

# Delivering Cost-Effective Premium Live QoS at Scale "Anywhere, Everywhere"

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Live media transport workflow on IP essential in today's TV & video streaming era

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In partnership with:

**IBM Aspera**

## Summary

### In brief

Ovum's ICT Enterprise Insights 2018/19 survey indicates that creating a highly profitable, and scalable, live engagement ecosystem is the top business priority for 41% of media enterprises over the next 12–18 months. The survey also reveals how media enterprises' margins come under pressure as they try to maintain market position despite rising content acquisition costs and audience fragmentation. In 2018, 15% of media enterprises invested in transformation projects to move one or more of their content supply chain workflows to IP networks.

However, the demand for re-engineering the live media transport workflow is not only to lower the total cost of ownership (TCO), but also deliver unprecedented premium quality of service (QoS) and quality of experience (QoE) – irrespective of location, device, and network – as user expectations, across the content lifecycle, continue to grow.

Ovum believes that embracing an agile backbone along with live media transport solutions over IP, which enable broadcast experiences with zero latency, will help media companies deliver against QoS and QoE demands, and help them achieve greater operational productivity, better remote media workflow collaboration, and optimized traffic volume management.

### Ovum view

The adoption of live media transport solutions over IP will rise exponentially in the next 24 months. This is due to

- margins under pressure to safeguard profitability
- rapidly growing live content repository investments to maintain market position
- operational efficiencies across media contribution (including multisource ingest) to distribution workflows to improve time to market.

Although the adoption curve will differ across segments, with enterprises in the gaming, film, and broadcast TV & video markets as early movers toward IP-based live media transport solutions, the need to lower TCO without offsetting premium QoS/QoE "anywhere, everywhere" will enable strong growth prospects in the long run. Furthermore, as live becomes a vital tool to improve multiscreen engagement rates, enterprises believe live media transport solutions over IP will deliver high return on investment (ROI) of 34% and an average proof-of-concept (POC) total transaction value (TTV) of \$150,000 – crucial indicators of a positive future outlook.

## Key messages

### Global

- Average live content repository spend is estimated to rise 1.7x in 2018–23.
- Delivering premium QoS and using remote production to reduce costs were the two leading business priorities for more than two-thirds (71%) of enterprises in 2018.
- Although fiber continues to dominate, IP will be the fastest-growing delivery route, accounting for almost a quarter (24%) of total global delivery by 2023.

- A lack of converged collaboration, testing, and visualization capabilities, combined with longer set-up lead-times, has resulted in close to four-fifths (77%) of enterprises stating they are dissatisfied with their current live media transport solution.
- The proportion of on-premises deployment models is predicted to drop by more than half from 69% in 2018 to 33% in 2023. Meanwhile, there will be a surge in uptake of cloud offerings from 10% to 34% over the same period, resulting in an even split of deployment models across on premises, cloud, and hybrid.
- More than two-thirds (69%) of enterprises surveyed prefer a fully managed live media transport service in 2018–23.
- Vendors that not only enable a reduction in TCO but also allow enterprises to embrace dynamic remote production workflows will witness positive long-term benefits.
- Multivendor approaches currently prevail, but more than one-quarter (26%) of enterprises will leverage a single vendor with a vertically integrated solution for their live media transport workflows in 2019.
- An agile live media transport solution over IP will offer an average ROI of 34% by 2023 (up from 19% in 2019).

### **Regional/segmental**

- Broadcast TV & video providers and digital service providers are the slowest *cloud* adopters, with more than half (51% and 57%, respectively) of enterprises in these segments remaining on premises until after 2023.
- Just under one-third (30%) of social networks, less than 5% of digital service providers, and 38% of internet TV & video enterprises relied on a single vendor with a vertically integrated solution for their live media transport workflow in 2018.
- The average POC TTV across the post-production and enterprise video segments is \$220,000 (40% higher than the global average).

## One in 10 enterprise's live content repository will be worth more than \$5bn by 2023 (up from 1 in 100 in 2018)

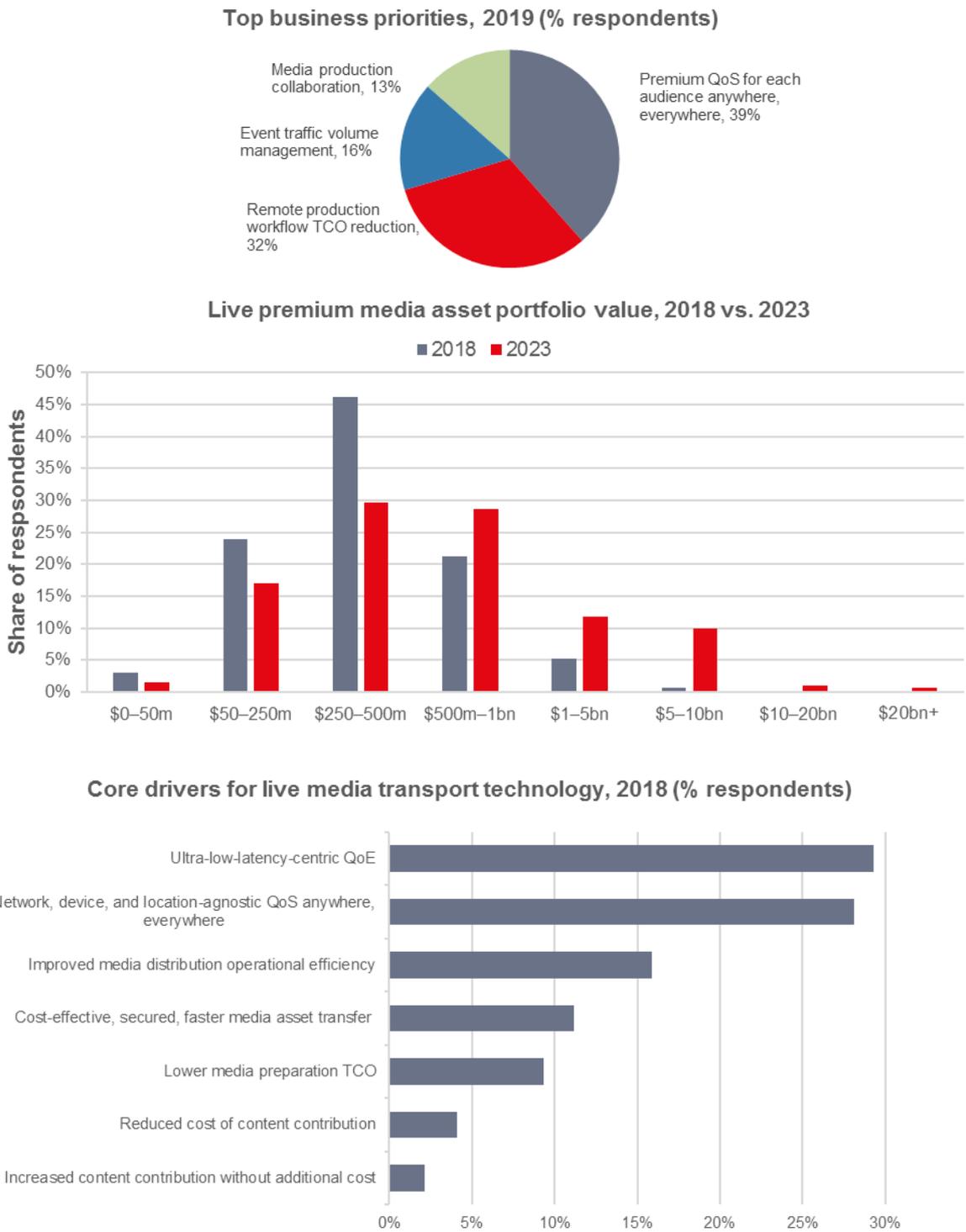
Greater reach and higher engagement rates, at lower TCO, remain the core business KPIs in the live era

### **Location, device, and network-agnostic QoS and near-live QoE are primary drivers of live media transport solutions**

In today's highly competitive, and fragmented, global multiscreen TV & video services segment, differentiated content strategies are fast becoming the norm to improve average revenue per user and per advertiser (ARPU and ARPA). This is gradually prompting the majority of premium content owners to acquire niche live media assets to reduce churn and cashflow margin risks. This can be witnessed among the 12% of enterprises reporting they will have a live content repository worth more than \$5bn by 2023, compared to just 1% in 2018. As live content gradually becomes the core tool in engaging digital users, most enterprises will place higher emphasis on key performance indicators (KPIs) related to economies of scale and scope (i.e., driving efficiencies and cutting costs). More than two-thirds (71%) of enterprises highlighted that delivering premium QoS anywhere, everywhere, and reducing TCO via remote production, are their leading business objectives. Therefore, these business goals are pivotal in driving live media transport solution deployments encompassing location, network, and device-agnostic QoS, ultra-low-latency QoE, and enhanced media distribution workflow operational excellence (i.e., aligning IT investment to business performance).

According to the survey, social networks, sports franchises, and digital service providers will be the biggest spenders on content, with 19%, 16%, and 14%, respectively, reporting an intention to own live content repositories worth more than \$5bn value by 2023. Furthermore, more than one-fifth of enterprises in the Europe, Middle East, and Africa (EMEA) region (excluding the UK) will be aggressively enhancing their live content repositories to be worth more than \$5bn by 2023. Finally, 21% of social networks believe that media production workgroup collaboration is equal to TCO reduction via remote production as a key business priority.

**Figure 1: Global, live media transport solution adoption drivers**



Source: Ovum, n=331 (March 2019)

## Almost eight in 10 enterprises dissatisfied with current deployments

### Fiber to dominate the delivery route, with IP fastest emerging globally

#### **By 2023, more than two-thirds of enterprises plan to embrace an outsourced deployment model**

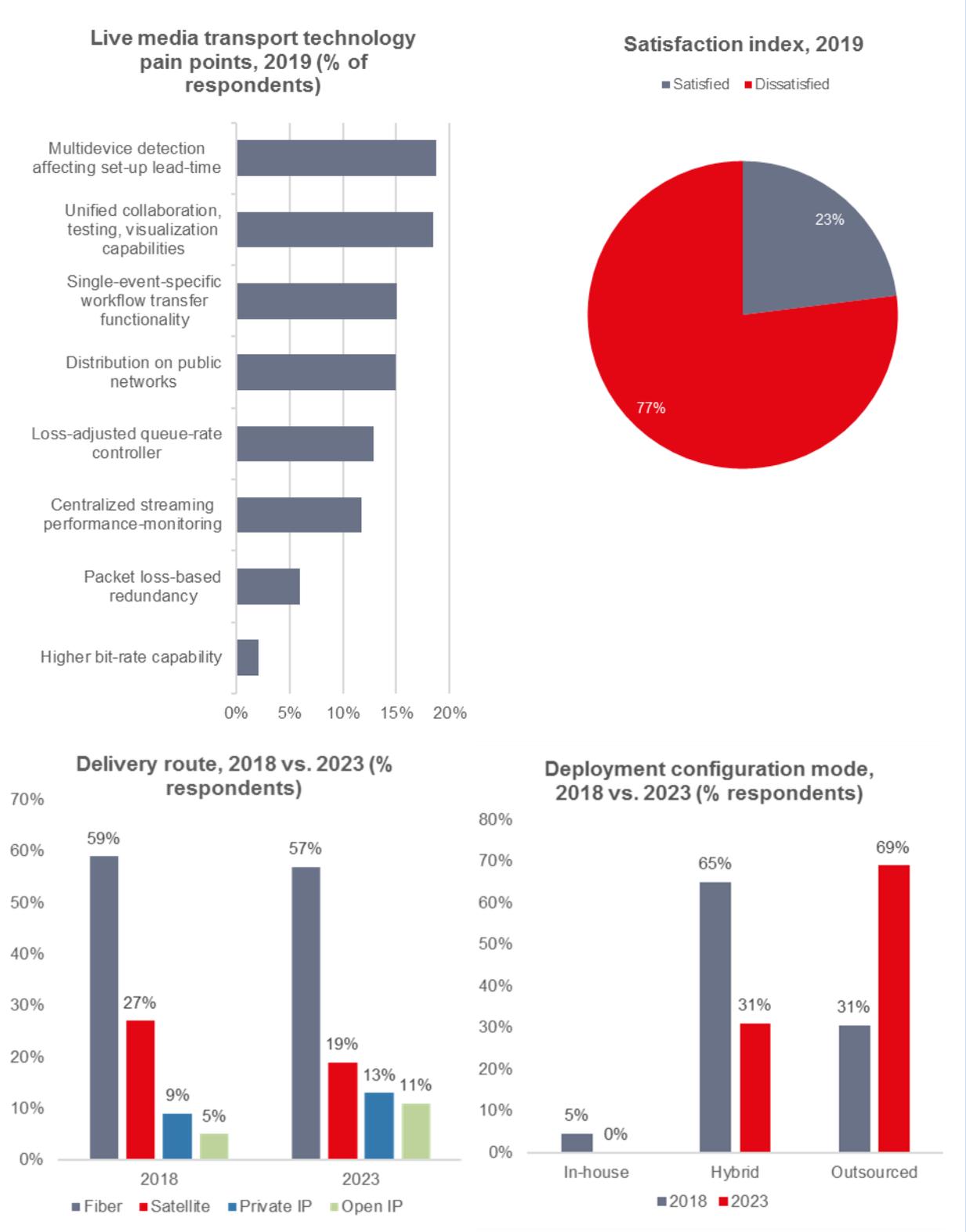
Historically, tier 1 media enterprises (such as Sky and ESPN) controlled the majority of live content repositories globally, especially sports. These enterprises predominantly leveraged traditional delivery routes such as satellite and fiber to offer a highly secure, and unique, QoE to their subscribers, while also focusing their onsite live production ecosystem through OB vans, for example, to guarantee premium QoS.

As the fragmentation of media consumption between traditional (TV) and non-linear (OTT, mobile) continues to rise, the traditional delivery routes, and onsite live production workflows, are gradually becoming costlier and inefficient. Fiber will remain the dominant delivery route in the global live TV & video segment, controlling 57% by 2023. Open IP will be the fastest emerging, contributing 11% of the total in five years' time. Although operating cost remains the primary factor in enterprises deciding to move to IP, 37% highlighted that their current live media transport solution is unable to lower set-up lead-time (i.e., reduce multidevice detection time) and lacks unified collaboration, testing, and visualization capabilities. Furthermore, poor public network interoperability and single-event-based workflow transfer functionalities resulted in 77% of enterprises stating dissatisfaction with their existing live media transport solution deployments in 2018.

Finally, 31% of enterprises currently embrace a fully outsourced deployment configuration compared with 65% following a hybrid approach. However, this will reverse over the forecast period, with 69% leveraging an outsourced model to lower their business continuity risks.

Gaming, film entertainment, and broadcast TV & video enterprises will be the fastest adopters of IP-based live media transport solutions, accounting for 33%, 29%, and 15% of total delivery routes, respectively, by 2023. However, these segments assign a low satisfaction index score to current live media transport solution deployments (at an average of 29%), compared with internet TV & video players at 42%. In 2023, IP will account for 24% of the delivery route across the global internet TV & video segment. Therefore, IP-centric cost synergies are a vital factor influencing the satisfaction index, but technology capabilities for streamlining and reducing inefficiencies across the live media transport workflow are also essential for today's premium content owners to achieve competitive edge.

**Figure 2: Global, live media transport solutions, current and future status, 2018–23**



Source: Ovum, n=331 (March 2019)

## Cloud to emerge as the leading deployment mode by 2023

Need for cost control, streamlined media contribution workflows, and multi-geographical back-up to drive cloud adoption

### **More than four-fifths of enterprises have embraced private and public cloud offerings**

The deployment roadmap of live media transport solutions is central to the media technology ecosystem (i.e., extensive initial on-premises installations). In 2018, 69% of enterprises preferred an exclusively on-premises deployment model. However, exclusively cloud live media transport solutions will be preferred by 34% of enterprises in five years' time, with exclusively on-premises approaches dropping to 33%. This shift is predominantly attributable to enterprises seeking to avoid lower profitability and address market risks by

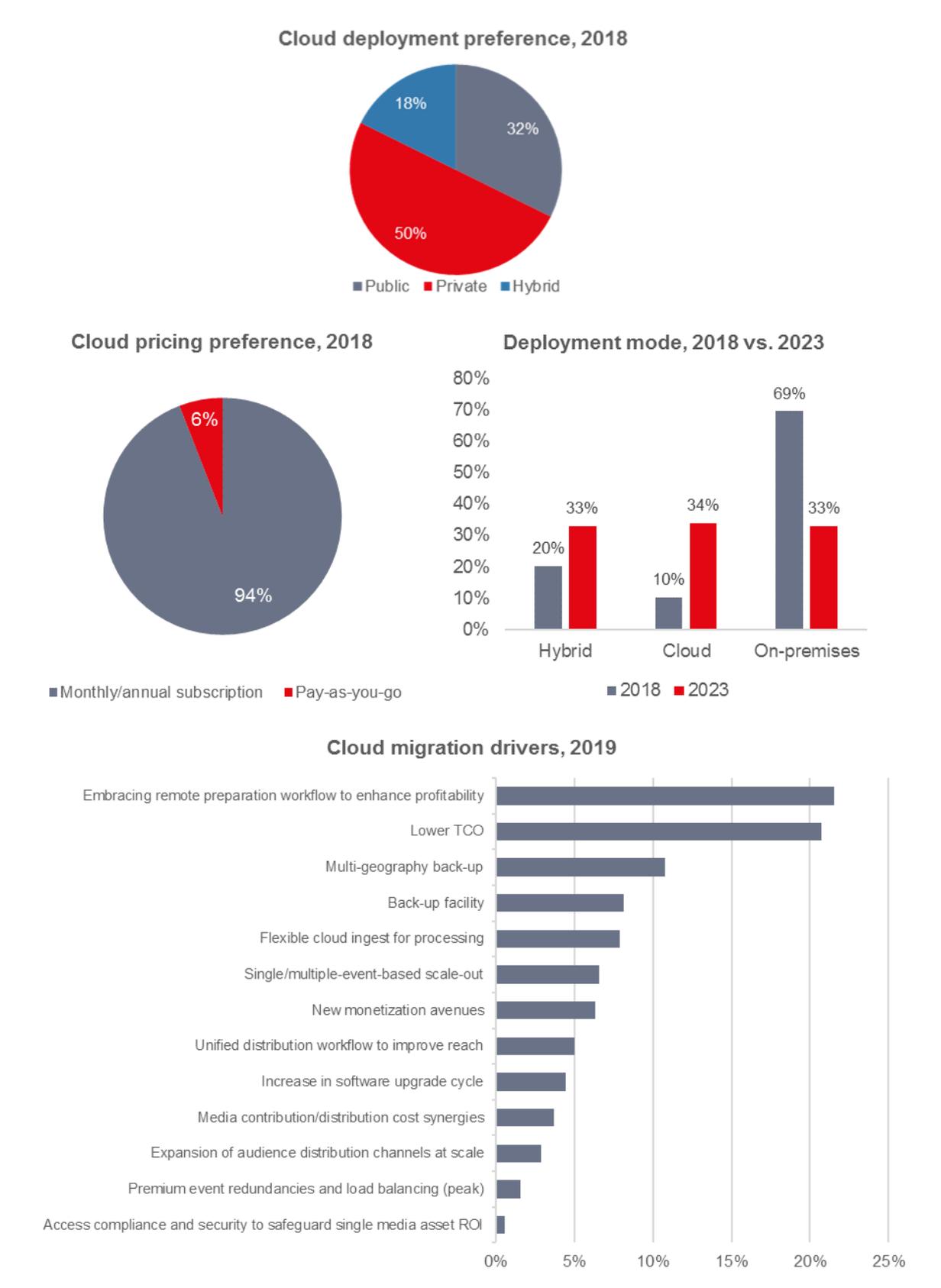
- pushing for improved operating margins
- reducing complexities across media acquisition (ingest) workflows from multiple sources
- embracing standalone pre-embedded remote production support
- building multi-geographical redundancies.

Furthermore, the majority of enterprises (82%) have highlighted that private and public cloud are the prominent cloud deployment modes, with a strong preference toward subscription-based pricing models (94%) in 2018.

The cloud adoption curve for live media transport solutions varies across premium content-owner segments and geographies. More than half of enterprises will maintain their legacy on-premises deployment mode in the broadcast TV & video and digital service provider segments in 2023. Sports franchises and film studios will be the fastest-emerging segments for cloud offerings, with close to half of enterprises embracing an agile backbone in the next five years. So far, almost all of the agile deployments in the social network segment have been on private cloud. Similarly, all gaming enterprises have embraced public cloud offerings as of 2018.

Latin America will be the fastest-growing market for cloud live media transport solutions, with 41% of enterprises moving to lower costs and embracing remote production on IP workflows. In the EMEA market (excluding the UK), 8% of enterprises will migrate to accelerate new monetization avenues.

**Figure 3: Global, live media transport solution cloud adoption trends, 2018–23**



Source: Ovum, n=331, n=34, n=230 (March 2019)

## Live media transport solution procurement roadmap

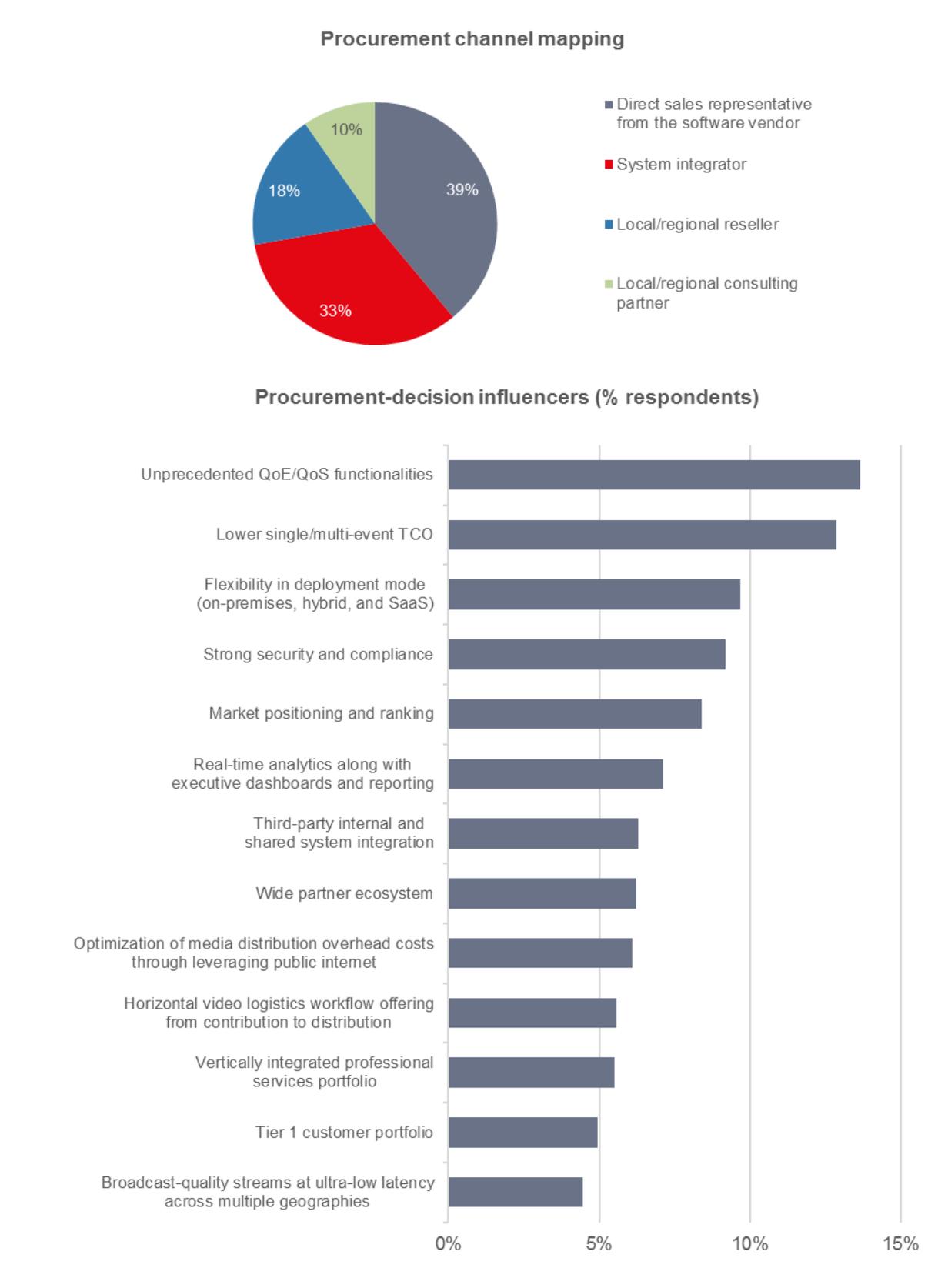
### Direct and indirect channels both prominent

#### **Robust security, flexible deployment, real-time analytics, and seamless third-party integration capabilities form niche differentiators**

Technology vendors supporting enterprises' core business priorities around unprecedented QoS/QoE and TCO reduction will witness higher initial customer acquisition rates, as highlighted earlier in the study. But customer retention rates depend upon building unique capabilities centered on security and compliance; real-time analytics; horizontally integrated deployment modes; and third-party integration. On a global basis, roughly 10% of enterprises highlighted that robust security, real-time analytics embedded in executive dashboards, and support for multiple deployment environments (from cloud to hybrid) are crucial factors in influencing technology procurement across live media transport workflow in 2018. On the non-technology front, a portfolio of tier 1 customers and a strong market positioning are vital factors influencing the procurement decision. Furthermore, in the past 12 months, 72% of enterprises have leveraged both direct and indirect channels (especially via system integrators) to procure live media transport solution.

In the broadcast TV & video segment, 26% of enterprises used niche, indirect channels for existing deployments (i.e., local resellers) in 2018. Technology vendors with a highly diversified partner ecosystem and vertically integrated professional services will be preferred by social networks and by broadcast TV & video segments that slightly differ from the global vendor selection trend. Finally, 51% of internet TV & video enterprises and 52% of sports franchises have procured technology from direct and system integration sales channels in the past 12 months.

**Figure 4: Global, live media transport solution procurement outlook**



Source: Ovum, n=331 (March 2019)

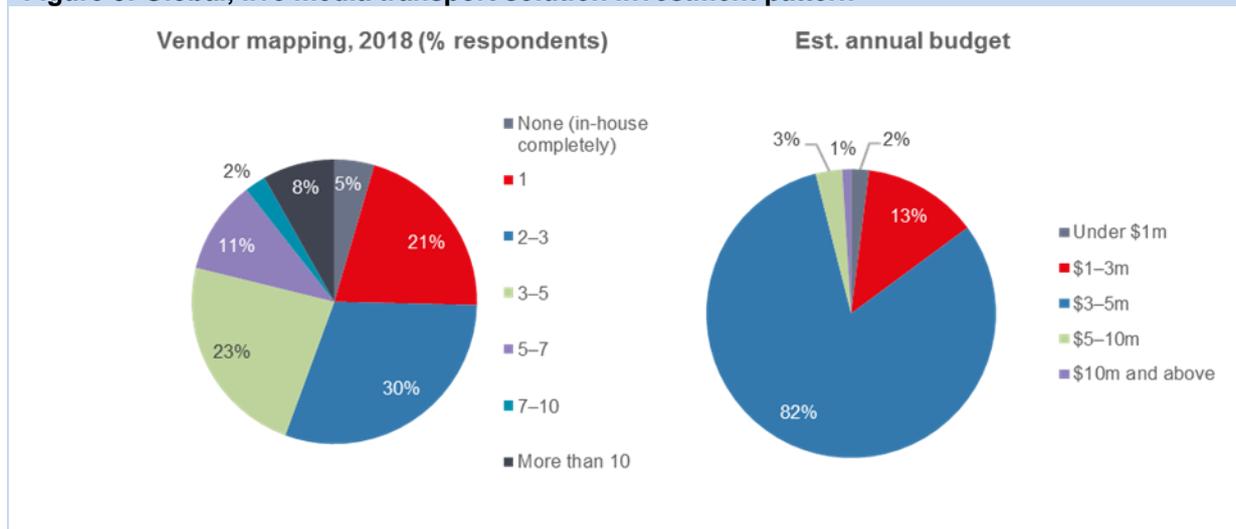
## Multivendor strategy predominant, with gradual shift toward portfolio centralization in 2019

### Annual average budget spend lies in \$3–5m range

Historically, the majority of premium content owners have followed a "siloes and fragmented" approach toward building their live TV & video ecosystem (i.e., leveraging multiple technology suppliers, and stacks for diverse geographies [local and regional markets]). This can be witnessed with the three-quarters of enterprises that reported leveraging more than one vendor for their live media transport workflow in 2018. Furthermore, less than 10% of enterprises plan to centralize their ecosystem with a single vendor in the next 12 months. This siloes and fragmented approach has not only been associated with 77% of enterprises being dissatisfied with existing solutions, but also pushed the annual average budget earmarked for live media transport workflow to up to \$5m (for 82% of enterprises). In the US, 17% of enterprises have low annual budget allocations of \$1–3m. As cost control becomes vital for most premium content owners, the push toward a single-vendor strategy will eventually result in lower TCO, realized through the reduction in the complexities of multifaceted support, maintenance, and integration costs along with economies of scale found through a unified live media transport workflow across multiple geographies in collaboration with a decentralized production module (remote).

A quarter of enterprises in the UK are already leveraging a single vendor with a vertically integrated solution for their live media transport workflow. Social networks will lead vendor portfolio centralization, with 42% utilizing a single vendor with a vertically integrated solution by 2019.

**Figure 5: Global, live media transport solution investment pattern**



Source: Ovum, n=331 (March 2019)

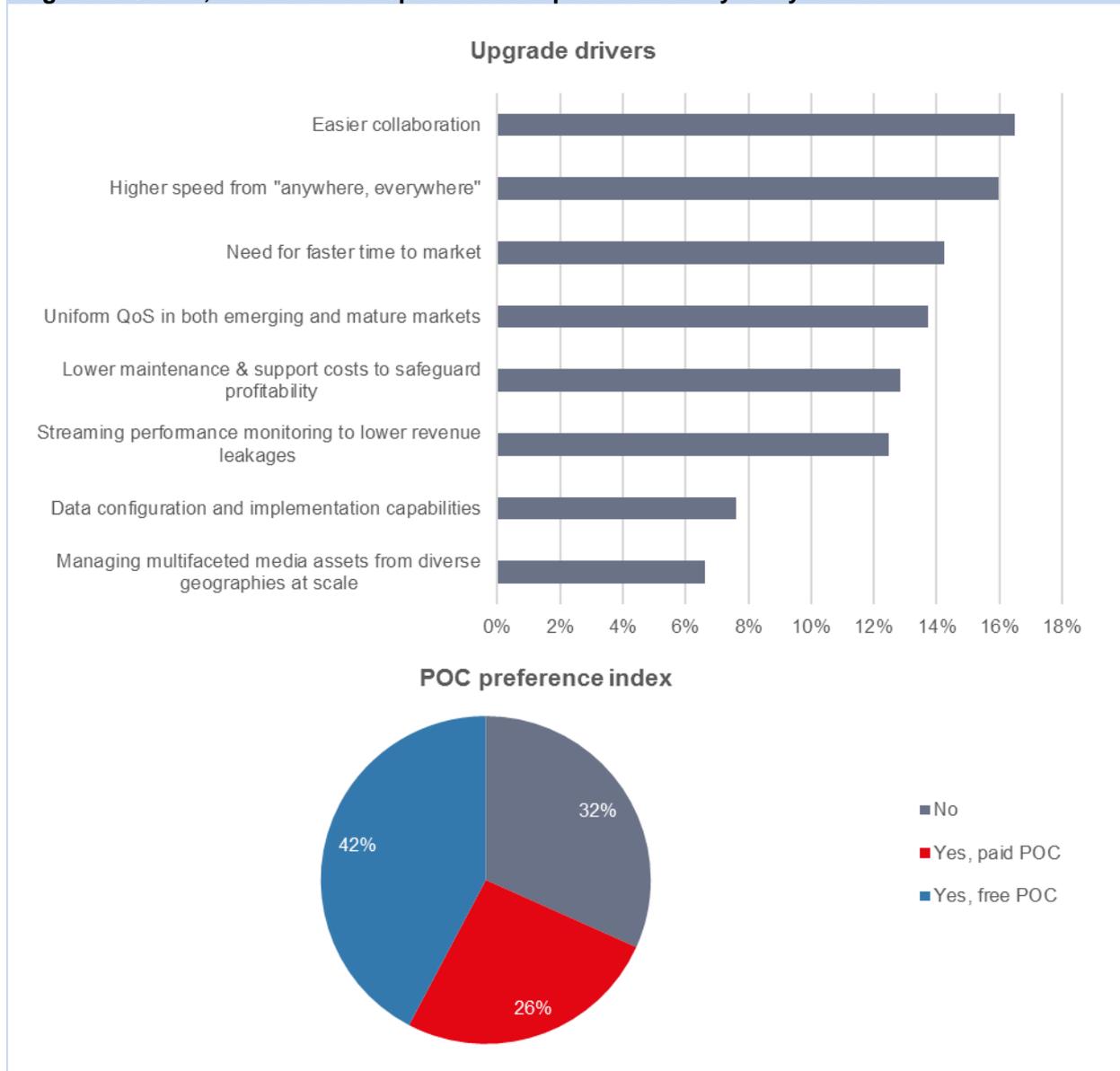
## Better collaboration, faster time to market, and lower maintenance costs to stimulate existing solution upgrade cycles

### Average paid POC TTV stands at \$150,000

In 2018, 77% of enterprises were dissatisfied with their current live media transport solution, but due to costly infrastructure, especially with satellite-centered delivery routes, the upgrade cycle will remain slow in the short to medium term. Globally, less than 15% of enterprises are planning to transform or replace their current solutions with more agile and IP backbone-centered offerings. Furthermore, less than 30% of enterprises are likely to prefer that a paid POC was run before embracing newer technology stacks, and the average POC TTV stood at \$150,000 in 2018. Finally, 44% of enterprises highlighted that improved media workflow collaboration (flexible editing and production workflows), faster time to market for newer services, and reduced support and maintenance costs remain the core drivers for upgrading their existing solution whether this involves minor or major modifications.

Enterprises in the EMEA region will be the highest spenders on paid POCs, with an average TTV of \$200,000. Furthermore, 11% of these enterprises will be upgrading data configuration and implementation capabilities in the next 12 months. The post-production and enterprise video segments will lead paid POC-centric technology procurement, with a combined average TTV of \$230,000. Finally, 8% of social networks highlighted that their solution upgrade budget will focus on enhancing their capabilities to manage multifaceted media assets from diverse geographies at scale.

**Figure 6: Global, live media transport solution procurement cycle dynamics**



Source: Ovum, n=331 (March 2019)

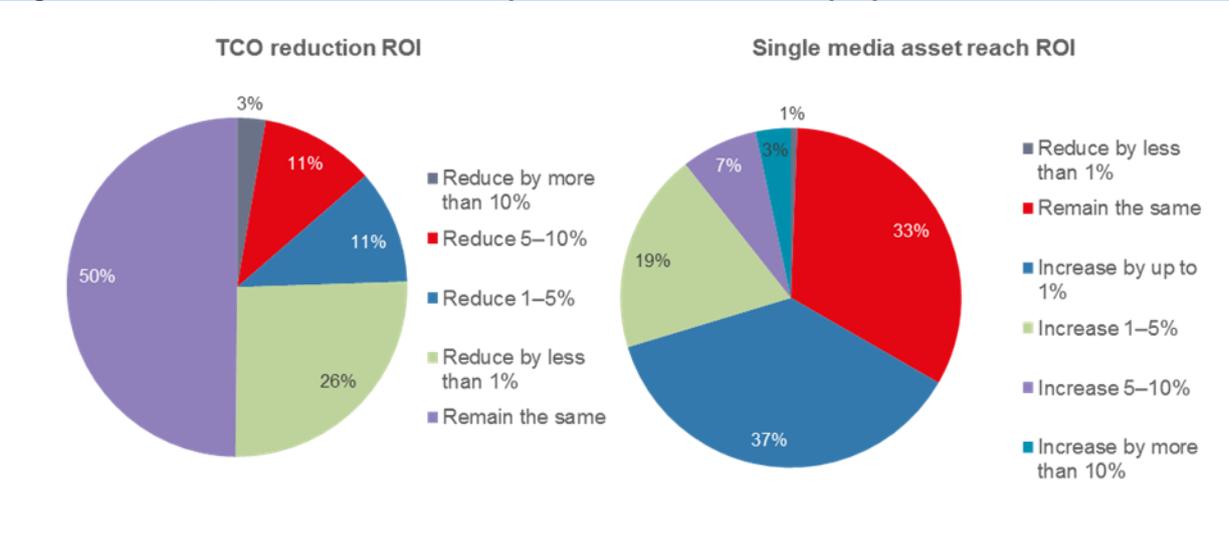
## Agile live media transport solutions over IP to safeguard profitability and extend reach

Live media transport workflow accounts for 32% of content supply chain TCO

### Average ROI estimated at 34% in the long term

In the highly competitive global multiscreen TV & video services market, acquisition of premium live content repositories, especially tier 1 sports such as the English Premier League, NFL, and IPL, is insufficient to generate high ROI today. Thus, building scalable horizontally and vertically diversified live content repositories (i.e., tiers 1, 2, and 3 local, regional, and global assets pertaining to sports and other live entertainment) is vital to maintain market dominance. Furthermore, existing live media transport solutions should enable premium content owners to exponentially increase the reach of these diversified content repositories at lower TCO to improve operating margins in the long run (i.e., reinvesting the profits into securing niche premium live assets). Some 56% of enterprises highlighted that a cloud live media transport solution on IP can enhance single media asset reach by 1–5%. Also, 37% of enterprises asserted that the technology stack assists in lowering live media transport workflow TCO by 1–5%. As live media transport workflow is highly capital intensive, accounting for 32% of content supply chain TCO, a reduction of 1–5% is a significant cost saving in the long run. Finally, the expansion of single media asset reach will not only help retain digital users but also have positive impact on ARPU. Therefore, cloud live media transport solutions on IP help premium content owners meet their core and non-core business priorities, offering an average ROI of 34% in the long run. Enterprises streaming between 251 and 500 events per annum highlighted higher short-term ROI of 23% compared with those delivering double the feeds (751–1,000). Enterprises streaming more live events perceive agile live media transport solutions to provide higher returns with the increasing usage of nontraditional deployment routes such as IP. A good example is that enterprises streaming more than 1,000 events per annum will likely see ROI double from 31% to 64% in 2018–23.

**Figure 7: Global, cloud live media transport solution on IP value propositions**



Source: Ovum, n=331 (March 2019)

**Table 1: Global, cloud live media transport technology on IP perceived ROI: live repository content value, 2018 vs. 2023**

Media enterprises by events per annum	Average live content repository value (\$m)		Increase in multiples (x)
	2018	2023	
Less than 50	200	250	1.3
50–100	250	325	1.3
101–250	275	450	1.6
251–500	300	600	2.0
501–750	375	725	1.9
751–1,000	450	850	1.9
More than 1,000	475	985	2.1

Source: Ovum, n=331 (March 2019)

**Table 2: Global, cloud live media transport technology on IP: ARPU, ARC, and reach, 2018 vs. 2019**

Media enterprises by events per annum	ARPU (\$)	Reach increase	ARPU (\$)	ARC (\$)	ARC (\$)
	2018	2019	2019	2018	2019
Less than 50	100	1.0%	101.0	35	34.0
50–100	100	2.5%	102.5	31	30.5
101–250	100	2.5%	101.0	36	35.1
251–500	100	5.0%	102.5	35	33.2
501–750	100	6.0%	101.0	27	25.8
751–1,000	100	5.0%	105.0	24	24.0
More than 1,000	100	3.5%	103.5	33	31.0

Source: Ovum, n=331 (March 2019)

**Table 3: Global, cloud live media transport technology on IP: margin and ROI impacts**

Media enterprises by events per annum	Margin (%)		ROI (%)	
	2018	2019	2019	2023
Less than 50	186%	197%	11%	14%
50–100	223%	236%	13%	18%
101–250	178%	188%	10%	16%
251–500	186%	209%	23%	46%
501–750	270%	292%	21%	41%
751–1,000	317%	338%	21%	39%
More than 1,000	203%	234%	31%	64%
<b>Global average</b>			19%	34%

Source: Ovum, n=331 (March 2019)

## Recommendations

As investments into live content repositories continue to surge, legacy delivery routes will be insufficient to build a lasting, highly scalable TV & video streaming ecosystem. Furthermore, traditional technology stacks will be unable to deliver a robust premium QoS/QoE to every live audience across multiple screens at optimal costs. Media companies that do not address their live media transport workflow in response run the risk of losing ground to agile and more audience-focused competitors. IP (open and private) will surpass satellite as the second most prominent delivery route, and slow but gradual reduction of dependencies on traditional modes, including fiber, will eventually offer significant cost savings. Also, leveraging a unified live media transport workflow streamlines media contribution, reduces production-to-distribution TCO (which now stands at 32%), and guarantees premium QoS/QoE with negligible pre-buffering, packet loss, and round-trip delays.

Tomorrow's premium content owners need to leverage diverse media production workflows (including remote) to enable them to improve their engagement rates and ARPU. By transforming their media contribution-to-distribution workflows, and leveraging a tightly integrated cloud live media transport over IP solution, they can

- enhance real-time remote media workflow collaboration (e.g., flexible editing and production workflows) to reduce time to market and improve overall productivity
- improve single or multi-event media asset volume management from diverse repositories and locations to expand reach
- access higher-bandwidth utilization rates and extend single media asset reach
- reduce their TCO
- accelerate operational productivity via a converged content supply chain
- improve time to market with flexible support for multiple deployment modes (cloud, hybrid environments) and configuration (fully managed) frameworks.

## Appendix

### Some additional key messages from the study

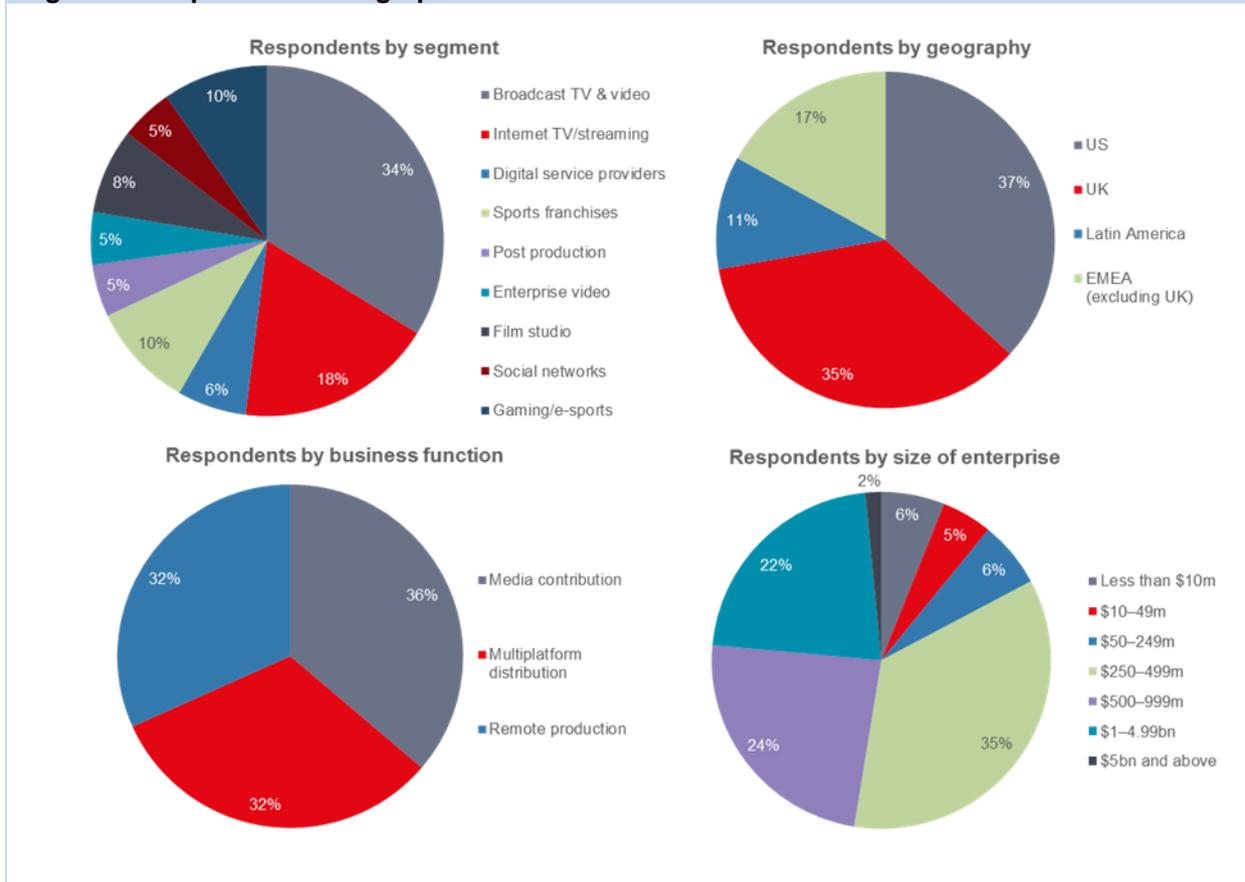
#### Global

- Almost 80% of enterprises have earmarked an annual budget of \$3–5m for their live media technology solution.
- Both paid and free POCs lie at the center of technology procurement strategies, with an average TTV of \$150,000.

#### Regional/segmental

- More than one-sixth of social networks (16%) and sports franchises (19%) will have live content repositories worth more than \$5bn by 2023.
- Gaming, film, and broadcast TV & video enterprises will be the fastest adopters of IP-based live media transport solutions.
- Almost all of the cloud deployments in social networks are on private offerings, whereas gaming segments prefer public offerings.
- Direct sales (39%) dominate the internet TV & video segment, with a higher preference toward system integrators (33%) among sports franchises.
- 9% of film studios and 12% of internet TV & video enterprises highlighted that enhancements to data configuration and implementation capabilities will drive their current system upgrade investment strategy and assist in reducing service deployment lead-time.

**Figure 9: Respondent demographics**



Source: Ovum

## Summary

### Catalyst

Ovum's ICT Enterprise Insights 2018/19 survey indicates that creating a highly profitable, and scalable, live engagement ecosystem is the top business priority for 41% of media enterprises over the next 12–18 months. However, the demand for re-engineering the live media transport workflow is not only to lower the total cost of ownership (TCO), but also deliver unprecedented premium quality of service (QoS) and quality of experience (QoE) – irrespective of location, device, and network – as user expectations, across the content lifecycle, continue to grow. This drove IBM Aspera to commission Ovum to develop and conduct a top-level sentiment and viewpoint survey on live media transport technology. Ovum believes that embracing an agile backbone along with live media transport solutions over IP, which enable broadcast experiences with zero latency, will help media companies deliver against QoS and QoE demands, and help them achieve greater operational productivity, better remote media workflow collaboration, and optimized traffic volume management.

### The adoption of live media transport solutions over IP will rise exponentially in the next 2 years

As per the survey, the adoption curve will differ across segments, with enterprises in the gaming, film, and broadcast TV & video markets as early movers toward IP-based live media transport solutions, the need to lower TCO without offsetting premium QoS/QoE "anywhere, everywhere" will enable strong growth prospects in the long run. Furthermore, as live becomes a vital tool to improve multiscreen engagement rates, enterprises believe live media transport solutions over IP will deliver high return on investment (ROI) of 34% and an average proof-of-concept (POC) total transaction value (TTV) of \$150,000 – crucial indicators of a positive future outlook. Some of the key findings from the research are:

- By 2023, more than 10% of media enterprises live content repository will be worth more than \$5bn. Average live content repository spend is estimated to rise 1.7x in 2018–23.
- Almost 80% of media enterprises surveyed are dissatisfied with their existing live media transport solutions with poor multi-device detection, and unified testing collaboration capabilities pivotal challenges driving this dissatisfaction.
- Media enterprises streaming more than 1,000 events per annum highlight that unified live media transport technology on IP is anticipated to provide an ROI of more than 60% (Vs global average of 34%)
- IP will be the fastest growing delivery route across global live streaming market, accounting for roughly a quarter (24%) of total streams in the next 4 years (2023)
- Gaming/e-sports, social networks, and sports franchises to remain the leading spenders on live media transport solution with almost 6% earmarking twice the annual budget for this technology (Vs global average of \$3-5mn)
- 41% of media enterprises in Latin America to embrace an agile live media transport solution on IP to lower their TCO, and accelerate paradigm shift towards remote production

## Scope of paper

IBM Aspera commissioned Ovum to develop and conduct a top-level sentiment and viewpoint survey on live media transport technology. Ovum interviewed 331 technology decision-makers and influencers across the US, UK, Asia-Pacific, and EMEA.

The survey encompassed nine sub-premium live content-owner verticals: broadcast TV & video, internet TV streaming, digital service providers (cable TV, satellite TV, and telco OTT), sports franchises, post production, film studios, social networks, gaming/e-sports, and enterprise video. The core respondents for this survey were technology buyers from media contribution, production (remote), and multiplatform distribution business units globally and regionally.

The research paper aims to address the most commonly cited questions pertaining to core value and ROI of cloud live media transport technology on IP to premium content owners in the emerging live content "anywhere, everywhere" era.

## Definitions

This study revolves around live media transport solutions, which consist of three core dimensions:

- **Contribution:** Capture, source, ingest, and transfer of video, data, and files to production facilities.
- **Production and processing:** The high-speed transfer and processing of media assets (e.g., video, data, files) within a workgroup for repurposing these assets.
- **Distribution:** Fast and secure transfer of these repurposed video streams to the edge content-delivery networks (CDNs).

Live media transport technology only covers the transfer of video assets and associated data, across either internet (IP) networks, fiber, or satellite uplinks. The technology enables media enterprises to capture time-bound video, data, and files, and transfer these assets to production facilities (remote, centralized, or onsite) where they are repurposed for multiple screens (i.e., linear and non-linear TV & video services) on a real-time basis.

## Methodology

Ovum formulated an in-depth trade interview framework encompassing close to 30 questions investigating the current status and future outlook of live media transport technology, with an emphasis on delivery routes (IP, fiber, satellite); mode of initial deployment (cloud, hybrid, on-premises); perceived procurement benefits; and ROI across the premium content owner's space.

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