Optimising the user experience for OTT video

Produced by

DIGITAL TV EUROPE

In association with

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Contents

Introduction

OTT video providers still face challenges in delivering consistent, high-quality video experiences to consumers. They are under pressure to address an ever-growing number of devices while maintaining a smooth video experience, without buffering or freezing of the image. They need to offer an attractive user guide and content. They need to ensure they have access to sufficient bandwidth to reach their entire addressable audience.

The user experience of OTT, streaming and on-demand video is a crucial – if not the crucial – element in differentiating one service from another.

DTVE recently surveyed over 140 video senior industry players from 49 countries (of whom 16% identified themselves as OTT service providers, 12% as triple or quad-play operators, 10% as pay TV channel operators, 7% as IPTV service providers, 7% as free-to-air broadcasters and 4% as cable operators, with the balance made up of a mix of content providers, technology vendors, system integrators, investors and others) to find out their views on how central the user experience is to the success or failure of services – and what to do to optimise it.

The survey revealed that:

- OTT, streaming and on-demand video providers generally prefer a mixed model to support the business, combining subscription and/or transactional revenue with advertising revenue. A subscription-only revenue model is also seen as viable, but advertising-only models are seen to offer less promise. Transactional revenue-only models are also favoured by a small minority. In general, operators believe subscription models are most likely to succeed, followed by transactional services, with advertising-based services trailing third.

- Overall, finding a business model that works is seen as a key challenge for the sector, along with the lack of an established brand and poor consumer awareness. Operators also think that lack of clarity and complexity about content rights is an important obstacle to success, along with the complexity of setting up the right technical infrastructure.

- Survey respondents believe that multiscreen functionality, the flexibility of the platform and delivering a consistent user experience are of key importance in determining whether a service will succeed or fail. The ability to deliver an identical line-up of content across multiple devices is highly prized, as is the ability to provide a user interface that enables effective search and recommendation and that can be updated and changed easily. In general, factors relating to the user experience and the user interface are seen as more important than the choice of content on offer.

- Insufficient bandwidth is seen as a key challenge facing OTT service providers, particularly so in the case of long-form premium content. In the case of short-form video, on the other hand, problems with the players and end devices, along with inadequate search tools, are seen as more important.

- Respondents favour the outsourcing of the technical aspects of OTT video delivery, but prefer, to a greater or lesser degree, to keep other aspects of service provision including customer care and billing, and above all marketing and sales, in-house. Eliminating high upfront technical costs, enabling operators to scale their investment as they grow their customer base, is seen as important, and this is where outsourcing plays a crucial role.

The business of OTT

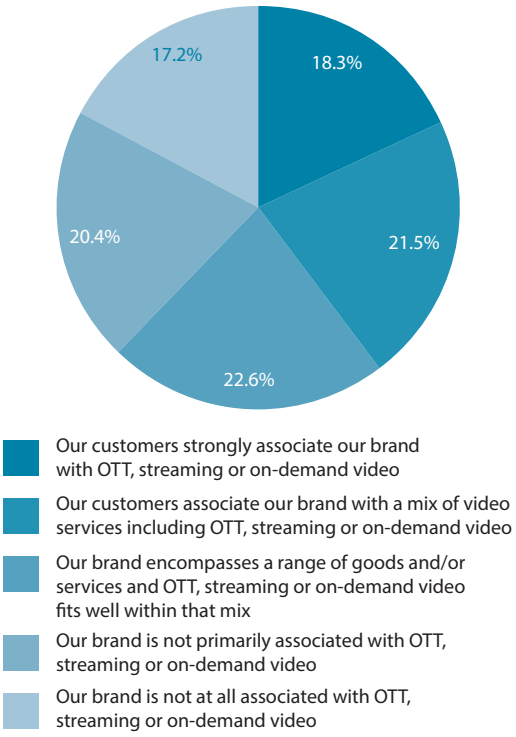
Non-linear video – OTT, streaming video and video-on-demand – is now a mainstream offering from a diverse range of providers.

Respondents to our survey come with a wide variety of experiences, but one clear theme that runs through responses is that these categories of video service are increasingly important.

Asked to assess perceptions of their brand in relation to OTT, streaming video and on-demand video, two in five respondents to the survey say their customers associate their brand with these services. Just under half of those say that their customers associate their brand "strongly" with these services. The remainder saying that customers associate their brand with a mix of video services including OTT, streaming and on-demand video. One in five said their brand encompasses a range of goods and services including video, with a further one in five saying their brand is not primarily associated with OTT, streaming or on-demand video. Just over 17% said their brand was not associated with these services at all. (fig. 1)

While only just over 16% of our overall survey sample self-identified specifically as an OTT service provider to describe their primary activity, a majority of those who responded to the question either have already launched or plan to launch an OTT, streaming or on-demand service. Interest in this category of service is clearly widespread, but consensus about the most appropriate business model is elusive.

Fig. 1. Which statement best reflects perceptions of your brand in relation to OTT, streaming video or on-demand video?

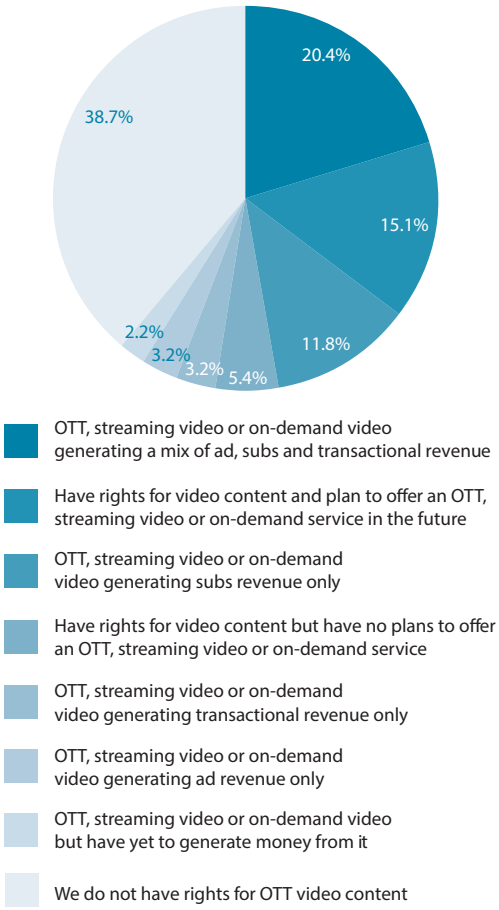


Just over 60% of respondents either offer, plan to offer, or hold rights that could enable them to offer, such a service. Of those with relevant rights, about a third (equal to one in five of all respondents) offer a service with a mix of advertising, subscription and/or transactional revenue, while one in five with relevant rights (or 12% of all respondents, including those without a service) offer a service with subscription revenue only.

The popularity of the mixed model is more dominant if those that hold rights but have yet to launch a service are eliminated. About 15% of all respondents hold rights and plan to launch something in the future, while a further 5% hold rights but have no plans to launch anything, which means that of those that have already launched a service, half favour a mixed model.

Some form of subscription revenue is seen as important by many respondents, with advertising-only and transactional revenue-only models favoured only by a small minority. A fully advertising-only model is favoured by just over 3% of all respondents, or just under 8% of those that have launched a service. This is exactly the same proportion that operate a transactional-VoD-only service.

Fig. 2. Which of the following best describes the type of video service that you offer?



While there may be little consensus about the exact business model to adopt, most respondents that have launched services say they are making some revenue from them. Only 2% of all respondents, or 5% of those who had launched a service, say they had yet to make money from their offering. (fig.2).

While non-traditional video may be growing in importance relative to old-style pay TV, subscription is still seen as the primary route to success.

In terms of general perceptions about the attractiveness of the various business models that are available to companies operating in this space, our respondents broadly favour a subscription model first, transactional services second and advertising third.

Asked to rate six different models for likeliness to succeed, three in five respondents rated subscription video-on-demand as very likely to succeed and a further three in 10 as moderately likely to succeed, beating subscription live-streaming, rated very likely to succeed by just over half of respondents and as moderately likely to succeed by three in 10.

Both SVoD and subscription live streaming are preferred to a transactional model, with just over two in five rating TVoD as very likely to success and a slightly smaller proportion giving the same rating to transactional live streaming. A significant minority of respondents believe that TVoD and transactional streaming are not likely to succeed.

Least favoured among our survey sample is an advertising-supported model, with about a third each giving a 'very likely to succeed' rating to AVoD and advertising-supported live streaming, with a slightly greater proportion favouring the latter. (fig. 3).

While subscription seems to offer the greatest promise in the eyes of our survey respondents, lack of certainty about the business model is seen as one of the key hurdles to success in OTT. Asked to qualify the relative importance of various challenges and obstacles in the way of launching a successful OTT, streaming video or on-demand service, factors related to the business model and content rights are seen as important, alongside lack of an established brand and/or poor consumer awareness of the content on offer.

In summary, lack of clarity about the business model is cited as very significant by over half of respondents, while a further three in 10 regarded it as moderately significant. Lack of established brand was rated very significant by 46% and as moderately significant by a further two in five. Complexity and lack of clarity about content rights is seen as very significant by almost half of respondents, with a further 37% seeing this as moderately significant.

Fig. 3. Which business model for OTT, streaming video or on-demand video is likely to be successful?

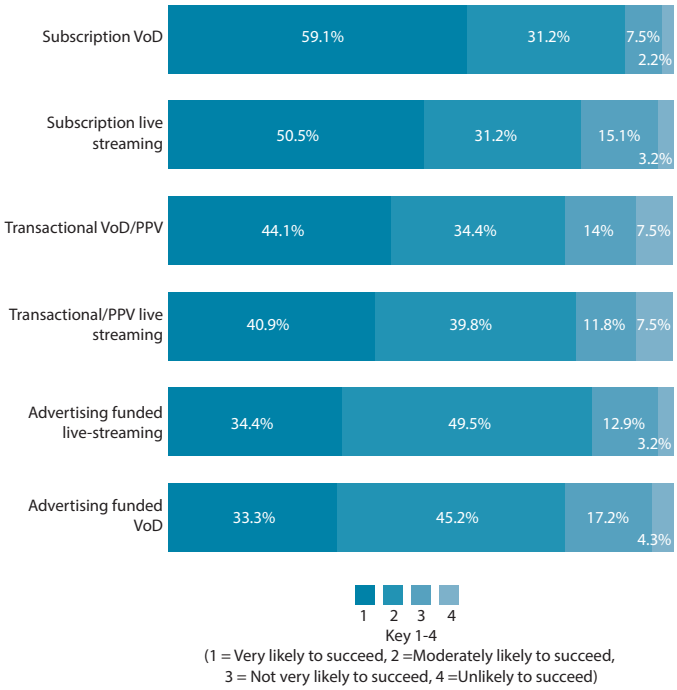
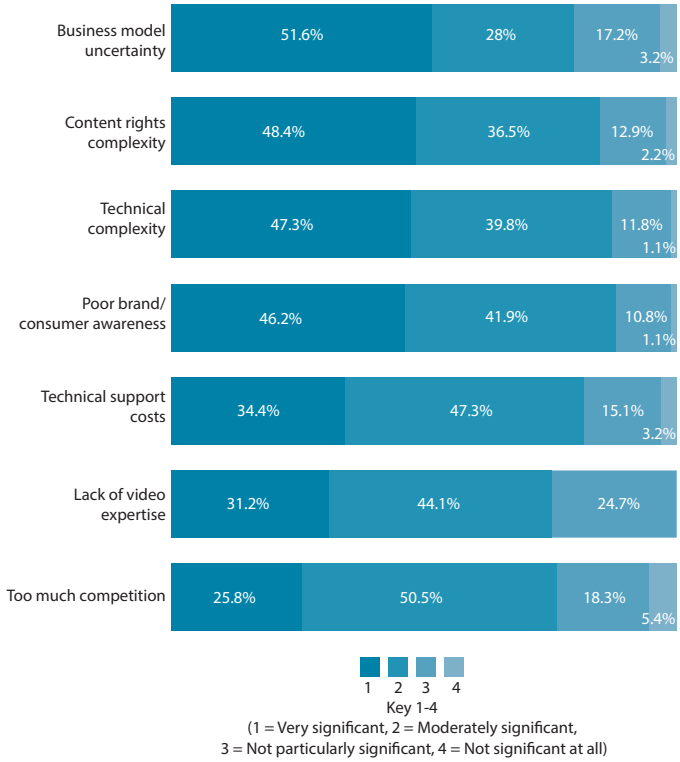


Fig. 4. How significant are these challenges/obstacles to launching an OTT, streaming video or on-demand video service?



Some 47% or respondents rated the cost and complexity of setting up technical infrastructure as the key obstacle, with a further two in five seeing this as moderately significant.

Relatively less important is the cost and complexity of providing ongoing technical and customer support, seen as very significant by a third or respondents and as moderately significant by a further 47%, with slightly smaller numbers giving a similar ranking to lack of in-house video expertise as an obstacle.

Our survey respondents see 'too much competition' as being relatively less important as a barrier to entry, with only one in four respondents ranking this as 'very significant' (although it is seen as 'moderately significant' by over half of respondents). (fig. 4)

The OTT user experience

The likelihood that a subscription model will play a major role in the success of services highlights the importance of providing something with qualities that consumers value and will find compelling and therefore willing to pay for. What exactly those qualities are – exclusive content, competitive pricing, a compelling user experience – is open to debate, but in the view of our survey respondent, the user experience ranks very highly among them.

Asked to rate a number of qualities of an OTT, streaming video or on-demand service for overall importance, our respondents privilege multiscreen functionality, the flexibility of the platform and a consistent user experience above factors related to content availability and business models.

The ability to provide comprehensive access to an identical range of content across multiple devices, including TVs smartphones, tablets and game consoles is rated 'very important by four in five of those surveyed. Over seven in 10 give a 'very important' rating to the ability to deliver an attractive user experience that can easily be updated and the ability to provide a consistent user experience without buffering and other quality problems.

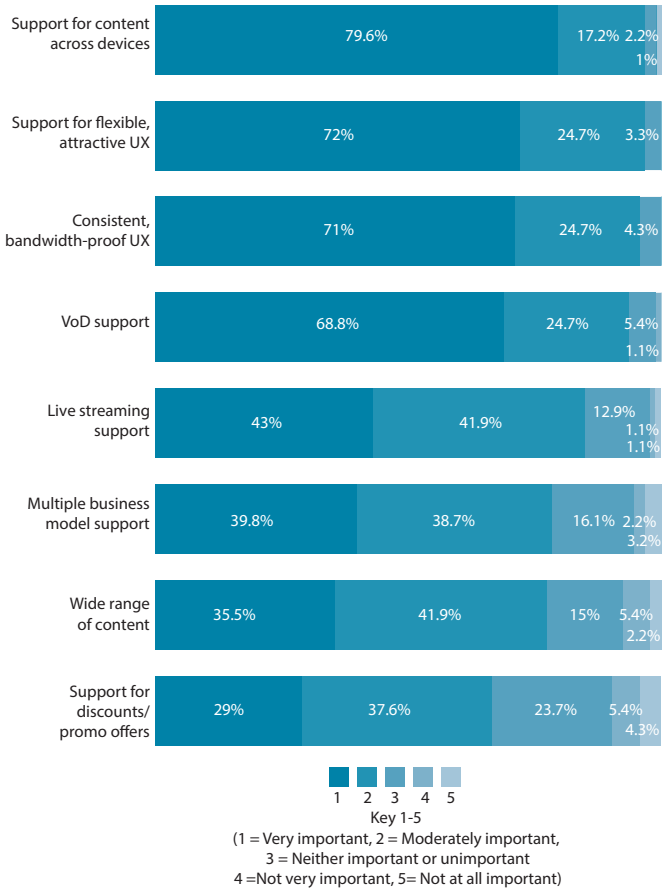
In terms of content-related features, the ability to support video-on-demand is rated more highly than the ability to support live streaming. Both are rated more important than the ability to offer the widest range of content possible.

Perhaps surprisingly in view of the mixed business model operated by many of our sample, support for multiple business models – advertising, subscription, transactions and download-to-own – is rated 'very important' by only two in five respondents, while the ability to make quick and flexible promotional offers is rated 'very important' by only three in 10. (fig. 5).

In terms of what differentiates one service from another, the views expressed by our survey respondents indicate – in broad outline – that quality comes first, followed by functionality, with pricing and choice of content only of secondary importance in relation to these.

Overall quality of experience – encompassing basic quality parameters such as lack of buffering and number of sessions dropped – is rated 'very important' by over four in five respondents and moderately important by a further one in eight. The only potential service differentiator to rival quality in importance, in the view of our sample, is an attractive, intuitive user interface, which is rated very important by over three in four respondents and as moderately important by one in five.

Fig. 5. How important are the following elements to ensure the success of an OTT, streaming video or on-demand video service?



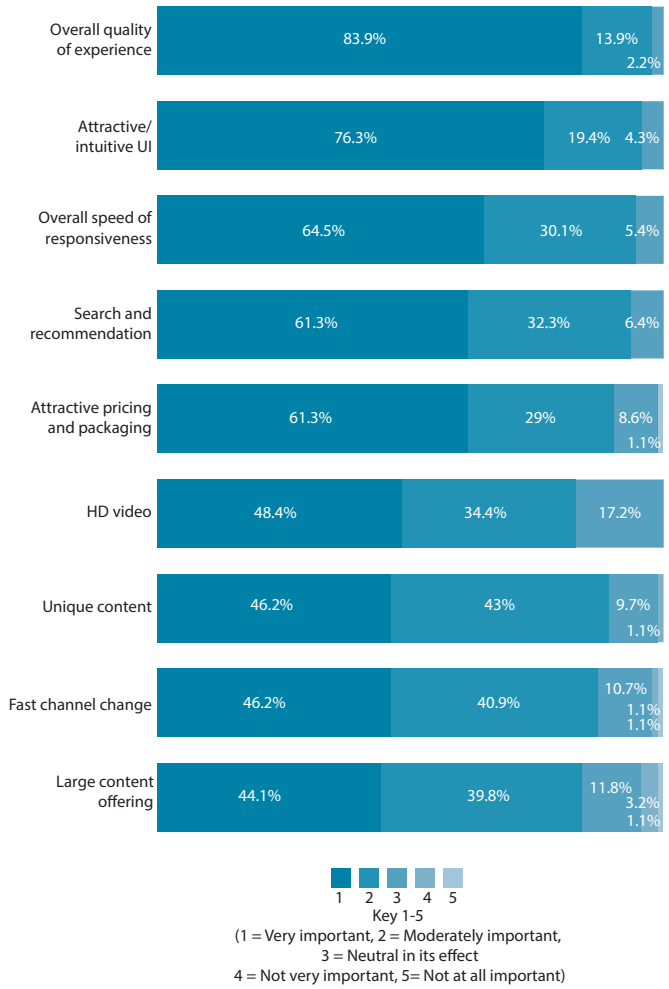
Related to having an attractive user interface, good search and recommendation functionality, and speed of responsiveness of the guide and responsiveness of video are each rated very important by over three in five respondents and as moderately important by over three in 10.

Attractive pricing and packaging options comes next – seen as a very important differentiator by over three in five respondents and as moderately important by almost three in 10.

Trailing behind these was fast channel change time and availability of HD video, both seen as 'very important' by just under half of respondents.

Of lesser importance relatively is content, with under half of respondents giving a 'very important' rating to having a unique or highly differentiated range of content or having a large content offering or access to multiple sources of content. (fig. 6)

Fig. 6. How important are the following elements of a video service to differentiate it from competitors' offerings?



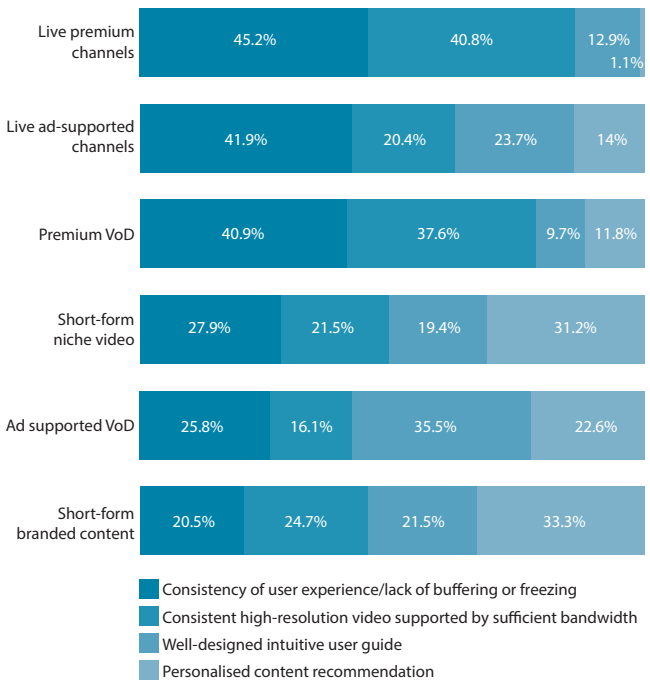
In summary, in the view of our respondents, quality of the user experience trumps variety or exclusive content as a product differentiator.

Digging deeper into the quality of experience, our survey sample was asked to choose the most important quality parameter for each of six types of OTT, on-demand or streaming video service. The results show that, while there is considerable variation in views on what the key factor is across a number of different business models, on the whole consistency is generally seen as more important than functionality, especially for premium services, while functionality is seen as relatively more important in the case of advertising-supported on-demand services.

In the case of a premium VoD service with feature film content and primetime series episodes, over two in five respondents say that a consistent user experience – implying no buffering or freezing – is most important, with consistent high-resolution video quality supported by sufficient bandwidth cited by almost as many. Consistency is seen as even more important in the case of live streaming of premium channels including sports, with 45% ranking it as most important and two in five giving the same ranking to consistent high-resolution video quality supported by sufficient bandwidth.

For advertising-supported free VoD based on catalogue content, a well-designed intuitive user interface is seen as the most important parameter, selected by 35% of respondents, with personalised content

Fig. 7. Which of the four qualities in the key is of greatest importance to the success of each of the video services listed in the left column?



recommendation seen as of equal importance to a consistent user experience. In the case of advertising-supported free live streaming, however, consistency of user experience reclaims the top spot, ranked as most important by over two in five respondents.

For short-form niche interest video and short-form branded content, one the other hand, personalised recommendation is seen as most important. (fig. 7)

Challenges and solutions

Given the overall importance of a consistent user experience for the success of OTT services, it is unsurprising that our survey sample rates having sufficient bandwidth as of key importance for service providers.

In terms of the factors adversely affecting quality of the user experience, respondents to the survey see insufficient bandwidth in the access network as the critical problem, with over seven in 10 rating this as very significant, followed by problems with the player or end user device, rated very significant by three in five. Over half of respondents give poor quality CDN performance the highest rating for significance, with somewhat smaller numbers giving a very significant rating to insufficient flow of data about the user experience to the service provider and inadequate video processing or compression technology. (fig. 8)

Drilling down further into these responses, our sample was asked to rate the same factors specifically in the case of long-form video. Responses were similar, with insufficient bandwidth seen as the key factor by the highest proportion of respondents, followed by problems with the player or end user device. (fig. 9).

In the case of short-form video, however, this order is reversed, with 55% giving a 'very significant' rating to problems with the player or end user device and 46% giving the same rating to insufficient bandwidth in the access network. For all factors, in the case of short-form video, a somewhat higher proportion of respondents do not see any of the factors listed as particularly significant than is the case when they are asked about long-form content. (fig.10).

The apt use of outsourcing is of critical importance to the success of many OTT video services. Given the technical nature of the challenges facing OTT content providers, many are inclined to outsource some or all of their technical infrastructure to third-party specialists.

Survey respondents were asked to choose which parts of the OTT video chain could benefit from being outsourced to third-party providers. A majority of our sample favour the outsourcing of all or most of the initial set-up of technical infrastructure, along with the ongoing operation of that infrastructure, content security and rights management. A significant proportion of respondents go further and agree that operators could benefit from outsourcing these elements in their entirety.

Fig. 8. Which of these factors is most likely to have an adverse impact on the the user experience of a live OTT video service?

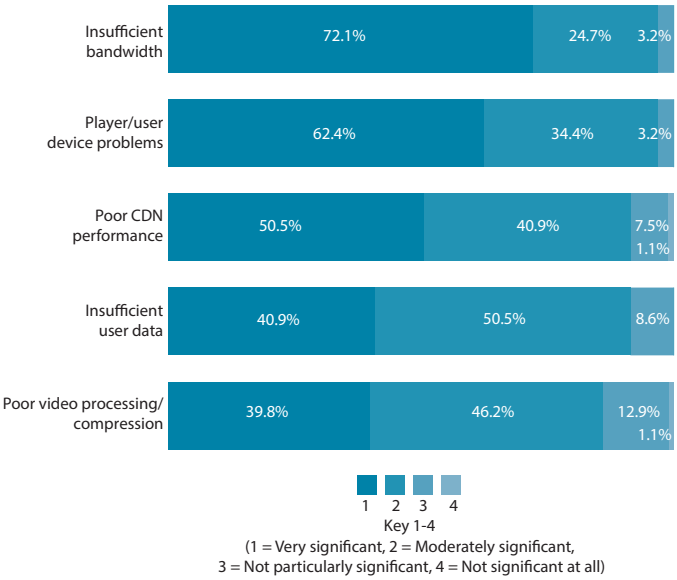


Fig. 9. Which of these factors is most likely to have an adverse impact on the the user experience of a long-form OTT VoD service?

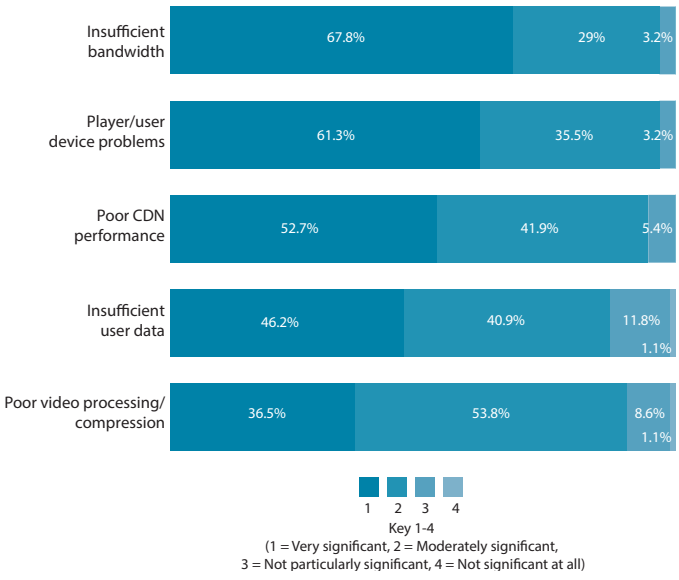


Fig. 10. Which of these factors is most likely to have an adverse impact on the user experience of a short-form video service?

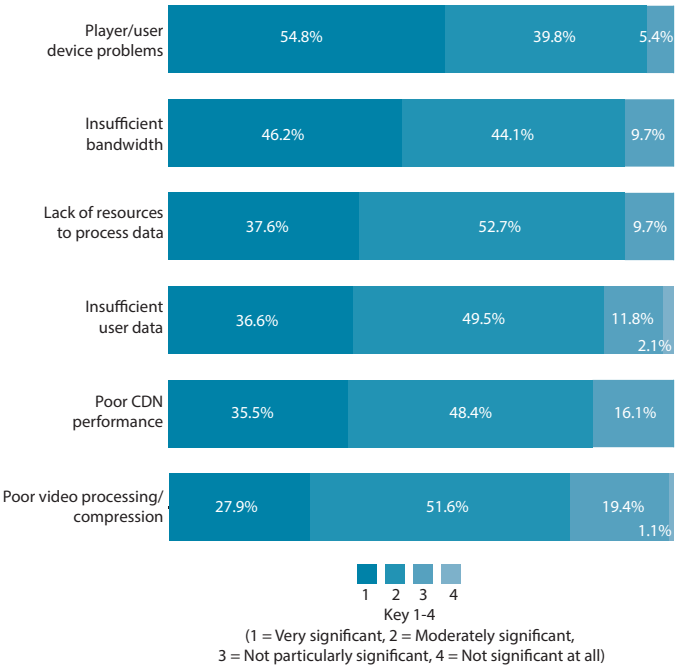
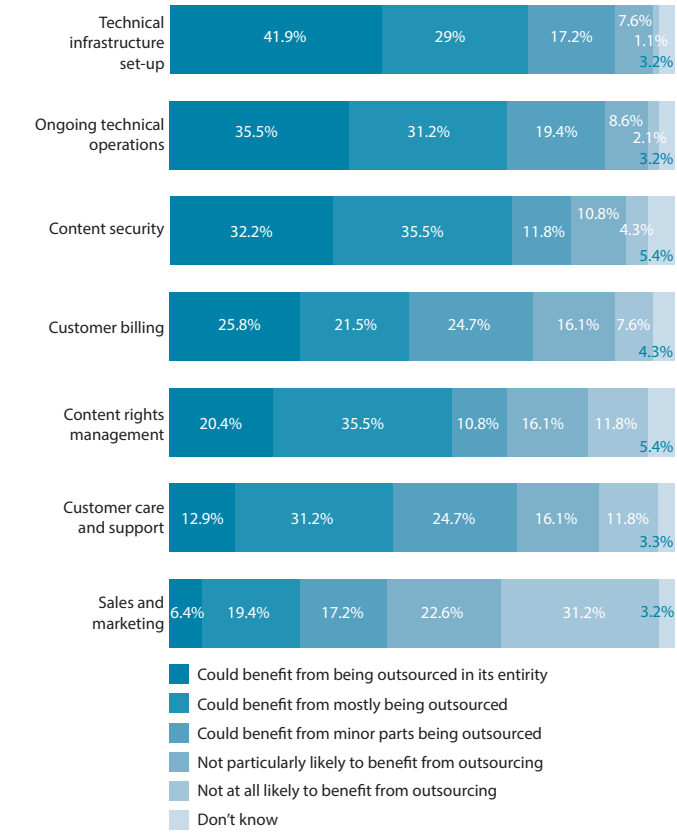


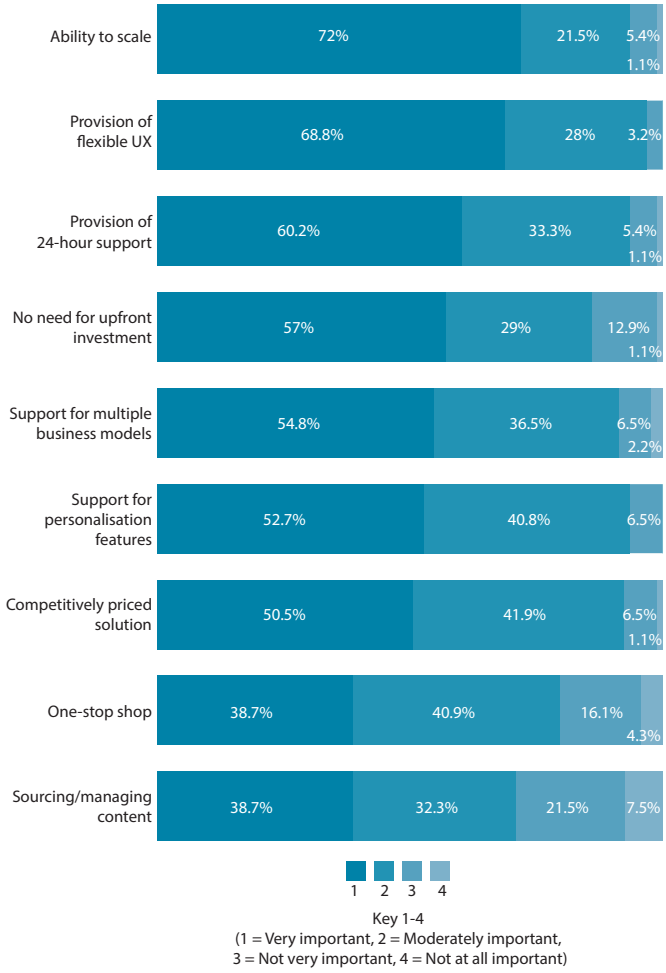
Fig. 11. Which of the following parts of launching and operating a service would benefit from being outsourced to keep costs down?



Outsourcing is somewhat less favoured in the case of customer billing systems, not well favoured in the case of customer care and support and not at all favoured in the case of sales and marketing, indicating that service providers believe the latter at least is central to their core competency. (fig. 11).

What service operators specifically look for from outsource providers is a good indication of their key concerns. In terms of what outsourcing partners can provide and what service providers value from an outsource provider, our survey respondents rated the ability to scale from small numbers of users to very large numbers on-demand more highly than any other single quality, with over seven in 10 giving this a 'very important' rating. This is instructive: the requirement to scale and operation up and down according to demand for services is increasingly seen as key to making a successful business out of video distribution. As content providers – and pay TV operators – move towards direct-to-consumer and hybrid distribution models rather than the traditional

Fig. 12. Which of the following qualities are most important in terms of what an outsourcing technology partner can provide?



big bundle approach favoured in the past by pay TV broadcasters, they need to be able to start small and build distribution quickly as demand ramps up.

The OTT direct-to-consumer model works best if content providers can avoid big upfront investments in technical infrastructure. What providers want above all is for a third party to take away this requirement and build something that multiple players can use, spreading the risk and investment cost across many different services. Our survey sample also rate the ability of outsource partners to remove the need for a big upfront investment quite highly.

Instructively, content providers also place a high value on the ability of outsource partners to deliver a user experience that can be changed in a rapid and flexible way, with almost seven in 10 rating this as very important. This reinforces the perception that flexibility and the ability to change things – including the look and feel of the service itself – quickly but reliably is seen as of key importance in delivering direct-to-consumer services. The ability to support multiple business models and the ability to deliver advanced personalisation features is also rated quite highly.

What content providers are not really looking for from outsource partners is functions that have more to do with the content itself. Fewer than two in five survey respondents give a 'very important' rating to the ability to source content and manage content rights or the ability to provide a complete 'one-stop shop' as qualities they look for in outsource providers. (fig. 12).

Conclusion

Our survey reveals that, while there is still a great deal of uncertainty about which business models are viable for OTT, streaming and on-demand video services, subscription-based and mixed models are favoured above free advertising-supported models.

At the same time, operators believe that the user experience will be of key importance both as a determinant of whether any given service will succeed or fail, and as a differentiator between services.

With regards to OTT video, the user experience encompasses both quality and consistency of service (meaning content that doesn't buffer or freeze, delivered with a relatively consistent resolution) and attractive user functionality (meaning a UI that is intuitive and attractive and good search and recommendation functionality). It also encompasses availability across multiple screens, with the ability to deliver an identical experience (and line-up of content) across different devices seen as highly important.

These qualities are seen by survey respondents as carrying more weight than the actual choice of content on offer from a service. Other factors, including price are also seen as secondary to the user experience.

Given the importance of (a) quality and (b) the look and feel (and functionality) of services, it is no surprise that lack of bandwidth and the cost and complexity of building the necessary technical infrastructure are seen to be of primary importance as barriers to entry.

Interest in outsourcing elements of an OTT service is focused on the technical aspects of OTT delivery. Service providers are less interested in outsourcing content aggregation and rights acquisition and prefer to keep sales and marketing activities in house.

Service providers believe that the technical delivery element can potentially benefit from being outsourced in its entirety. Finding a suitable outsource partners can enable operators to scale their investment as well as ensure that their content is delivered at a suitable level of quality.

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