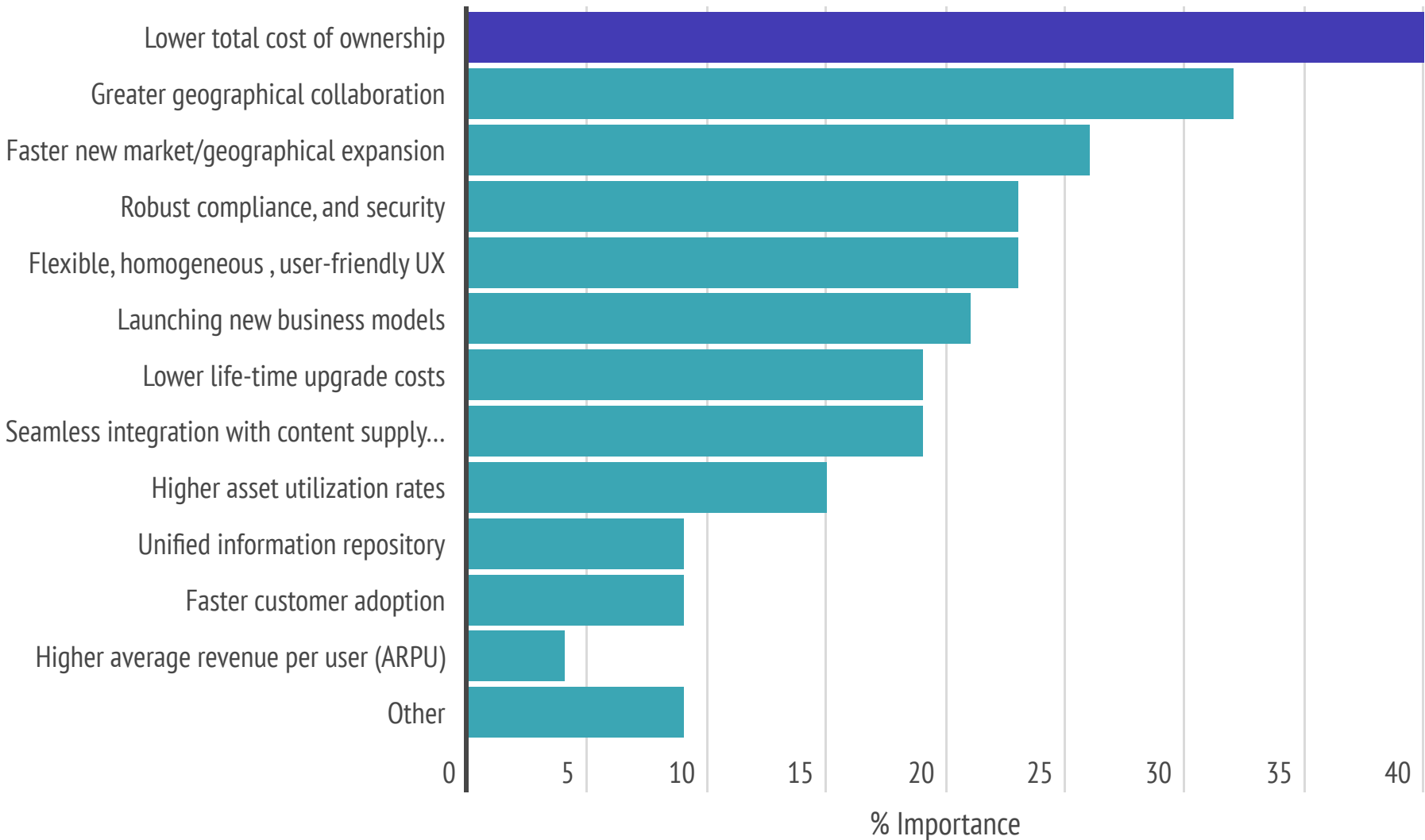
IABM research shows that “Total cost of ownership” is also cited by cloud adopters as the most important advantage derived from moving to cloud operating models. This is followed by “Greater geographical collaboration” and “Faster new market/geographical expansion.”

Media Tech & Cloud Drivers

General Drivers of Media Tech Adoption



Main Drivers of Cloud Adoption



Decoding Cloud Operating Models



Why is Cloud being adopted in media workflows? - Cloud future proofing

As evidenced earlier, one of the main drivers of cloud adoption is future proofing. Media companies consider the cloud more adaptable to the future as well as more extensible to the different kinds of workflows they may require. They think that, by moving to the cloud, they will be better able to adapt to the constantly changing nature of the industry as well as enjoy the innovation powered by the massive technology budgets of cloud service providers. The characteristics of microservice and containerized architectures were often cited as a good example of adaptability. In these settings, you can more easily implement changes by modifying only a piece of the puzzle, without rewriting the whole stack from scratch. Media companies often understand that the move towards cloud operating models will involve significant investments but, consistent with the overarching principle of technology sourcing, they seem to be committed to accepting this for the sake of future proofing their organizations in the long-term. This long-term focus was well captured by two comments we heard during the interviews:

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1. Maybe it [cloud] costs a bit more on day one, when we are making this transition, but in the long-run, it will be cheaper.
2. You might not want to technologically invest in things that are going to be outdated at some point. When it may not make complete revenue sense initially, it makes revenue sense in the long term, and you want to plan for the long term.

Decoding Cloud Operating Models

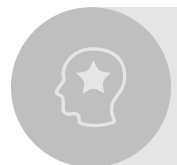


Why is Cloud being adopted in media workflows? - Cloud economics

Most research participants highlighted that cloud operating models can indeed be more expensive than on premises deployments, if users replicate the latter in a cloud-based environment. However, if cloud models are designed natively for the cloud, they can achieve important operational savings vis-à-vis on-premises deployments. Media companies highlighted that it is important not to look only at the financial modelling of a technology sourcing decision but rather at whole range of operational costs and benefits of cloud deployment – the total cost of ownership. This, in some cases, entails a thorough cost-benefit analysis of new deployments. This cost-benefit analysis often entails new operational elements, some of which are rather difficult to measure, such as:



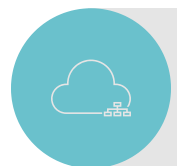
Productivity: will the benefits of cloud, including increased collaboration and workflow automation, make my employees more productive?



Talent: will the better user interfaces of cloud technology enable me to retain employees and attract the new digital skills that I need?



Speed: will the cloud enable me to be more responsive to sudden changes in the market in which I operate?



Infrastructure Support: will the cloud enable me to outsource costly infrastructure maintenance and security to the cloud vendors?

Decoding Cloud Operating Models



Why is Cloud being adopted in media workflows? - Cloud economics

Some media companies interviewed for this report told us that they account for these elements when moving media operations to the cloud, weighing them against the potential financial disadvantages. The first and last points on productivity and infrastructure support respectively are particularly important operational drivers according to interviews carried out for this report. Companies emphasizing the importance of external infrastructure support see this model as resembling an outsourcing model that enables them to focus on the core of their operations. Media companies lamented the support they can give to their own data centers and generally highlighted that their experience with cloud has been positive from both a security and resource provisioning perspective - even in situations of peak demand.


Also, media companies highlighted that cloud makes more sense when there is more content sharing happening across business divisions. As the media marketplace consolidates and global platforms emerge, this represents another driver of cloud deployment – as it reduces the storage footprint and avoids workflow duplication, among other things.


Decoding Cloud Operating Models




Why is Cloud being adopted in media workflows? - Cloud economics

When working out the economics of cloud, media companies will also pay close attention to the configuration of their workflows, a concept that was mentioned in Part 1 of this report. This is a very important point that most media companies made. This means that cloud will be deployed strategically to minimize its potential financial burden – i.e. the egress charges. Companies interviewed for this report described some ways to go about this:

 **Go all-in:** Build 100% cloud-native pipelines so that content does not have bounce up and down, thus avoiding the egress charges

 **Strategically position cloud-based workflows:** Place the cloud steps in your media chain to minimize egress charges – e.g. start or end of the chain

 **Book minimal long-term reserved instances:** in the case of activities exhibiting sustained demand, buy long-term instances to be able to burst if needed

Media companies also remarked that the financial model is an issue only for assets – i.e. media files – and not for the cloudification of business processes (e.g. rights management) which present them with trivial financial implications.

Decoding Cloud Operating Models



Why is Cloud being adopted in media workflows? - Cloud economics

Moreover, if we adopt the media tech decision tree framework described in [Part 1](#), we can see that media companies are often trading off different elements of a technology sourcing decision. For instance, they might be more inclined to spend more on cloud technology if this enables objectives that are more important than cost in a specific activity. DTC, and everything related to this, is always a good example of this behavior. Digital asset management is another good example, in the case of a news organization that intends to increase collaboration between journalists as well as its digital presence. This philosophy is well captured by a comment we heard during the interviews:

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I think there are even occasions when we're willing to spend a bit more overall for the sake of flexibility, if flexibility is actually more important than just the price.

From a financial perspective, people highlighted the need to make a detailed business case based on the elements above to finance departments to enable the cloud move. This sometimes entails the higher degree of accounting transparency provided by cloud-based tools.

Decoding Cloud Operating Models



Why is Cloud being adopted in media workflows? - Cloud economics

It is worth noting that the state of adoption of cloud economic models in media depends on the specific use case considered. For example, while cloud has been a no-brainer in digital activities that present unpredictable demand patterns such as DTC platforms, its adoption in other parts of the content supply chain such as content creation has not been so sweeping. The specific requirements of content creation activities such as rendering may in fact translate into cloud-based deployments not making financial sense in settings where demand patterns are predictable. However, when demand is unpredictable or unevenly distributed over time, the benefits of increased asset utilization driven by cloud-based deployments may outweigh the costs, as demonstrated by the case studies of some content creators moving to the cloud.

Aside from the structure of demand, the cloud offers benefits such as reduced turnaround times unlocking new revenues, access to a wider creative talent pool remotely and the avoidance of large capital investments in office space for content creation outlets based in expensive locations.

According to IABM research, most content creators still rely on large capital investments for their activities, utilizing the cloud in situations of excess demand. However, we expect the level of investment in cloud by content creators to rise in the coming years in what may look like an increasingly hybrid model in most cases.

Decoding Cloud Operating Models



Why is Cloud being adopted in media workflows? - Cloud transformation

Finally, media companies see the challenge of digital transformation also as an opportunity for their organizations. When talking about this, media companies mostly refer to people, and the change in people, as both a challenge and an opportunity. This is consistent with another long-term industry driver of change identified by IABM in its Special Report published in September 2020:

”

The once isolated media technology sector is being absorbed by a wider technology industry as the adoption of general-purpose technologies rises.

IABM Special Report, September 2020

One research participant told us about this:

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Changing technology is easy but changing people's behavior is hard.

Decoding Cloud Operating Models



Why is Cloud being adopted in media workflows? - Cloud transformation

This really captures the major element media companies are focused on. An example of this issue entails the choice of a new technology deployment taking current staff skills into account. When choosing new technology, broadcasters need to weigh the priorities and preferences of media and IT (or cloud) engineers. While the former may be more inclined to concentrate on the functioning of new technology systems, the latter may be more likely to focus on their frontends – i.e. user interfaces. As highlighted by IABM's Special Report published in September 2020, new generations with a completely different relationship with technology are entering the industry, with major implications for media companies.

Additionally, they will need to account for, and overcome, resistance to change that is inherent in most people – particularly those in whom a particular way of working has been long ingrained.

Aside from people, research participants highlighted the risks that moving to these radically different technology solutions entailed infrastructure security as well as a more complex architecture of operations – more on this later.

Decoding Cloud Operating Models

Cloud & Value Paradigms



In the survey we did as part of this project, we also asked media companies that have adopted the cloud for their media operations to rate the effectiveness of the cloud when it comes to achieving their selected value paradigms on a scale from 1 (very low) to 5 (very high). The results from this question are provided below:



Decoding Cloud Operating Models

Cloud & Value Paradigms



The cloud rates highly or very highly (light and dark green blocks being over 50%) for most value paradigms and particularly for “Increasing opportunities for collaboration,” “Increasing agility and speed of operations” and “Saving money/reducing costs.” The high rating on “Saving money/reducing costs” highlights the importance of arguments in favor of cloud economic advantages as opposed to on-premises infrastructures evidenced earlier.

If we look at low and neutral ratings (red, orange and yellow blocks being over 50%), we can see that the value paradigms rating poorly or moderately include “Reducing operational risks,” “Creating new revenue opportunities” and “Reducing operational complexity.” While we were not surprised about the cloud increasing operational complexity (or risk) – which rate low or very low - we were surprised at the low rating of “Creating new revenue opportunities” which the cloud, in theory, should be a boon for - although this element includes a high percentage of neutral respondents.

In summary, these results show that most respondents are convinced of the enabling value of cloud operating models though are aware of the operational risks and complexities that this transition involves for their organizations.

Decoding Cloud Operating Models

The Unresolved Dilemmas



When analyzing the challenges of cloud deployment, we noticed that the complexities derived from deploying this technology in a hybrid fashion were often unresolved. The low rating of “Reducing operational complexity” in the ranking above backs this conclusion up. The hybrid model still needs some figuring out by media companies, particularly when it comes to managing, monitoring, and orchestrating different infrastructure elements. IABM research pointed this out last year when analyzing multi-cloud models:

”

A challenge is the sheer complexity of multi-cloud management, including use cases such as orchestration, monitoring and billing, for example. Media companies are very interested in a unified approach in this and are looking into providers that offer tools to manage, monitor and orchestrate workflows in different cloud environments without having to use different portals that are specific to specific vendors.

IABM Adapt for Change Report, December 2019

Media companies mentioned working with cloud vendors as well as other partners on this challenge. They highlighted that media represents a high-growth opportunity, which is just in its infancy, for cloud vendors due to the large file sizes carried in media workflows and therefore expressed confidence in the likelihood of the cloud market becoming more integrated and economical as it reaches maturity.

Decoding Cloud Operating Models

The Unresolved Dilemmas



It was extremely interesting to notice that some media companies are outsourcing this element – i.e. the complexity of managing hybrid technical and business processes - to large consulting outlets that are supporting them in their digital transformation. This conclusion stresses again the importance of outsourcing the unessential in this industry – as media companies are doing with security - and is consistent with a conclusion IABM research made about agility at media companies a year ago:

”

Agility also encapsulates the capacity to translate business requirements and outcomes into technology solutions. This is something that most media companies are struggling with. This market seems to be mostly tapped into by large consulting companies with more experience on the business implementation of technology solutions in various verticals.

IABM Adapt for Change Report, December 2019

Another apparent conundrum is represented by security in the cloud. There is widespread consensus that cloud providers can do a much better job than broadcasters on securing public cloud infrastructures – due to the sheer size of their IT security budgets. However, at the same time, interviews evidenced that the fragmented infrastructure strategy of hybrid models is correlated to a potential increase in vulnerabilities that should not be disregarded.

Decoding Cloud Operating Models

The Unresolved Dilemmas



In conclusion, media companies are still facing some unresolved dilemmas regarding the deployment of cloud operating models in media, which is just at its beginning. The major dilemmas discovered by this research include:



Lock-in vs Complexity: Some media companies are still pondering about best-of-breed vs end-to-end in the cloud. While most prefer complexity over lock-in, they are still working on minimizing this complexity to make a solid business case for the cloud. As evidenced earlier, this is a major area of focus for media companies going forward, which will likely attract investment.







Cloud vs Media: Media companies expressed their optimism regarding the potential long-term value of media for cloud service providers - and the fact that this might lead them to resolve issues such as egress costs' impact for content workflows and integrational challenges. While this is considered a likely scenario by most, it is still only a scenario and not a certain future development.



Outsourcing vs Risk: Many media companies highlighted that outsourcing unessential elements such as infrastructure and business complexity management to third-parties can reduce their exposure to risk. However, others rightly highlighted that fragmenting resources in hybrid settings can increase vulnerabilities. This will likely represent another area of great focus for media companies going forward.



This research is based on a hybrid set of sources, including IABM’s data-driven insights into the business of media technology (e.g. IABM Media Tech Business Tracker, IABM Coronavirus Impact Tracker), IABM’s ongoing interviews with technology decision-makers (30+ in 2020) as well as research conducted specifically for this study. Specific sources include a short survey focusing on the two topics examined in this report and a series of in-depth interviews conducted with major media companies on these issues. More information on these sources is provided in the table below:

	Source Type	Source Name	Use Case	Responses / # of Interviews	Time Period	Description
	Survey	IABM Media Tech Business Tracker	IABM Research	706	Continuous	Tracking media technology revenues, investment and strategies
	Survey	IABM Coronavirus Impact Tracker	IABM Research	569	Continuous	Tracking impact of COVID-19 on media technology
	Survey	Tech as Enabler Poll	Specific to this study	131	Oct. - Nov. 2020	Poll on value paradigms and cloud operating models
	In-depth Interviews	Interviews with Media Companies	Specific to this study	6	Oct. - Nov. 2020	In-depth interviews conducted for this study