Benefits of Utilizing a Cloud-based Solution for Live OTT

An IHS Markit Technology Webinar

#OTT

Customize your console

- Widgets are resizable and movable

  - Use the controls to minimize or maximize a widget

  - Drag the bottom right hand corner to resize it

  - Click the icon to download resources & bookmark helpful links

  - Have a question? Click the icon

  - Click the icon for tech help

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Today's speakers

Benefits of Utilizing a Cloud-based Solution for Live OTT

Przemek Bozek

Principal Analyst, Consumer Electronics, Broadband & Video Technology

IHS Markit

Ashique Anwar

Product Director Online Video Platform

Ooyala

Alex Balford

Senior Product Marketing Manager

Akamai

Allen Tatara

Senior Manager Webinar Event (Moderator)

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1 Market trends & drivers

2 Problems & challenges

3 Moving forward

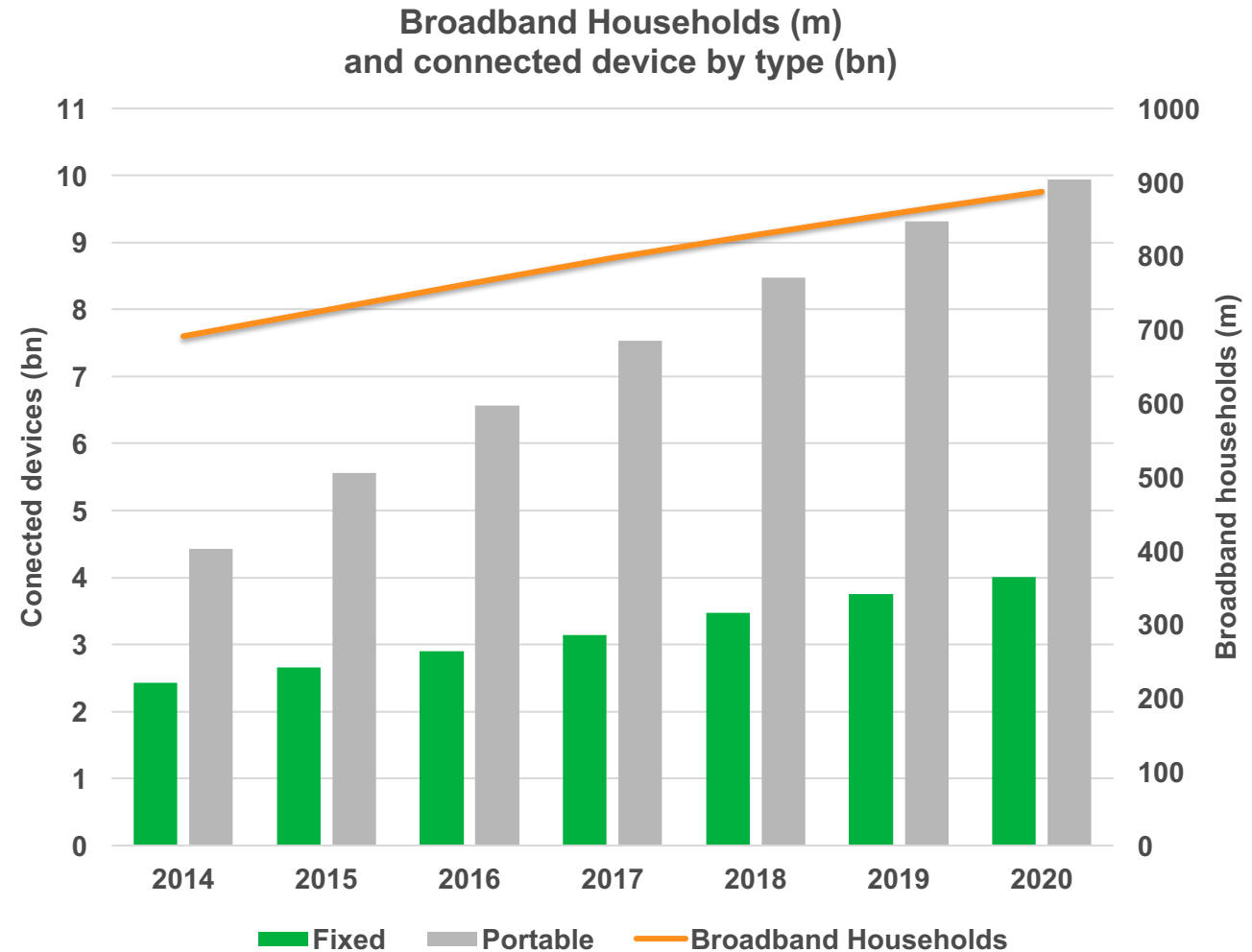**4** Deployment applications

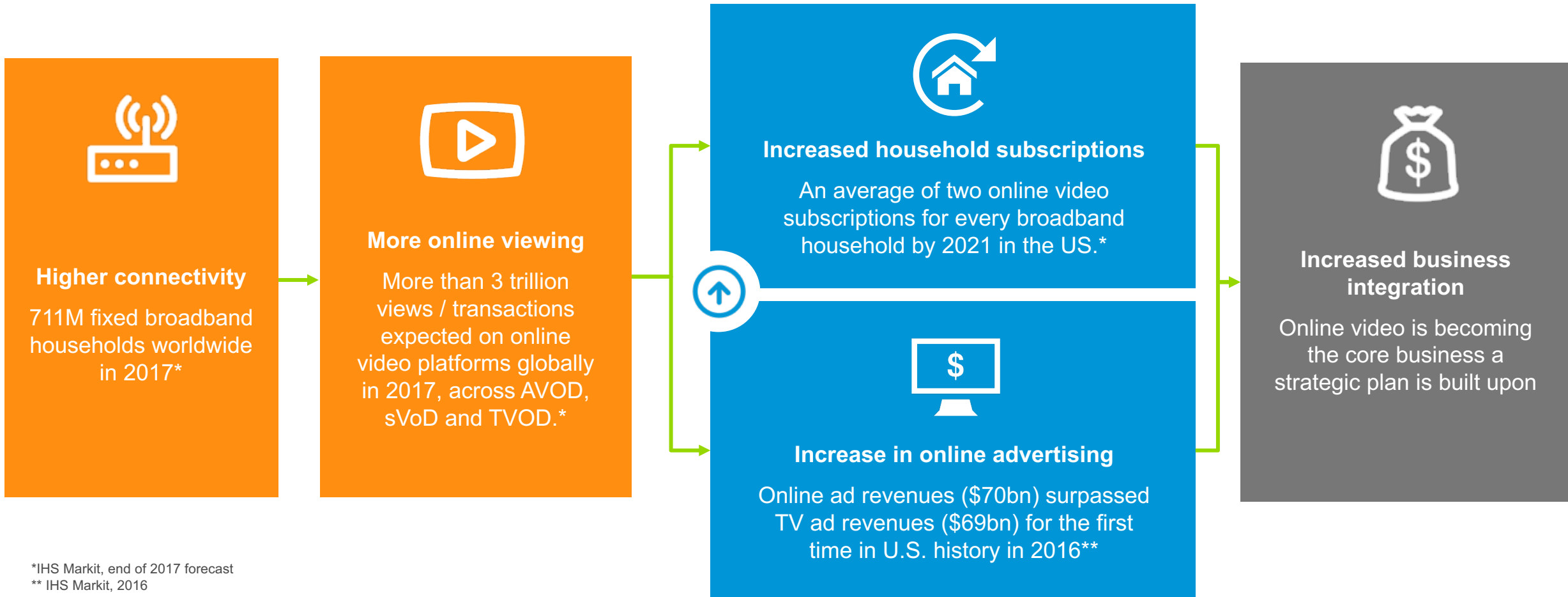**5** Conclusions

6 Audience Q&A

Live video primed for massive growth

- According to IHS Markit's estimations, **over 1,220 EB of data was transmitted globally in 2016**; demand grows exponentially, and in 2030 we expect that it will be at least **330 times greater than today**

- The major drivers are:

  > **The number of connected devices**

  > **Broadband households**: 125m broadband additional households will get connected by 2020 with Asia Pacific responsible for half of that, while MENA to demonstrate the highest growth rate

  > **In 2030 over 80% of all global traffic to be video and media**; the remaining shared between back-office and analytics and control data

  > **Media industry will remain the number one contributor**; live transmissions to subscribers amongst fastest growing individual applications

Broadband Households (m) and connected device by type (bn)

Source: *IHS Markit Connected Devices Intelligence Service*

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OTT opens up new monetization opportunities

Strong growth potential for live linear services

Higher connectivity

711M fixed broadband households worldwide in 2017*

More online viewing

More than 3 trillion views / transactions expected on online video platforms globally in 2017, across AVOD, sVoD and TVOD.*

Increased household subscriptions

An average of two online video subscriptions for every broadband household by 2021 in the US.*

Increase in online advertising

Online ad revenues ($70bn) surpassed TV ad revenues ($69bn) for the first time in U.S. history in 2016**

Increased business integration

Online video is becoming the core business a strategic plan is built upon

*IHS Markit, end of 2017 forecast
** IHS Markit, 2016

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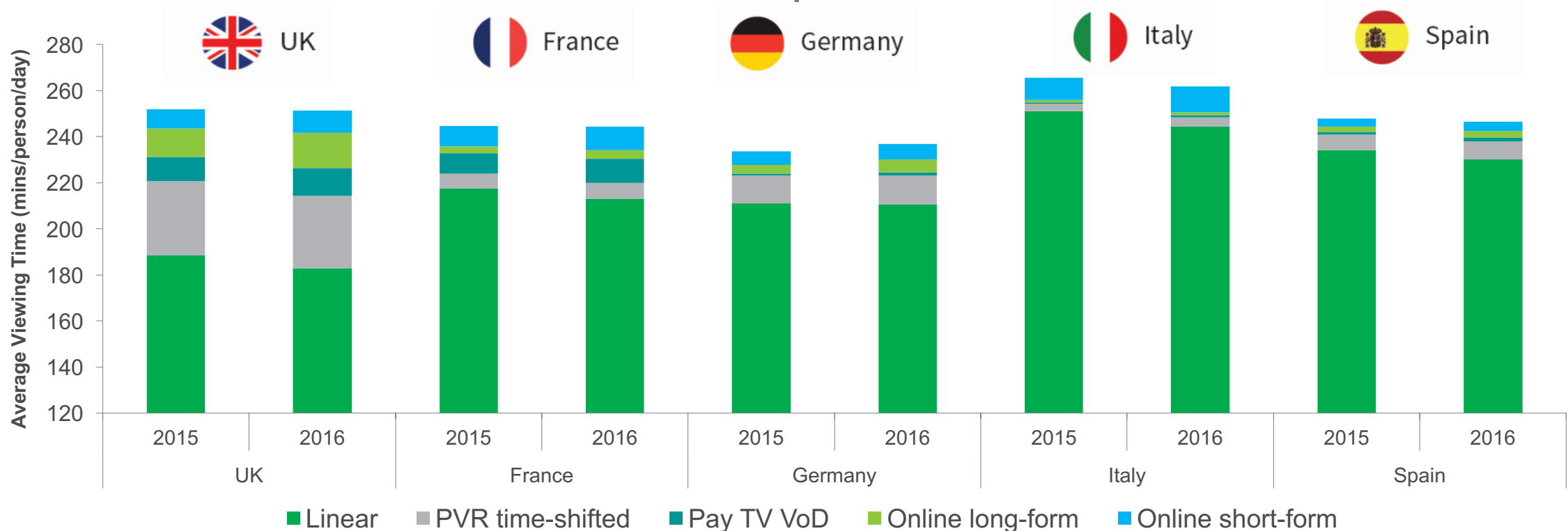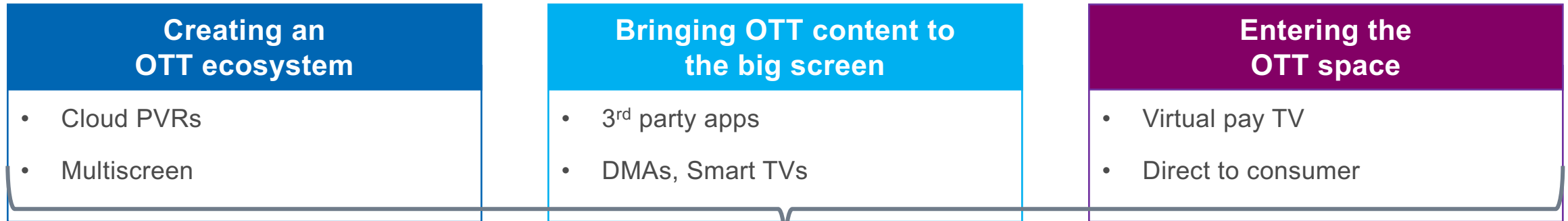
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Growth in live event viewing audiences

Increased viewership for live events over the Internet is a significant trend

Peak live event-related traffic on the Akamai network has grown from 21 Gbps in 2004 to more than 8.7 Tbps in 2016 — an increase of more than 400x. Significant milestones in that time include:

Royal Wedding audiences push peak traffic volumes to 1.3 Tbps.[1]	Super Bowl XLVI audiences push peak traffic to 1.4 Tbps.[2]	FIFA World Cup audiences push peak traffic to 6.9 Tbps.[4]	The Brazil games drive 100x more live streaming than London & Sochi, at 2x speed, & 3x the traffic peaks[4].	Presidential Inauguration audiences push peak traffic to 8.7 Tbps, 16% higher than Election Night traffic & more than 24x higher than the 2013 Inauguration[5].
2011	**2012**	**2014**	**2016**	**2017**

1-3 Akamai.com/LiveEvents; 4 *NBC Olympics Delivers Record-Shattering Digital Coverage Of 2016 Rio Games With Help From Akamai,* Akamai Press Release, September 7, 2016; 5 Presidential Inauguration-related traffic across the Akamai network on January 21, 2013, hit a peak of 0.33 Tbps

Akamai · OOYALA

OTT key in capturing shift to on-demand

Creating an OTT ecosystem	Bringing OTT content to the big screen	Entering the OTT space
• Cloud PVRs • Multiscreen	• 3rd party apps • DMAs, Smart TVs	• Virtual pay TV • Direct to consumer

Legend: Linear | PVR time-shifted | Pay TV VoD | Online long-form | Online short-form

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Live is perceived today as the next big thing

CUSTOMER DEMAND

- Shift to personalized experiences

- Expectations for real-time, original content

TOP CATEGORY SUPPORT

- News & sports - 96% of TV sports viewing in Europe is live

- Expectations for live TV experience everywhere

SOCIAL MEDIA IMPACT

- Expectations for instant access to content

- 36% of smartphone users live stream videos on social media*

Sources: IHS Market, Consumer Survey, Aug 2016. Q6: In the last month, which of the following types of video have you watched on your smartphone?

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1 Market trends & drivers

2 **Problems & challenges**

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Delivering streaming video today isn't like it used to be...

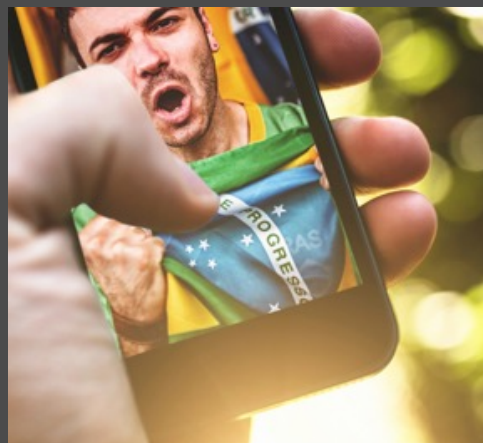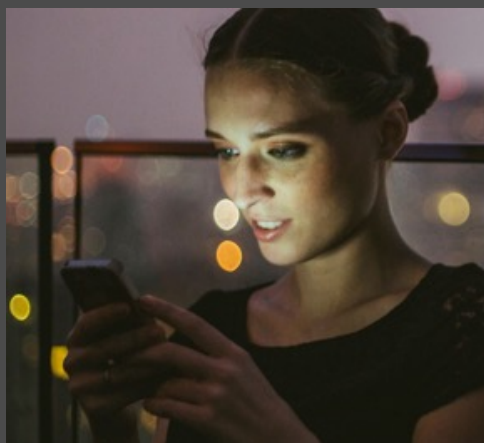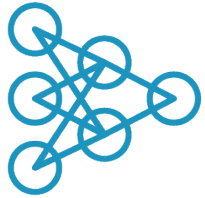| FORMAT & DEVICE LANDSCAPE IS COMPLEX | AUDIENCES ARE GETTING BIGGER | PEOPLE ARE WATCHING LONGER | BITRATE PER USER IS GOING UP | AUDIENCE EXPECTATIONS ARE INCREASING |

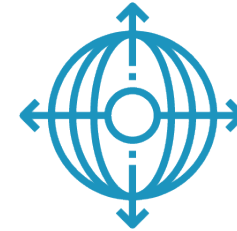# Technical and workflow challenges at every stage…

Management

- Floating starts
- Ingest
- Transcoding
- Packaging
- CMS
- Scheduling
- Blackouts
- *+ more…*

Delivery

- CDN performance
- Spike start
- SSAI
- Ad replacement
- DRM
- Low latency
- High availability
- *+ more…*

Distribution

- Live to VOD
- Syndication
- DVR
- Playlists
- Trimming
- Clipping
- Simulated linear
- *+ more…*

Monitoring

- NOC
- Recovery
- QOS
- QOE
- Reporting
- *+ more…*

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The quality challenge

Viewers had the following reaction when they experienced buffering and low-quality streams
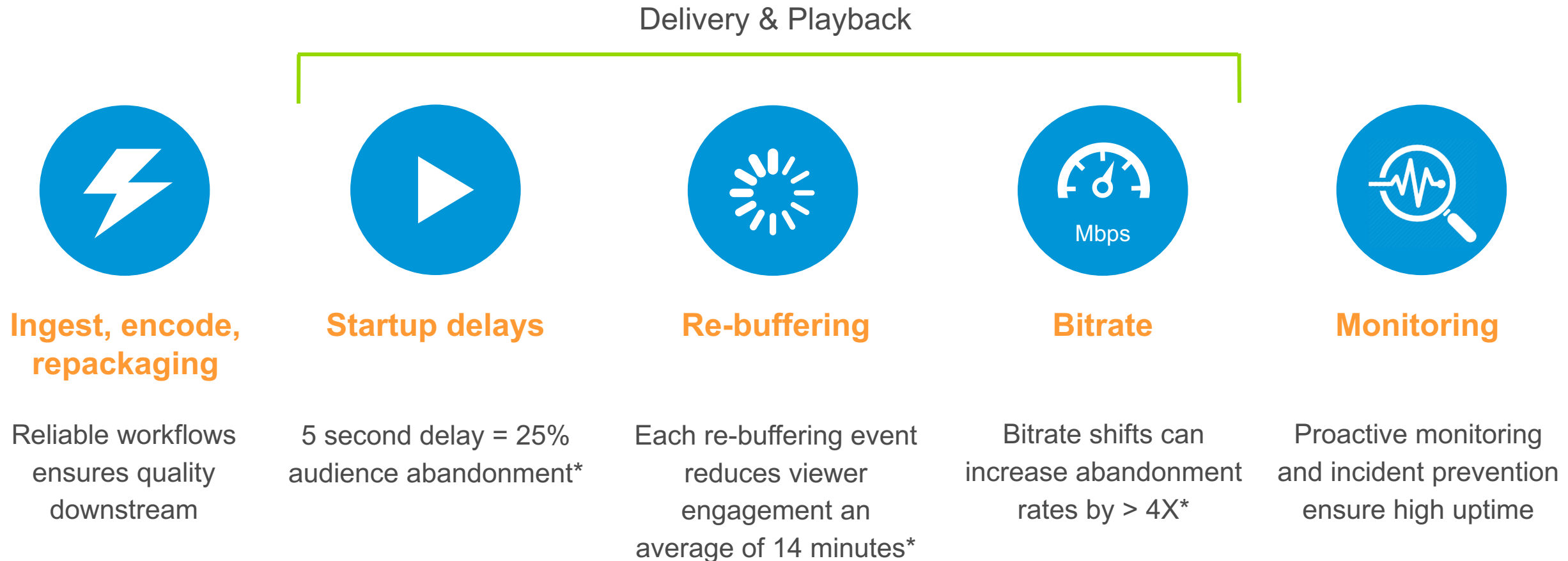
↓ **20%**
Engagement

↓ **14%**
Happiness

↓ **8%**
Focus

Results from a 2016 research study sponsored by Akamai and conducted by Sensum, a market research and biometrics software firm.

Factors that impact quality

Delivery & Playback

Ingest, encode, repackaging

Startup delays

Re-buffering

Bitrate

Monitoring

Reliable workflows ensures quality downstream

5 second delay = 25% audience abandonment*

Each re-buffering event reduces viewer engagement an average of 14 minutes*

Bitrate shifts can increase abandonment rates by > 4X*

Proactive monitoring and incident prevention ensure high uptime

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The latency problem

OTT

TV

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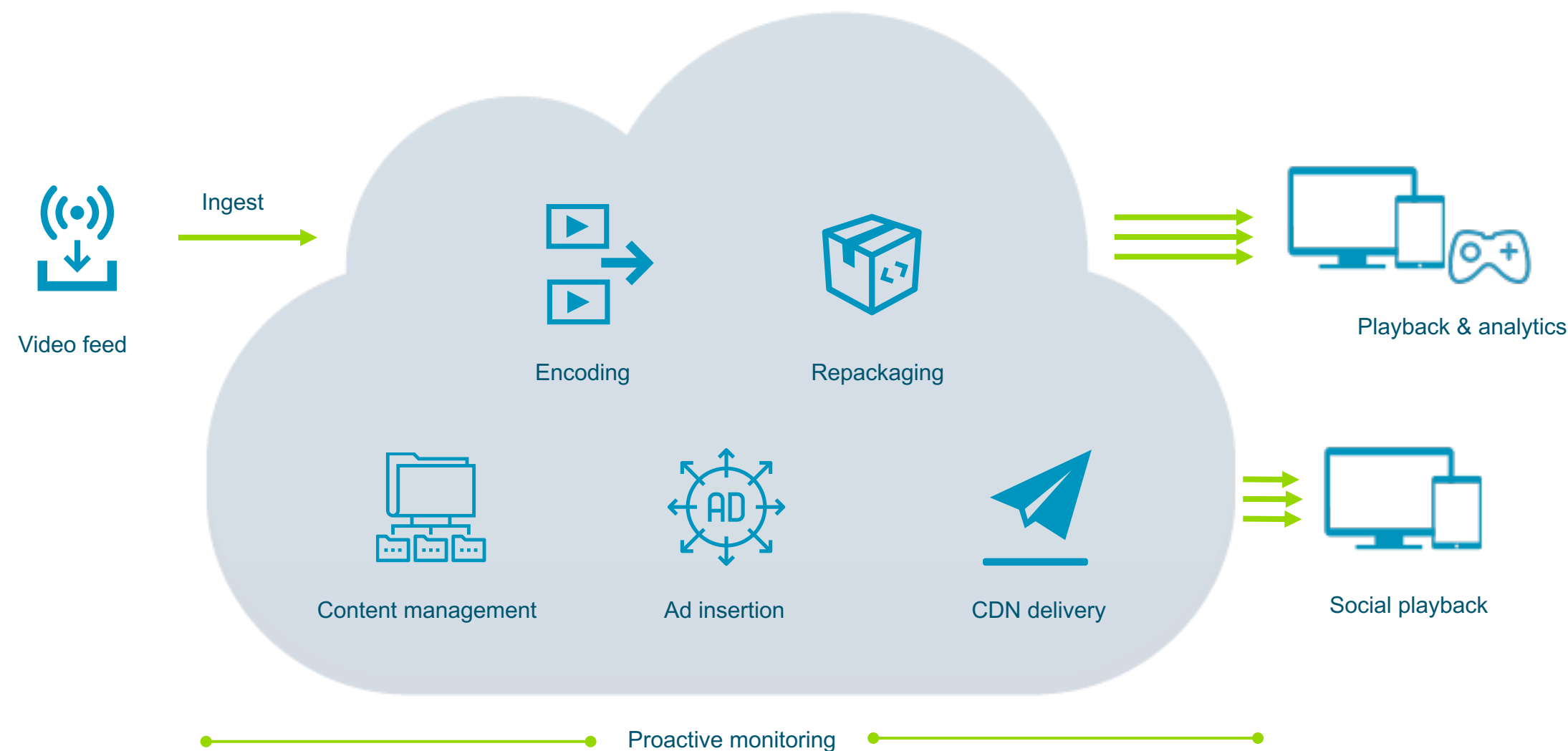**6** Audience Q&A

Cloud-based solutions for live

Cloud-based solutions for live video offer the flexibility to scale up or down based on your needs
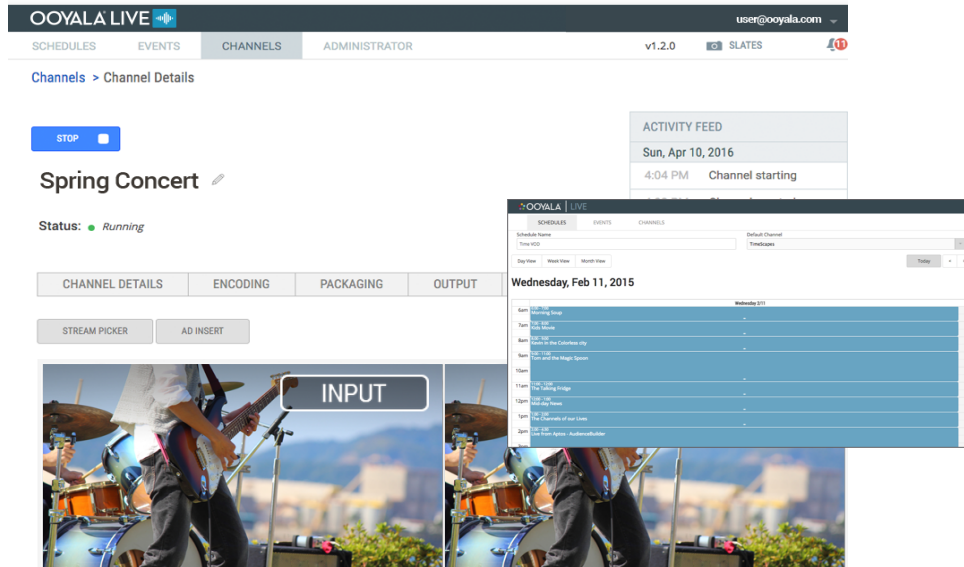
Key benefits

- Ease of use
- Time to market
- Accessible from anywhere
- Instant start / stop
- Minimal infrastructure costs
- Reliability
- High availability
- Disaster recovery in the cloud
- OPEX vs. CAPEX

Cloud-based solutions for live

Video feed

Ingest

Encoding

Repackaging

Content management

Ad insertion

CDN delivery

Playback & analytics

Social playback

Proactive monitoring

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Cloud-based solutions for live

End-to-end management
Cloud solutions make it easier manage live operations through web-based administrative dashboards and content management systems

Proactive monitoring & mitigation
A managed solution designed for 24x 7 proactive monitoring, alerting, live support for OTT video streams

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Live linear OTT

fuboTV

Stream Your Local Teams

Watch the action live or record it and watch when and where you want.

Start 7-Day Free Trial

fuboTV

Leading OTT provider for live streaming and curated soccer from all over the world

Results achieved

- Enhanced delivery performance
  Achieved a 40–50% reduction in video buffering

- Provided a proven solution that scales
  Flawlessly stream large global sporting events

"Other providers claim they can deliver globally but Akamai is one of the few that has successfully delivered large-scale events"

-Sung Ho Choi, CTO at fuboTV

Leading pay-tv provider launches live OTT service

Looking to increase customer loyalty and maximize value of rights purchased, pay-tv operator launched an **OTT service with 24 live channels** and high-profile event streams such as Champions League, NFL, NBA and more

Launched service quickly, becoming first pay-tv operator in their market to offer OTT service

Increased customer retention by providing high-quality live streamed events and more ways for subscribers to watch

Increased number of subscribers by using OTT service as differentiator in the market

iPad Air
MockUp
Free Resource

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Sky Sports syndicates at global scale

Their challenge

- Generate highlight clips plus added value content for Premier League games (10+ per game)
- Rapidly generate 30+ renditions for global license holders
- Efficiently deliver within tight timeframes

The result

Through cloud automation, Sky Sports is able to deliver clips to global license holders within MINUTES of it happening live

1 Market trends & drivers

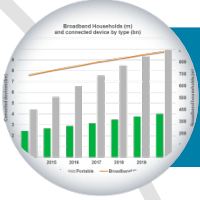2 Problems & challenges

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The bottom line

Shift to live OTT will accelerate

Delivering live OTT requires end-to-end solutions

Quality is paramount at every stage

Cloud systems provide more flexibility and faster time to market

The time to introduce live video is NOW

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Audience Q&A

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Principal Analyst, Consumer Electronics, Broadband & Video Technology

Przemek.Bozek@ihsmarkit.com

IHS Markit

Ashique Anwar

Product Director Online Video Platform

aanwar@ooyala.com

Ooyala

Alex Balford

Senior Product Marketing Manager

abalford@akamai.com

Akamai

Allen Tatara

Senior Manager Webinar Events (Moderator)

Allen.Tatara@ihsmarkit.com

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