

The background of the slide is a vibrant, abstract graphic. It features a series of overlapping, wavy bands of color in shades of red, orange, yellow, green, and blue, creating a sense of movement and energy. On the right side, there is a bright, multi-colored sunburst or starburst effect that radiates outwards, adding to the dynamic feel of the design.

cisco *Live!*

Let's go

#CiscoLive



The bridge to possible

# The Evolution of Content Distribution in Venue and Outside of Venue

Chris Lapp  
Technical Solutions Architect  
PSOIND-1010



#CiscoLive



# Cisco Webex App

## Questions?

Use Cisco Webex App to chat with the speaker after the session

## How

- 1 Find this session in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until June 9, 2023.

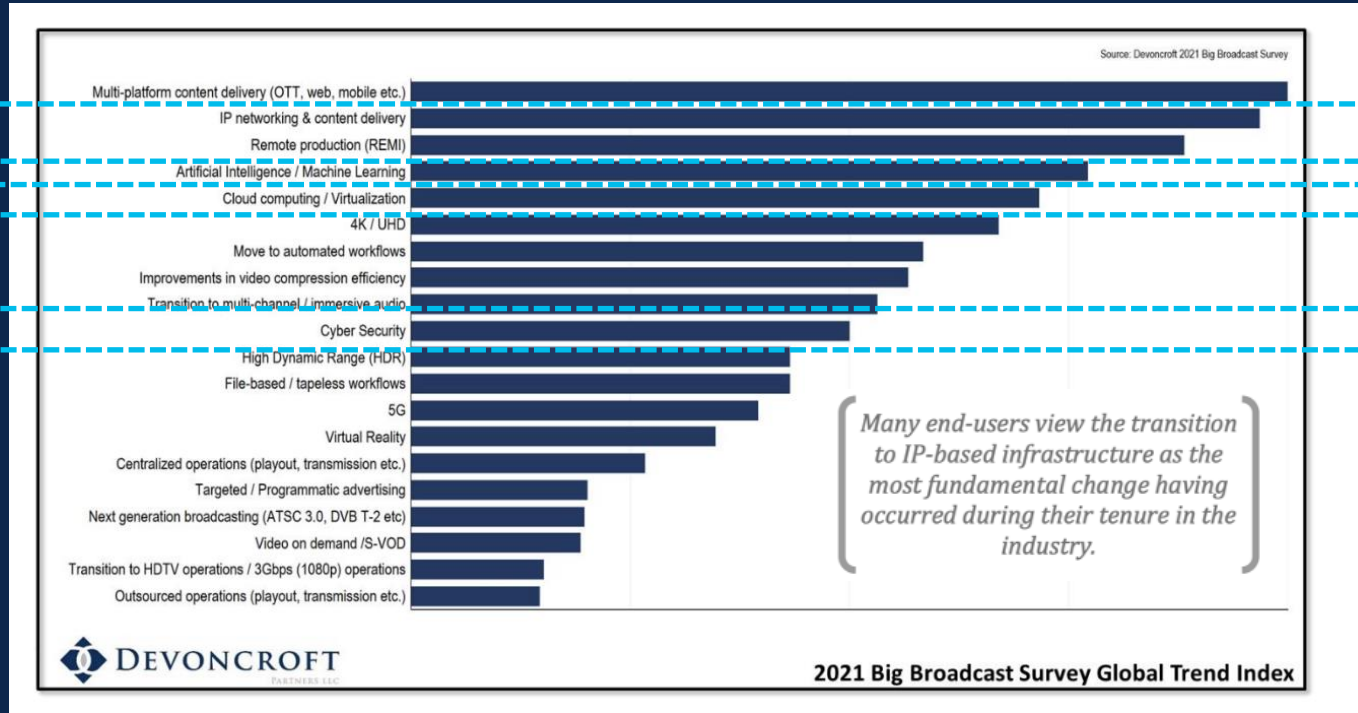


<https://ciscolive.ciscoevents.com/ciscolivebot/#PSOIND-1010>

# Agenda

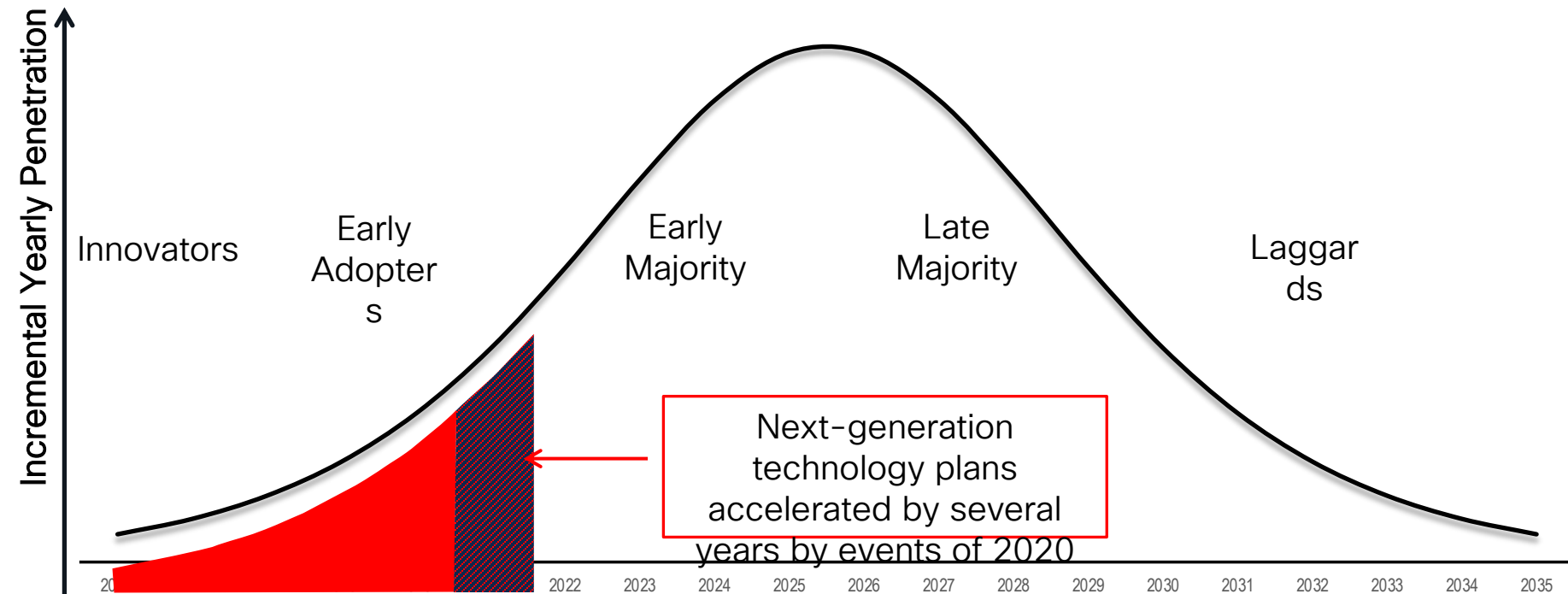
- Introduction
- IP is trending up
- Media Blueprint
- IP for Media
- Customer Stories
- Conclusion

# 2021 Big Broadcast Survey Trend Index



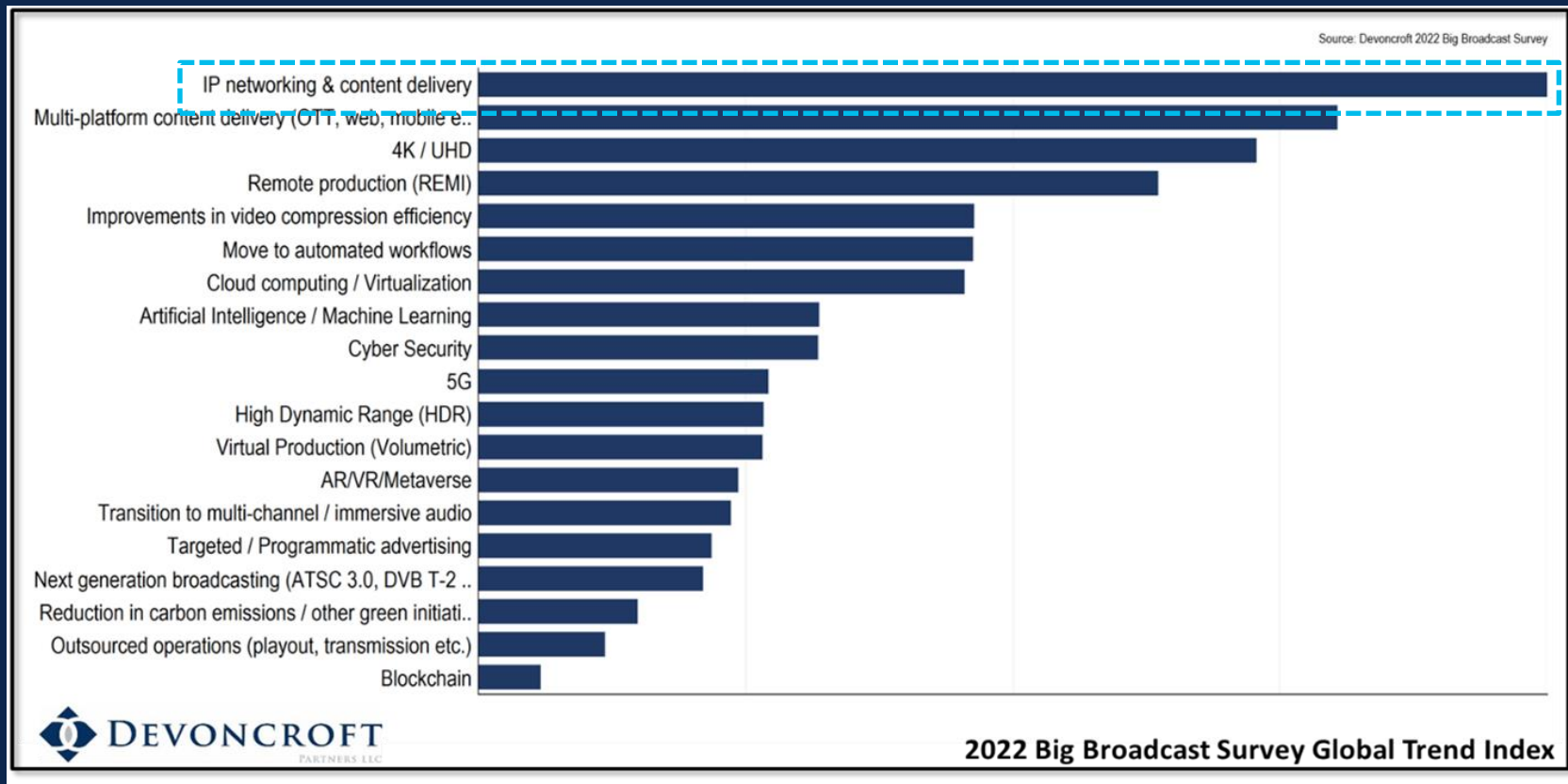
# IP Transition (ST 2110) is Accelerating

## Devoncroft M&E IP Technology Penetration Curve

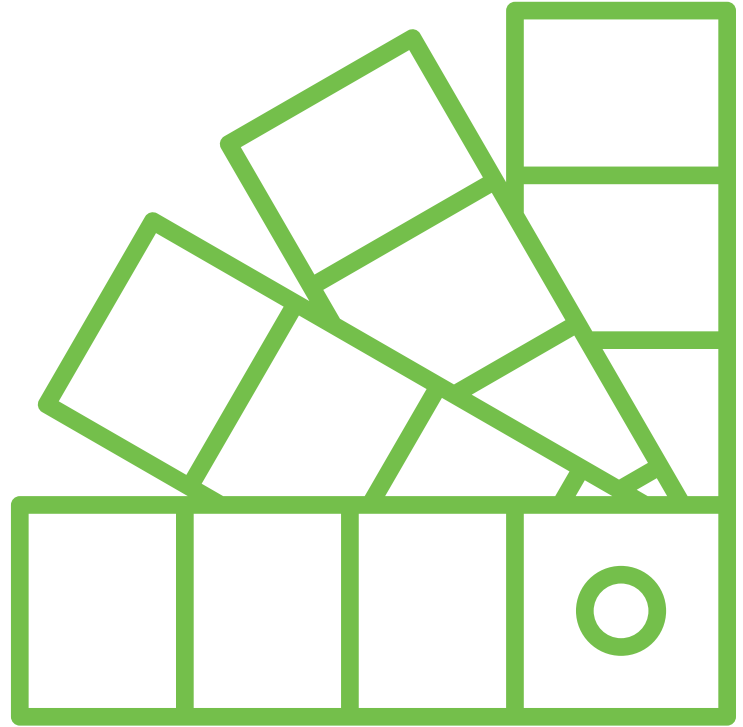


Source: Devoncroft Big Broadcast Survey 2014 - 2020

# 2022 Big Broadcast Survey Trend Index

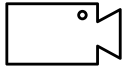


# Media Blueprint





# Blueprint for Media and Entertainment Business



## IP Fabric for Media



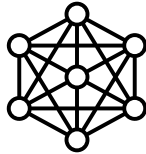
## Audio over IP



## Cyber Security for all workflows



## Media Data Center & Hybrid Cloud



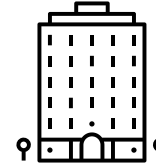
## Media Networking

(Ex: SDN/Automation & 5G)



## Sustainability

(Circular Design, operation and solutions)



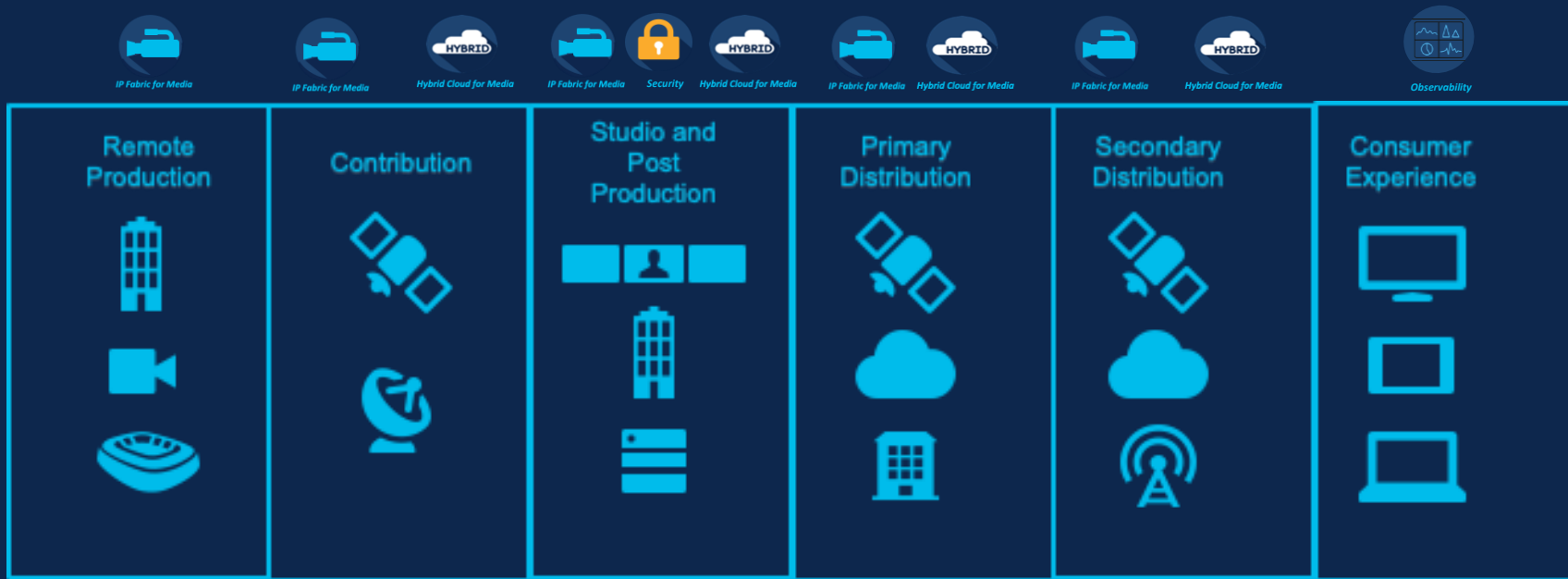
## Smart Enterprise

(Ex: SDA, WiFi-6, Hybrid Workplace)



- IP Trainings for Broadcast Engineers
- Cisco CX deliverables for broadcast projects

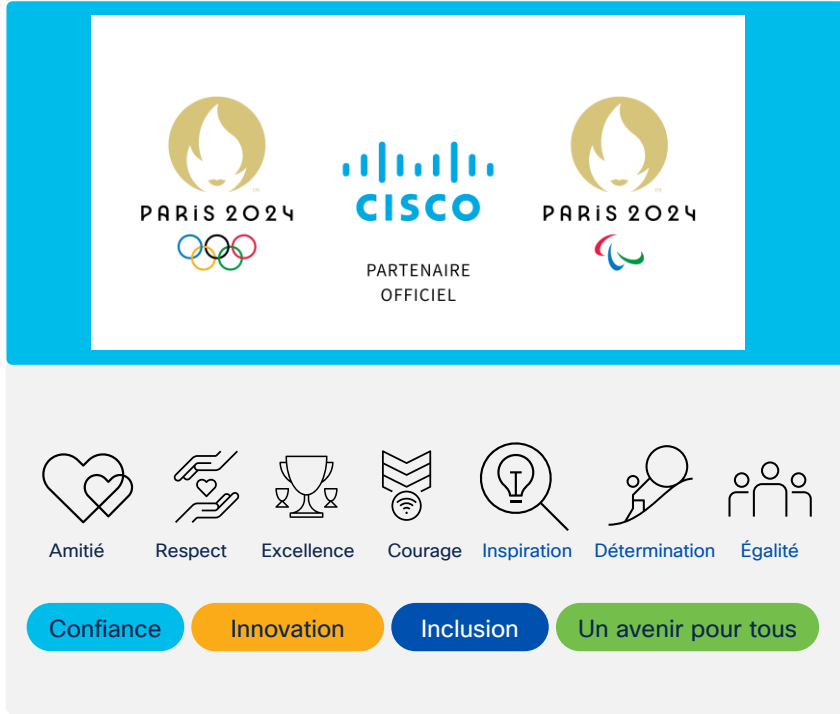
# End to End Media Workflow



End to End Solutions for Media Workflows  
Powered by IP Fabric For Media

# Paris 2024

Cisco is an official partner of Paris 2024 Olympics and Paralympics Games



Official partner for Network infrastructure



Official partner for Cybersecurity infrastructure



Official partner for Collaboration software

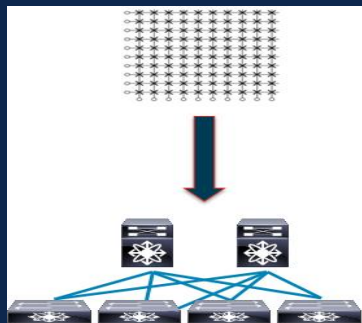
# IP Fabric for Media

Enabling transition to SMPTE ST 2110



# Industry Challenges and Requirements

*While networks have been carrying multicast flows for a very long time, there are unique requirements this use case brings due to the nature of the traffic(**uncompressed flows**) and the requirement to assure **zero drop** transport or **guarantee delivery** of flows (for live production).*



Reliable Network  
(Zero Packet Loss, Ultra Low Latency and Minimal Jitter)

Architecture Choice  
(deployment flexibility for OBVan, Studio, MCR...)

Flow Health and Visibility Monitoring

Precision Timing

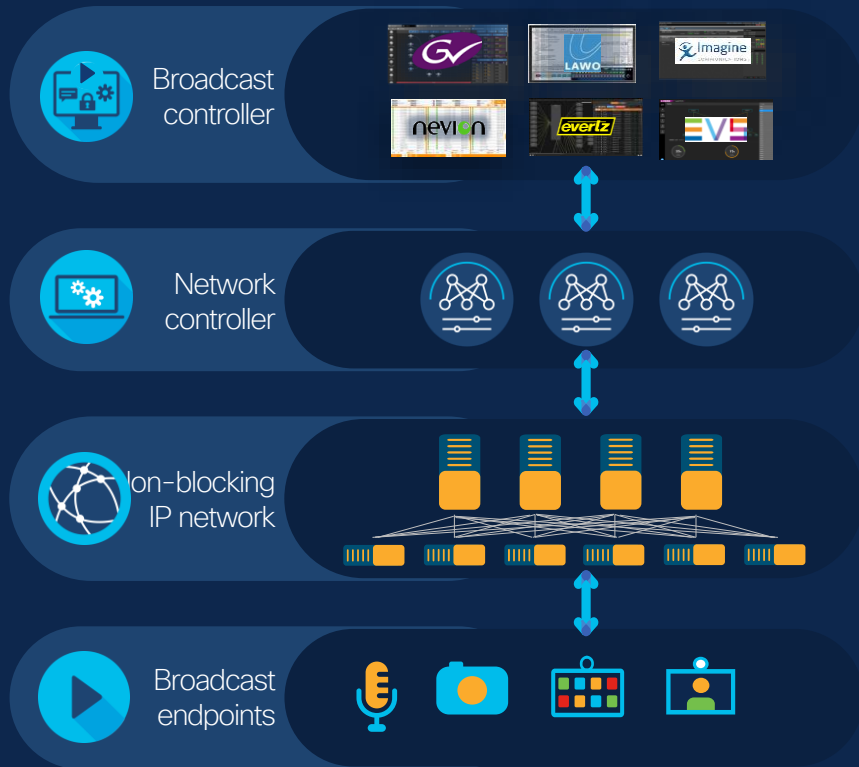
Network Security

Unchanged Operator Workflow

# Cisco IP Fabric for Media



Shipping



## Deployment locations



Studio



Stadium



OB  
van/truck

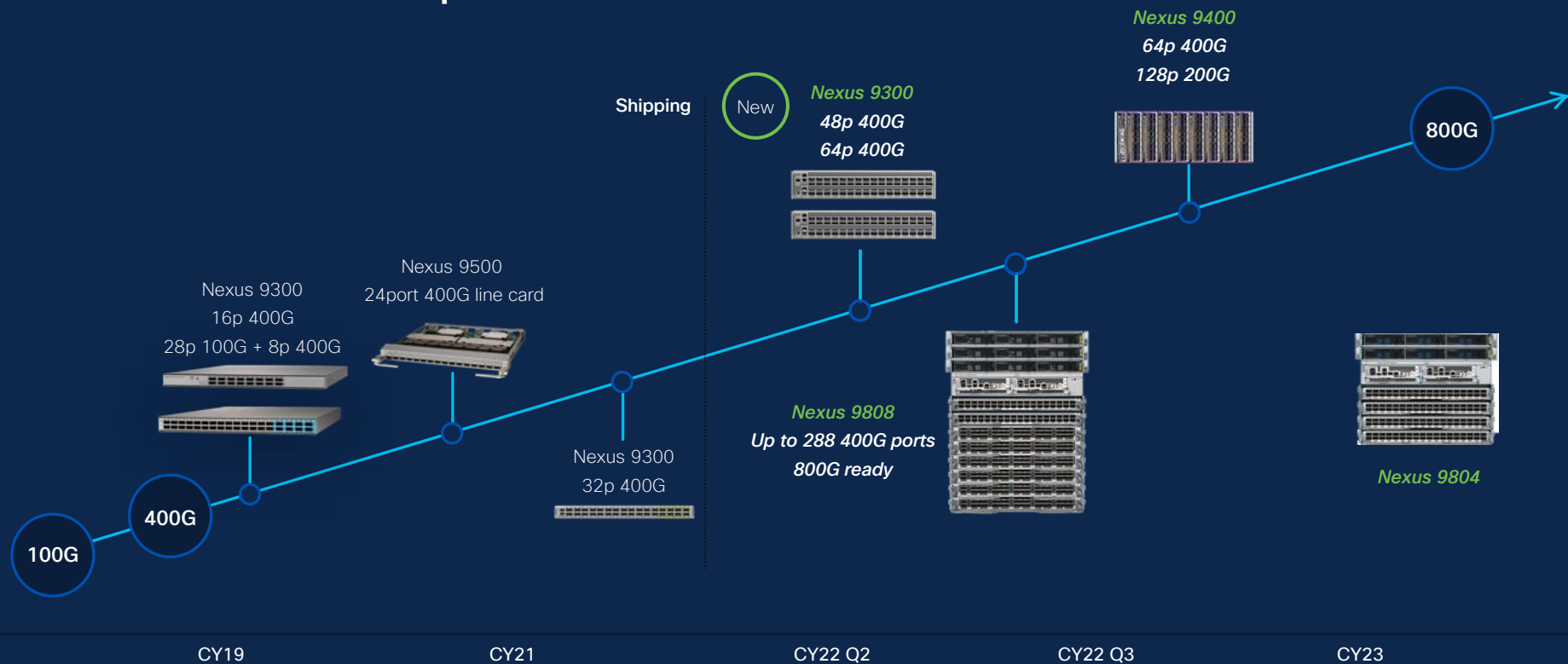
Deterministic and non-blocking IP fabric

Highly scalable multicast and PTP timing

Highly secure admission control and policing

Turnkey automation and deep visibility with NDFC

# Nexus 9000 portfolio evolution



Cloud  
service providers



Telco  
service providers



Enterprise



Media networks

# IPFM Summary and Benefits





# IPFM Solution Benefits & Summary



Unchanged Operator Workflow



Integration with Broadcast Partners



Deterministic network



Non-blocking Network design using bandwidth aware PIM



Flexible Architecture



Spine-leaf , Hybrid Spine-leaf, Single Modular Chassis

# IPFM Solution Benefits & Summary



Host and Flow Policies



Network Security



Host & Flow Visibility  
RTP and PTP monitoring



Visibility and Monitoring



SMPTE 2059-2, AES67  
profile



Precision Timing

# IP Fabric for Media Customer References



# Nine Australian Full IP Production Center



- *First and largest broadcast centres to run entirely over Internet Protocol (IP) in Australia in Nine's new North Sydney office, with Cisco supporting the organisation's transition to dital.*
- *Cisco IPFM, N9k and DCNM, with Lawo VSM and Smart Dash*

*"For us, it's a bit like switching the production and business model from black and white to color. It's the future of broadcasting and together with Cisco, we're shaping it."*

*Geoff Sparke, Director of Broadcast Operations, Nine*

<https://www.cisco.com/c/en/us/about/case-studies-customer-success-stories/nine.html#~summary>

# SoFi Stadium – Hollywood Park



- World's most technologically advanced stadium
- Best in breed Cisco technologies
  - 4K Cisco Vision Deployment
  - *4K HDR IP based production facility powered by IPFM (PCR with Evertz Magnum)*
  - Cisco WiFi 6

[https://www.cisco.com/c/m/en\\_us/solutions/industries/sports-entertainment/sofi-stadium-interactive.html](https://www.cisco.com/c/m/en_us/solutions/industries/sports-entertainment/sofi-stadium-interactive.html)

# Real Madrid Stadium



IP Production  
Center IPFM



IT SW Defined DC  
ACI



IT SW Defined  
Campus  
SDA + WiFi6

<https://newsroom.cisco.com/c/r/newsroom/en/us/a/y2022/m03/cisco-and-real-madrid-team-up-to-power-europe-most-connected-stadium.html>

# Super Bowl LVII New IP Production Control Room



- Best in breed Cisco technologies
  - *IP based Production Control Room powered by IPFM (Spine and Leaf)*
  - Cisco WiFi 6
  - Catalyst 9k campus network

<https://www.sportsvideo.org/2023/02/11/live-from-super-bowl-lvii-arizona-cardinals-put-new-ip-capable-control-room-to-the-test-on-nfls-biggest-stage/>

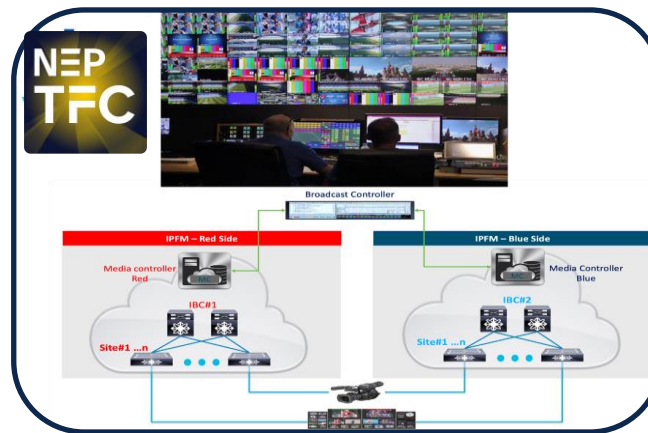
<https://stadiumtechreport.com/feature/wireless-upgrades-have-state-farm-stadium-prepared-for-super-bowl-lvii/>



# Large Sports OB Broadcasting



“From the POC, our preliminary conclusion is that the Cisco solution offers superior performance”



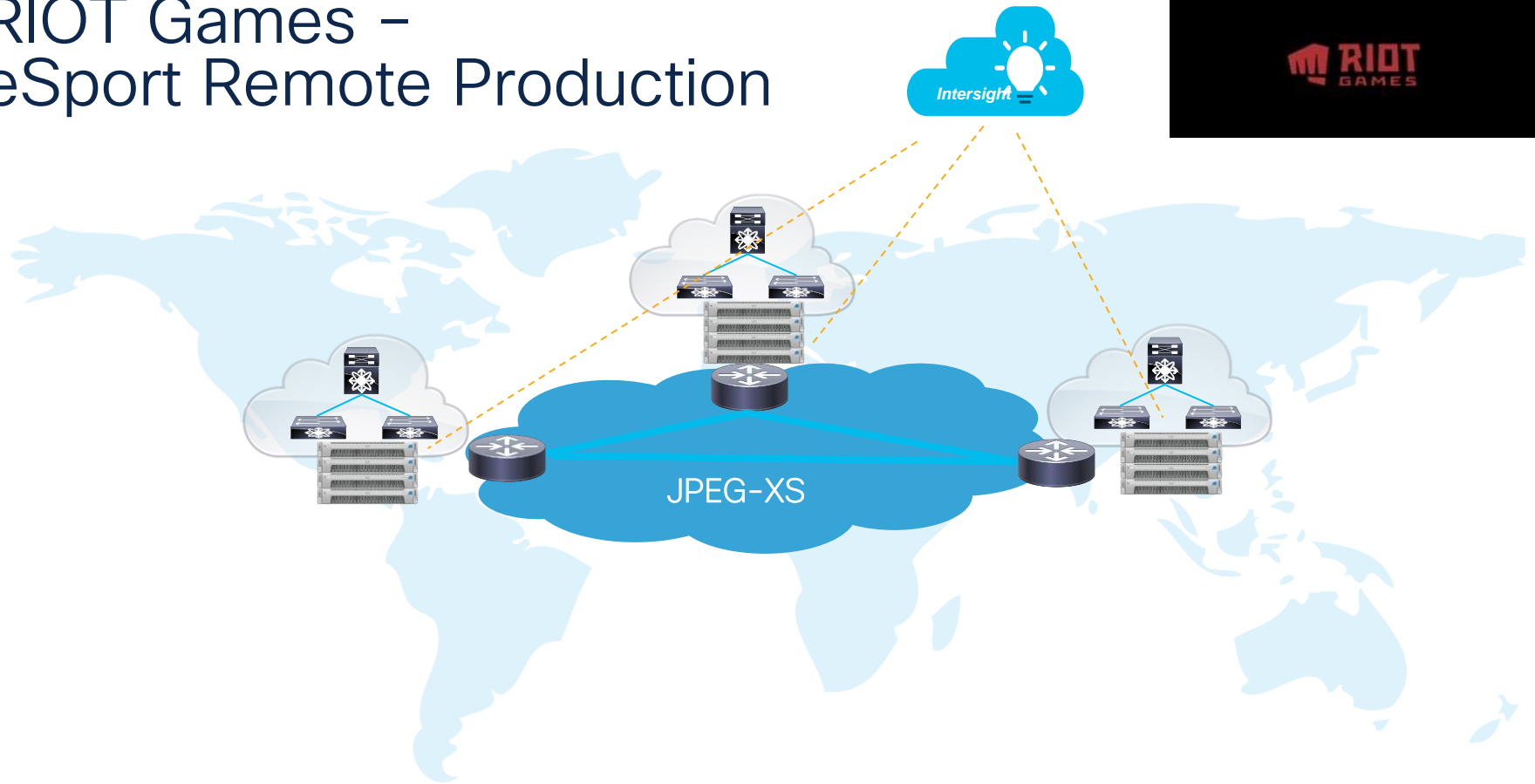
8 Stadiums

32 Training Sites

4 Outside Presentation  
Facilities



# RIOT Games – eSport Remote Production

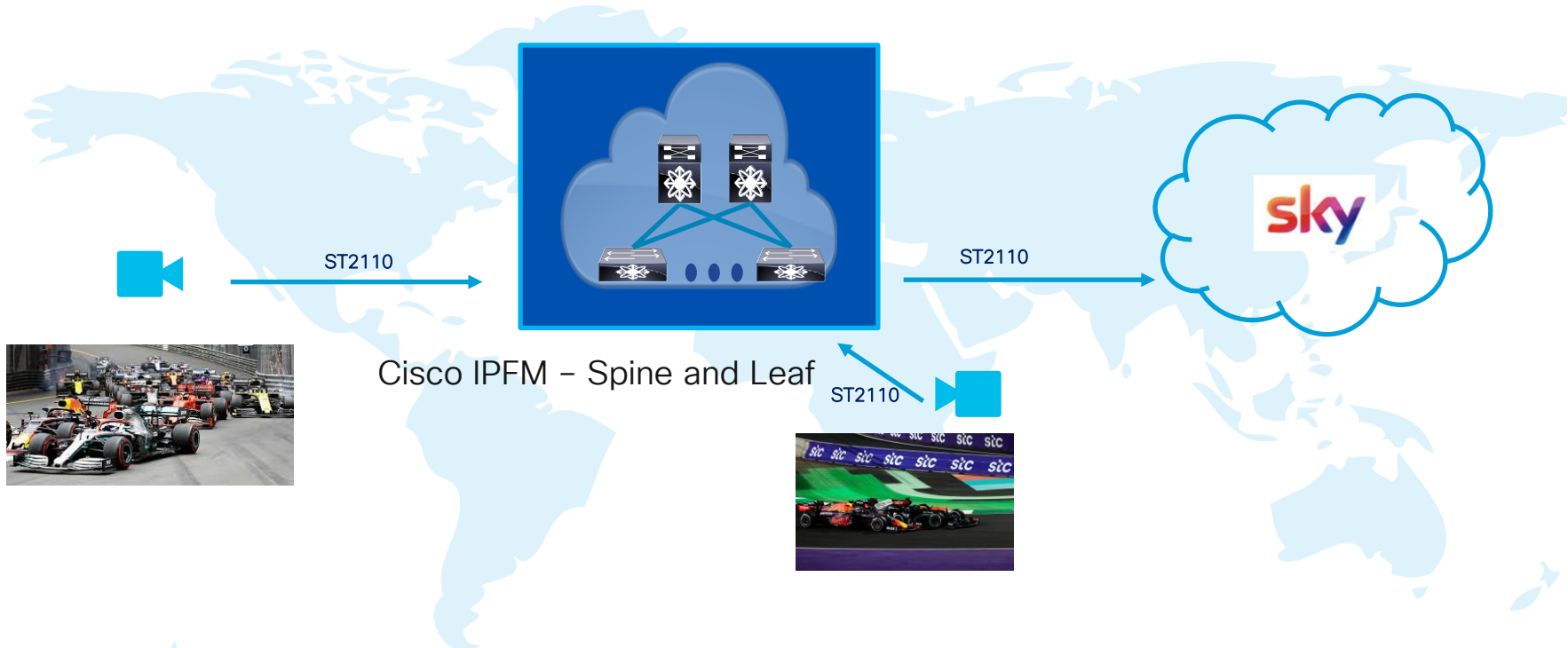


<https://www.sportsvideo.org/2021/10/28/riot-games-takes-esports-production-global-with-project-stryker-remote-broadcast-centers-in-dublin-seattle-apac/>

# Formula 1 – Remote Production



## London PCR and Post Production



# Fill out your session surveys!



Attendees who fill out a minimum of four session surveys and the overall event survey will get **Cisco Live-branded socks** (while supplies last)!



Attendees will also earn 100 points in the **Cisco Live Challenge** for every survey completed.



These points help you get on the leaderboard and increase your chances of winning daily and grand prizes

# Continue your education



- Visit the Cisco Showcase for related demos
- Book your one-on-one Meet the Engineer meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at [www.CiscoLive.com/on-demand](https://www.CiscoLive.com/on-demand)

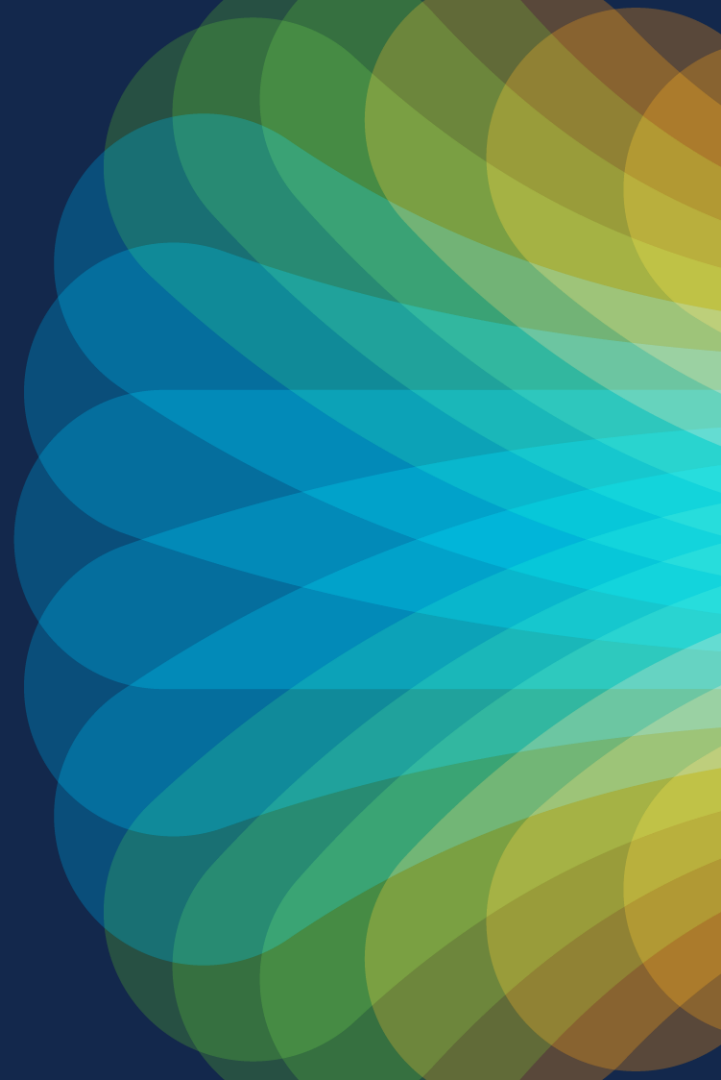


The bridge to possible

# Thank you

CISCO *Live!*

#CiscoLive

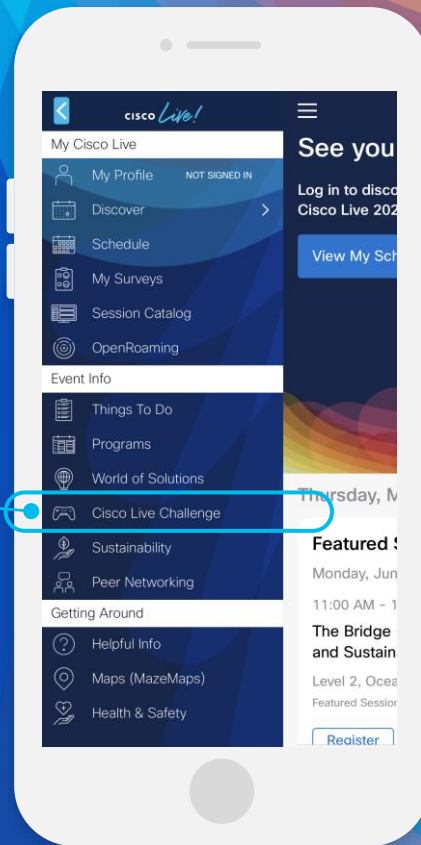


# Cisco Live Challenge

Gamify your Cisco Live experience!  
Get points for attending this session!

## How:

- 1 Open the Cisco Events App.
- 2 Click on 'Cisco Live Challenge' in the side menu.
- 3 Click on View Your Badges at the top.
- 4 Click the + at the bottom of the screen and scan the QR code:



The background features a vibrant, multi-colored abstract design. On the left, there are overlapping, wavy, organic shapes in shades of red, orange, and yellow. On the right, a bright white light source emits a series of sharp, radiating lines in various colors, including blue, green, and yellow, creating a sunburst or starburst effect. The overall composition is dynamic and energetic.

cisco *Live!*

Let's go

#CiscoLive