

# Digital TV<sup>Europe</sup>

## Industry Survey 2022



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# INTRODUCTION

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## EDITOR'S NOTE

### The state of streaming

Welcome to the 2022 edition of Digital TV Europe's annual industry survey, where we ask our audience of industry insiders to share their views on some of the most pressing topics of the day.

This year we quizzed the 320 industry executives who responded to our survey on five key areas.

As is customary, we begin with an overview of the Digital TV Landscape. The results this year highlight the convergence between streaming and traditional pay TV, as well as the growing importance of live streaming and advertising-supported offerings.

In the context of convergence between streaming and pay TV we also look at the evolution of super-aggregation and the way in which service providers are adapting to the revolution in content consumption. We find that most want to combine super-aggregation with a more traditional pay TV offering for customers who continue to value that.

Streaming itself is fast-evolving, and advertising-supported streaming is a concept whose time has arrived. Our survey finds that FAST – free advertising-supported streaming television – offers a strong commercial opportunity for rightsholders, and that a model that combines free and paid services is most valued.

We also assess the state of streaming video technology challenges and solutions, where we find that low latency live streaming is a key priority.

Finally, as more fixed-line service providers look to offer TV and a super-aggregation proposition, the provision of TV-as-a-service is becoming mainstream. Our survey this year shows that this concept is highly popular with respondents.

The results of the survey are presented in full in the pages that follow.

Stuart Thomson, Editor

## Executive summary

**The overall digital TV landscape continues to be transformed by the relentless advance of streaming – and more recently by addressable advertising associated with streaming, but traditional media is adapting to the changed environment. For this year’s industry survey respondents:**

- There is a growing belief that streaming and pay TV are converging, and that pay TV operators globally still have an opportunity to grow their business.
- Live sports streaming will be the key industry development over the next two years, as well as the onward march and evolution of streaming in general.
- From a technology perspective, In the age of streaming, bandwidth is king and video compression is queen.
- Advertising-supported streaming – particularly FAST and AVOD – will enjoy the best growth prospects among video services for the next two years.
- Disney has supplanted Netflix as the most impactful media company.



Divitel helps video and TV services make a quantum leap forwards in the way they get video content to the screens. By improving the performance of their video delivery platforms, we take away the hassle that video distribution has become and transform it into the high quality, brand value, operating margin generating machine that it can be. So services can compete and remain relevant in the dynamically complex world of video.

We do that by helping improve and optimize processes ranging from OTT to IPTV to DVB to in-home, through troubleshooting, system integration and day to day continuous improvement.

With customers all over the globe, Divitel applies over twenty-five years of focused video delivery expertise powered by a bionic, data-driven approach. Divitel has its own ISO27001-certified Operating Center in Apeldoorn, from which we remotely run customers’ daily video services and we have recently been appointed as Global Innovator by the World Economic Forum.

## How will the balance between traditional pay TV and streaming change over the next two years?

### WHAT DOES THE DATA TELL US?

The question of how pay TV and streaming are likely to evolve in relation to each other is a regular kick off point for our surveys. This year's responses suggest a rowing back from the perception that streaming is rapidly eclipsing pay TV and the latter is in terminal decline.

Some 36% of respondents in this sample believe that streaming services will grow in the next two years, and traditional pay TV will decline. This is a significantly lower percentage than when this question was asked a year ago in our 2021 Summer Survey.

Respondents who believe that streaming services and pay TV will both grow but that streaming will grow faster amount to 26% of the total, with those believing that streaming and pay TV services will grow at the same rate number amount to 7%.

One significant change is the number of respondents who believe that pay TV and streaming services will converge, and the distinction between them will become meaningless. The number of respondents taking this view has increased significantly and now stands at 28%, a testament to the proliferation of partnerships between streamers and distributors and the ongoing migration of traditional pay TV services to unicast streaming offerings.

### PERSONAL VIEWPOINTS

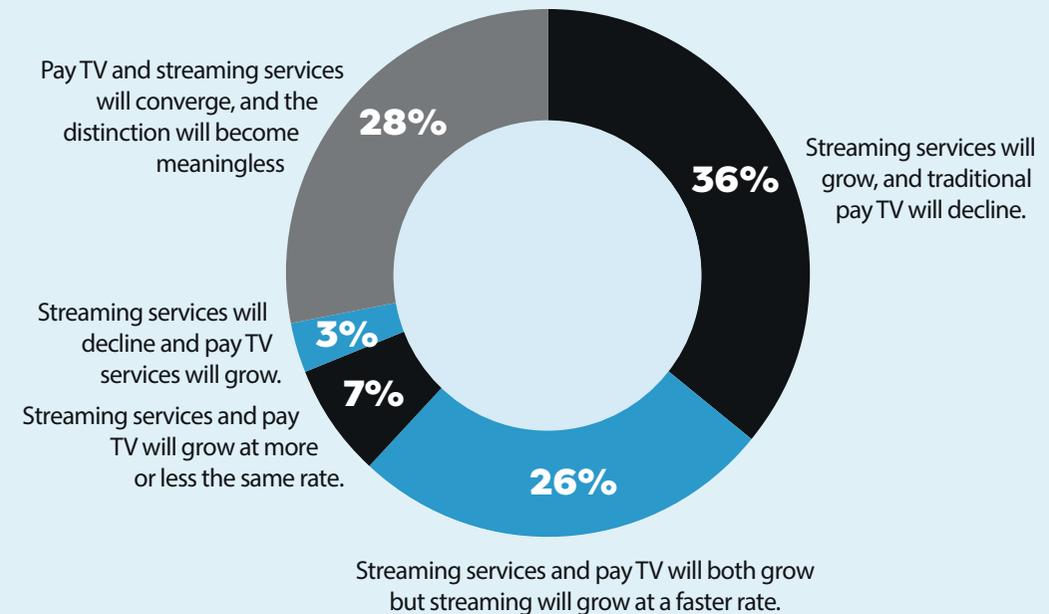
Some respondents' comments reflect a sense that the death of pay TV has been much exaggerated, with growth continuing in emerging markets and pay TV operators in mature markets successfully reinventing themselves as super-aggregators of streaming apps.

"We haven't yet reached the level of a decline in pay TV that I have been expecting," said one.

Another respondent was of the view that pay TV is leading a fightback. "People who cut the cord a few years back are now paying more for their package of OTT services than they did for cable TV – plus they still get their Internet from the cable TV... The pendulum is fixing to swing back in favour of better-curated pay TV services if operators can do it smartly," this respondent said.

A third said that the COVID-19 lockdown had "dramatically reduced broadcasting's decline".

Other respondents endorsed the view that streaming and pay TV are converging. One was of the view that "more pay TV providers are using the same IP networks – albeit in an owned and managed way – while streaming providers are facing challenges related to the cost of content



**KEY TAKEAWAY** There is a growing belief that streaming and pay TV are converging, and that pay TV operators still have an opportunity to grow their business.

and subscriber churn" and concluded that "It is inevitable that they will converge in some way".

Another expressed the opinion that "consumers are interested in content... not industry self-categorisation". Others however hold to the view that pay TV is headed for a terminal decline: "As CTV penetration grows and CTV service aggregation matures, the requirement for traditional pay TV set-top box services will diminish," said one.

## How will key industry developments impact the business in the next two years?

### WHAT DOES THE DATA TELL US?

We asked survey respondents to assess seven ongoing industry developments and rate them in terms of their wider impact over the next two years.

Among the seven developments considered, the biggest impact will be from investment by streaming platforms in premium sports at the expense of traditional broadcasters, according to our sample, with 53% rating this as having a very strong impact and only 3% rating it has having little or no impact.

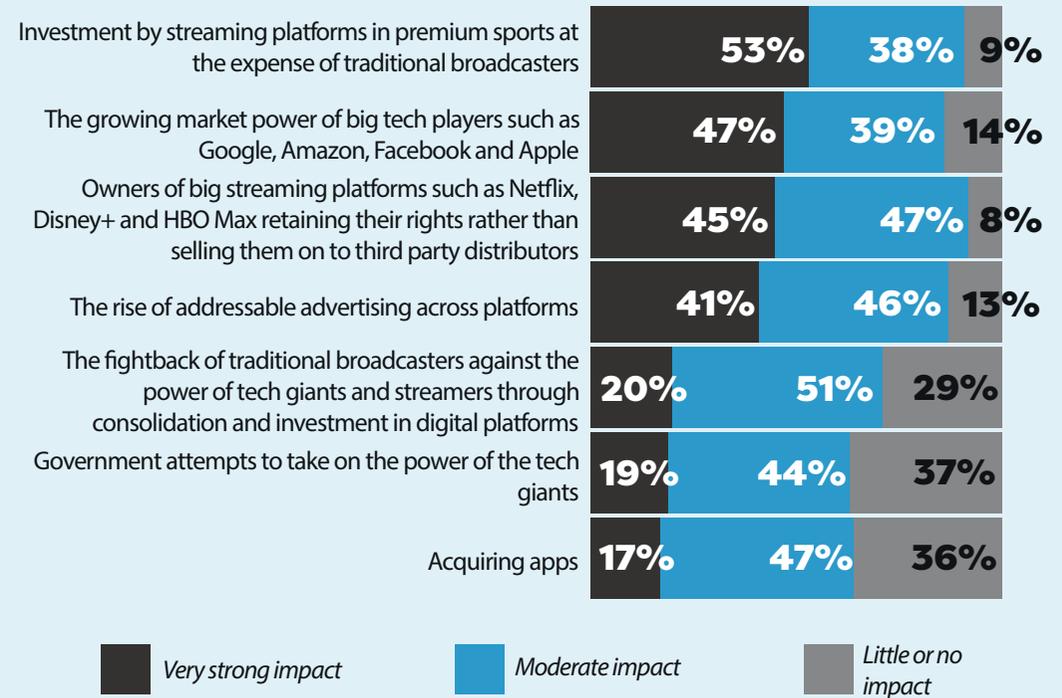
Investment in sports by big streamers – as well as by specialist platforms – is very much in the news as providers seek to diversify their offerings and build a wider base as SVOD take-up begins to show signs of tapering off.

The other key trends identified by respondents as likely to impact the business significantly are the growing market powers of big tech, the growing tendency of streaming platforms' owners to retain rights to their intellectual property rather than licensing them to third-parties, and the rise of addressable advertising.

The market power of players such as Google, Amazon, Facebook and Apple is very much in the news as regulators grapple with the need to address threats to competition. The habit of retaining rights on the part of players such as Disney is now well established and is clearly having an impact as linear channels are withdrawn and rival streamers seek to differentiate by upping their own original content investment.

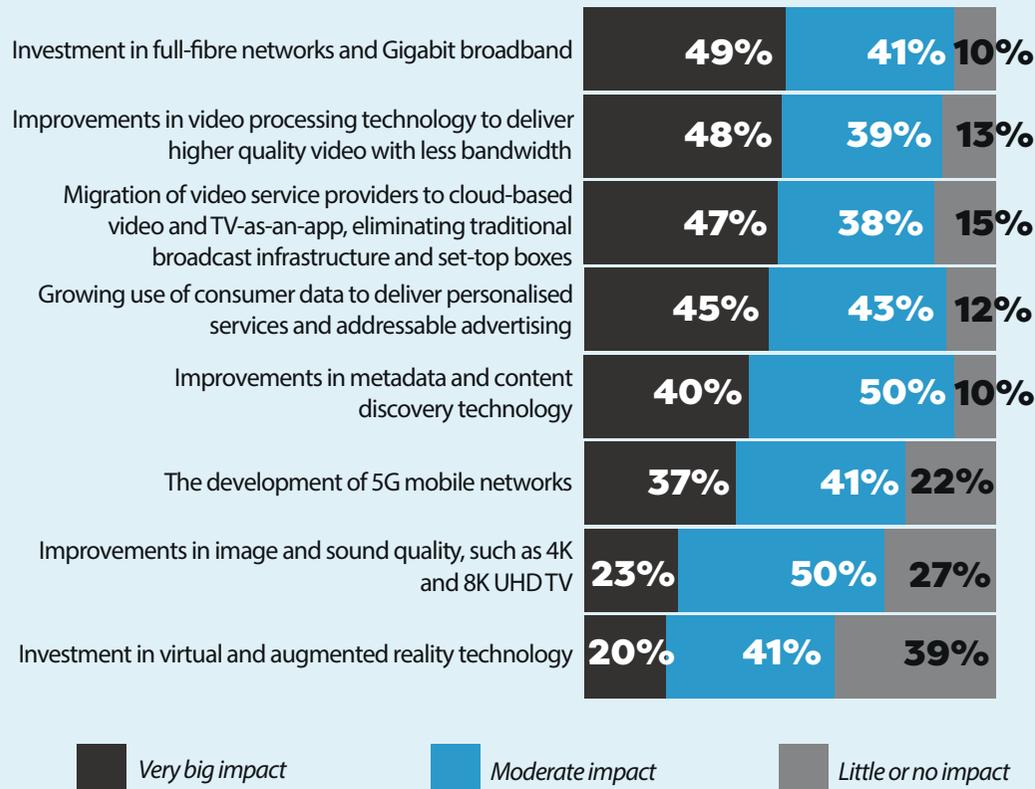
Addressable advertising is clearly a technology to watch, as FAST and AVOD streaming grows in relative importance while big SVOD players seek to revive take-up by offering cheaper, ad-supported tiers.

Respondents believe the remaining three developments considered will have a more moderate – or even negligible – impact on the industry. These are the fightback of traditional broadcasters against the power of international tech giants and streamers, either by consolidating, by investing in digital platforms, or both, and government attempts to take on the power of the tech giants. Scepticism about the ability of traditional players to reinvent themselves is matched by scepticism about the ability to governments to have much impact on what is happening.



**KEY TAKEAWAY** Live sports streaming will be the key industry development over the next two years, as well as the onward march and evolution of streaming in general.

## Which technology developments will have the biggest impact on the global video distribution business in the next two years?



**KEY TAKEAWAY** In the age of streaming, bandwidth is king and video compression is queen.

### WHAT DOES THE DATA TELL US?

With the rise of streaming, technology developments are more crucial than ever to the way the industry evolves. We asked survey respondents to rate eight ongoing technology trends that could have a significant impact.

Bandwidth – enabling high-quality video and high peak capacity, particularly in relation to live events – is key to the growth in streaming. The most impactful of the eight trends considered, in the view of our survey sample, is investment in full-fibre networks and Gigabit broadband, with 49% of respondents believing this will have a very big impact and only 11% believing it will have little or no impact.

While investing in high availability of bandwidth can enable content service providers to manage peaks and troughs in capacity more easily as well as to deliver consistent ultra-high-definition streams, improvements in video processing power may offset the very expensive commitments this can entail. Some 48% of respondents believe improvements in video processing will have a very big impact, with only 13% believing it will have little or no impact.

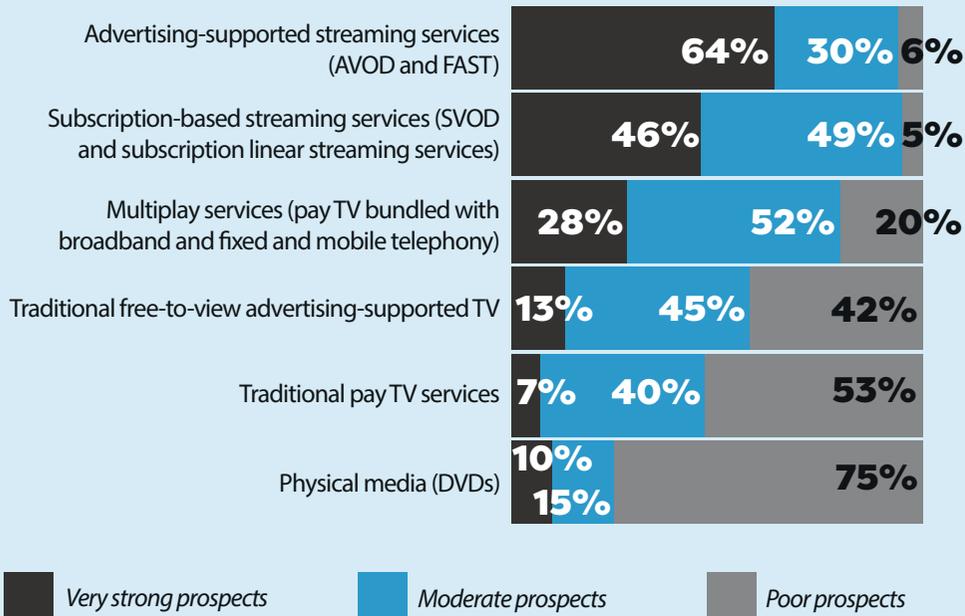
Other technology developments that rate high in terms of their likely impact include the migration of video service providers to cloud-based video and TV-as-an-app, eliminating traditional broadcast infrastructure and set-top boxes. This is a technological trend that can greatly expand the scope of video distribution, enabling content owners to reach consumers directly at scale, as well as freeing up infrastructure-based service providers from the need to maintain multiple generations of client hardware.

The growing use of consumer data to deliver personalised services and addressable advertising is also rated as impactful, unsurprising in view of the growing importance of advertising as a revenue opportunity for streamers.

Respondents believe that improvements in metadata and content discovery technology and the development of 5G mobile networks will have a moderate to high impact.

However, further improvements in image and sound quality, including 8K UHD TV, will only have a moderate impact at best. And despite all the current buzz around the metaverse, respondents are less than convinced about the impact of investment in virtual and augmented reality technology.

## Which type of video service has the best growth prospects over the next two years?



**KEY TAKEAWAY** Advertising-supported streaming – particularly FAST and AVOD – will enjoy the best growth prospects among video services for the next two years.

### WHAT DOES THE DATA TELL US?

Having identified the rise of addressable advertising as a key industry trend, survey respondents also indicated they believe that advertising revenue will be of growing importance to the future of streaming.

Asked to identify which types of service will have the best growth prospects over the next two years, 64% of respondents said that AVOD and FAST had very strong prospects, and only 6% said they had poor prospects.

This compares with 46% who now believe that SVOD and subscription linear streaming services have very strong prospects. The move in favour of advertising-supported streaming is a significant shift since our Summer Survey last year when respondents believed that SVOD had stronger prospects than either AVOD or FAST. The perception that SVOD growth is tapering off and that content rights holders are now looking more intently at advertising as a way of further monetising their intellectual property is now significantly more widespread.

Respondents believe overall that multiplay services – the established fixed-line model of bundling pay TV with broadband and fixed and mobile telephony) will continue to enjoy moderately positive growth prospects. The pay TV element of the multiplay offering is of course undergoing significant reinvention through super-aggregation, which will be considered later in this survey report.

Other forms of media attract less enthusiasm. Only 13% of respondents believe that traditional free-to-view advertising-supported TV has very strong prospects, although 44% continue to believe it has moderate prospects. Broadcasters will continue to try to reinvent their own models through investment in digital and addressable advertising.

Similarly only 7% of respondents believe that traditional pay TV services have very strong prospects, while 53% believe pay TV has poor prospects. Growth in emerging markets and various moves to reinvent the model are urgent necessities for this model.

Finally, the fortunes of physical media in the form of DVDs continue to fall, with 75% believing this format has poor prospects.



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## Which company do you think has had the biggest impact on the digital video distribution business over the last year?

### WHAT DOES THE DATA TELL US?

This edition of the survey sees Disney supplant Netflix as the company respondents believe has had the biggest impact over the past year. Netflix's widely-reported loss of subscribers combined with the rapid growth of the Disney+ streaming service means that 25% of respondents voted for Disney, against 22% who voted for Netflix.

While the death of Netflix may – like the death of pay TV before it – be greatly exaggerated, the perception that Disney is now the clear leader among traditional media companies making a successful transition to digital is evidently continuing to gain adherents.

The remainder of the top five most influential players, in the view of our survey sample, comprises Amazon, Apple and TikTok, with the latter listed for the first time. Amazon, whose vast scope and reach is growing, has risen in the rankings with 21% of the votes.

Disney excepted, only big tech and new media companies gained a significant share of the vote, leaving traditional media players trailing far behind. The exception was Facebook, which came bottom of the 12 companies considered this year, despite winning a significant share of votes in our last survey, an indication of how far the company's fortunes are perceived to have declined.

### PERSONAL VIEWPOINTS

Many respondents believe that Disney's strategy is paying off.

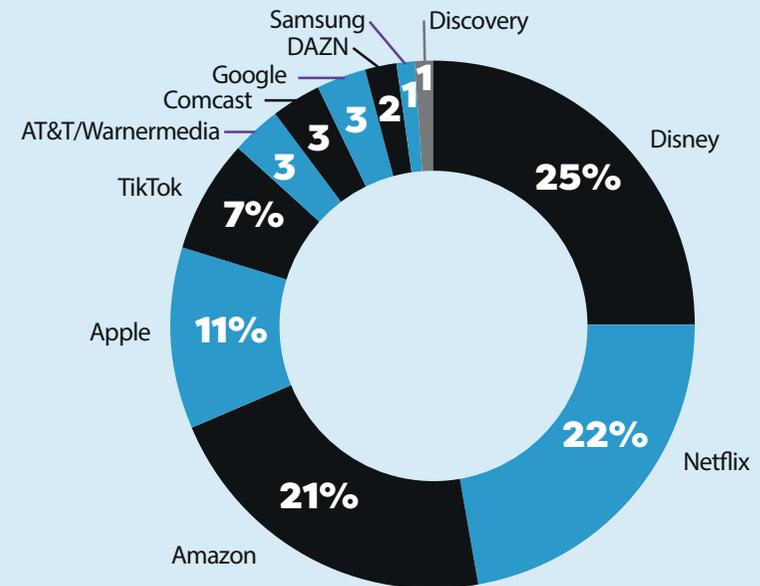
"Closing linear Disney channels and consolidating its massive catalogue of IP under one roof was a smart move. Added to this they have the power to go 'straight to screen' with movie premieres, delivering their latest cinema releases straight to your living room," said one, while another respondent was of the view that "global reach is much better than Disney". A third was of the view that Disney is "the most identifiable destination brand in the media world".

Netflix still has its supporters, but some have reservations. One was of the view that "Netflix is a bubble" but acknowledged that "their marketing team is still the best in making a viral hit". The same respondent cautioned that social networks such as TikTok were now helping reshape the industry.

Other respondents opined that Netflix "still dominates" with a "huge subscriber base" and note that the company "changed the face of entertainment".

Regarding Amazon, one respondent noted that the retail giant "seems to have the biggest

**KEY TAKEAWAY** Disney has supplanted Netflix as survey respondents choice for the most impactful media company.



base and more original content" and another cited its "large customer base". A third had an original take on this, citing the importance of AWS in media distribution, noting that "video distribution is about technology and AWS is becoming a mammoth player when it comes to global distribution of video".

Some respondents commented on TikTok's impact, with one opining that "where mobile is a significant play TikTok has had the most impact".

## SPONSOR'S COMMENT

A lot is happening in the digital TV landscape. The convergence of pay TV and streaming, the onward march of live sports streaming, the growing power of big tech players, technology development and more.

But before you can focus on these challenges, there is one most important thing you need to work on first - your subscribers want a smooth-running video service. They expect a high picture quality with all the functionalities like replay tv, catch up TV, NPVR, VOD, etc., all working in the way they are supposed to work.

Giving them that is easier said than done and can be a real time and resource consuming hassle. But unfortunately, it is a necessary one. Because, if video platforms do not perform as expected, with all features and functions working properly, subscribers will talk.

While a life may not be at stake, a positive experience is. Research shows that people talk much more frequently about a negative experience than a positive one, and they spread negative reviews far wider than positive endorsements.

But a good performing service is not enough. This high-standard needs to be managed efficiently. We all know of the increase in content rights costs - a situation that is not expected to improve any time soon.

Because of these reasons, video distribution is becoming one of the highest commercial priorities. For brands to be successful an efficient, high performing video platform is a prerequisite.

The good news is that it does not necessarily have to be video services themselves who deal with this hassle.

Enter Divitel - we are the video distribution hassle removers. We make video distribution effortless by taking on the burden and help with everything needed to maximise the performance of your video service: from troubleshooting to system integration, to operational support.

**“Video distribution is becoming one of the highest commercial priorities. For brands to be successful an efficient, high performing video platform is a prerequisite.”**

**Hans Kornmann, CEO and Founder of Divitel**

## Executive summary

**Super-aggregation – meaning aggregating apps in a single user experience with universal search – is increasingly seen as a necessary strategy for fixed-line service providers. But big questions – should this be an exclusive strategy or something that sits alongside legacy pay TV channel and content packages, how can service providers differentiate their offering, who controls the customer data – remain. Our survey found that:**

- Service providers believe in super-aggregation, but a majority will look to combine it with elements of legacy pay TV offerings.
- Changing consumer tastes are driving super-aggregation.
- The big SVOD streamers and national broadcasters remain the must-have apps for super-aggregators.
- Universal search and recommendation are the key differentiating functionalities of the super-aggregation proposition.
- Service providers look to technology platforms to deliver a comprehensive range of apps and access to actionable data.
- Consumption metrics and subscriber data are the most valued forms of data.



Amino is a global leader in media and entertainment technology solutions and an IPTV pioneer, working with over 250 operators in 100-plus countries. Drawing on more than 20 years' experience delivering IP and cloud innovation, Amino enables Pay TV providers to seamlessly deliver live, local and on-demand broadcast or streaming content with all the features required in a multiscreen entertainment world.

Amino Communications is a wholly-owned subsidiary of Aferian PLC and listed on the London Stock Exchange Alternative Investment Market (AIM: AFRN), with headquarters in Cambridge, United Kingdom, and global offices in California, Finland, Hong Kong, and Portugal.

For more details, visit [www.Amino.tv](http://www.Amino.tv)

## Has your company adopted a ‘super-aggregator’ strategy for content?

### WHAT DOES THE DATA TELL US?

Among respondents for whom super-aggregation is a relevant proposition, the vast majority claim to have implemented or are planning to implement a super-aggregator play.

Some 8% said they are already exclusively super-aggregators of content, while a further 30% said they are super-aggregators but not exclusively, meaning 38% have implemented some sort of super-aggregator strategy.

A further 14% said they are planning to become a super-aggregator exclusively, while 29% plan to become a super-aggregator but not exclusively, meaning that 43% of respondents have not yet implemented a super-aggregator strategy but plan to do so.

Looked at another way, 22% of respondents see themselves exclusively as super-aggregators, now or in the future, while 59% see themselves as super-aggregators but not exclusively.

Taken together the survey results tell us that, among our sample at least, a hybrid model combining super-aggregation with another form of content offering such as traditional pay TV is roughly twice as popular as ‘pure’ super-aggregation of third-party apps.

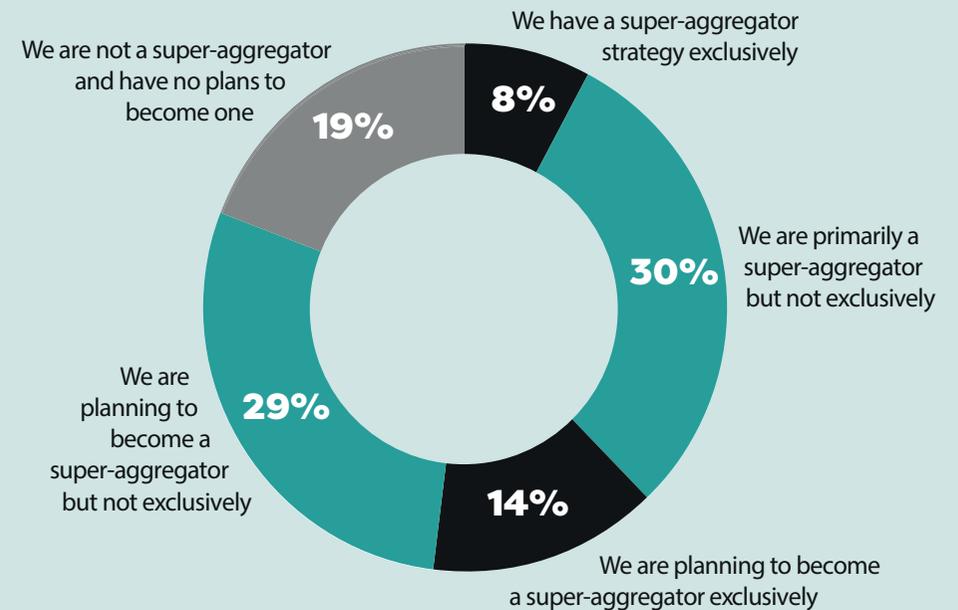
A minority of 19% of respondents for whom the question is relevant say they have no plans to become super-aggregators.

### PERSONAL VIEWPOINTS

Among respondents who provided reasons for their strategy, the majority had implemented or planned to implement some form of super-aggregation but non-exclusively. Super-aggregation is a must-do for service providers wanting to stay relevant.

While there is a widespread belief, in the words of one respondent, that “super-aggregation is a must-do for services providers wanting to stay relevant”, some respondents were wary or uncertain about what this might mean in practice.

One respondent who objected to the prefix “super”, commented that “everyone wants to be an aggregator and consumers truly want aggregated services” but was of the view that “no-one wants someone else to be that aggregator and this hampers the standardisation that would be necessary to enable aggregation”.



**KEY TAKEAWAY** Service providers believe in super-aggregation, but a majority will look to combine it with elements of legacy pay TV offerings.

Another respondent said that there is currently “no reason” to become a super-aggregator exclusively because the market is “not there yet”.

One respondent said that his company was “still milking the cow” of the traditional pay TV model, adding that “it’s hard for the business to let what’s bringing the money in go and bet, with uncertainty, on the future”.

## What is the most compelling reason for service providers to adopt a ‘super aggregation’ strategy?

### WHAT DOES THE DATA TELL US?

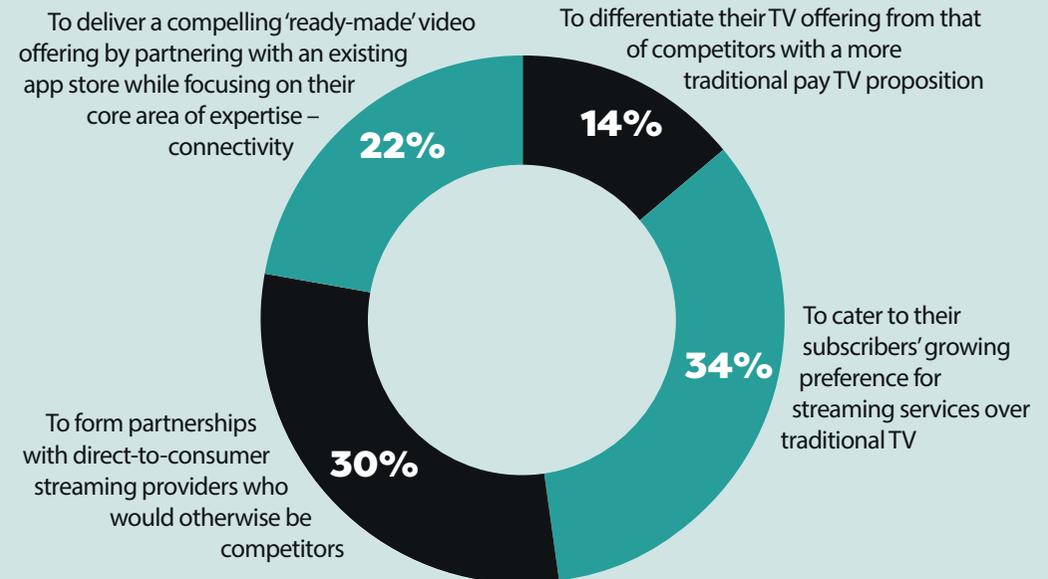
If respondents exhibit a certain degree of caution about how far and how fast to implement super-aggregation strategies, they are also, to an extent, divided in their perceptions about why such strategies might make sense.

Asked to state a first preference for the most compelling reason to adopt a super aggregator strategy, the largest group, amounting to 34% of the sample, said they want to cater to their subscribers’ growing preference for streaming services over traditional TV. This is the ‘positive’ case for super-aggregation. For such service providers super-aggregation is a means to anticipate changes in the tastes and preferences of customers and to give them something that they will value – all services in one place with the ability to discover content across multiple apps.

This rationale for super-aggregation is closely related to another reason considered: to differentiate an TV offering from that of competitors with a more traditional pay TV proposition – chosen as the most compelling reason by 14% of the sample.

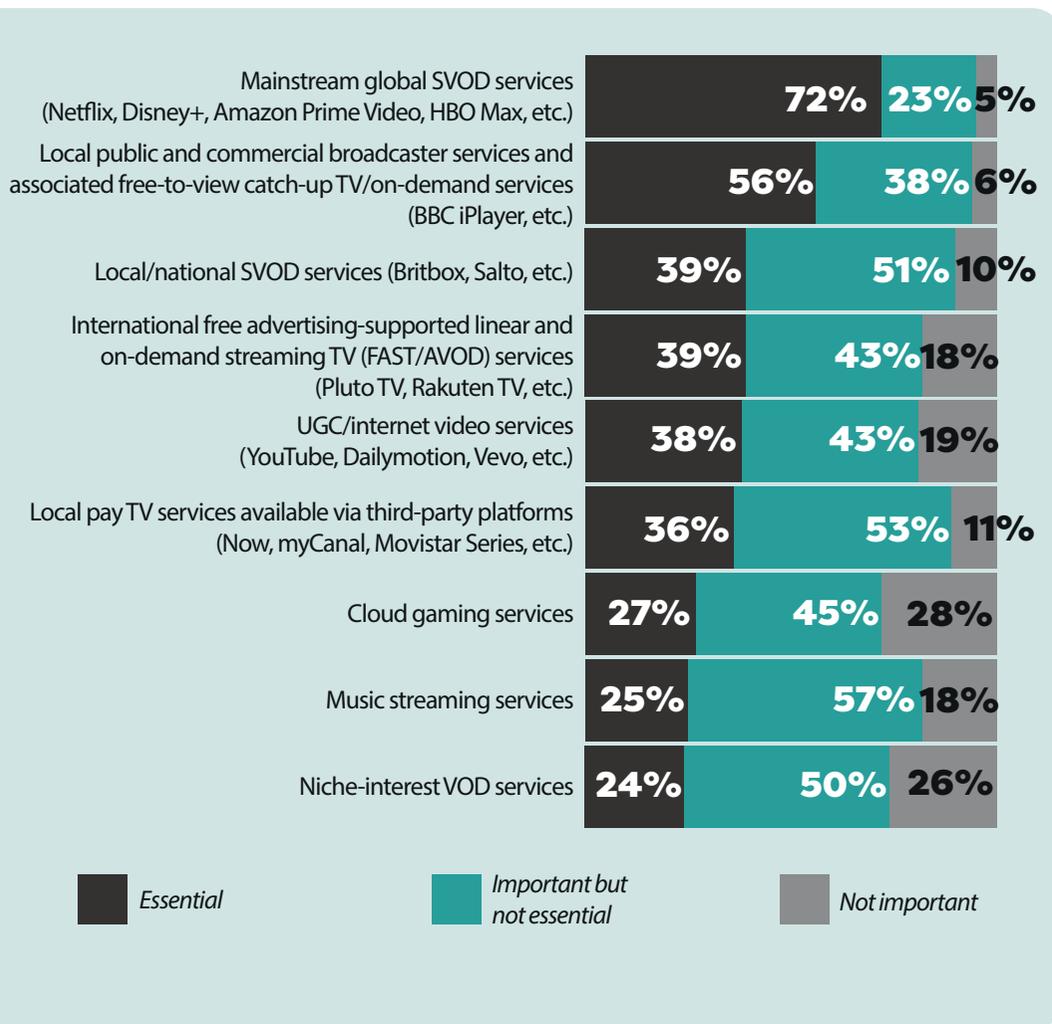
One group of respondents believe the most compelling reason to adopt a super-aggregation strategy is to form partnerships with direct-to-consumer streaming providers who would otherwise be competitors. This group see super-aggregation primarily as a defensive strategy. Streaming is seen as more of a threat that needs to be neutralised than an opportunity. In a sense, this group also sees the need to anticipate the changing tastes and preference of consumers, but primarily out of the fear that others may step into the space, as some larger streamers are already doing.

Another reason, selected as most compelling by 22%, is that a super-aggregation strategy allows service providers to deliver a compelling ready-made video offering by partnering with an existing app store. This would then allow them to focus on their core expertise – delivering connectivity.



**KEY TAKEAWAY** Changing consumer tastes are driving super-aggregation, but some providers view it as an opportunity while others see it as a defensive move.

## What type of content is important for ‘super aggregator’ service providers to include in their offerings?



### WHAT DOES THE DATA TELL US?

For super-aggregators, some content partners are more important than others.

The mainstream global SVOD giants top the list. Some 72% of respondents view these as an ‘essential’ part of the super-aggregation proposition, with a further 23% rating it ‘important’.

Next in order of importance are local public and commercial broadcast services and associated free-to-view catch TV and on-demand services. These are viewed as essential by 56% and important by 38% of respondents.

A range of other services are rated more or less equal in terms of their importance to super-aggregated offerings. These include local or national commercial SVOD offerings, international FAST and AVOD services, user-generated content or internet video platforms, and local pay TV services that can be made available to third-party platforms. These categories cover a wide range of services, some of which are of course likely to be more relevant and attractive than others. But overall, they form a second tier of services below the leading SVOD streamers and the mainstream national broadcasters’ services.

A third tier of services, viewed as essential by a minority of around a quarter of respondents (and as ‘not important’ by a similar number) include cloud gaming services, music streaming services and niche-interest VOD offerings. While some streaming players and aggregators are currently seeking to broaden their offerings to encompass non-video services, these are seen as non-core by our survey respondents.

Clearly, not all service providers will have the means or desire to open their platforms to any or all app providers. Many are likely to focus primarily on the most popular services.

Some may view too comprehensive an offering as confusing to their customers. Others may take a different view. But with most consumers signing up for a relatively small handful of subscription apps, the main source of successful differentiation is more likely to come from elsewhere – meaning the user experience.

**KEY TAKEAWAY** The big SVOD streamers and national broadcasters remain the must-have apps for super-aggregators.

## What functionality is important in delivering a compelling super-aggregation offering?

### WHAT DOES THE DATA TELL US?

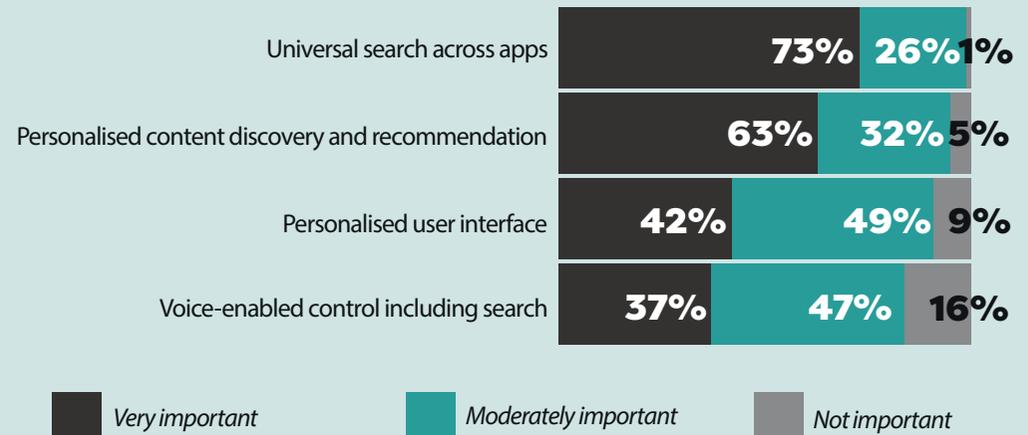
If the content offerings most sought after by consumers are broadly similar – the big SVOD players and well-known national broadcaster apps – service providers should look beyond content to differentiate their services. That means a compelling user experience – but what are the most important elements of this?

For survey respondents, universal search across apps is the key functionality for super-aggregators. Being able to search for content across multiple sources rather than having to trawl through individual apps in search of the content you are looking for is rated as highly important by 73% of respondents and moderately important by a further 26%. Virtually no respondents think it is not important.

The closely related functionality of personalised content discovery and recommendation comes second, rated very important by 63% and moderately important by a further 32%. Surfacing content that users want to watch is key to making service offering sticky and giving subscribers a stake in the service. Frustration at having multiple sources of content by 'not finding anything I want to watch' is of course a well-aired complaint, and one often discussed in industry forums.

Two other functionalities – a personalised user interface and voice-enabled search – rate relatively less highly but are still viewed as either very important or moderately important by a majority of respondents. These are subsidiary functionalities, delivering a more appealing or convenient way to access the all-important search and personalised recommendation. It is possible that personalising the UI will become more important as a secondary source of differentiation as service providers' offerings of cross-service search and recommendation begin to deliver similar levels of functionality. Voice search is becoming a standard feature of services, and use of it to bypass more cumbersome ways of searching for content is clearly now mainstream.

**KEY TAKEAWAY** Universal search and recommendation are the key differentiating functionalities of the super-aggregation proposition.



**73%** of respondents believe that universal search across apps is a key differentiator for super-aggregators.



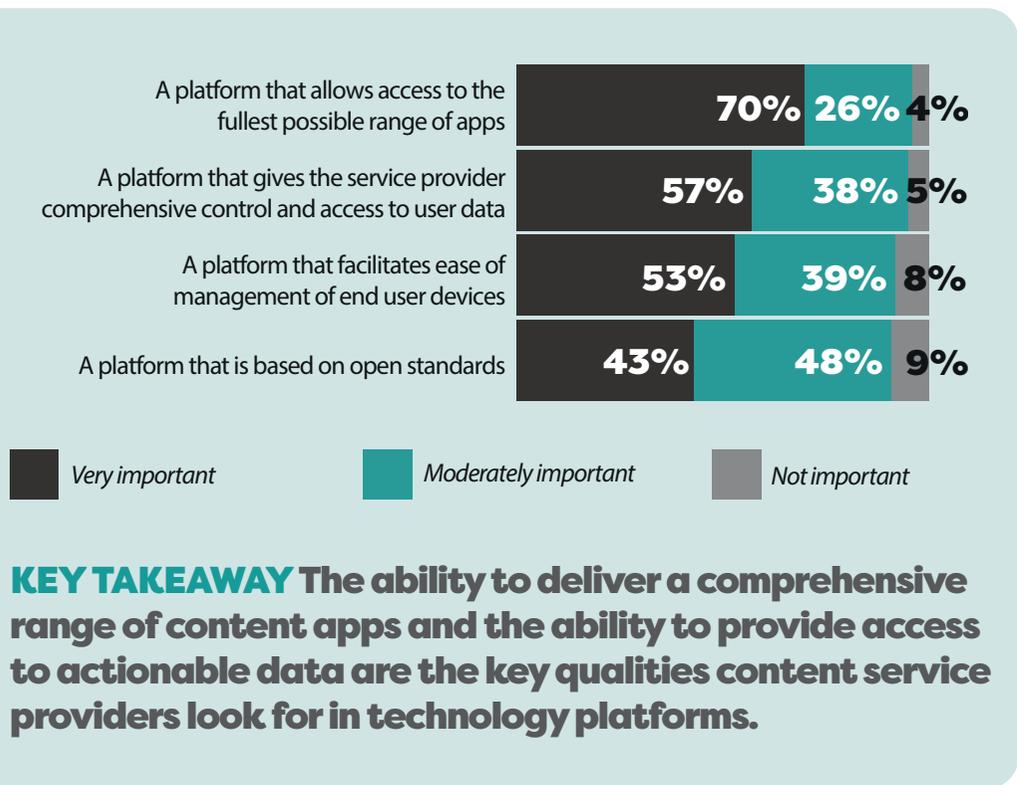
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## What do super-aggregators need from their technology platforms?

### WHAT DOES THE DATA TELL US?

While we have seen that the most important content offerings for super-aggregators tend to be common across multiple operators – the main SVOD streamers plus nationally recognised broadcasters and their apps – that does not mean that service providers want to be restricted to these alone.



Offering a broad range of content remains an important differentiator. The key technology facilitator that our respondents seek from their platform reflects this. Some 70% say that a platform that allows access to fullest possible range of apps is very important and a further 26% say it is moderately important.

That priority will likely be reflected in the technical platform choices that content service providers make and helps explain the growth over the last few years in take up of the Android TV platform, which promises access to the wealth of the Google Play store, and the convergence among service providers around either Android TV or RDK.

The second biggest priority for survey respondents is a platform that gives the service provider comprehensive control of and access to user data, rated very important by 57% and moderately important by 38%. Access to data is important both at a technical level – to enable the service provider to optimise the performance of the platform – and at the commercial level, where user behaviour can help drive the choices operators make and where personalisation becomes possible.

Desire for the control of user data can of course partially offset the appeal of Android TV, amid concerns about Google’s access to and control of such data. But it also underpins residual tension between the super aggregator and the individual third-party content apps that rely on distribution partnerships to reach a wide audience.

A related item is the third priority for respondents from their platform: the facilitation of management of user devices. This requires access to, and the ability to act on, user data and also necessitates the effective and comprehensive user of cloud management technology.

Respondents were marginally less concerned about using a platform that is based on open standards, with 43% rating this as very important. However, as service providers seek to deliver super-aggregated streaming offerings to multiple generations of client devices and add new apps and functionality over time, standards are likely only to grow in importance.

## How important is control of different types of data when providing a super-aggregation service?

### WHAT DOES THE DATA TELL US?

Our survey respondents attribute considerable importance to the technology platform that enables super-aggregation providing access to actionable data. But what kind of data is most valued?

According to respondents, consumption metrics are the most valued type of data, rated very important by 72% and moderately important by a further 26%.

This is not surprising. Data about consumption metrics is likely to become more important over time, informing both how providers select, package and market content and how they segment their audience for targeted advertising.

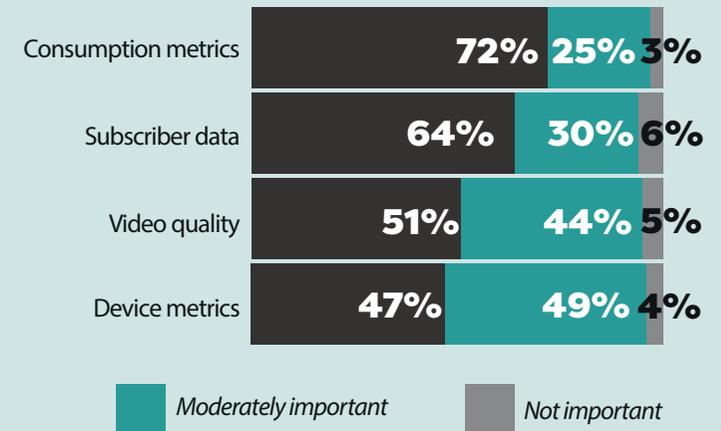
Control of subscriber data is also highly valued, with 64% rating this as very important and 30% as moderately important. The subscriber relationship is the most important asset that service providers have and a crucial element in their ability to add value in partnerships with content providers.

Both consumption data and subscriber data are also, of course, contested with content providers and service providers both seeking to control the relationship with the customer and use the data to best advantage.

Both consumption metrics and subscriber data achieve higher scores than data about the technical performance of the platform, though this is also rated as important.

Regarding video quality data, some 51% of respondents rate this as very important and 45% as moderately important. Device metrics are rated very important by 47% and moderately important by 49%. These types of data are of course central to operators' drive to reduce churn by anticipating the problems that customers are likely to experience.

**KEY TAKEAWAY** Consumption metrics and subscriber data are the most valued forms of data within the super-aggregation model.



**72%** believe that control of consumption metrics is very important for the super-aggregation model.

## What are the biggest challenges for service providers offering super-aggregation services?

### WHAT DOES THE DATA TELL US?

The biggest challenge facing service providers offering a super-aggregation service is delivering a consistent user experience, in the view of survey respondents.

The user experience is the most important element of the super-aggregation proposition. In the absence of acquiring and packaging content, and the likely commonality between platforms in terms of their overall content line-up, differentiation must come from delivering the most compelling experience.

However, delivering a best-in-class user experience is fraught with difficulty, largely because service providers may need in many cases to strike agreements with individual content providers with regards to the prominence of content and the sharing of data.

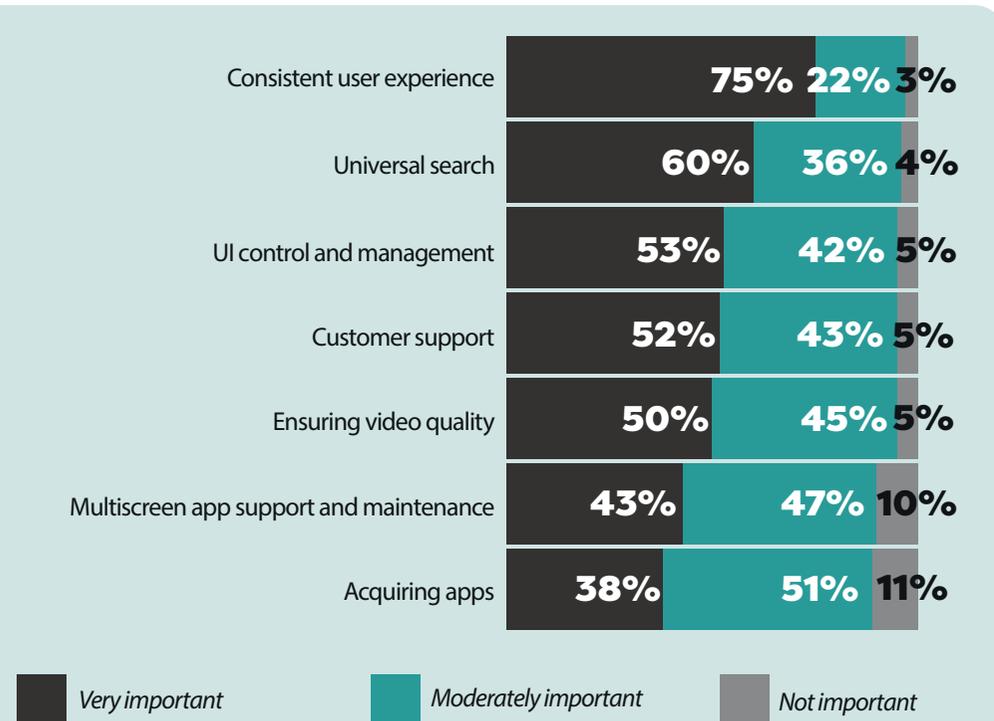
The second biggest challenge is the very closely related one of delivering universal search. Content discovery, including search, is a key element of the user experience, but is also challenging again because of the need to balance the interests of content partners and to secure access to the vital metadata that enables search in the first place. Integrating multiple content partners within a single content discovery platform is not a trivial task, and service providers may seek outside technology partners to do the heavy lifting in this area.

For similar reasons, survey respondents consider the technical challenge of control and management of the UI to be the third most significant challenge.

Other areas seen as challenging but with more of a division of opinion over whether they are very important or only moderately important include customer support, ensuring video quality and multiscreen app support and maintenance.

All of these challenges speak to the complexity of delivering a consistent level of support and Quality of Experience across multiple content apps on one hand and delivering these to multiple screens within a single unified super-aggregated experience on the other.

Acquiring apps in the first place is seen as a more moderate challenge, speaking to the demand on the part of content owners for a berth in super-aggregators' app stores to extend their reach. However, questions remain over the level of integration desired by service providers and content partners, the implications of this for the revenue split between the pair, and control of data.



**KEY TAKEAWAY** Delivering a first-class user experience and the associated task of delivering universal search across apps are the most challenging aspects of offering a super-aggregated service.

## SPONSOR'S COMMENT

Regardless of how a video services operator approaches a super-aggregation model, there is a significant opportunity to differentiate your service by making it easier for the consumer to a) easily identify where to find the show they want to watch, b) validate access to the selected program or service and c) receive a high-quality service.

The goal is not to create bigger and more complex bundles, but to provide flexibility and convenience in accessing a wider range of content. As noted in the survey results, the key to enabling this is a deep understanding your customers in order to select the right platform, apps and functionality while maintaining the right levels of control.

The need for control combined with access to a wealth of popular and niche content apps has informed the strategic technology choices Amino has made to build our products for several years. Our focus on RDK and Android provides operators with an off-the-shelf solution that balances standardization of the platform with the ability to customize and differentiate a service.

Control and management of the UI is also ranked as one of the biggest challenges by 53% of respondents. While content is what attracts subscribers, the UI may well be what retains them. The ease of navigating the UI and the

consistency of how the UI is represented across different types of content is an issue where we work closely with our customers.

But perhaps the most important element for an operator implementing a super-aggregation strategy is customer service. Pay TV operators are able to differentiate from the multitude of retail devices available on the market that come with little or no support. Subscribers value a single contact who can resolve a wide range of connectivity and technology issues.

Operators who set themselves up with technology partners, like Amino, that are equipped to manage platforms and systems through this journey will be best placed to succeed. Ultimately, it's about adopting an attitude of understanding and embracing change, while keeping the customer at the heart of all decision-making processes.

Because at the end of the day, it's in everyone's interest that consumers spend more time watching content and less time looking for it.

Be sure to follow Amino on [LinkedIn](#) and [Twitter](#) to stay updated on the latest innovations in media and entertainment.

**“The goal is not to create bigger and more complex bundles, but to provide flexibility and convenience in accessing a wider range of content.”**

**Jonny McKee, VP, Product Management and Customer Support, Amino**

## Executive summary

**Free advertising-supported streaming television (FAST) has attracted a huge amount of industry attention in recent months as content rights holders look for opportunities to further monetise their assets. But defining a FAST proposition and its place in an overall content strategy is still a work in progress. Our survey respondents believe that:**

- FAST offers a significant commercial opportunity for content rights holders.
- A model that combines a mix of free and subscription services offers the best prospects for service providers.
- Securing the right content and making it discoverable are the key challenges for FAST providers.
- Dynamic ad insertion and cloud-based channel origination are the most important technologies in enabling FAST.



Harmonic, the worldwide leader in video delivery, enables media companies and service providers to deliver next-generation streaming and broadcast services to consumers globally. Powering millions of simultaneous streams, thousands of live channels, and countless VOD requests, Harmonic's VOS® innovative cloud and software-based platforms, combined with world-class 24x7 support and DevOps services, are changing the way operators monetize live and on-demand content on every screen.

Harmonic's VOS offerings, which includes the VOS360 SaaS platform, simplify all stages of media processing and delivery, and ensure exceptional-quality video experiences. The platforms support an extensive range of use cases, including live events, TV everywhere, free ad-supported TV, cloud distribution, channel origination, and broadcast. For more information visit [www.harmonicinc.com](http://www.harmonicinc.com)

## How do you rate the commercial prospects of FAST over the coming two years?

### WHAT DOES THE DATA TELL US?

FAST is a very compelling commercial proposition, in the view of survey respondents.

Only a tiny minority of respondents do not believe that FAST offers a strong commercial opportunity to make additional revenue from content assets as other streaming models such as SVOD and TVOD mature.

Among the 97% who believe FAST offers a positive commercial opportunity, respondents are split over whether the format is the single most compelling opportunity currently facing streaming providers or whether it offers more modest prospects.

Fully 45% take the view that FAST offers the single strongest commercial opportunity to make additional revenue from streaming as other models mature, while 52% believe it offers a modest commercial opportunity to make additional revenue from content.

Given that FAST is a relatively recent development in streaming, the perception among many that it is the biggest opportunity is noteworthy and speaks to the momentum behind advertising-supported streaming models in general at the moment.

### PERSONAL VIEWPOINTS

Survey respondents who commented on reasons for their answer to this question were generally positive about FAST, though with some reservations.

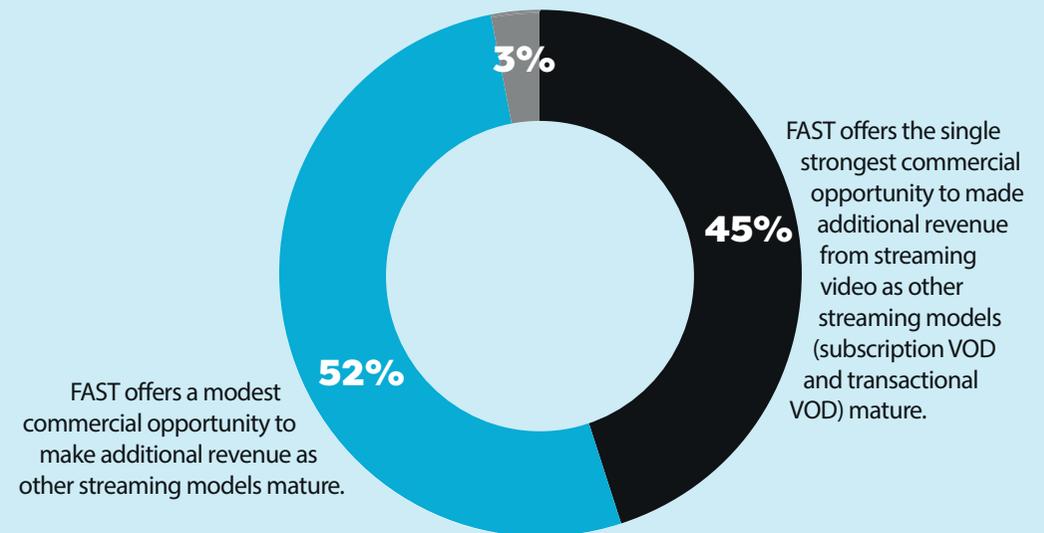
“It gives all parties the potential to drive and share revenue if they can figure out how to cooperate in the use of relevant consumer data,” said one, adding that “consumers are willing to view content as long as it has less ads than traditional pay TV, they are relevant to them and the frequency is managed”.

One survey respondent took the view that FAST offers a way for pay TV operators to take advantage of ‘subscription fatigue’ on the part of actual or potential customers.

“People who cut the cord a while back are experiencing ‘subscription fatigue’ and are also not happy with so many user interfaces. FAST from a well-curated pay TV company can provide a better user experience and more centralised user data collection - it’s ultimately more efficient than having six OTT services plus still paying a cable company for Gigabit broadband,” they said.

One respondent was an enthusiast for FAST but believed the time scale set by the question is too short.

FAST does not offer a strong commercial opportunity to make additional revenue as other streaming models mature.



### KEY TAKEAWAY FAST offers a significant commercial opportunity for content rights holders

“Two years is but a blink of the eye - things are changing but not that quickly and FAST will only really have gotten started within two years – but will remain strong for at least a decade,” the respondent said.

Another respondent made the point that the success or failure of FAST “all depends on what the content [providers] will be able to make available”.

## Which FAST model do you think is most likely to become predominant in the current market?

### WHAT DOES THE DATA TELL US?

Survey respondents were presented with six potential FAST models, ranging from a 100% ad-supported model based on linear channels only to a combined offering of FAST, advertising-light and premium SVOD and live, and asked to select the one they believed would prove to be the biggest winner.

While respondents were divided in their responses, the most-favoured model with support from just over a quarter of respondents is an offering that combines a mix of free advertising-supported and premium options with both linear and VOD content. This was preferred over individual 'pure' ad-supported models and a model that combined free and premium content with 'advertising-light' SVOD – the model that most premium streamers are currently grappling with.

If the different models are grouped together into three categories – 100% ad-supported; ad-supported with an upsell to premium and mixed ad-supported and premium – the split is 29% for 100% free, 27% for free with upsell and 44% for combined ad-supported and subscription-based offerings.

### PERSONAL VIEWPOINTS

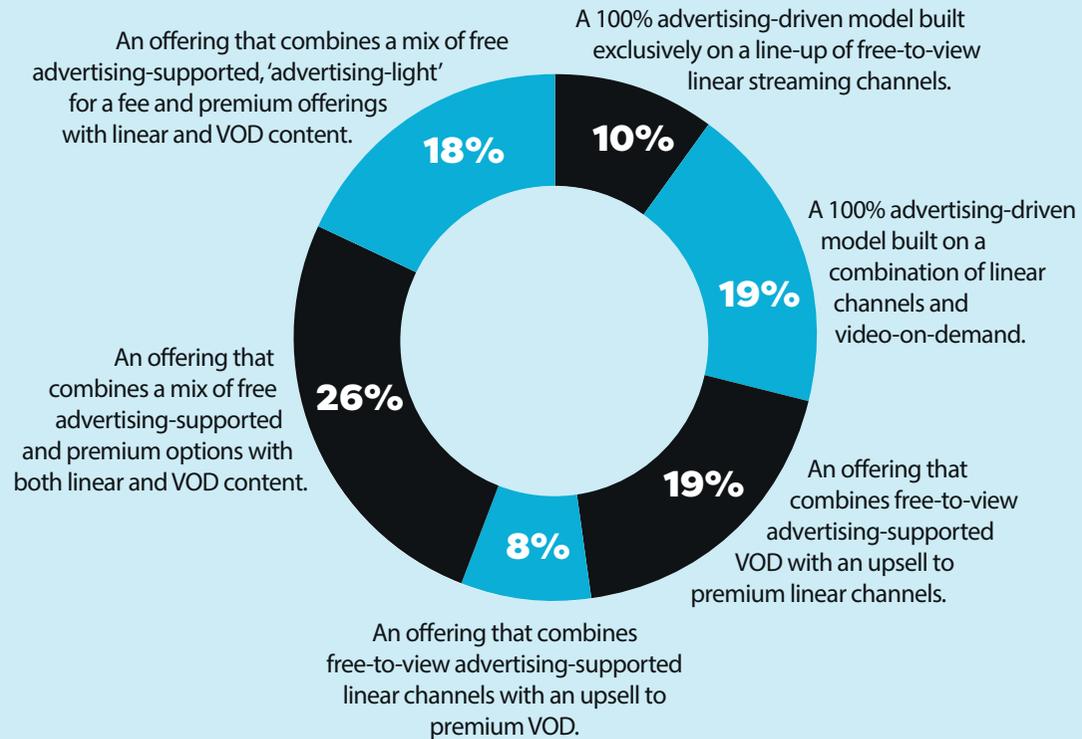
Comments on this question offered arguments in favour of a broad offering combining free with premium, subscription-based services that, in the view of one respondent “keep the most revenue doors open”.

This respondent took the view that service providers could use a combination of free and subscription services to test the market before “streamlining operations based on what consumers actually want” and saw this as “a way for traditional pay TV to make a comeback”.

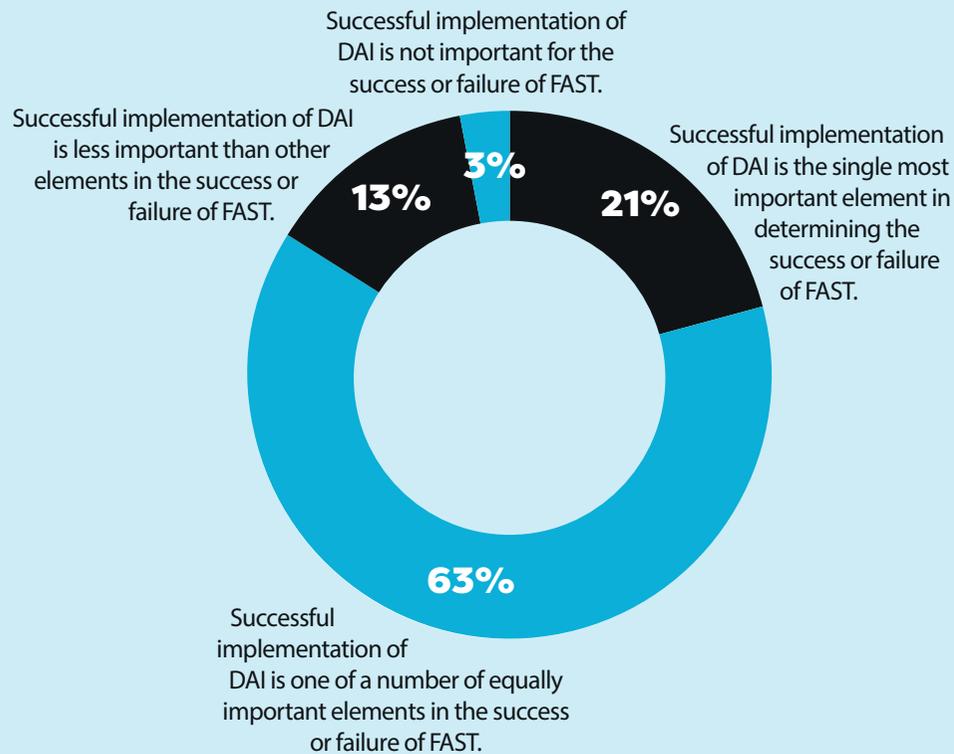
Another took the view that “you need every weapon to win the war”, while a third summarised by noting that “consumers are seeking more control of their wallet and how much and on what services they spend their money on”.

“They are prepared to more readily switch on and off services as the content they want to watch becomes available. They will accept ads but want the flexibility to choose,” the respondent said.

**KEY TAKEAWAY** Respondents believe a model that combines a mix of free and subscription services offers the best prospects for service providers.



## How important is dynamic advertising insertion (DAI) to the success or failure of FAST?



**KEY TAKEAWAY** Dynamic ad insertion (DAI) plays an important role in determining the success or failure of FAST.

### WHAT DOES THE DATA TELL US?

Dynamic ad insertion (DAI) refers to the server-side ad technology that enables service providers to stitch ads into video content as a single stream, allowing them to target different ads to different users based on a range of criteria.

Currently, ads in streams can be inserted at the server side or at the client device. However, client-side insertion can introduce an element of latency in live linear content.

While client-side insertion can enable viewership and reach of ad campaigns to be measured relatively straightforwardly, enabling programmatic buying and trading of spots, the possibility of delays occurring when ads are called up by the user selecting a video means that problems of ads being served at the wrong time can grow in frequency. This could be particularly important in the case of FAST, where content service providers are increasingly trying to create an experience that matches broadcast TV and are targeting connected TV platforms.

There is little doubt that the successful implementation of DAI is important as a determinant of the success or failure of FAST, in the view of respondents.

Some 63% of respondents believe that the successful implementation of DAI is one of a number of equally important elements in the success or failure of FAST, while a smaller group of 21% believe it is the most important element.

Only a relatively small minority downplay the significance of DAI, putting forward the view that it being less important than other elements or not important at all.

### PERSONAL VIEWPOINTS

Respondents who commented on their answers to this question believed DAI is important.

One noted the efforts of players including YouTube to “target the ads to the relevant people, now not in a webpage or app, but within a video stream”, while another argued that “If DAI is not done well and meets consumer expectations and acceptance of relevance for ads and frequency, then consumers will move away from FAST”.

## For content rights holders, what are the major challenges in launching and monetising FAST channels?

### WHAT DOES THE DATA TELL US?

Respondents were asked to rate six potential challenges that stand in the way of successfully launching and making money from a FAST offering.

The number one challenge, in the view of respondents, is to make content more 'easily discoverable'. Some 65% of those who took part in this survey believe that ensuring content is visible and discoverable by the target audience is a very significant challenge.

As the number of FAST – and premium – services available to users continues to grow, and as such services are increasingly accessed via the TV screen and a platform or provider that aggregates multiple app-based offerings, there can be little doubt that the ability to find content will be very important in determining the success of any service – whether free or paid. In the case of FAST, where services may lean on larger archive content libraries or less well-known content assets, this may become even more pressing.

Other challenges that could stand in the way of FAST becoming a success include the basic one of aggregating suitable content that is rights-cleared, rated very important by 55%. As FAST offerings proliferate, service providers will find it harder to attract an audience to provide a viable return on investment to their advertisers. In this context, content remains king, and FAST providers that can build a library of recognisable, appealing content will be more likely to win this game. But competition for rights has never been more intense, and FAST providers will require considerable scale to justify the sums necessary to invest in their own high-quality original content or compete with subscription services for acquired content.

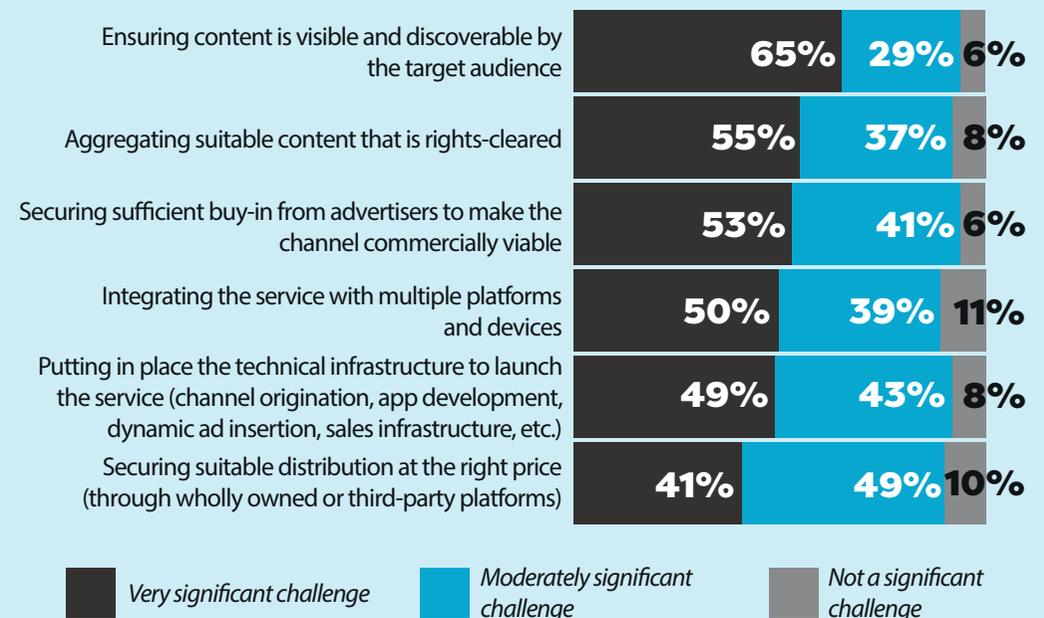
The next most important challenge, in the view of respondents, is to secure sufficient buy-in from advertisers to make the channel viable. This will to some extent be dependent on success in overcoming the first two challenges, which suggests that services with well-funded backers are – as always – those most likely to succeed.

Respondents also rated technical challenges to getting FAST up and running as important, though marginally less important than the three outlined above.

Integrating services with multiple platforms and devices was considered 'very significant' by 50% of respondents, while putting in place the technical infrastructure to launch the service in the first place was rated very significant by 49% and moderately significant by 43%.

Relatively less important, in the view of respondents, was the challenge of securing suitable distribution for the channel at the right price.

**KEY TAKEAWAY** Securing the right quality content for the right audience and making it discoverable by them are the key challenges for FAST providers.



**65% of respondents believe that ensuring content is easily discoverable by the target audience is a very significant challenge.**

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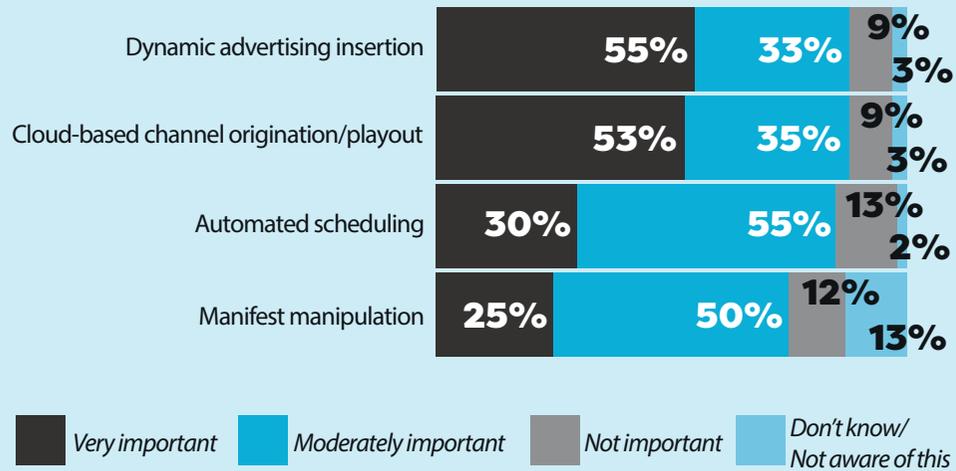


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## Which technologies are important for the future of FAST?



**KEY TAKEAWAY** Dynamic ad insertion and cloud-based channel origination are the most important technologies in enabling FAST.



**55%** believe that dynamic ad insertion is very important to the future of FAST

### WHAT DOES THE DATA TELL US?

Respondents were asked to consider four key technologies that enable content service providers to launch and operate FAST offerings – cloud-based channel origination, automated scheduling, dynamic ad insertion and manifest manipulation.

As indicated by answers to the earlier question on this, respondents believe that dynamic ad insertion (DAI) is the most important technology for FAST. DAI achieved 97% awareness among our sample, and 55% of respondents rated it as very important, with a further 33% considering it moderately important.

Cloud-based channel origination came second in order of importance, achieving the same 97% recognition, with 53% considering it to be very important. Cloud-based channel origination enables FAST providers to get services up and running relatively quickly – something that is important for a format that often requires flexibility and the need to adapt swiftly to changing consumer tastes. FAST channels are often based around specific content titles, which may go in and out of fashion in a short time frame. FAST providers often look to launch pop-up channels to take advantage of the buzz around certain titles or to build an audience around specific events or seasonal preferences. Crucially, cloud-based origination enables them to launch quickly without incurring large up-front investments.

Two other technologies are important to FAST, but prompt slightly lower levels of recognition and lower ratings of their centrality. Automated scheduling can make operating channels less costly and reduce the need for human intervention. Automated tools can enable business rules to handle advertising insertion – for example governing placement and frequency of ads – as well as ensuring that the content line-up remains fresh and attuned to audience tastes and preferences.

Manifest manipulation is another technology that enables ads to be inserted into a playlist in the right space and to the right length. It also enables content service providers to insert content to replace black spaces – for example where advertising is missing. Dynamic manifest manipulation involves manifests being created for individual pieces of content or session in response to a device request, facilitating targeted advertising for live and on-demand content.

## Have you launched or do you intend to launch a FAST offering?

### WHAT DOES THE DATA TELL US?

Respondents were asked to state whether they had launched or planned to launch FAST as part of their overall portfolio of video services.

Among those for whom the question was relevant, a majority had yet to launch a service, but either intended to do so, or were at least considering it.

Some 22% of respondents said they have already launched a commercial FAST proposition, while a further 21% said they are at an advanced stage of planning.

Beyond this group, 21% of respondents for whom the question was relevant said they were at an early stage of planning a FAST offering, while a further 25% said they are still considering whether to launch FAST as part of their portfolio of video services.

Only 11% say they have no plans to take the plunge into FAST even though it is theoretically relevant for them.

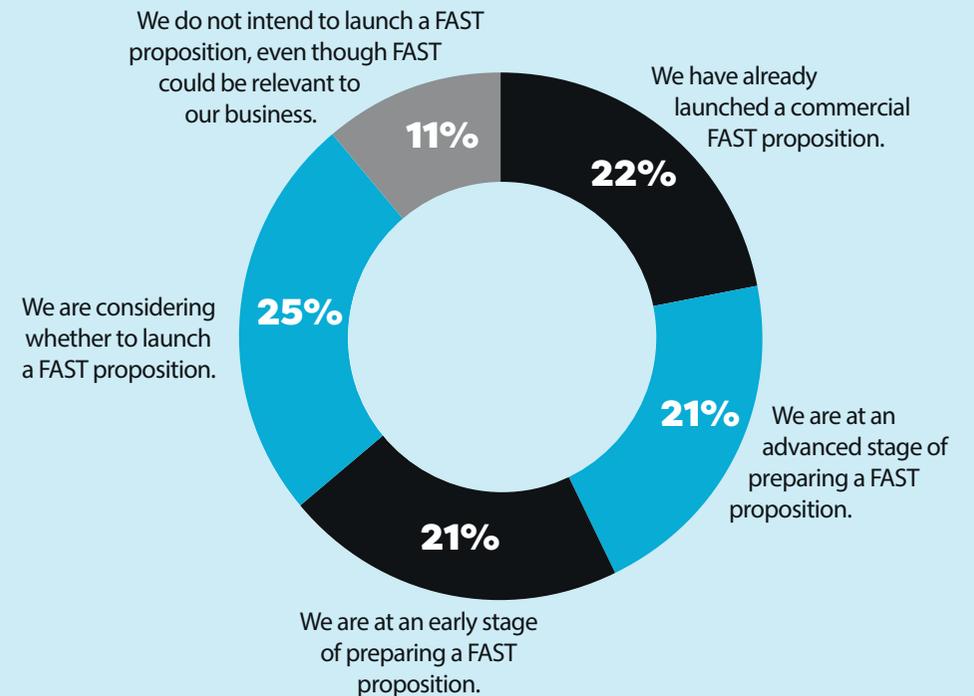
The responses tell us that content service providers and rights owners for the most part see FAST as a format they ignore at their peril. Some two thirds have either launched or have a definite plan to launch FAST at some stage, while a further one in four are considering their options.

In many ways this is not surprising. As video distributing increasingly converges on streaming, FAST is coming to represent something like the future of free-to-view broadcast, with the element of addressable advertising and dynamic ad insertion giving content owners much more flexibility in how they monetise their content and serve advertisers.

The numbers also suggest that FAST has some way to go to reach its full potential, with most respondents still to fully realise their ambitions in this area. However, this number also speaks to some of the challenges in launching FAST, which still comes with barriers to entry in the form of the need to invest in suitable infrastructure and the need to reach an audience big enough to justify that investment.

**43% of respondents have either launched a commercial FAST proposition or at an advanced stage of planning one.**

**KEY TAKEAWAY** The majority of content service providers and content owners have launched or are planning to launch FAST.



## SPONSOR'S COMMENT

As video streaming and especially connected TVs have become more prevalent, we've seen the video landscape change dramatically, and it continues to evolve. Changes in viewing habits, coupled with fragmentation in subscription video services have caused free, ad supported options to spring up virtually overnight, and they don't show any sign of going away. Big content houses have capitalized by launching their own streaming platforms, offering varying levels of free and ad supported, but there are still niches being filled by independent, completely-free services.

As rights holders explore options for maximising monetisation on their content, FAST is invariably an option that comes up, and it's good to understand the level of knowledge and understanding across the industry. Talking to many such groups – and looking at the results of this survey – it is clear that this subset of the video industry is advancing rapidly, but still has a lot of development to do, as players new and old adapt to changing market conditions.

I always urge those I advise to take a data-driven approach to their decision making. Look at where the eyeballs are going and look at where the money is being spent. In this case, the answer is very clearly in platforms delivering ad supported video experiences that will help to capture greater market share.

**“As rights holders explore options for maximising monetisation on their content, FAST is invariably an option that comes up, and it's good to understand the level of knowledge and understanding across the industry.”**

**Rob Gambino, Senior director of Solution Strategy, Advertising and Content Personalisation, Harmonic**

## Executive summary

**Streaming technology challenges that most preoccupy service providers are a function of their commercial priorities. Survey respondents look to technology partners to solve challenges such as matching the experience of broadcast TV, with many favouring outsourcing.**

**The survey found that:**

- Low-latency high-quality live streaming and quality of streams will be major areas of focus in innovation.
- Live-streaming and ad-supported streaming will be the key commercial priorities for service providers this year.
- The main technology challenges facing service providers are platform integration, video quality and content discovery.
- Technical obstacles to build streaming services are diminishing over time, but commercial pressures are growing.
- Outsourcing technology requirements of building and running video streaming services to trusted partners makes sense.
- Widely recognised, standardised technologies that support low-latency streaming and simplification of the streaming workflow are recognised as of key importance to the future of video delivery.



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With a leading distributed platform in edge computing and multi-layered cloud security capabilities, we offer powerful solutions across web applications, content delivery and video streaming, servicing 20% of global internet traffic and clients in 38 countries around the world. But that's enough about us – we want to focus on you.

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## What do you expect to be the major focus of innovation and development in streaming technology over the coming year?

### WHAT DOES THE DATA TELL US?

To ensure a high-quality streaming experience, innovation is necessary across the full delivery chain and for different elements such as live, VOD, monetisation and so on.

Asked what they expect the major focus of innovation and development in streaming to be in the immediate future, survey respondents therefore gave a variety of answers. However, the most popular was optimisation of the live video streaming experience. For one in five survey respondents, the key focus is ensuring that live streaming matches broadcast in terms of latency and consistent high-quality of streams.

Delivering higher-resolution video streams while optimising bandwidth and ensuring consistent resolution and quality also ranked highly, identified as the key focus by 17% of respondents, the same proportion as chose optimising content discovery technology to deliver the best experience for users.

Also ranked fairly highly with a score with a score of 14%, was monetisation through advertising, including optimising ad inventory, ensuring quality and viewability and refining addressability and targeting.

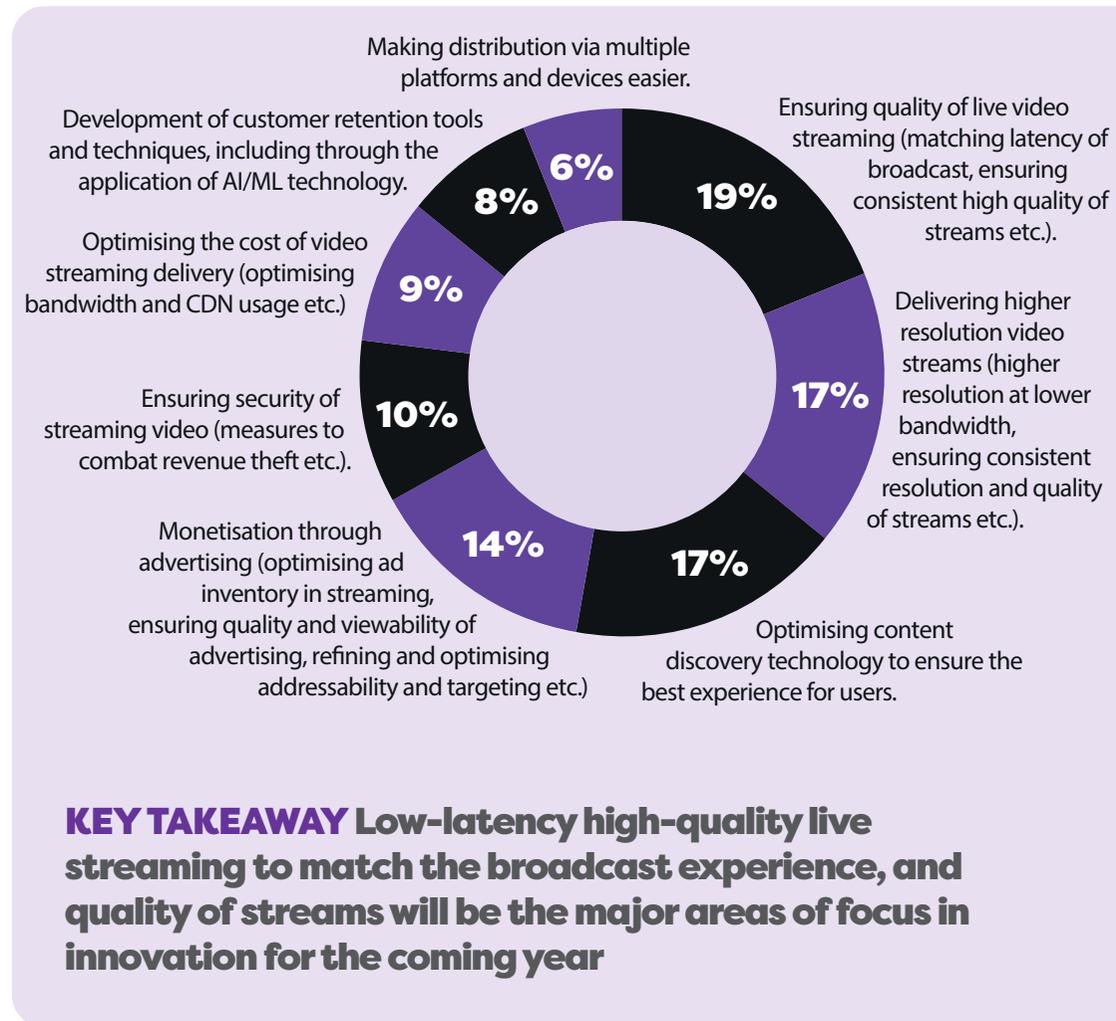
Slightly lower down the list of priorities were four other elements – ensuring security, optimising video streaming costs, development of customer retention tools, including through AI and ML, and making distribution via multiple platforms easier.

### PERSONAL VIEWPOINTS

Respondents expressed diverse views about what should be the key area of focus. Live-streaming remains an area of concern in the view of some respondents, with one opining that “for consumers latency is a huge issue”. (However, this respondent also was of the view that “making distribution easier” should be a key focus.)

Another respondent believed that as ad-supported streaming is growing in importance, this should be a priority: “If this is not done well and monetisation achieved, there will be significant challenges... to continue to fund the creation of content.”

A third respondent was of the view that “content may be king, but discovery is definitely queen”, meaning that optimising content discovery technology should be a key area of focus.



**KEY TAKEAWAY** Low-latency high-quality live streaming to match the broadcast experience, and quality of streams will be the major areas of focus in innovation for the coming year

## Which business areas will attract most attention and focus from streaming providers over the coming year?

### WHAT DOES THE DATA TELL US?

Technology choices are generally driven by commercial priorities. The weight given to live-streaming technology in answers to the previous question is likely driven by the fact that fully 34% of survey respondents believe that live linear streaming, including sports and associated monetisation opportunities such as subscription, advertising and real-time gaming as well as pay-per-view, will attract the most attention from streaming providers over the coming year.

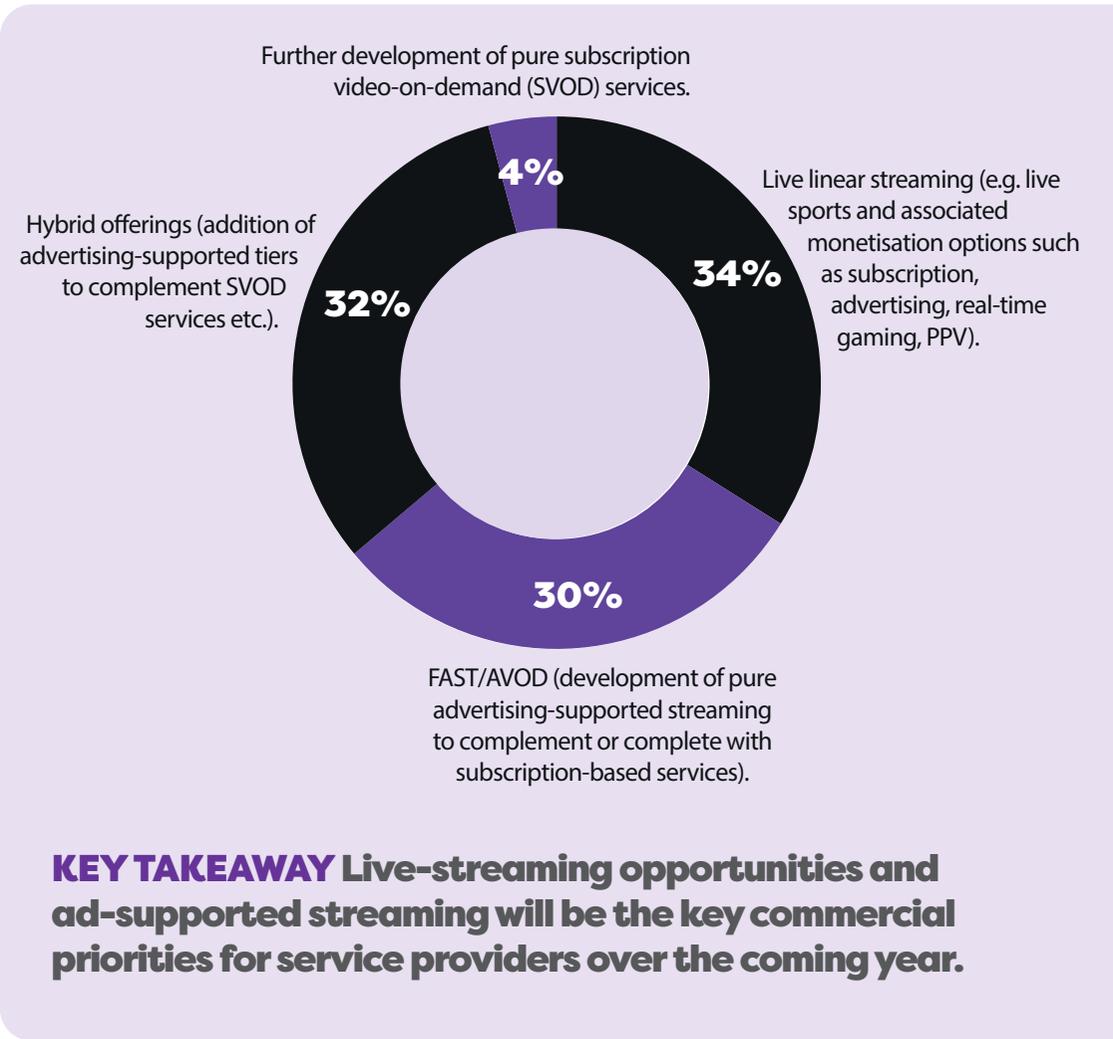
Respondents who believe that live-streaming – particularly of sports – will be the main area of focus outnumber those who believe that pure-play ad-supported streaming will be the main area of focus. Some 30% of respondents believe that FAST and AVOD to compete with subscription-based services for consumers' attention will be the key priority of content service providers over the year to come.

However, that number can be added to the 32% who believe that hybrid offerings, such as the addition of advertising-supported tiers to complement SVOD, will be the key area of focus. Combined, these numbers suggest that around two thirds of respondents believe that advertising-supported services – whether in the form of FAST/AVOD or ad-supported lower-cost subscription tiers – will be the main priority of services providers this year.

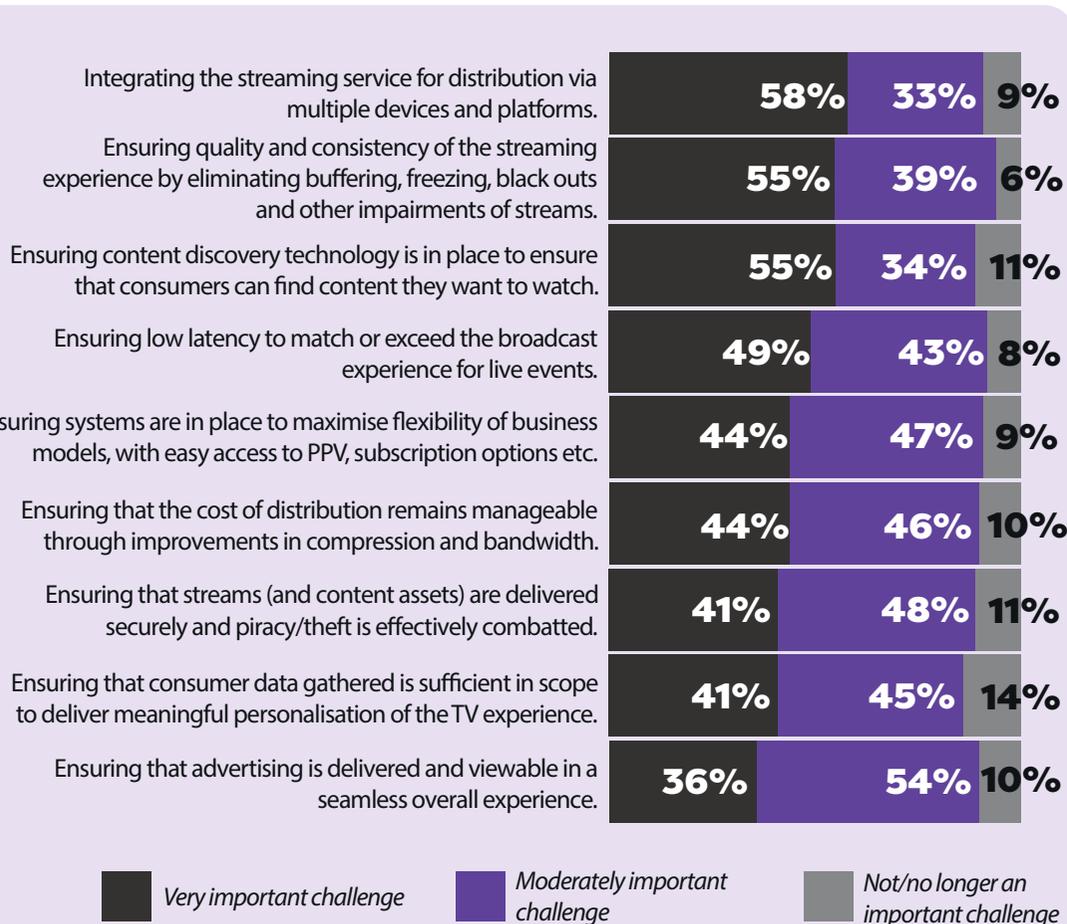
Only 4% of respondents believe that the further development of pure subscription-based services will attract the most attention. While there are reasons to believe that the death of SVOD has been greatly exaggerated, it is clear that respondents to this survey believe that advertising will be a key element in service providers' commercial priorities.



**believe that advertising-supported streaming – whether pure-play FAST and AVOD or hybrid offerings such as ad-supported SVOD – will be the key focus for service providers this year.**



## What are the major technology challenges facing streaming service providers today?



### WHAT DOES THE DATA TELL US?

While live-streaming and advertising-supported tiers dominate answers about technology and commercial challenges, asked about the key technology challenges facing providers, respondents chose platform integration, video quality and content discovery above other elements.

Fully 58% of respondents rated integration of services on multiple devices and platforms as a very important challenge. This is actually a much higher number than those who believe this will be a key priority for technology investment.

Ensuring video quality and consistency – meaning for example eliminating buffering and blackouts – rates as a very important challenge, as does the need to ensure that content discovery technology is in place to ensure that consumers can find what they want to watch.

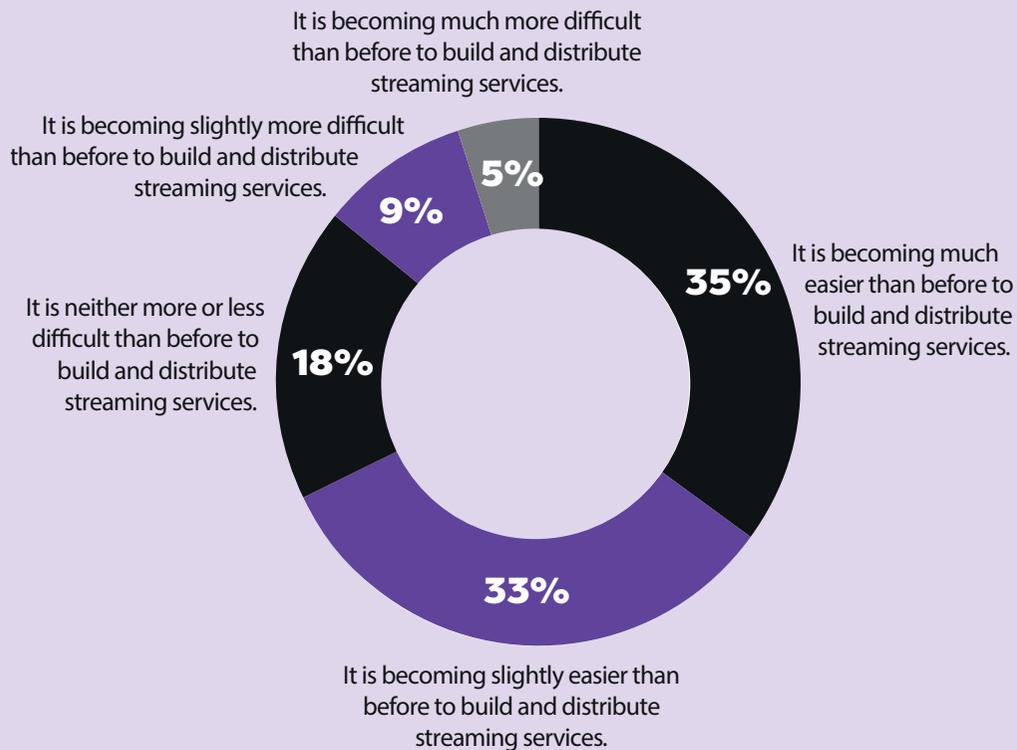
Other elements of building and delivering services are rated primarily as moderate, rather than severe, challenges. These include ensuring systems are in place to manage flexibility of business models, with easy access on the part of consumers to the full range of options.

Ensuring that the cost of distribution remains manageable through improvements in compression and bandwidth is also rated as a moderate challenge primarily, as is ensuring that piracy of streams is combatted effectively and ensuring that consumer data is available and manageable to deliver meaningful personalisation.

Fewer respondents believe that ensuring advertising is delivered and viewable as part of a seamless user experience is a very significant challenge. This could be because they believe advertising insertion technology has reached a stage where delivery is straightforward, or it could be because they are uncertain about the value of advertising as part of the streaming business model.

**KEY TAKEAWAY** The main technology challenges facing service providers are platform integration, video quality and content discovery.

## Is it becoming easier or more difficult for streaming providers to build and distribute services?



**KEY TAKEAWAY** Technical obstacles to build streaming services are diminishing over time, but commercial pressures are growing.

### WHAT DOES THE DATA TELL US?

Challenges – both commercial and technical – clearly still exist, but streaming is now becoming a mature distribution technique, which would hopefully imply that it has become easier over time to build a service. But is this the case?

Technology improvements are clearly in train, in video compression and bandwidth optimisation as well as delivering quality through more sophisticated use of data, for example. However, commercial pressures are also increasing, and fragmentation of distribution and business models means that service providers need to integrate with many more clients and build infrastructure to support an expanded range of revenue models.

In the view of survey respondents, it is becoming easier to build and distribute such a service, with 78% believing this. This group is split more or less evenly between those who believe things are becoming much easier and those who believe they are becoming slightly easier.

A further 18% of respondents believe it is now neither more or less difficult than before to build and distribute a streaming service.

Only a minority take the view that things are becoming more rather than less difficult. Some 9% of respondents believe it is becoming slightly more difficult than before to build and distribute a service, while 5% believe it is becoming much more difficult.

### PERSONAL VIEWPOINTS

The combination of technology improvement and commercial and operational complexity is reflected in written responses to this survey question.

One respondent commented that it is becoming “easier to build” services but “not necessarily to get customers”.

Another said that the technology is now “cheaper, secure and fast-growing” in range while a third was more circumspect, commented that “new things always have challenges”.

At the more pessimistic end of the spectrum, one respondent commented that building a service remained a “capital-intensive proposition” while another said that costs to “new entrants” remained “prohibitive”.

## Should mid-sized streaming providers build their own platforms or rely on outside contractors?

### WHAT DOES THE DATA TELL US?

With complexity still an issue and many small-to-medium sized players looking to enter the market for the first time, outsourcing all or part of the technological infrastructure, operations and even sourcing of content and customer care is becoming more common.

Asked whether mid-sized streaming providers should build their own or outsource their streaming requirements, respondents were broadly in favour of outsourcing.

A minority of 16% believe it makes sense to contract out the entire streaming workflow from technology to content rights and aggregation to a trusted third-party, focusing only on branding.

A much larger group – 43% – believe in outsourcing the entire technology workflow but keeping control of content as well as branding, while a sizeable group of 28% believe in outsourcing parts of the technology workflow while retaining control of other elements in-house.

Only a small minority are sceptical of outsourcing in principal. Some 10% believe in choosing best of breed suppliers for all elements of the technology stack while building and integrating internally, and a tiny group of 3% believe in building the entire stack from internal resources.

From responses to this survey it is clear that belief in outsourcing in principal is strong and well-established, although there are some differences as to what and how much of the workflow should be contracted out.

### PERSONAL VIEWPOINTS

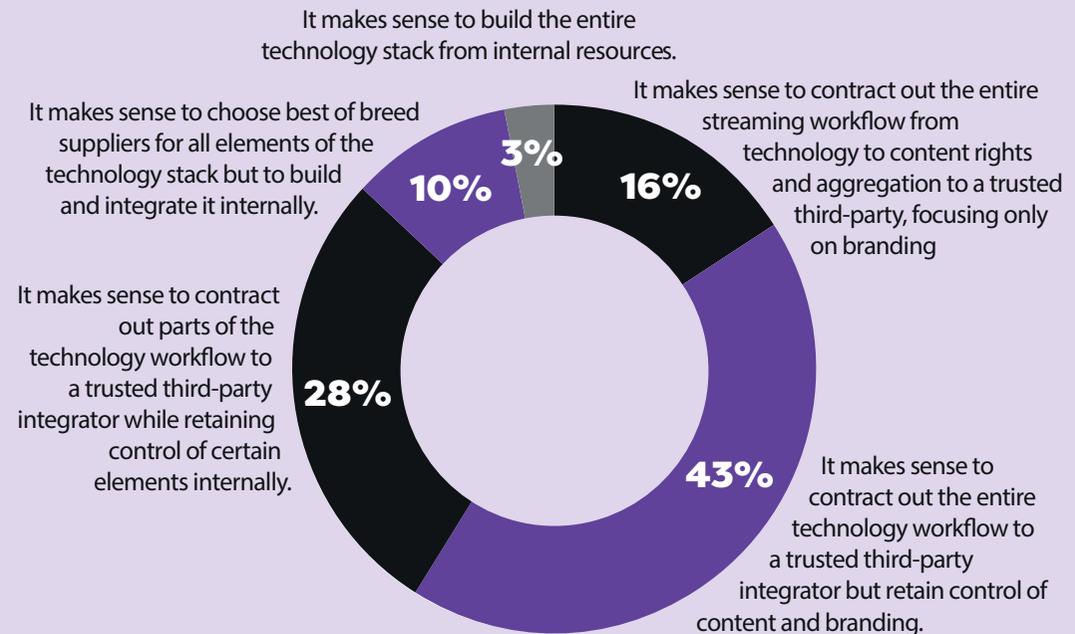
Respondents who provided written answers to this question exclusively believed in outsourcing the technology stack but in keeping control of content and branding.

One respondent said that “there needs to be a sense of ownership and branding” but that “outsourcing technology is a cheaper option” for service providers.

Another said that “there are adequate experts with solid platforms” to take care of technology but that “a mid-level service provider has got to keep control of what makes their offering special”.

A third was of the view that “it makes no sense to waste time on the technology if someone else will competently deliver for you” while another respondent cautioned that service providers should not relinquish “overall control”, adding that “if you don’t have any control of the business, why are you in it in the first place?”

### KEY TAKEAWAY Outsourcing the technology requirements of building and running video streaming services to trusted partners makes sense.



One respondent summed up the case for technology outsourcing succinctly: “Streaming providers need to focus on their brand and content quality – this is their core business. By contracting out technology workflow to trusted third parties they can leverage the economies of scale these partners have serving multiple mid-sized streamers.”

## Which technologies are important for the future of video streaming?

### WHAT DOES THE DATA TELL US?

We asked respondents to give their opinion on the relative importance of a selection of the most recent technologies that are designed to improve the streaming experience.

The highest rated of the 12 technologies presented to them was LL-DASH or Low Latency MPEG DASH, the modification of adaptive bit-rate technology MPEG DASH designed to reduce latency and enable streaming to match the performance of broadcast.

The Common Media Application Format (CMAF) – the emerging standard designed to simplify the delivery of HTTP-based streaming media and reduce cost – also rated highly both in terms of importance and recognition.

Generally speaking, technologies were highly recognised also rated high in terms of their perceived importance. Compression formats HEVC/H.265 and Low Latency HLS rated relatively high in terms of importance and recognition, also speaking to the growing importance of reducing latency.

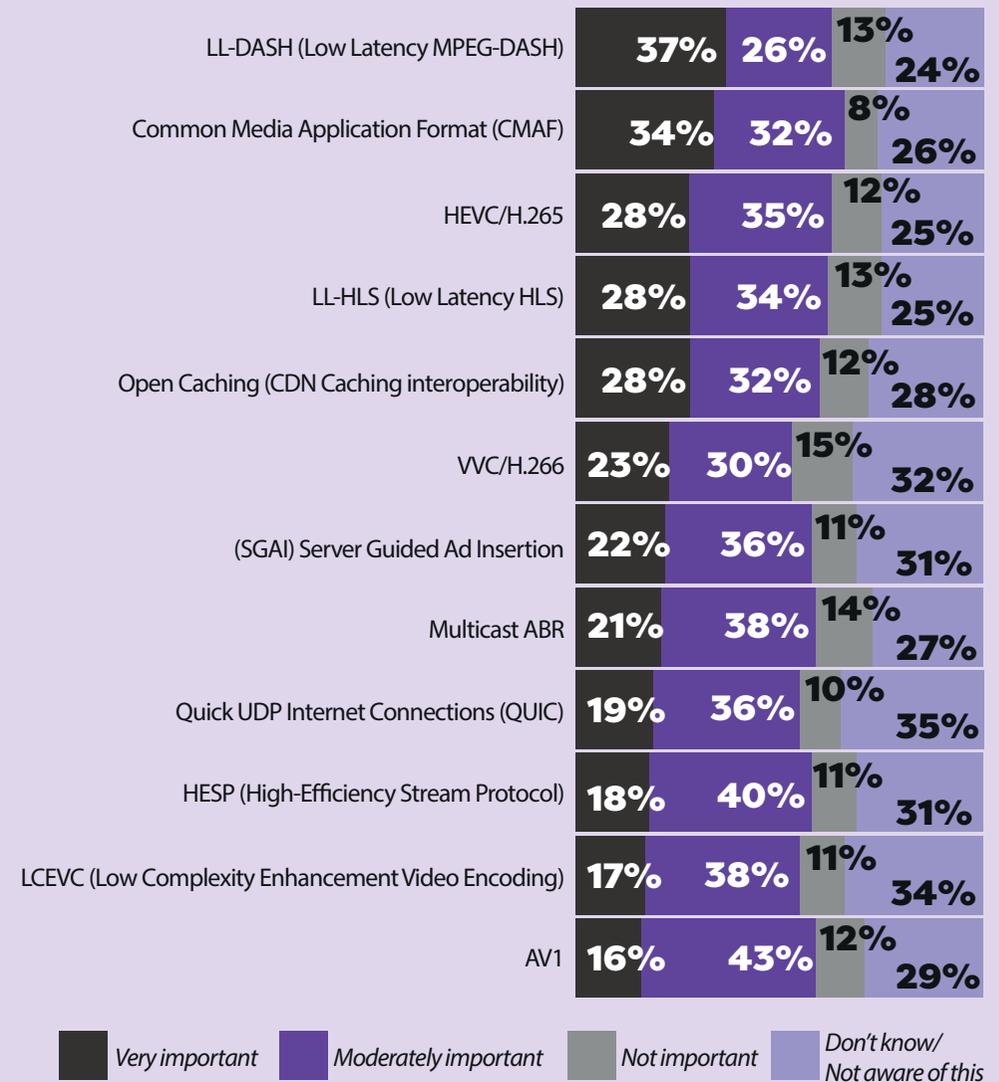
Open caching, the Streaming Video Alliance specification to give content owners, operators and CDNs visibility into the caching network received a respectable rating in terms of importance and recognition, as did next-generation compression format VVC/H.266.

Server Guided Ad Insertion, the ad serving architecture that describes ad opportunities within content prior to the stream reaching the client, but has the client resolve opportunities, and Multicast ABR – designed to deliver traditional HTTP-based streams like HLS and DASH over multicast, converting back to unicast HTTP at the edge, achieved respectable ratings for importance, but slightly higher numbers who thought they were only moderately important.

Quick UDP Internet Connections (QUIC), the transport layer network protocol designed to improve the performance of apps also achieved a modestly respectable score for importance but a high rate of non-recognition.

At the bottom of the rankings, though still with most respondents rating them as very or moderately important, were three other compression technologies: HESP, the ultra-low-latency streaming protocol, LCEVC (Low Complexity Enhancement Video Encoding), the MPEG-developed enhancement layer designed to improve the performance of video codecs, and, bringing up the rear, AV1, the proposed HEVC alternative.

**KEY TAKEAWAY** Technologies that support low-latency streaming and simplification of the workflow are important to the future of video delivery.



## Executive summary

**TV-as-a-Service (TVaaS), involving outsourcing the technical – and potentially other – elements of a TV service is on the rise. Small and medium-sized telecom operators want to offer a competitive TV service without investing heavily in infrastructure, while larger players are looking to focus on their core business. Our survey found that:**

- TVaaS is highly popular, with a clear majority of respondents either having adopted it or planning to do so.
- Some think the main advantage of TVaaS is to provide more functionality and services, while others think the main advantage is to deliver TV more cost-effectively and quickly.
- Ongoing support for all integration requirements for multiscreen delivery is the most valued element of the TVaaS proposition.
- The key elements of service provider's TV offering now are an -asp-a-intuitive UI, access to premium and mainstream content and availability on smart TVs and streaming devices.
- There is more support for outsourcing back-end technology functions than consumer-facing elements of a service.
- TVaaS represents the future of TV, at least for a majority of survey respondents.



As a leading technology partner, Zattoo delivers OTT, IPTV and VOD solutions to more than 30 operators and media companies such as 1&1 in Germany, eir in Ireland, Salt in Switzerland and Monaco Telecom, for whom Zattoo offers fully hosted and managed IPTV, OTT and TV Everywhere services.

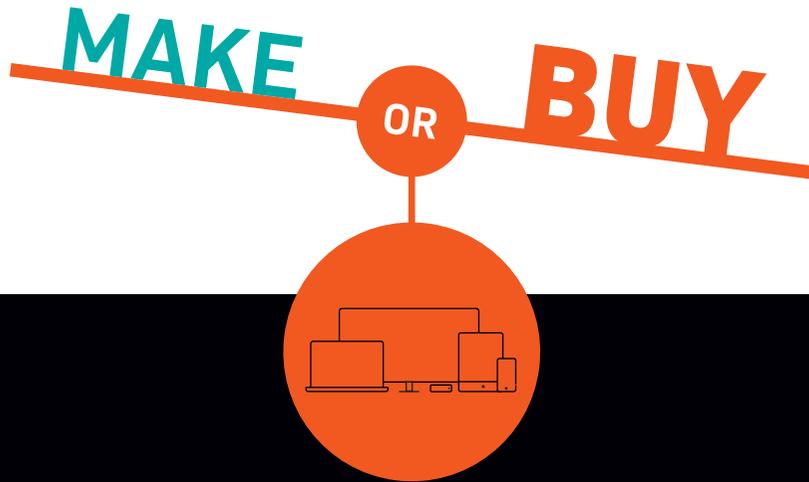
Zattoo strives to satisfy existing customers and attract new ones by offering state-of-the-art TV features and functions with a superior user experience across many devices and device

platforms. Zattoo's product portfolio ranges from back-end services such as ingest, encoding, and transcoding to hosted and managed end-to-end solutions for first-screen IPTV & OTT and second-screen mobile/web TV devices such as Android TV for Operator set-top boxes, as well as Apple TV as both a set-top box and retail device, Amazon Fire TV, Smart TVs and mobile devices (iOS / Android / Windows 10). Zattoo gained recognition for its achievements in 2020 with the awarding of the Technology and Engineering Emmy® Award from the National Academy of Television Arts and Sciences.

For more information visit [thetvplatform.zattoo.com](https://thetvplatform.zattoo.com) and follow us on [LinkedIn](#) and [Twitter](#).

# TV-as-a-Service

## IPTV & OTT for Operators



### We are Zattoo!

As one of the leading TV-as-a-Service platforms in Europe, Zattoo has been pioneering TV streaming since 2005. Let's get in touch and discuss how the Zattoo TV platform can address your challenges and aspirations by offering a state-of-the-art and carrier-grade TV experience to your subscribers.

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# ZATTOO

THE TV PLATFORM.

## Has your own company adopted a TVaaS offering from a third-party vendor?

### WHAT DOES THE DATA TELL US?

The experience of survey respondents for whom this question is relevant varies considerably. However, a clear majority have either adopted TV-as-a-Service or plan to do so, and only a minority have adopted a build-your-own approach.

The biggest two groups in the sample are those who have adopted a fully-functioning TVaaS offering to replace a legacy TV system – 28% of the total – and those who have not yet adopted a TVaaS offering but plan to do so in the future – 26% of the total.

A smaller group of 14% say they have adopted a fully-functioning TVaaS offering to deliver video services to their base for the first time.

Of the remainder, 10% have not yet launched a TV service and are considering their options. The other 22% have rejected adoption of TVaaS for a variety of reasons.

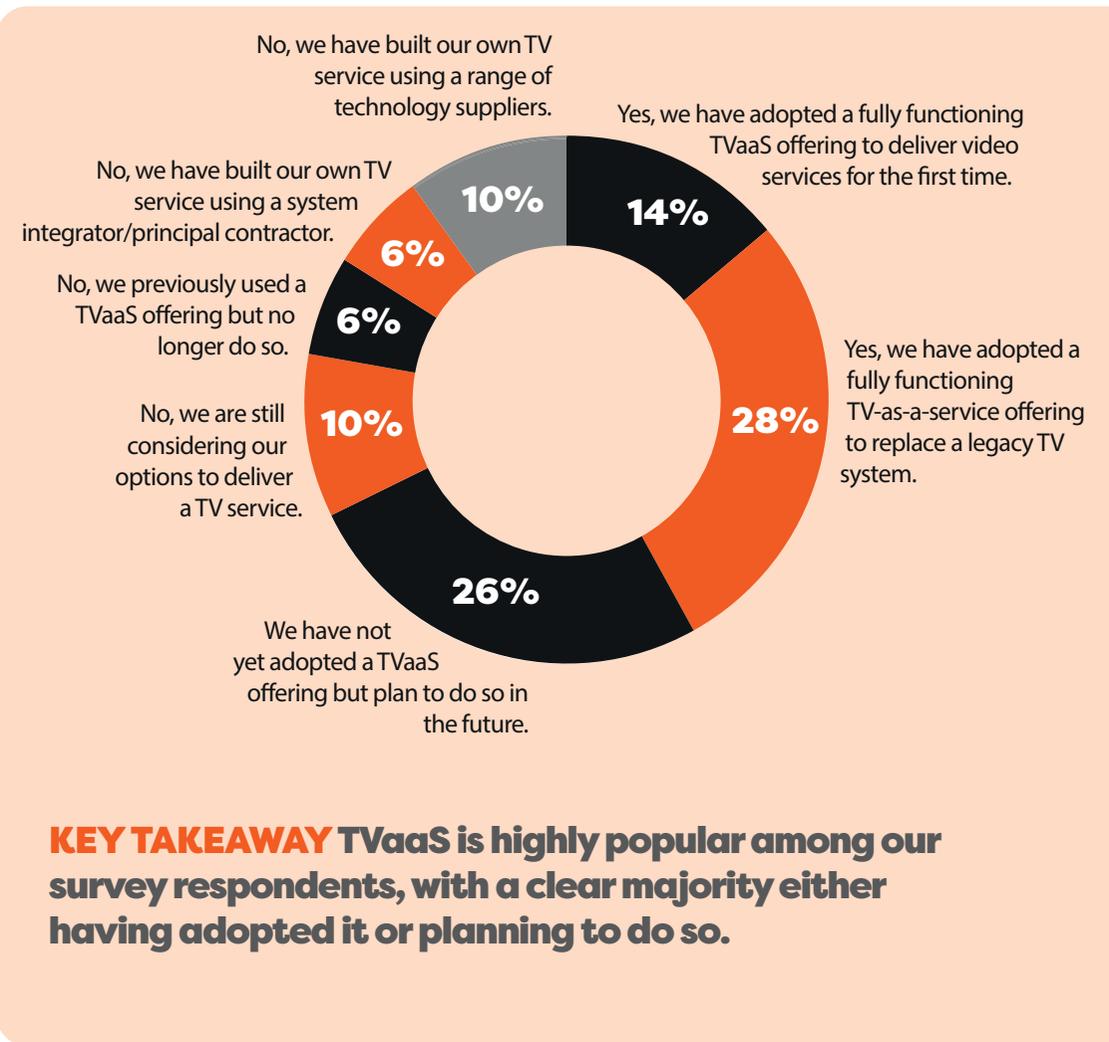
Some 6% say they previously had adopted TVaaS but no longer do so. Six per cent report they have built their own TV service using the services of a principal contractor or system integrator, while the same number report they have built their own TV service using a range of technology suppliers.

The results suggest that TVaaS is certainly growing in popularity as a means to offer TV as one element of the overall service offering. For a growing number of service providers, it seems that contracting out the delivery of TV to focus on other elements of the business makes sense. It enables small and medium-sized operators in particular to focus on their core expertise rather than invest in-house or attempt to integrate complex technology from a range of suppliers.

The growth in TVaaS may also be related to the growing popularity of streaming and the decline of broadcast TV as a means to consume video. If future patterns of video consumption are uncertain, it makes sense to contract out the supply of services.

### PERSONAL VIEWPOINTS

While a majority of respondents have adopted or plan to adopt TVaaS, comments on this question came from those who had still to make up their mind. One reported that they were “still considering how we maintain ‘us’ if we work with a TV-as-a-Service platform”, with a concern that “if all we do is provide customers with a technology platform, what do we have left as our value?”



## What is the single most important advantage of a TVaaS solution?

### WHAT DOES THE DATA TELL US?

Asked to identify the single most important advantage of a TVaaS solution, survey respondents were more or less evenly split between those who looked to TVaaS to deliver more features, content and functionality on one hand, and those who prioritised time to market and cost-effectiveness on the other.

Some 28% endorsed the view that TVaaS provides access to more content, features, devices and app updates than individual service providers can manage on their own, while a further 18% favoured the view that it provides a level of TV functionality and end-user devices that many service providers would struggle to match – essentially two ways of saying the same thing.

Sixteen per cent of respondents said that TVaaS provide a more cost-effective way of delivering TV services than alternative approaches, while the same number – 16% – favoured the position that it provides a fast time to market. A further 14% favoured the similar point that TVaaS removes the challenge and risk associated with integrating different components, ensuring with a high degree of probability that a service will be up and running without delay.

A surprisingly small group of 9% of respondents believe the most important element is that TVaaS frees up service providers to focus on their core areas of expertise – delivering connectivity.

### PERSONAL VIEWPOINTS

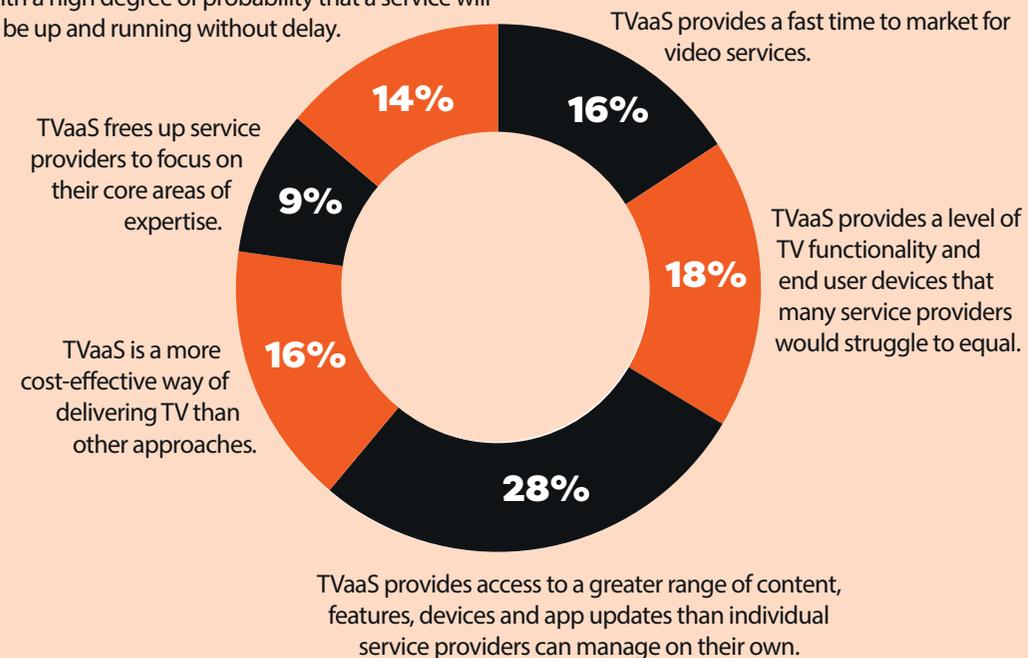
Respondents offering comments on this question focused on the idea that TVaaS can offer more content, features, devices and app updates than individual service providers could manage.

One respondent was sceptical of the claim that TVaaS can offer more, observing that “one would hope that this was true, but unfortunately it probably isn’t”, without citing a specific justification.

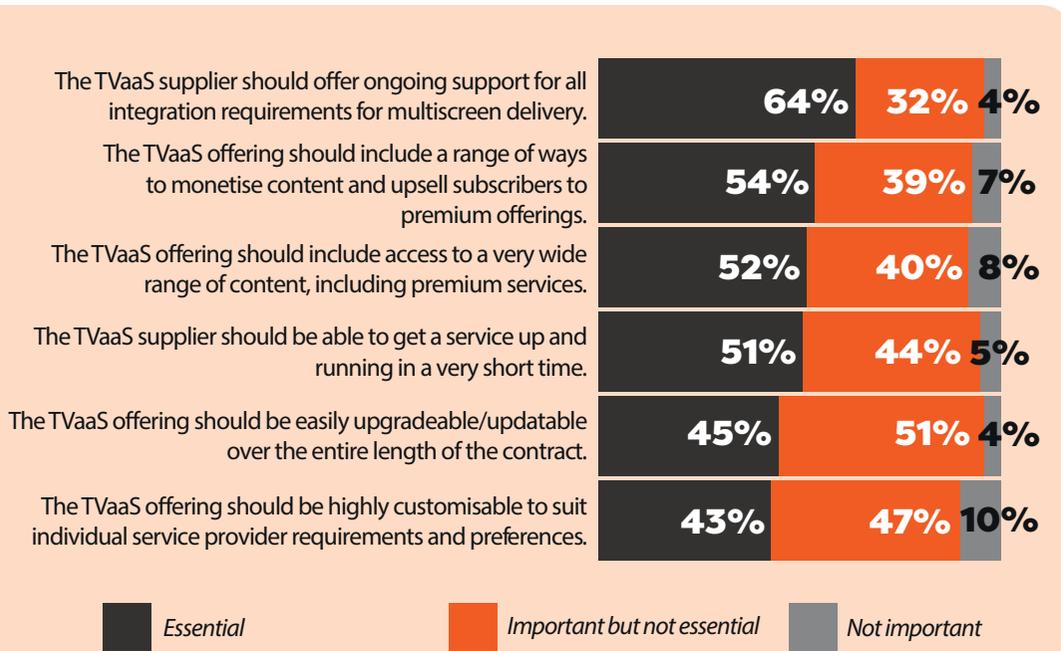
However, another respondent, while cautioning that “this largely depends on the size of the service provider operator in my view”, nevertheless took the view that “the ability to have a broad range of capabilities they can choose from and offer to their market gives [service providers] the greatest ability to offer the right mix and set of targeted services”.

**KEY TAKEAWAY** Some think the main advantage of TVaaS is to provide more functionality and services, while others think the main advantage is to deliver TV more cost-effectively and quickly.

TVaaS removes the challenge and risk associated with integrating different components and ensures with a high degree of probability that a service will be up and running without delay.



## What are the most important elements of a TVaaS implementation for service providers?



**KEY TAKEAWAY** Ongoing support for all integration requirements for multiscreen delivery is the most valued element of the TVaaS proposition.

### WHAT DOES THE DATA TELL US?

Support and reducing complexity are the key elements for most respondents considering the question of what TVaaS providers should offer to service providers.

Some 64% of respondents rated ongoing support for all integration requirements for multiscreen delivery as 'essential', with a further 32% rating it as important but not essential. Ongoing support will enable service providers to deliver up-to-date functionality across their subscriber base, including access to content such as video apps.

A high number of respondents – 54% – believe that it is 'essential' that TVaaS includes a range of ways to monetise content and upsell subscribers to premium offerings. A further 39% believe this is important but not essential.

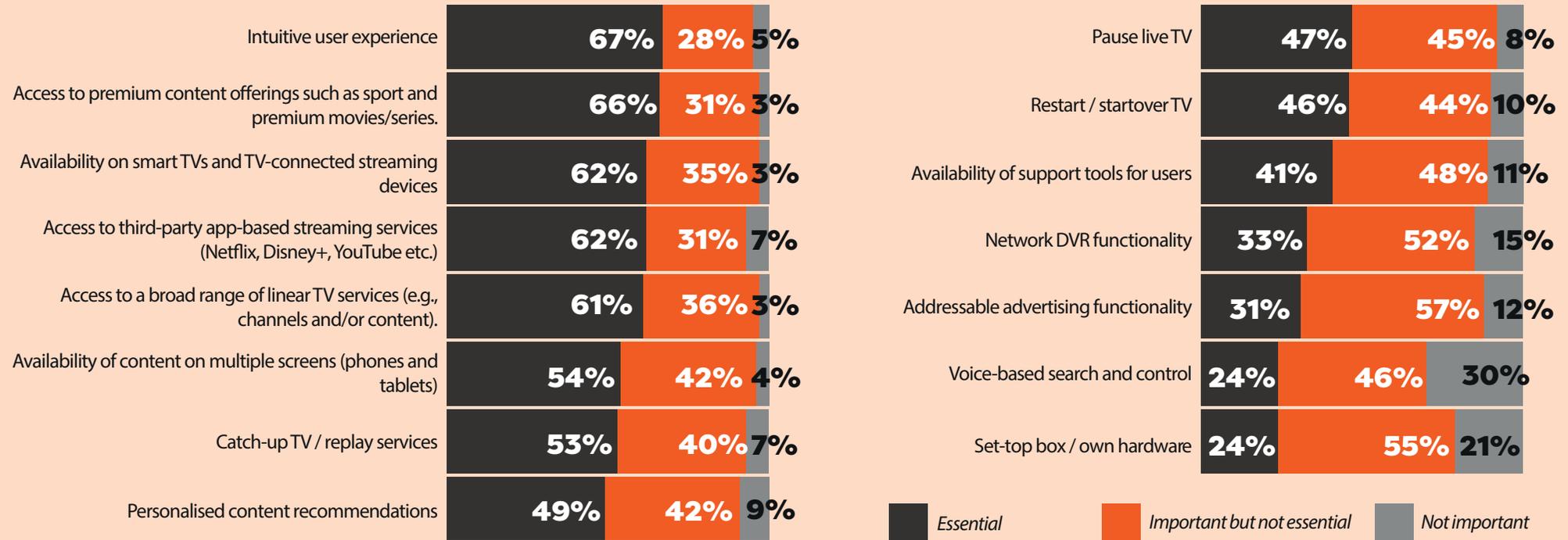
Majorities of respondents also take the view that it is essential for TVaaS providers to include access to a very wide range of content, including premium service or apps, and that the TVaaS supplier should be able to get services up and running in a very short time.

The emphasis on content shows that striking individual deals is a complex challenge for many services providers. Including white label offerings of content that can be delivered under the service provider's own brand takes this complexity, as well as the technical complexity if investing in TV infrastructure – out of the service provider's hands. For service providers who simply want to deliver a compelling TV proposition with a premium user experience, this is invaluable.

Another element – that TVaaS should be easily updatable over the length of the contract, overlaps with 'ongoing support for all integration requirements'. It does however underline the importance of clarity in the contracts between service providers and TVaaS providers, identifying what will be updated in line with market over what period of time.

A slightly smaller group of individuals took the view that it is essential that the TVaaS offering would be highly customisable, with 47% thinking this is important but not essential and 10% taking the view that it is not important.

## What are the important features in a service provider's TV offering?



**KEY TAKEAWAY** The key elements of service provider's TV offering now are an intuitive UI, access to premium and mainstream content and availability on smart TVs and streaming devices.

## What are the important features in a service provider's TV offering? (continued)

### WHAT DOES THE DATA TELL US?

If TVaaS is to meet the needs of service providers, there is a clear requirement that its capabilities should match their priorities. We asked survey respondents to rate the elements of service providers' offerings for importance.

Perhaps the most important element in a service provider's offering, according to this survey sample, is an intuitive user experience. As content line-ups become more homogenised the user experience is becoming ever more central to how service providers differentiate their offerings and establish loyalty among their subscribers. Two thirds of respondents said an intuitive UI is essential, with a further 28% saying it is important.

That said, content also remains an essential part of the mix. Even if content exclusivity is on the wane as a differentiator, having a strong overall content line-up remains vital. Sixty-six per cent of respondents rated access to premium content, including sports, movies and top series, as essential, with 31% viewing it as important.

In an age when distribution is becoming more fragmented and consumers are choosing a variety of ways to view content, technical reach is growing in importance. Other features that rate very highly as essential among the survey respondents include availability on smart TVs and TV-connected streaming devices.

Respondents also give high 'essential' scores to access to third-party apps from top streaming services such as Netflix and Disney+, and to a broad range of linear TV services. The consensus still seems to be that service providers need to deliver a mix of both linear and streaming services to please as many consumers as possible.

Slightly lower scores – but still with a majority rating these as 'essential' – are given to availability of content on multiple screens, meaning phones and tablets, and the availability of catch-up TV services.

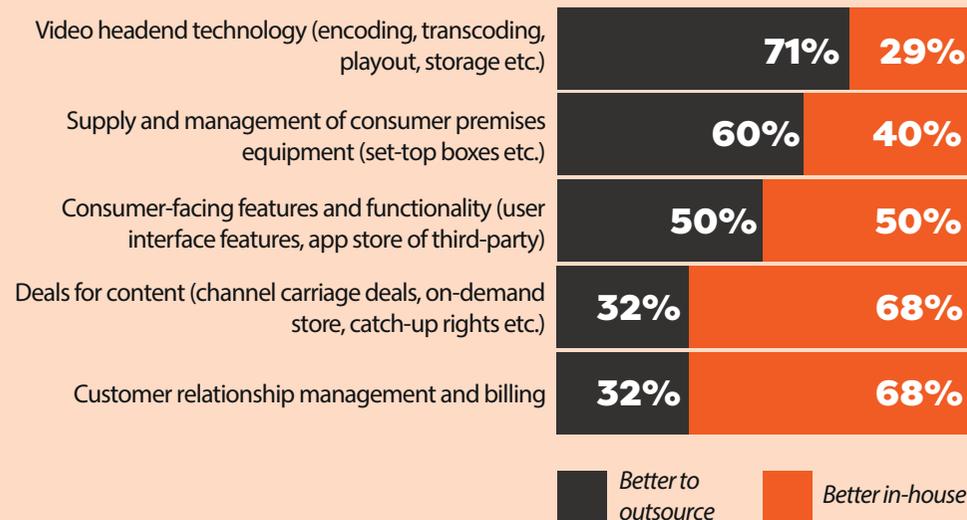
Other elements that also rate highly in terms of their 'essential' nature include personalised recommendations, pause live TV functionality and restart or startover TV.

Elements that are rated more as 'important' than 'essential' include support tools for users, network DVR functionality – clearly on the wane in an era where most content is available on-demand – and addressable advertising functionality. (The latter often tends to be considered more from a 'consumer' perspective in surveys than as something that helps service providers make money.)

Elements that are deemed less important include having your own proprietary set-top box or client hardware (also declining in importance) and voice-based search and control (rising in importance but still perceived as non-essential).

**67%** believe an intuitive user experience is an essential element in a service provider's offering.

## Which elements of delivering a TV service do you think are most appropriate for outsourcing?



**KEY TAKEAWAY** There is more support for outsourcing back-end technology functions than consumer-facing elements of a service.

### WHAT DOES THE DATA TELL US?

TVaaS is essentially about outsourcing the TV element of a service provider’s multi-play offering to a third-party that can provide such services at scale, delivering efficiencies, enabling operators to provide a superior offering and freeing them up from making big upfront investments in this part of their business.

Nevertheless, while TV is seen in some quarters as ‘non-core’ to telecom operators, it remains an important part of the mix, and opinions differ on how much should be outsourced and how much should remain in-house.

For survey respondents, there is a clear dividing line in suitability for outsourcing between back-end functions and consumer-facing elements of the TV proposition, with much greater reluctance to contemplate outsourcing the latter.

Fully 71% of respondents believe that video headend functionality, such as encoding, transcoding, playout and storage, would be provided more efficiently through outsourcing.

For supply and management of consumer premises equipment such as set-top boxes, the proportion in favour of outsourcing drops somewhat, but is still a majority position, with 60% in favour of outsourcing.

With regards to consumer-facing platform functions such as user-interface features and app stores, respondents are split 50:50 on whether these should be outsourced or kept in-house.

Respondents remain more clearly in favour, however, of keeping what they may see as more direct consumer touch-points in-house. Only 32% are in favour of outsourcing content deals, such as channel carriage deals, an on-demand store and catch-up rights, despite some outsourcing companies developing expertise in these areas. For some service providers and other industry players there remains a perception that managing content relationships is the work of the service provider. In reality, small and medium-sized providers may not have the resources and scale to negotiate attractive deals, while even some larger players may be looking to reduce their involvement in content in favour of focusing on connectivity.

Finally, respondents are also wary about outsourcing customer relationship management and billing – the most direct consumer touch-point. The direct relationship with customers, and control of customer data, is seen as a key asset and one best kept in-house.

## Do you think TVaaS represents the future of TV services for broadband service providers?

### WHAT DOES THE DATA TELL US?

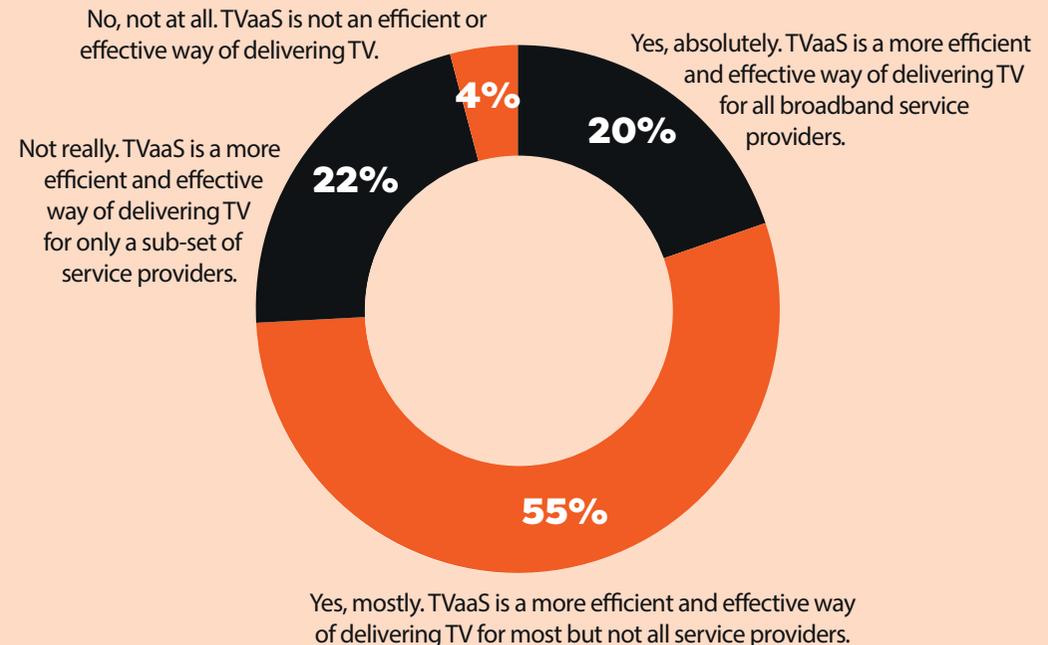
Despite reservations about elements of the service that directly touch the consumer experience, survey respondents are broadly in favour of outsourcing and believe that TVaaS represents the future of TV services for broadband service providers.

Some 20% believe without reservations that TVaaS is a more efficient and effective way of delivering TV services for all broadband service providers, while a further 55% believe that TVaaS is a more efficient and effective way of delivering TV for most service providers.

Only a minority of respondents are sceptical about the potential of TVaaS. Some 22% believe that it is more efficient and effective only for a subset of service providers, while a tiny minority of 4% reject TVaaS in its entirety, holding the view that it is not an efficient or effective way of delivering TV.

In general, therefore, respondents are highly positive about TVaaS as a concept, sharing the view that this level of outsourcing delivers value.

**75%** believe TVaaS is an efficient and effective way of delivering TV.



**KEY TAKEAWAY** TVaaS represents the future of TV, at least for most survey respondents.

## SPONSOR'S COMMENT

In the past few years, the TV market has undergone a major transformation. Growing competition and ever-increasing requirements from end customers forced network operators of any size to invest in their own TV platform. Operators are faced with the decision whether they prefer to develop and operate their own TV offering or to use a TV as a Service Solution.

The survey results demonstrate that TVaaS is very popular and the majority of the respondents have already adopted a TVaaS offering or plan to do so in the future. The main advantages of TVaaS, based on the results, are a better access to a greater range of content, features, devices, updates and functionality as well as a fast time to market and cost efficiency. At Zattoo, we focus on our scalable platform with a wide range of unique IPTV & OTT services which are fully hosted and managed by us. The outsourcing of backend functions enables our customers to handle their end-customer business independently, which is important to mobile operators according to the survey results.

Another result that supports our mission is the important features named by the respondents. The answers reflect our goal of providing a feature-rich TV experience available on any streaming device.

As stated in the survey, delivering TV via TVaaS is a more efficient and effective way and represents the future of TV for a great number of respondents.

Based on our experience and the survey results, we see ourselves and our TVaaS Business Model strengthened. We are looking forward to constantly further developing our solutions in close cooperation with our partners, satisfying the ever evolving needs of our customers.

**“The main advantages of TVaaS, based on the results, are a better access to a greater range of content, features, devices, updates and functionality as well as a fast time to market and cost efficiency.”**

**Jörg Meyer, Chief Commercial Officer Zattoo**

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