

Case Study

Enabling a world-first: 6K tiled 360- degree live sports streaming success

Sven Bolthausen, MediaKind



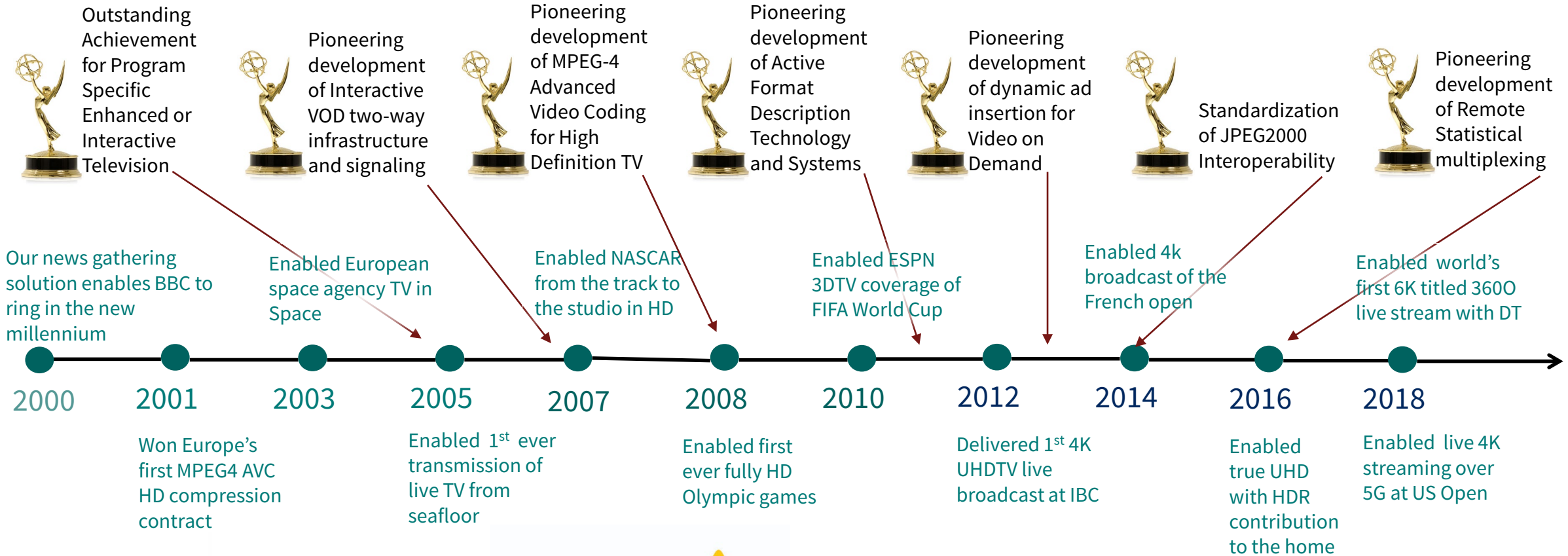
Enabling a world-first: 6K tiled 360-degree live sports streaming success

Sven Bolthausen

SVP Sales – APAC, MediaKind

17th June 2019

Our Pioneering Heritage



Live event limitations of the past



Staging / Prep time



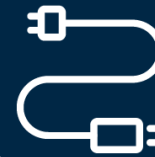
Cost



Quality / Latency

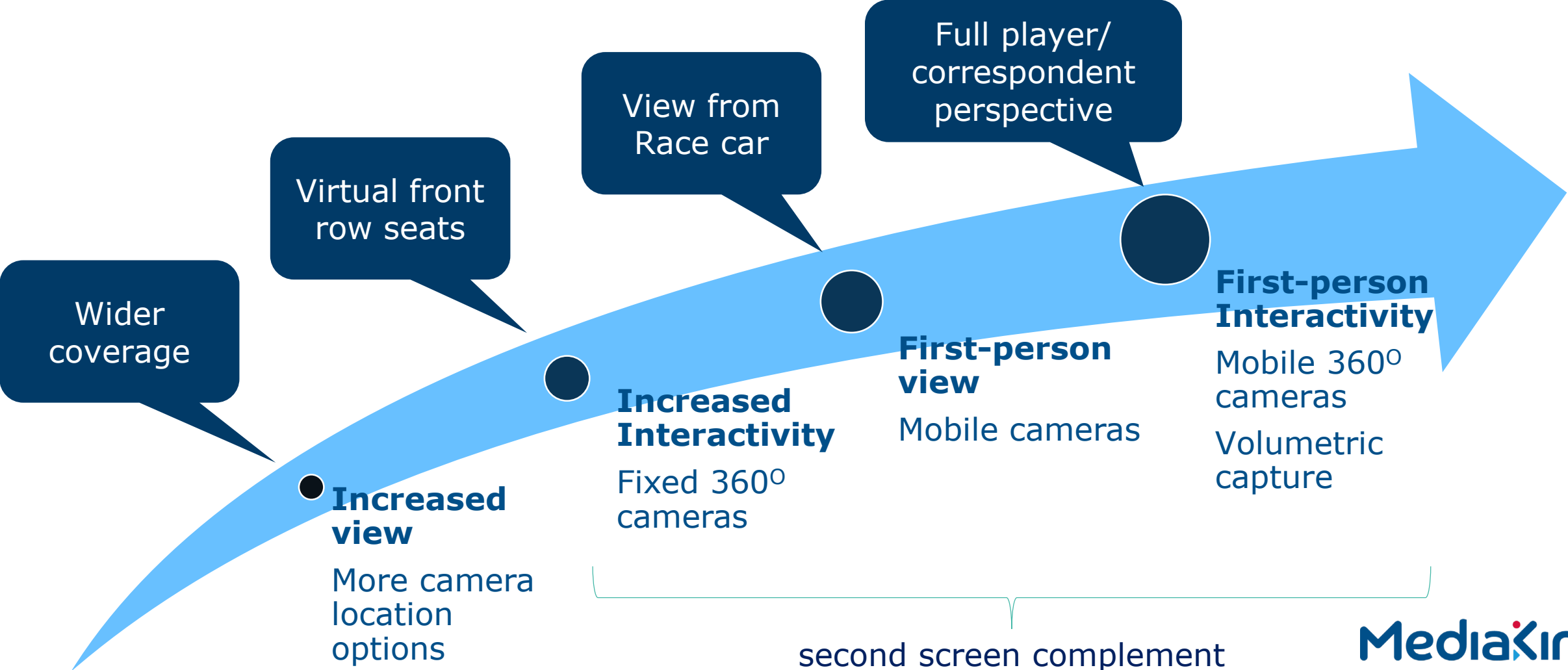


Immobility

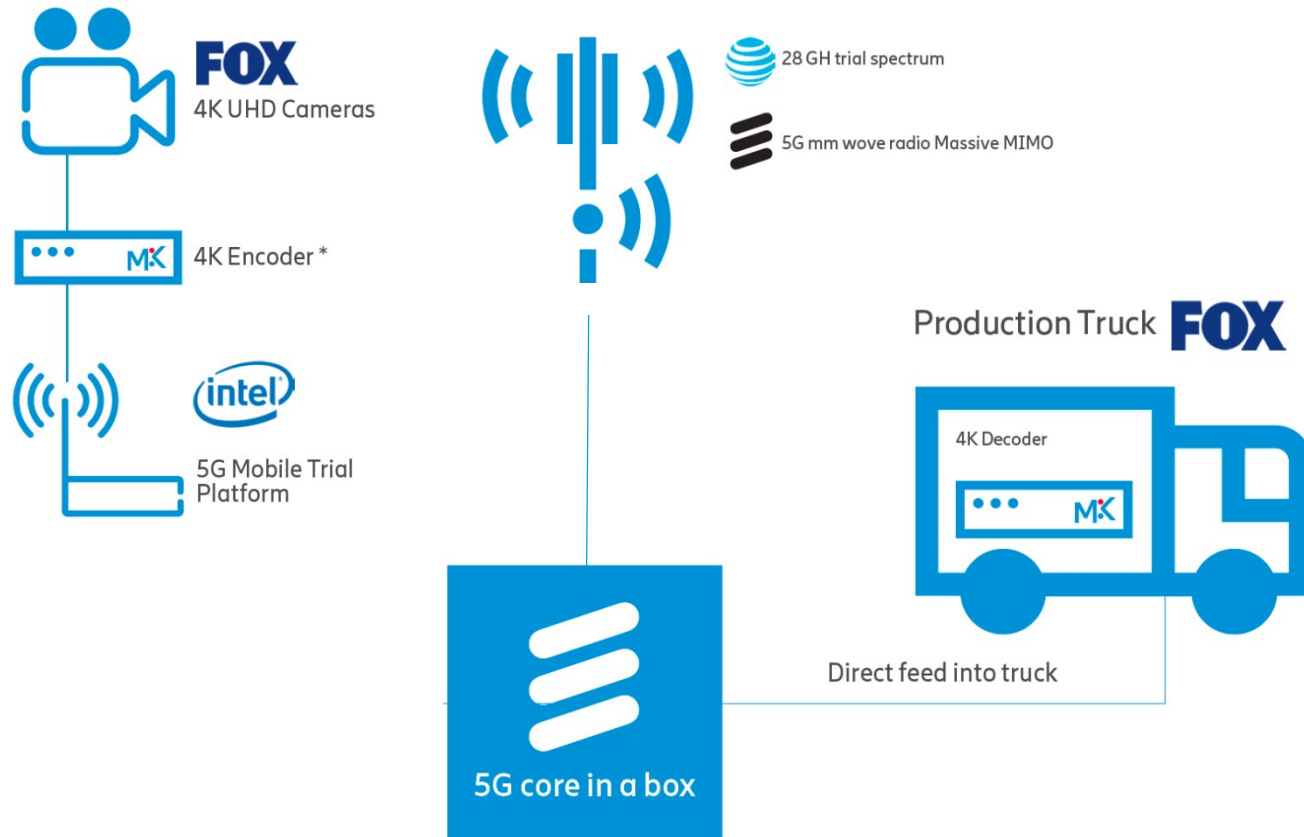


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5G and Cloud Processing breaks the traditional creative barriers of contribution



Fox Sports – 2018 US Open Golf



Expanded camera locations brings audience closer to the action

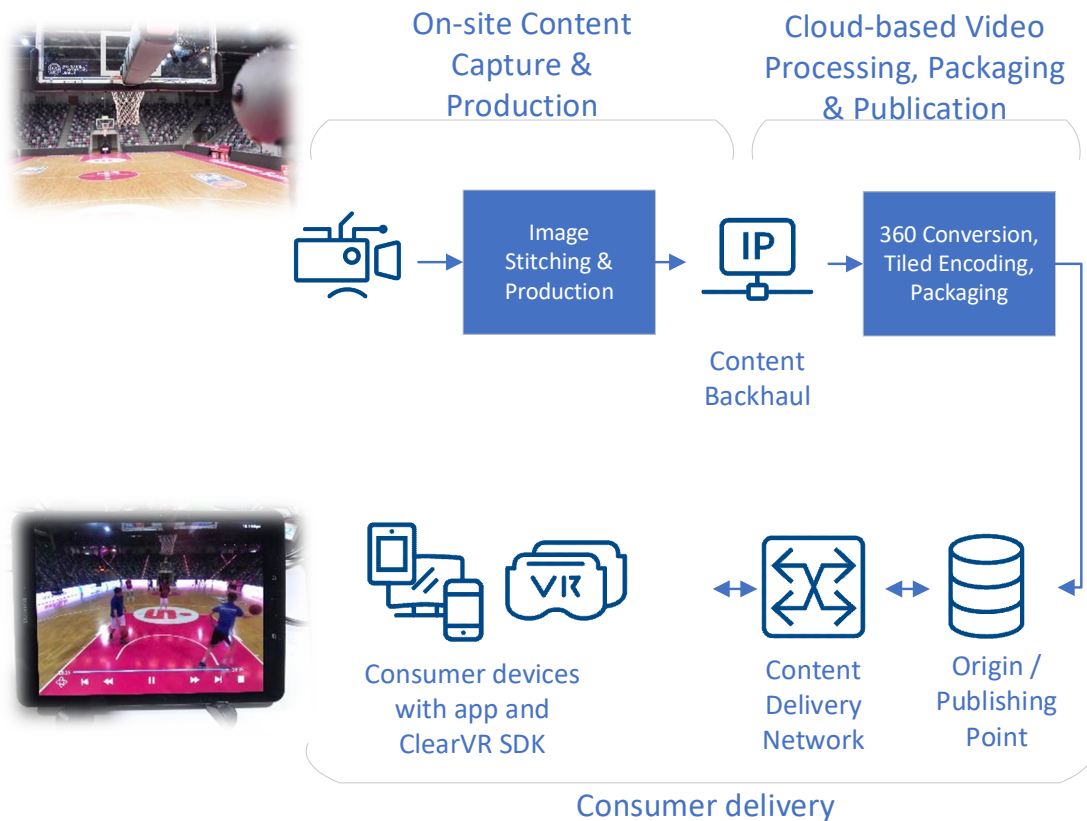
- ▶ Two 'wireless' camera locations – mobile on golf carts
 - ▶ 4K UHD HDR Cameras
 - ▶ Transmitting at 80Mbps each
- ▶ 5G Bandwidth at 28Ghz / Millimeter Wave
 - ▶ Sustained symmetrical data rates above 650Mbps
- ▶ Camera to Production Truck latency of 12ms average
 - ▶ Encode to Decode total latency at 712ms

Fox, AT&T, Intel, Ericsson, MediaKind. June 2018

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Deutsche Telekom Magenta VR Live Sports

Live 6K tiled 360 video streaming with cloud-based processing



Immersive sports with multi-camera live 360 degree sports coverage with cloud-based video processing

- ▶ 2 x 6K 360 Live. Transfer from venue at 60-200Mbps per camera
- ▶ Cloud-based conversion, tile video processing, packaging and publication to CDN
- ▶ Average ~12Mbps to consumer
- ▶ 5 second segments resulting in ~30sec end-to-end latency

Deutsche Telekom, Magnum Films, INVR, Tiledmedia, MediaKind. Using Google Cloud and Akamai. December 2018.

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First Person Immersive Experiences

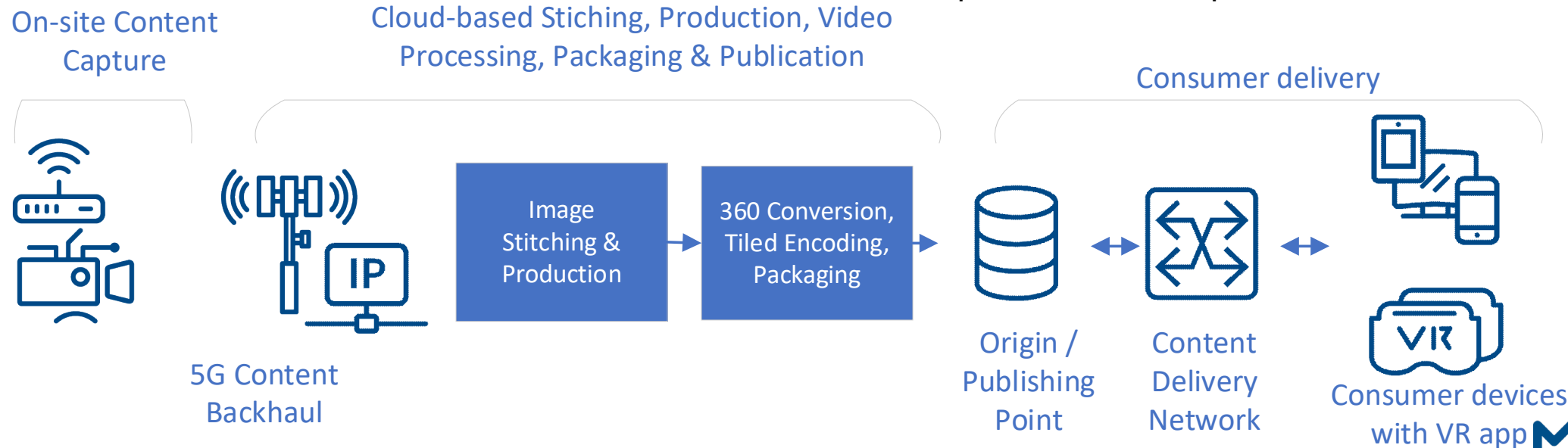
Into the Future

New first person camera locations untethers creativity and consumer experience

- Small formfactor UHD / 360 cameras
- 5G modem packs
- Wireless, minimal on-site crew

Cloud-based remote production and event processing and publication.

- Low latency for remote camera control
- Throughput for high quality capture
- Event based infrastructure reducing production setup time and cost



Consumer devices
with VR app

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Awards

