

# How AVoIP is Giving Viewers the Best Seat in the House





## **AVoIP Adoption Expected to Continue**

*Usage of AVoIP is on the rise as an economical way to meet increased live broadcast viewership demands; current adopters are seeing benefits meet & exceed expectations*



## **Talent Scarcity for AVoIP Technical Skills As A Barrier to Greater Adoption**

*Demand for engineers to operate AVoIP technology is greater than the current supply, resorting to hiring from adjacent industries; broadcasters had a noticeable change in diversity recruiting but retention remains a challenge*



## **Data Collection & Object-Based Broadcasting On the Horizon**

*Other emerging AVoIP innovations include advanced cloud-based solutions, interactivity & personalization, and micro-services*

Photo Courtesy of Pexels

Sources: 2022 Altman Solon Global Film & TV Production Survey, Altman Solon Research & Analysis



# Demand for high quality live content is increasing; consumers/viewers are watching more live events than ever before and have less tolerance for low quality broadcasts



## Growing consumer demand for premium live content

**~50B**  
2022

### Global Broadcast & Media Video Infrastructure Spend

- Projected to grow in single digits percentage over the next 5 years
- Includes (but not limited to) sports games, news programs, music concerts, conferences, political hearings, & religious services

**58%**  
2022

### Percentage of Viewers in the US Who Watched Live TV Sports Content At Least Once A Month

Based off survey on N=5062 in 2019 and N=1011 in 2022



## Increased consumer standards for high quality content

Consumers want the same high quality of experience on OTT services as they are used to on broadcast channels



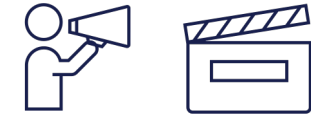
**19.8%**

Difference in viewer engagement between high- and low-quality videos<sup>1</sup>



"There is a real need for a consistent level of user experience delivered across all devices, with a **fast time to market to address rapidly evolving consumer needs**. When it comes to streaming, 'just good enough' just doesn't cut it anymore!"

– Director of Production Engineering and Technology at a Broadcaster



## Broadcasters incentivized to produce more live events

Increasing number of live broadcasts creates opportunities for **more ad insertions and indirect revenue streams as advertisers charge for more viewers, cheaper AVoIP solutions, and improved technology**

"As **businesses reach maturity, they're looking at new business models to serve their consumers**. in the ad-supported business you need **events that will support that scale**. Sports is the type of **content that can drive uptake**, and so **we are going to see them play a bigger role**."

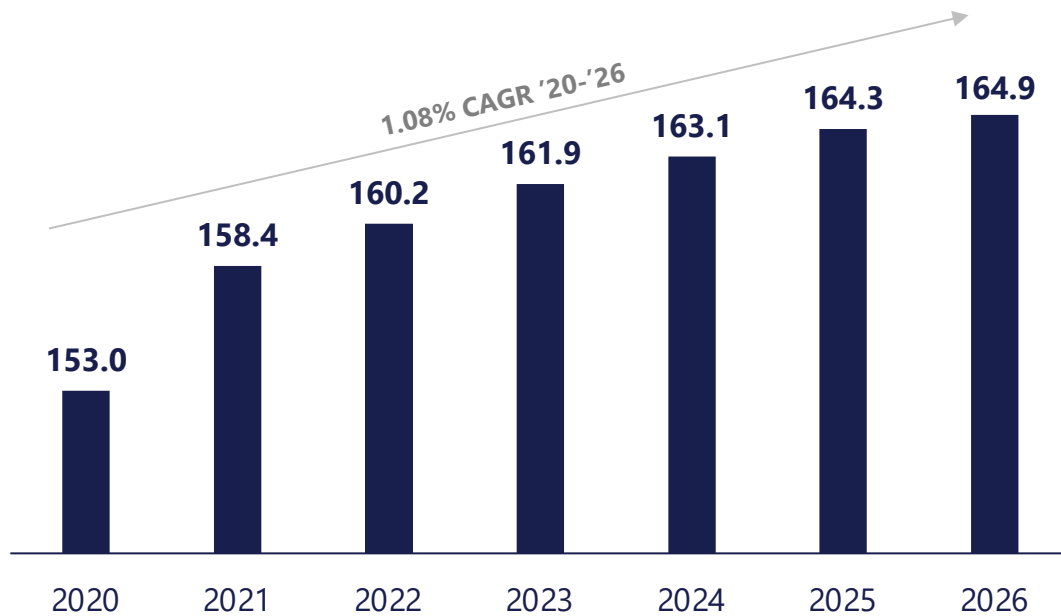
– Co-Founder of OTT Managed Service Provider

Sources: 1) Akamai, 2) Altman Solon Research & Analysis

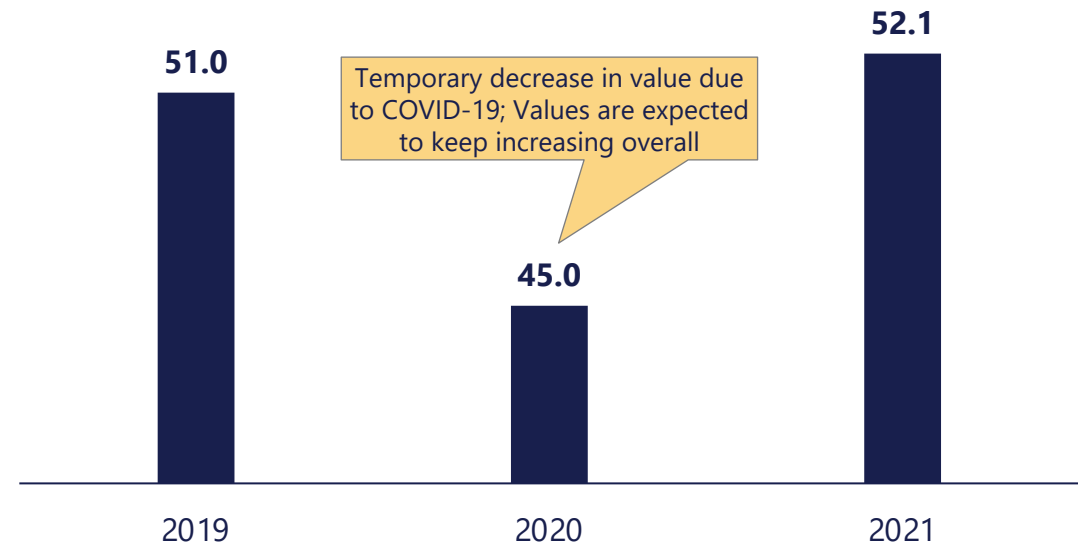


# Upward trends in sports media viewing and value is an indicator that viewership for live event broadcasts overall is increasing, contributing to more demand for AVoIP

How many people watch live sports in the US?  
Millions of people of any age who watch sports at least once per month



What's the global value of sports media rights?  
\$bn USD



- In 2022, about 160.2 million viewers in the US watched live sports content at least once a month; This figure is projected to increase to more than 164.9 mil by 2026

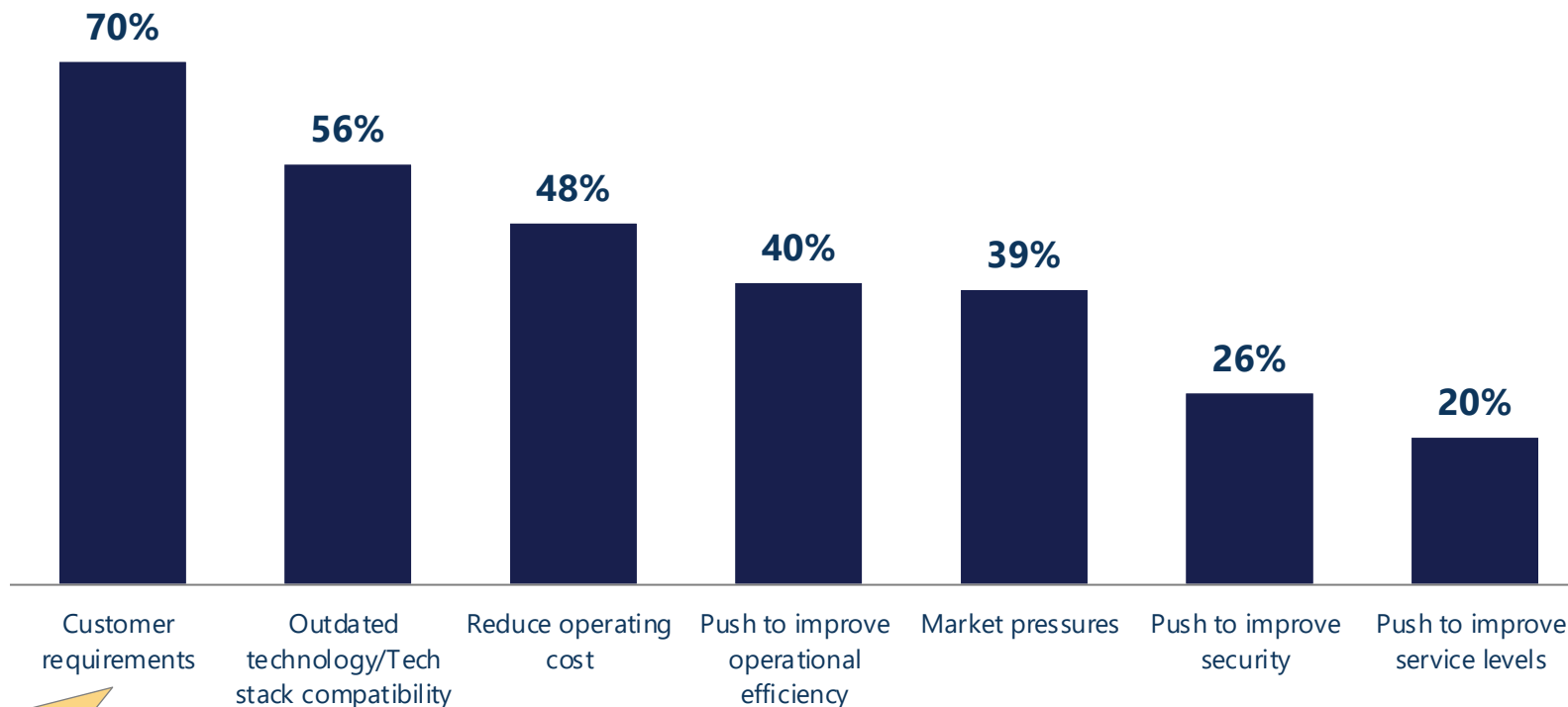
- The global value of sports media rights - \$52.1bn in 2021 – has risen by about \$7.2bn since last year, an increase of just under 16% on last year's Covid-affected total. It is also about \$1.1bn more than 2019's total of \$50.9bn, underlining the industry's resurgence

Sources: eMarketer, Sport Business Consulting Global Media Report, Altman Solon Research & Analysis



# As broadcasters increasingly adopt AVoIP to take advantage of the increased demand they are also faced with shifting requirements in an evolving landscape

How have your AVoIP requirements changed over the last 12-18 months?  
% of respondents and changing technological needs, n=102<sup>1</sup>



The "customers" of survey respondents are primarily content distributors

- 70% of respondents reported that their **AVoIP requirements are changing in response to content distributor needs**
  - The increase in viewership has led to an **increase in distributors/end points**
  - **AVoIP can scale up to meet this demand** cost-efficiently

*"The number of games never changes but the number of destinations is increasing. That's a positive for that industry."  
– Fmr VP Biz Dev, Service Provider*

Notes: 1) n=102 represents qualified respondents with an AVoIP background  
Sources: 2022 Altman Solon Film and TV Production Survey, Altman Solon Research & Analysis

# Audio and Video over Internet Protocol (AVoIP) is a method of transporting audio, video, and metadata materials using an internet connection

## AVoIP Transport Process

### Deconstructed

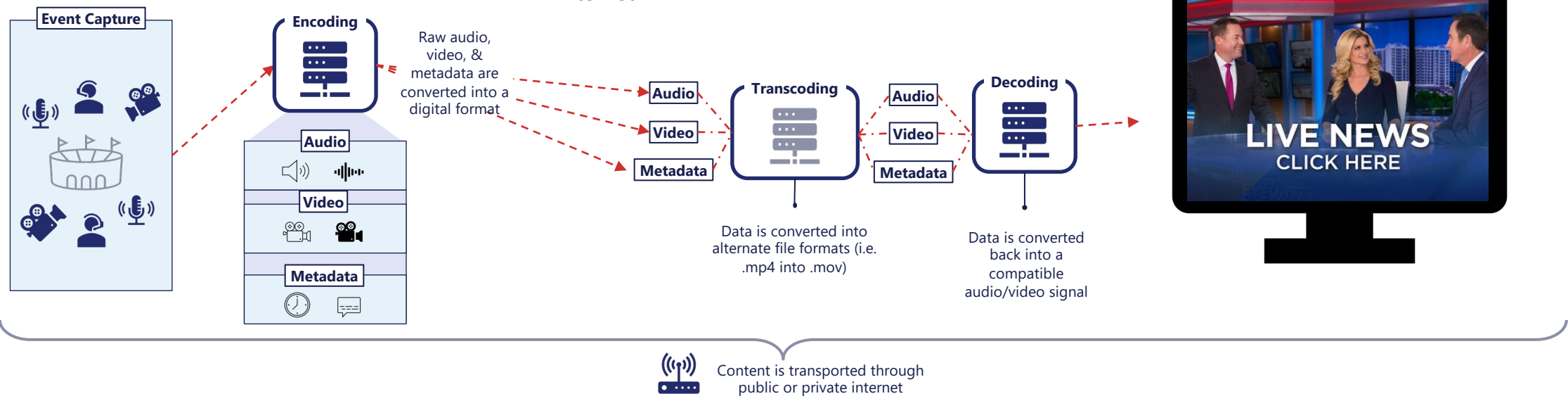
Television broadcasters and streamers have been utilizing AVoIP infrastructure to **deconstruct live audio, video, and metadata** (such as closed captioning and timecodes) into **different data packets during encoding** for each individual video angle and audio capture

### Easily Transmitted

These streams are then transported over IP as **individual packets of data** through **encoders, transcoders, and decoders**. In this process, large video and audio files are **compressed and uncompressed in real-time** so they **use less network bandwidth** and are **easily transmitted** across the public internet









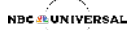
















































### Synchronized

Once the packets reach their destination, they are **recombined synchronously** to produce a live broadcast of content



# Live video infrastructure users in the market fall within four key segments, with legacy players and disruptors leading

## Selected market segments

| User Segment Name                                | Example Logos  | Buyers in Key Markets of Interest  |   |
|--|--|--|---|
|  |  |   |    |
| <b>TV &amp; Broadcast</b><br>Legacy Players      |   <br>    |  <br>    |  <br>  |
| Telecoms, Cable, Satellite & MSPs <sup>1</sup>   |     <br>    |  <br>   | <br> <br> |
| <b>Digital Natives / Streaming</b><br>Disruptors |   <br>   |   <br>  | <br>   |
| Broadcast & Infrastructure System Integrators    |    <br>    |  <br>    | <br>   |

Notes: 1) MSP = Managed Services Provider (in the context of media broadcast it can include service providers that even operate broadcast infrastructure owned by broadcasters, telecom or other media companies on their behalf – an example of this is Encompass Digital Media)

Sources: Company websites; Altman Solon Research & Analysis



# While M&A activity in the AVoIP competitive space is healthy, total market consolidation is in the far future due to a growth in the number of small players entering the space

## Mergers & Acquisitions, 2020-2022



### Haivision Case Study

In 2022, Haivision acquired **AVIWEST**, a 4G/5G and bonded cellular company, for \$22.4M; This acquisition not only **indicates Haivision’s determination to remain a market leader**, but also their **interest in innovating in wireless video transport**

### grass valley Case Study

In 2020, **Grass Valley** was acquired by **Black Dragon Capital**, a PE firm focusing on high-growth technology sectors, as a way for the company to maintain sustainable growth in AVoIP; This acquisition highlights a **growing trend in PE firm M&A activity in the AVoIP space, often funding company expansions**

“M&A activity will always happen **but maybe not increase** - since the ecosystem is fragmented and segmented, there will **continue** to be a **space for smaller differentiated players to exist.**”

- CEO at Leading Solutions Provider

“The market **has not even begun to consolidate**; more players will pop up before that; [consolidation] might take place during the **next good run in the market** when video technology is prominent”

- Hybrid Cloud Lead at Major Consulting Solutions Provider

“Though a main challenge in building an end to end solution is that there are many creative decision makers across the value chain, there are some **operational efficiencies across consolidated links in the value chain**”

- Co-founder of OTT Managed Service Provider

Sources: Industry Interviews, Pitchbook, S&P Global, Altman Solon Research & Analysis

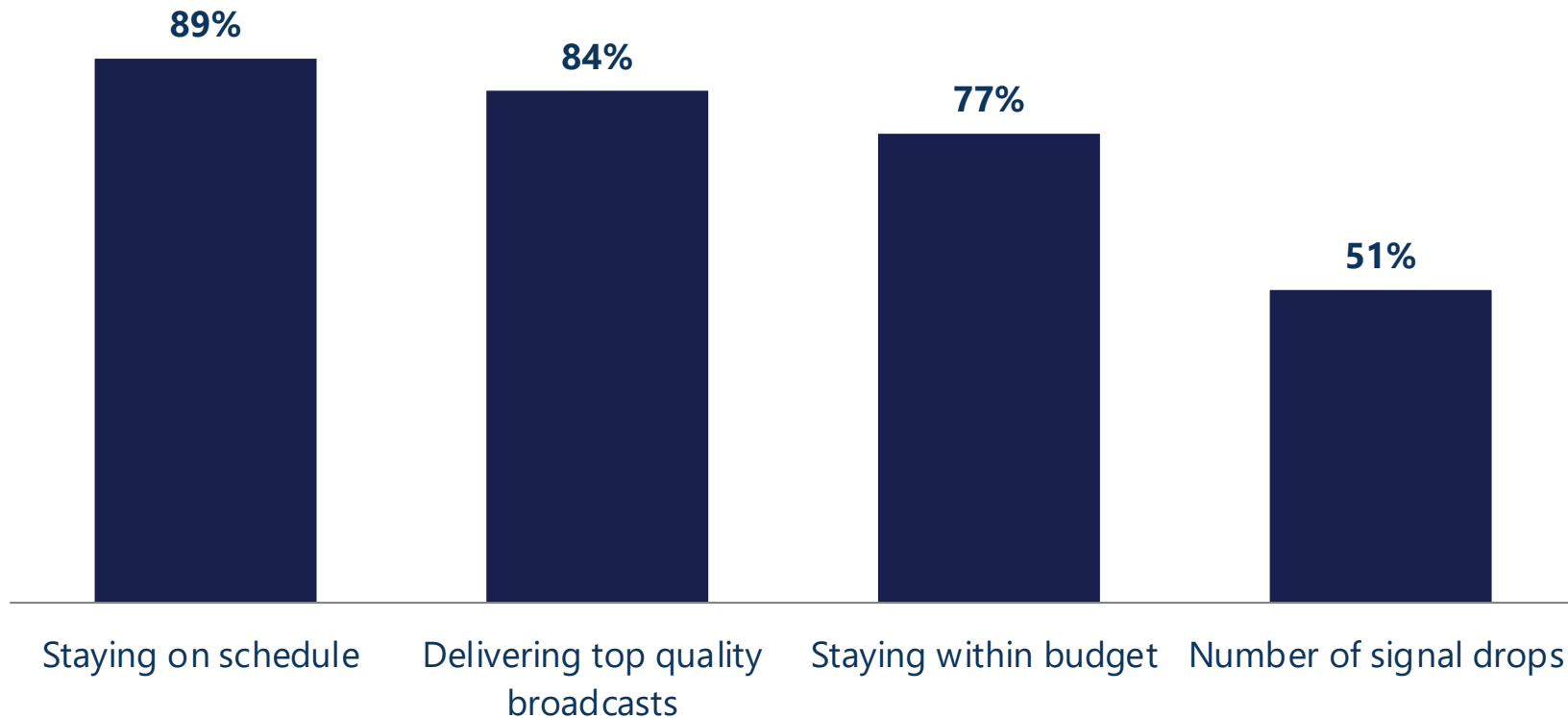




# The measures of a successful broadcast via AVoIP are the same as the measures of a successful broadcast utilizing legacy technology: cost-efficiency and quality

What is the most important measures of successful AVoIP use in a broadcast?

% of respondents selecting tools considered for future use, n=98<sup>1</sup>



- Because live events are broadcast to end points mere moments after they occur in real time, **staying on schedule is vital to delivering on viewers' expectations**
- **Broadcasters are focused on delivering quality broadcasts** regardless of the technology used to transmit the signal
- Since **the primary value proposition of AVoIP is cost savings**, staying within budget is unsurprisingly one of the top chosen responses for measures of a successful broadcast

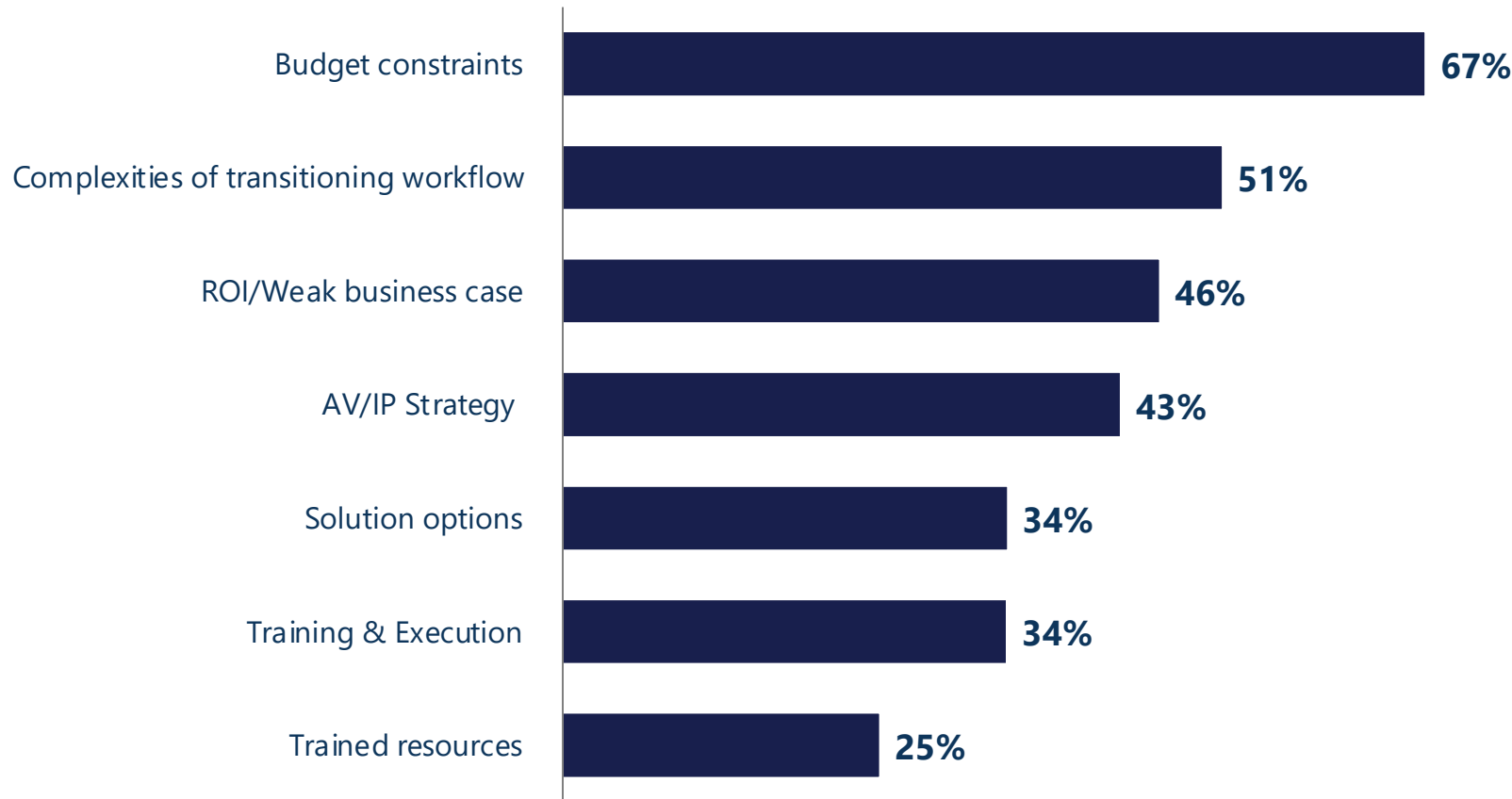
Notes: 1) n=98 represents qualified respondents with an AVoIP background  
Sources: 2022 Altman Solon Film and TV Production Survey, Altman Solon Research & Analysis



# Despite the benefits of AVoIP, broadcasters face constraints to adoption including rigid budget plans, technical complexity, and convincing decision makers

What limitations have prevented you from using, integrating, or increasing AVoIP production capabilities into your workflow?

% of respondents selecting limitations of AVoIP, n=102<sup>1</sup>



- Broadcasters typically plan major budgeting decisions 1 – 5 years in advance, making it **difficult for the organization to make investments in new technology ahead of schedule**
  - Costs can include equipment, vendor selection, tech approval processes, resources to align on requirements, installation and staff retraining
- Live event broadcasting infrastructures are complex, multi-faceted systems; **technical expertise is required to maneuver the transition**
  - Often broadcasters transition hardware and workflows piecemeal
- **Any new investment must be accompanied by a strong business case**, especially when current workflows are functional and reliable

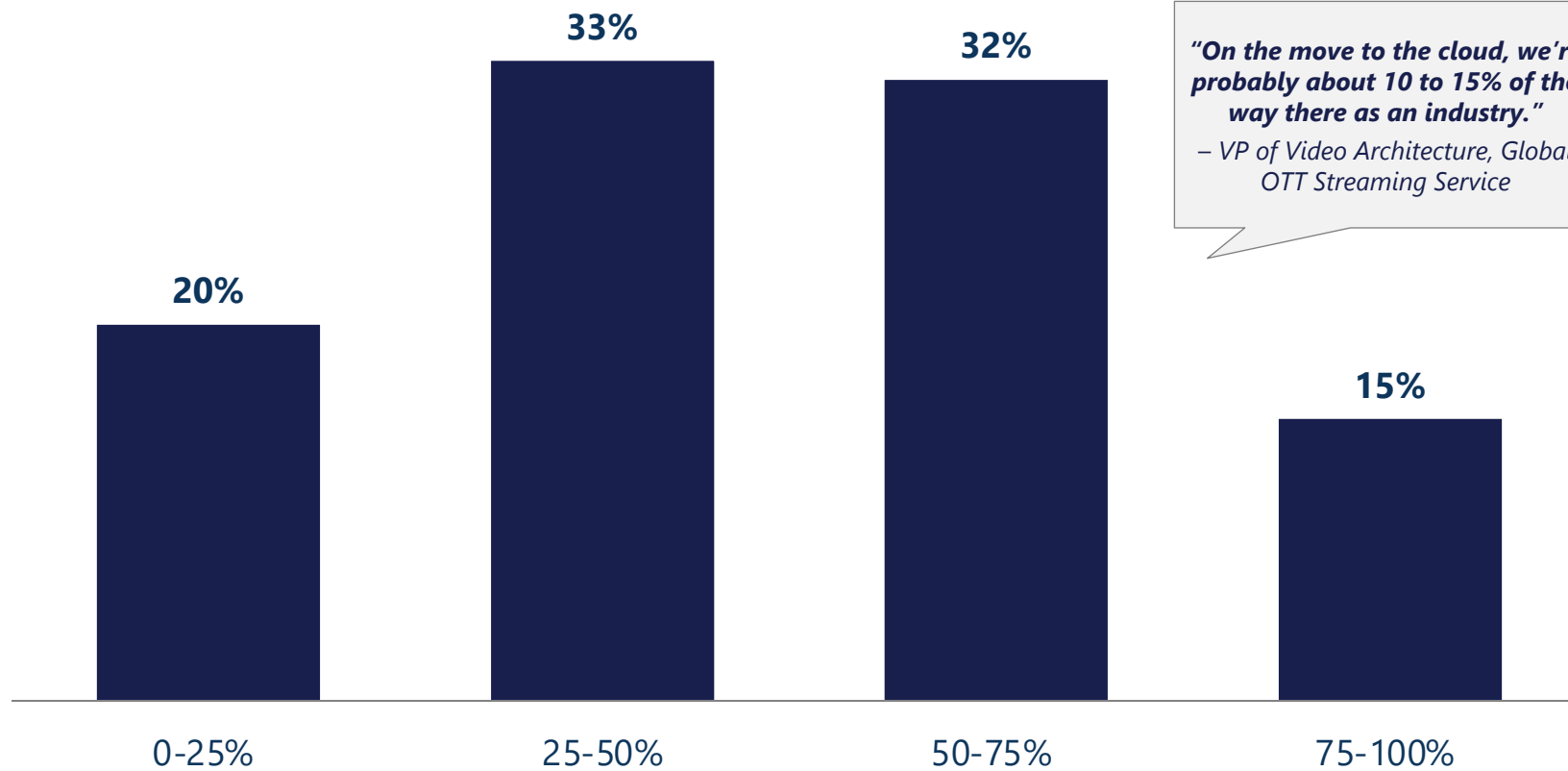
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# The industry is trending towards increased use of cloud computing for AVoIP live broadcasting, but is not yet relied upon heavily

What percent of your AVoIP live broadcasting infrastructure is reliant on cloud capabilities (excluding user-generated content/platforms)?

% of respondents and estimated % reliant on cloud, n=102<sup>1</sup>



*"On the move to the cloud, we're probably about 10 to 15% of the way there as an industry."*  
– VP of Video Architecture, Global OTT Streaming Service

- Broadcasting infrastructures are, on average, less than 50% reliant on cloud-based solutions because **the technology is not as tested and therefore not as reliable** as older systems




- Organizations deciding whether to incorporate cloud capabilities should **weigh their risk-appetite for an unreliable video feed** in favor of the benefits like scalability and flexibility

*"When you get to cloud, you've got much greater scalability. **It fixes a whole bunch of problems. It also brings a whole bunch of problems as well.** But as every new technology does."*  
– VP of Video Architecture, Global OTT Streaming Service

Notes: 1) n=102 represents qualified respondents with an AVoIP background  
Sources: 2022 Altman Solon Film and TV Production Survey, Altman Solon Research & Analysis



# The challenges for broadcasters to adopt cloud are similar to those they face in adopting AVoIP, including unique logistical, security, and cultural challenges in implementation

| Challenges  | Details   | Example  |
|---|---|--|
| <br><b>Logistics</b> | <i>Implementing new hardware, new software, and personnel trained to operate those tools requires ample time and dedicated resources</i>                                      | <ul style="list-style-type: none"><li>• Making new investments ahead of schedule is difficult due to <b>outstanding lifespan of legacy infrastructure</b>.</li><li>• <b>Potential unreliability of equipment</b> leads to trepidation due to high expectations for a consumer centric industry</li></ul> |
| <br><b>Security</b>  | <i>Since cloud-based solutions are off premises, security is an added concern</i>   | <ul style="list-style-type: none"><li>• Using a <b>third party to store data</b> (e.g. for the Olympics) can be an issue.</li></ul>  |
| <br><b>Culture</b> | <i>Cultural challenges in transitioning legacy technicians to a new environment could include implementing an effective change management program throughout the process.</i> | <ul style="list-style-type: none"><li>• Engineers must learn or be replaced by someone who can.</li><li>• Changing production roles (e.g. obsolescence of trucks, staff) is often met with internal resistance</li></ul>   |

Sources: Altman Solon Research & Analysis

Thank You

