

# HOW CLOUD-BASED MAMS ENABLE THE LIVE COVERAGE OF THE FUTURE

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**AWS SERVICES AND PARTNER SOLUTIONS ENABLE CUSTOMERS TO RAPIDLY BUILD SCALABLE LIVE-TO-OTT SPORTS MEDIA WORKFLOWS, AS WELL AS MORE IMMERSIVE, INTELLIGENT AND PERSONALIZED FAN ENGAGEMENT.**

## Live Sports: Acquisition to OTT



## Fan Engagement, Personalization & Monetization



## Record Viewing

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**10.3M**

Concurrent viewers watching  
Hotstar IPL Cricket match  
(May 2018)

## Increased Subscription

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**63%**

Of sports fans are interested  
in paying for OTT  
subscription.

## Incremental Viewing

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**50%**

Of fans watched supplemental  
sports programming

Src: <https://www.prnewswire.com/news-releases/usc-annenbergthepostgame-genz-and-younger-millennial-sports-fans-are-driving-fundamental-changes-in-programming-platforms-and-purchasing-300271545.htm>  
<https://blog.hotstar.com/re-architecting-apps-for-scale-d4639b91e0c3>

# Adapting to 21<sup>st</sup> century fans

Fan Expectations → Business Change Needed → How AWS Helps

## Live Access

anytime, anywhere



## Global Live Delivery

low-latency streaming scaling to viewership



## Media Services & CloudFront

enable over-the-top (OTT), broadcast playout, and video workflows

## Personalization

customized fan engagement



## Connect Directly with Fans

augment experience, tailor viewing, personalize ads



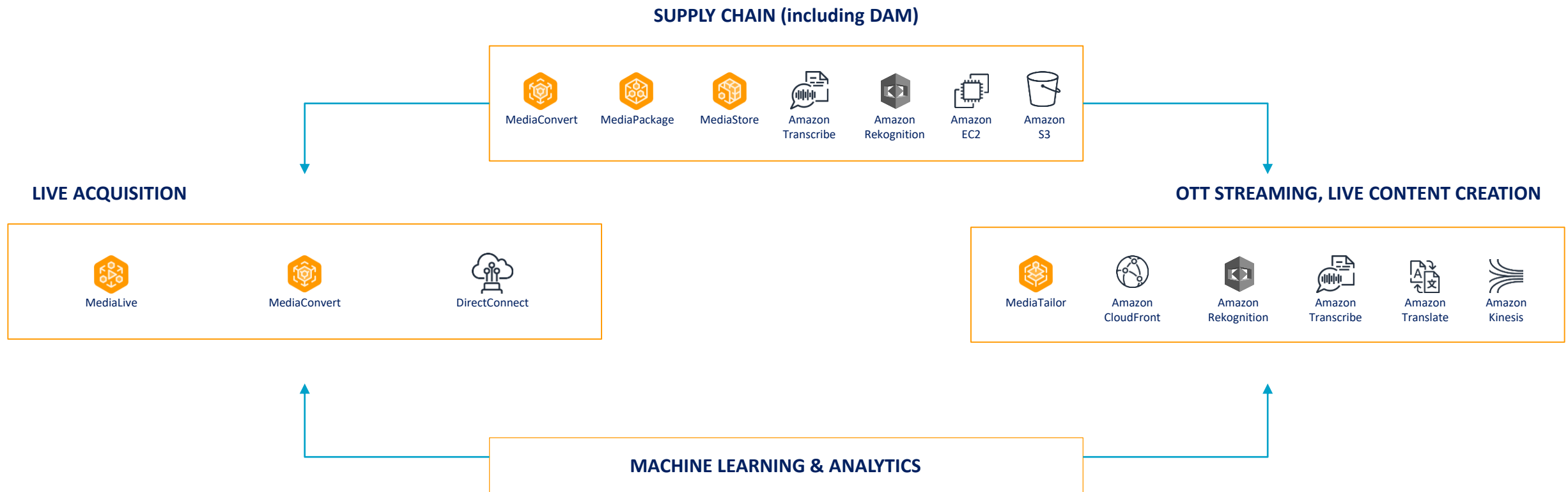
## AWS Services

content / data lakes, ML platforms and frameworks. Server-side ad insertion.

# AWS WORKS WITH BRANDS AT THE FOREFRONT OF THE SPORTS

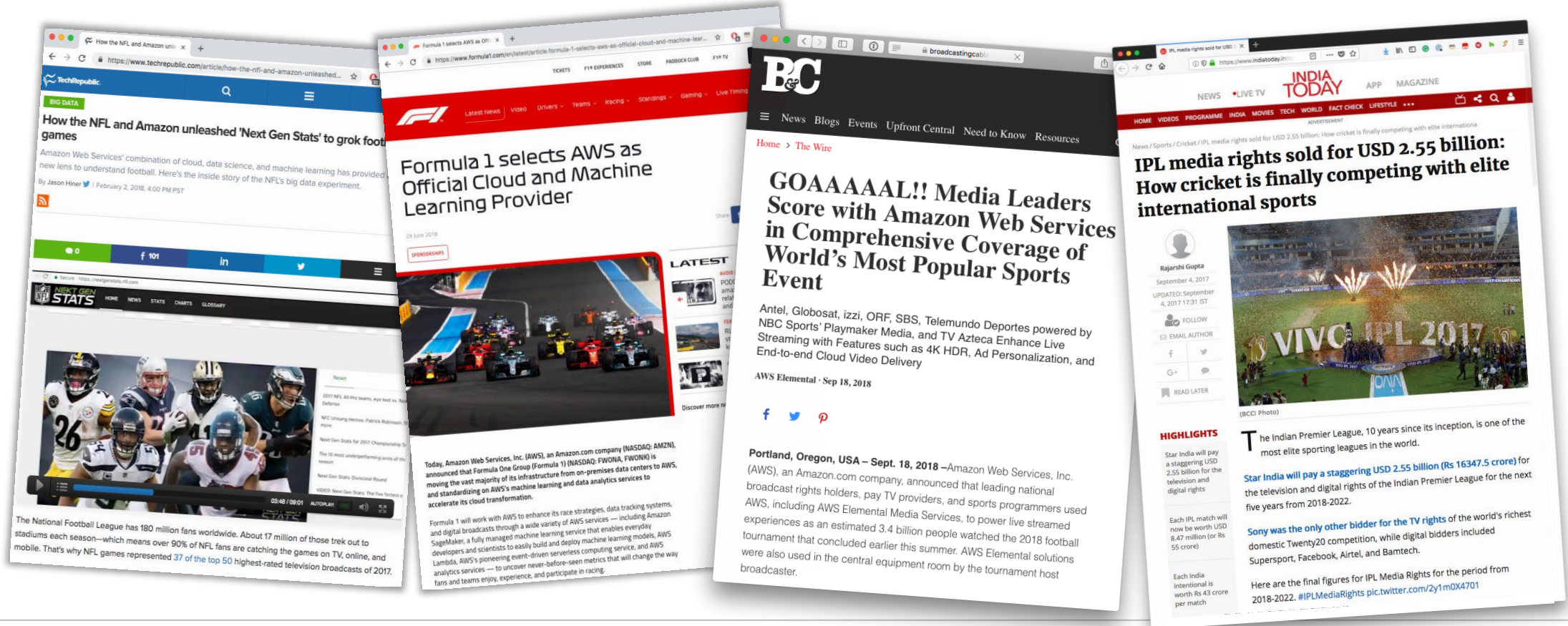


# AWS ACROSS SPORTS MEDIA WORKFLOWS



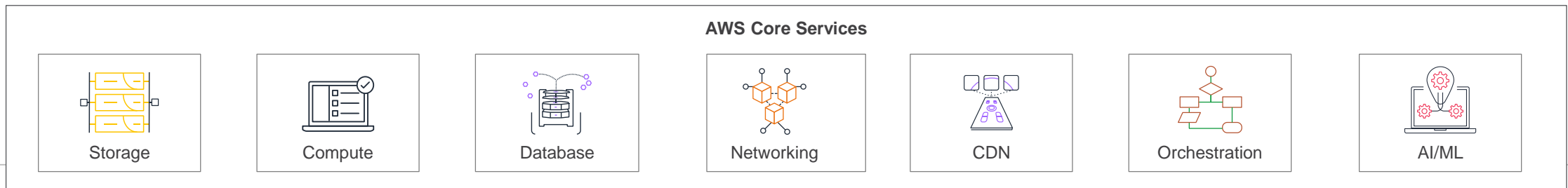
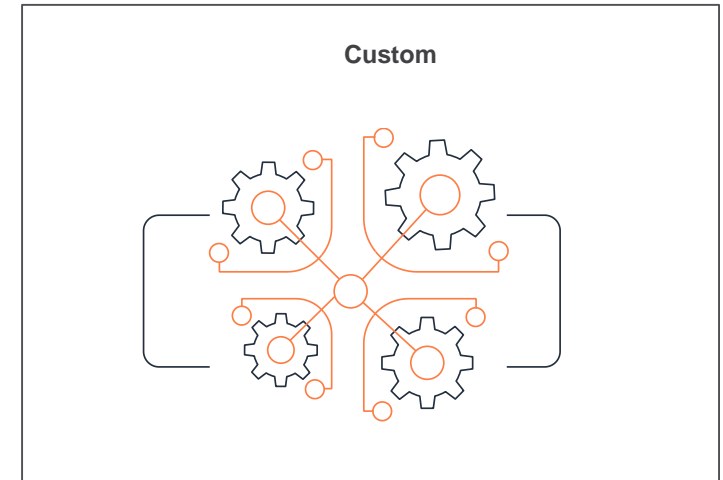
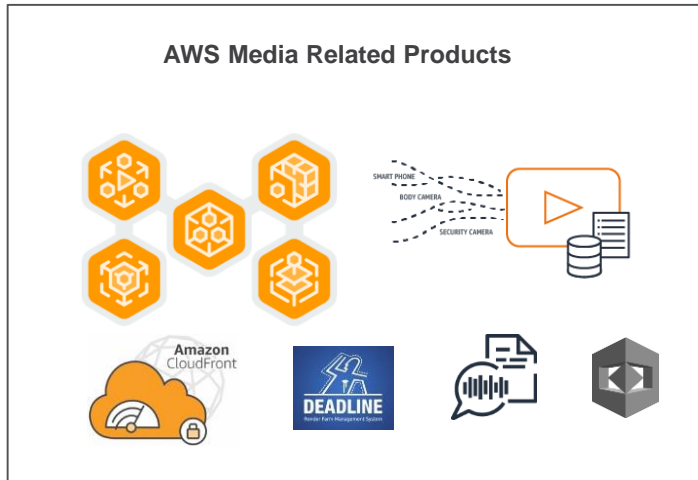


# Sports industry already adopting new media workflows



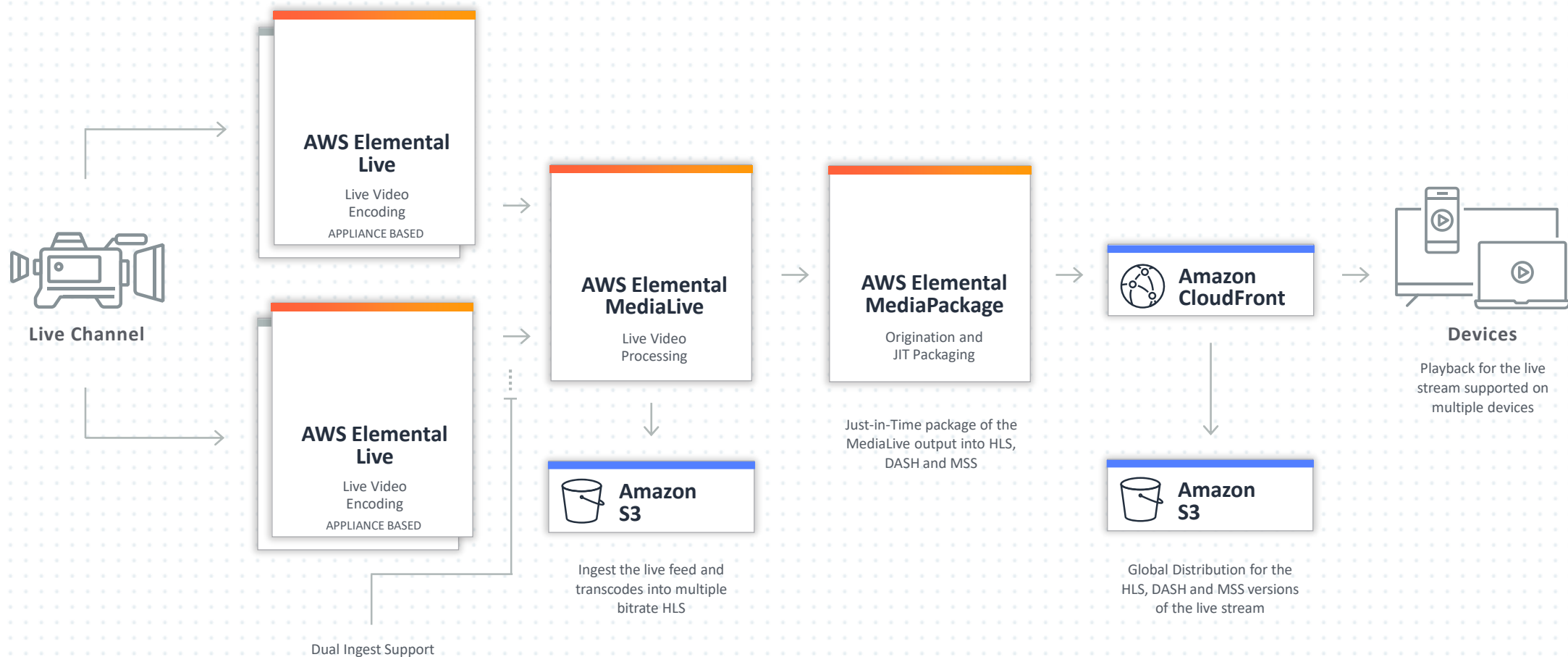
# WITH A PLATFORM FLEXIBLE ENOUGH TO SUPPORT A VARIETY OF DEPLOYMENT MODELS

Build media workflows on top of AWS core services using AWS products, leveraging our partner ecosystem, and/or directly through customized solutions





# Live Sports Acquisition to OTT (Media Services)



# ACCELERATING WITH AI/ML SERVICES

## Vision Services

### Amazon Rekognition Image

*Deep learning-based image analysis*

### Amazon Rekognition Video

*Deep learning-based video analysis*

## Conversational chatbots

### Amazon Lex

*Build chatbots to engage customers*

[Learn more »](#)

## Language Services

### Amazon Comprehend

*Discover insights and relationships in text*

[Learn more »](#)

### Amazon Translate

*Fluent translation of text*

[Learn more »](#)

### Amazon Transcribe

*Automatic speech recognition*

[Learn more »](#)

### Amazon Polly

*Natural sounding text to speech*

[Learn more »](#)

# MACHINE LEARNING IMPACTS ON M&E

- Extract metadata from content and make it more valuable to the business
  - Rekognition for Video
  - Transcribe and Comprehend for Audio
  - Pull out Celebrities, actors, objects, scenes, transitions, sentiment, logos
- Clip generation for personalization and discovery services
  - Using Rekognition Video with people and actions
- Auto Caption generation for supply chain efficiencies
  - Using Transcribe on audio
  - Using Translate for different languages



# Live Clipping at the World Cup

## The Objective:


*“The Men’s World Cup is the single biggest event in sports,” said Dustin Myers, Fox Sports SVP of Production Operations, at a recent industry panel discussion in New York City. “We had to shoot live video in Russia, send it to Los Angeles to edit, and get it back to Russia in minutes for playback in the studio shows.”*


# Powered by the AWS Partner Network

Forbes

3,794 views | May 21, 2018, 7:00 am

## FOX Sports Pulling Out All The Technology Stops For The FIFA World Cup

Maury Brown Contributor   
[SportsMoney](#)  
20+ Yr Sports Biz Reporter, National Baseball Writer, BBWAA Member



FOX Sports will be building a special studio in Red Square for the 2018 FIFA Men's World Cup. FOX SPORTS

When it was announced that FOX Sports had paid \$425 million for the 2018 and 2022 FIFA World Cup, questions circulated as to whether the network could get a return on the investment. It's a huge gamble that remains unanswered, especially after Team USA's Men's team was eliminated in October by Trinidad and Tobago.





# Why the Cloud?

## The Requirements:

- *384 people for editing (FOX editing and production support) in the Pico facility*
- *Supported SKY production in London as well*
- *Facilitate collaboration, dynamic editing, social media, without sending all those people and equipment to Russia*



# Fox Live Clipping Architecture



# 2018 World Cup Broadcast-By the Numbers...

- *1.9 PB of content total*
- *Nearly 2,000 live feeds*
- *29,000 clips*
- *22,600 assets*
- *1,300 show elements*
- *10 stadiums*
- *32 sites*
- *64 matches*
- *3 media locations (Red Square, onsite operation at the IBC, post in L.A.)*
- *66 concurrent feeds at peak bursting into AWS*
- *127 TB live processing concurrently*
- *348 editors working remotely off the cloud*





“The process of sending video from Russia to L.A. and back in edited form was seamless thanks to all the tech companies participating, and represents a giant leap in sharing live events with audiences halfway across the planet within moments of the action taking place,”

-Art Raymond  
CEO-Levels Beyond



An aerial, high-angle photograph of a large stadium at night. The stadium is filled with a dense crowd of spectators. The field is illuminated, showing various markings and logos, including a large red and white circular logo on the left, a butterfly-shaped logo in the center, and a large white and red logo on the right. The stadium's architecture and seating tiers are visible, creating a sense of scale and atmosphere.

Thank You

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