HPA

LUX MACHINA

“We’ll Do It Live!”

PHIL GALLER

Co-President of Lux Machina Consulting
NEP Virtual Studios
Background in Film & Broadcast

As a principal and founder at Lux Machina Consulting, Phil Galler strives to push the boundaries of technology and design in the entertainment industry. Focusing on in-camera visual effects, real-time mixed reality and the future of film making and live broadcast, he has been fortunate enough to find himself at the crossroads of technological innovation and creativity.

Who We Are

Comprised of industry-leading experts, our team offers unparalleled knowledge and experience in:

- Virtual Production
- System & Show Control
- Technology Design & Sourcing
- Film & Broadcast Production
- Research and Development
- Software Development

Lux Machina provides premium consultation and on-the-ground production support while setting industry standards as leaders in innovation and technology.

Screens Control History

Screens Control History

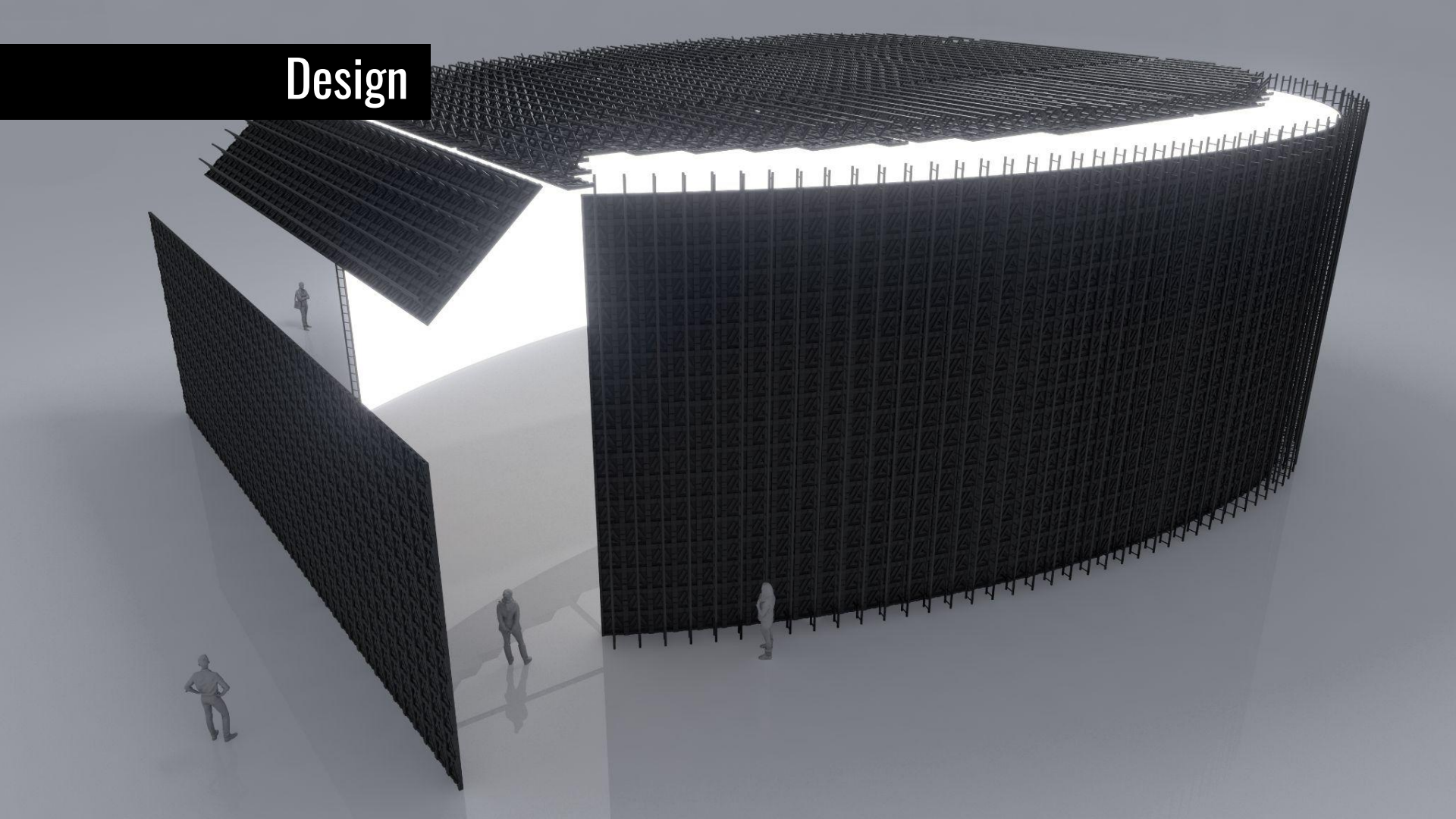
Multi-Vertical Workflow

A Design Process

Multi-Vertical Process - It Starts With Universal Design

- Monitoring
- Easy signal management
- Clear and quick access to information about signal status and health
- Flexible deployment of signal types

Design

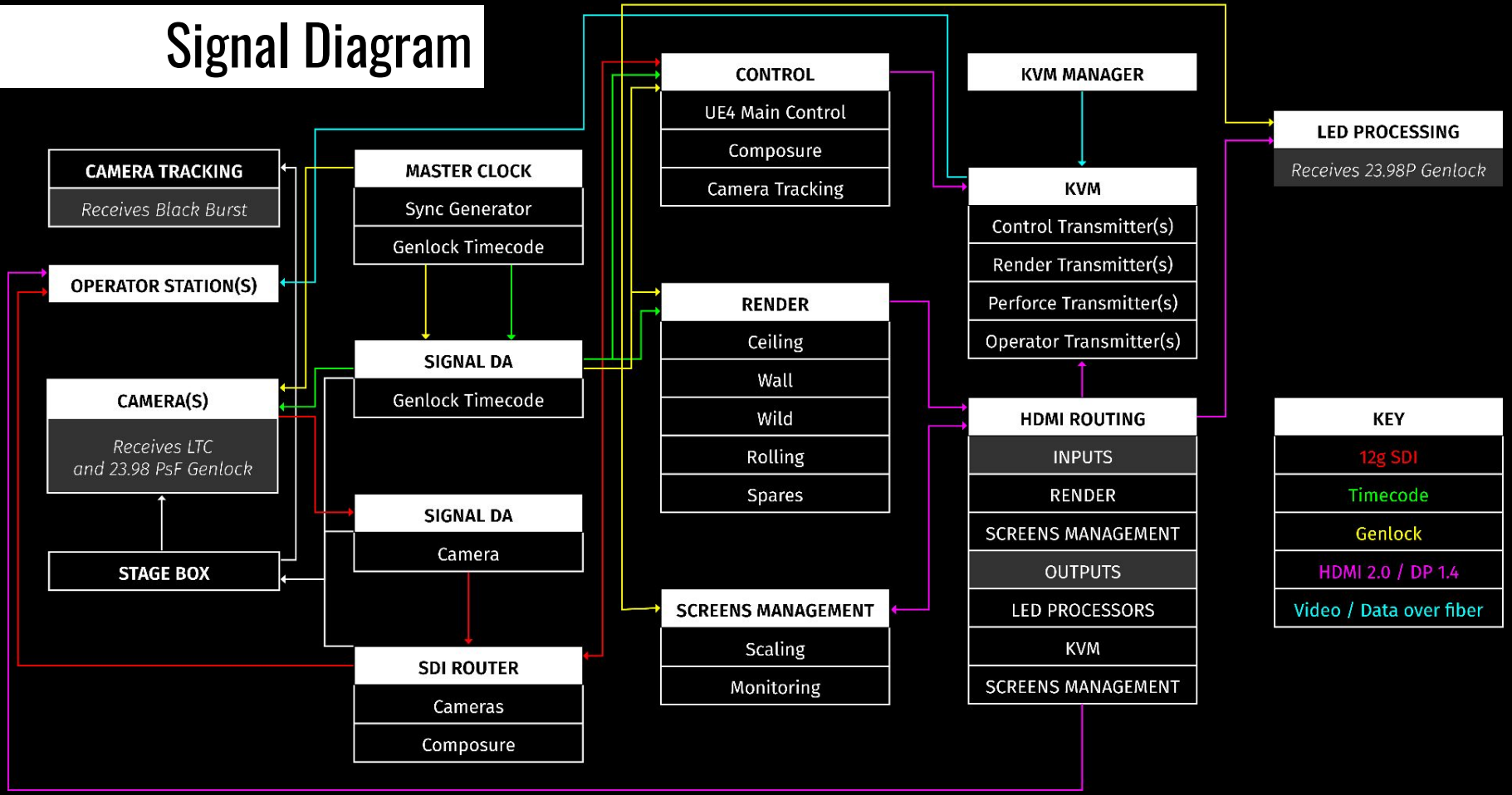


Signal Workflow

Signals Used In Broadcast & Virtual Production

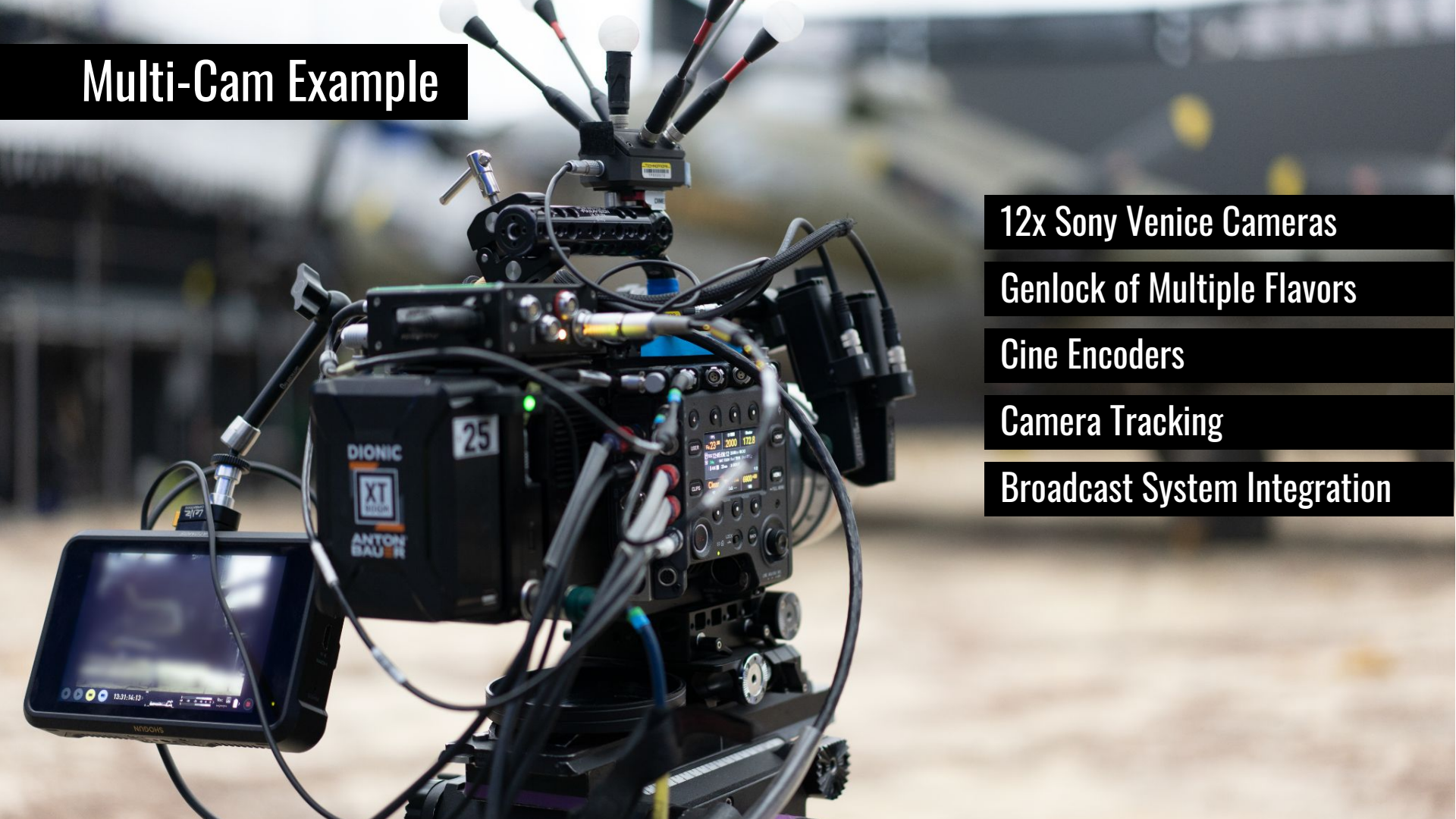
- Genlock
- LTC
- Networking Signals of all kinds
- Camera Tracking Data
- FIZ Data
- Lens Distortion

Signal Diagram



Machine Room

Multi-Cam Example



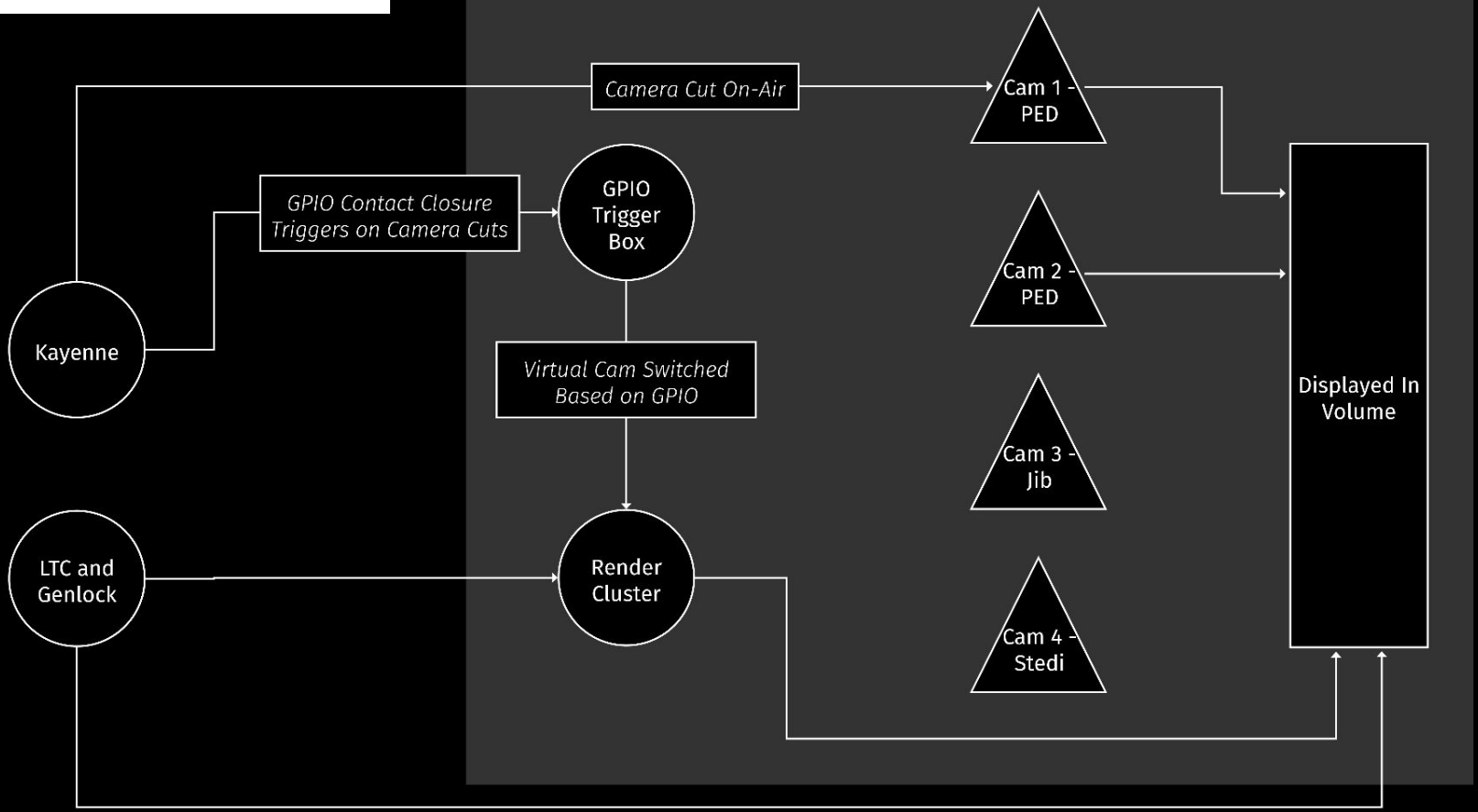
- 12x Sony Venice Cameras
- Genlock of Multiple Flavors
- Cine Encoders
- Camera Tracking
- Broadcast System Integration

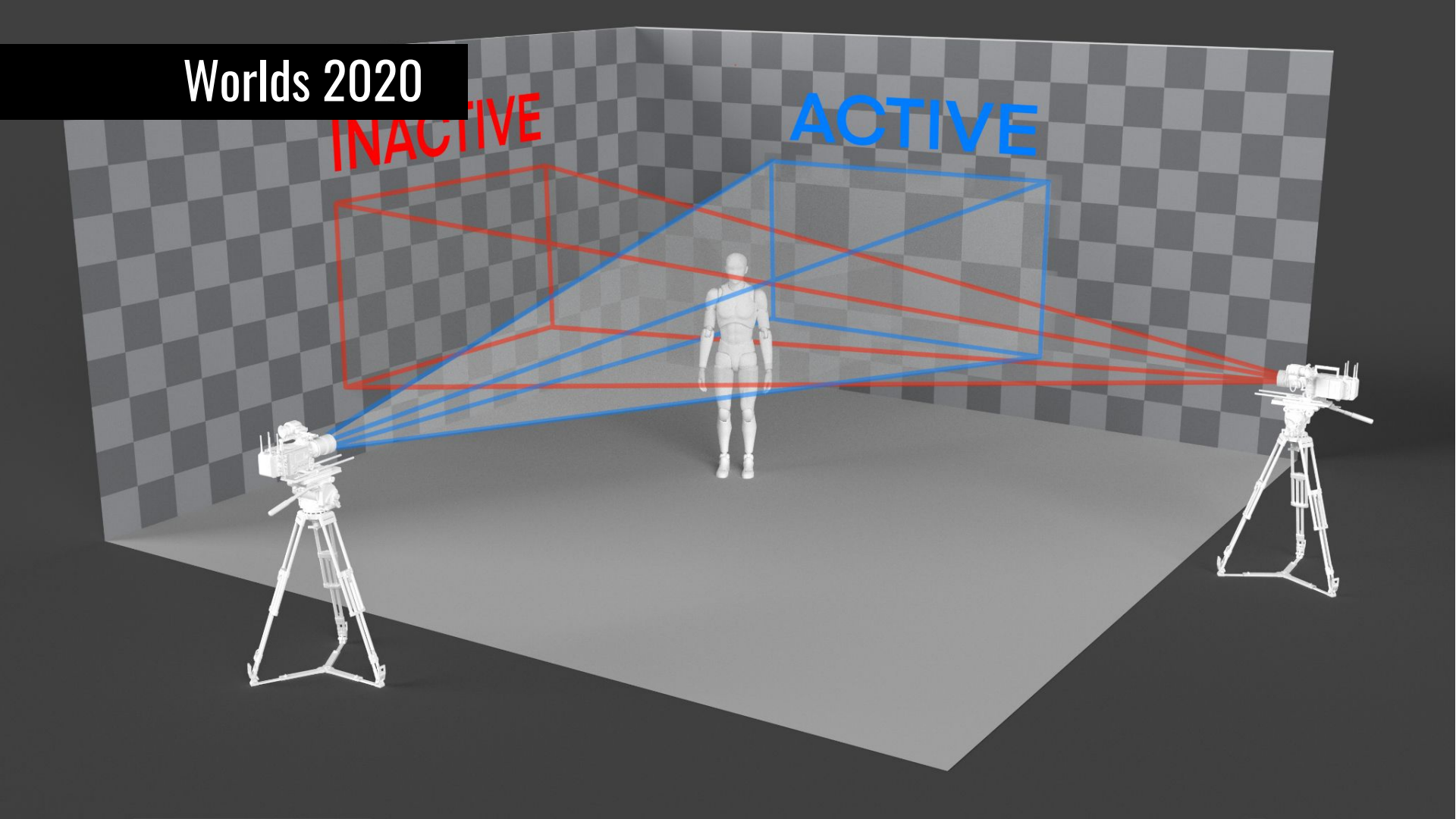
League of Legends: Worlds 2020

Worlds 2020

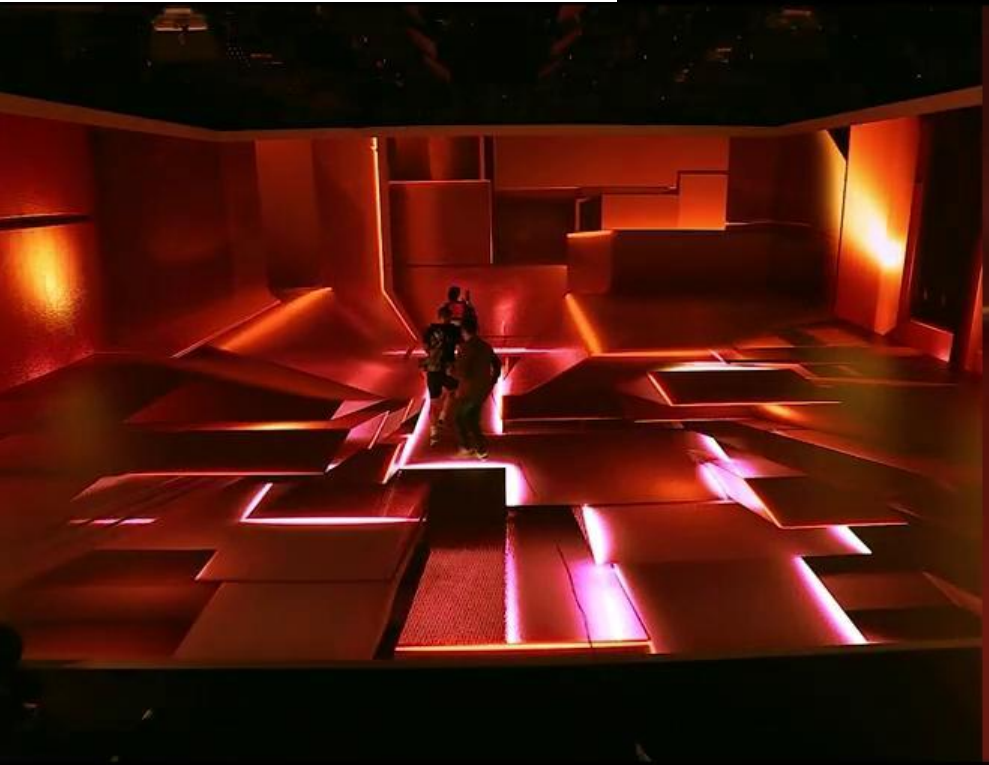
- 4 Broadcast Cameras
- Multi-Cam Frustum Switching
- 240 Hours of Live Content
- Player / Talent Interactivity
- Broadcast System Integration

Worlds 2020


Camera Cut On-Air
Cam 1 - PED
GPIO Contact Closure Triggers on Camera Cuts
GPIO Trigger Box
Cam 2 - PED
Kayenne
Virtual Cam Switched Based on GPIO
Displayed In Volume
Cam 3 - Jib
LTC and Genlock
Render Cluster
Cam 4 - Stedi


Worlds 2020
INACTIVE
ACTIVE

Worlds 2020

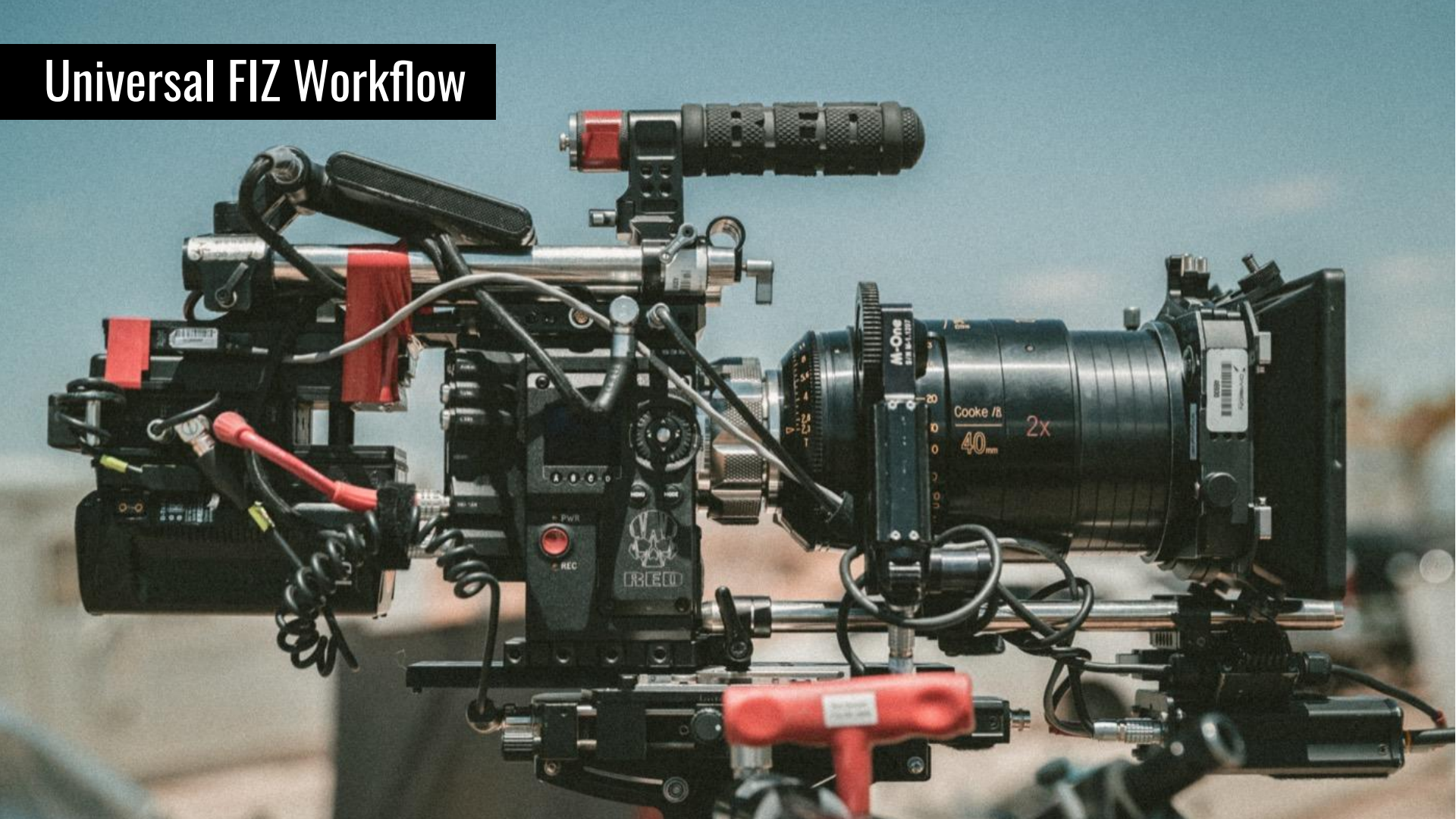


SEMFINALS SHOW OPEN SHOT ON XR STAGE

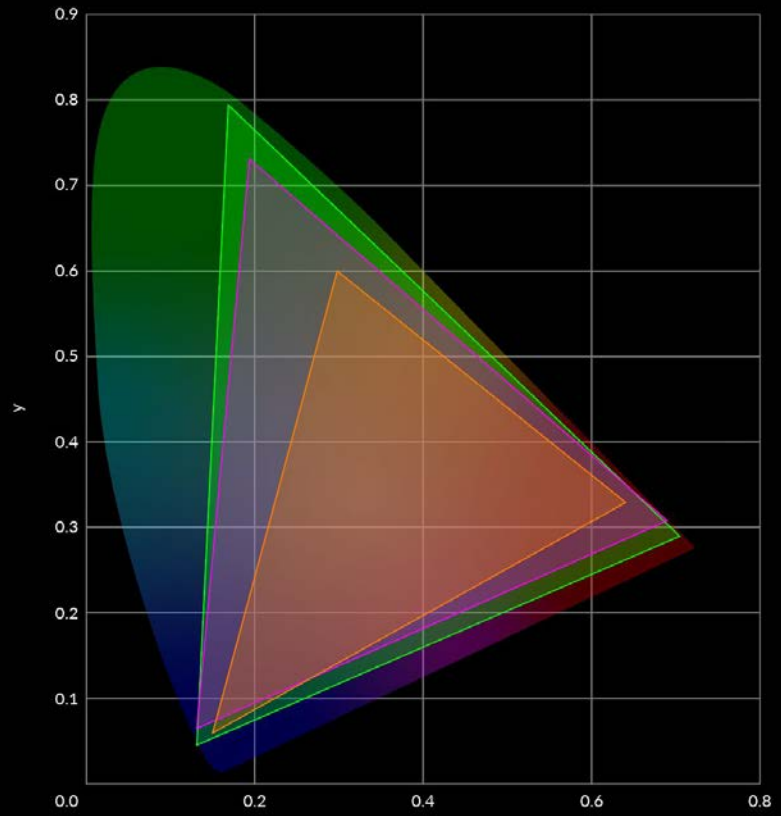
SEMIFINALS SHOW OPEN

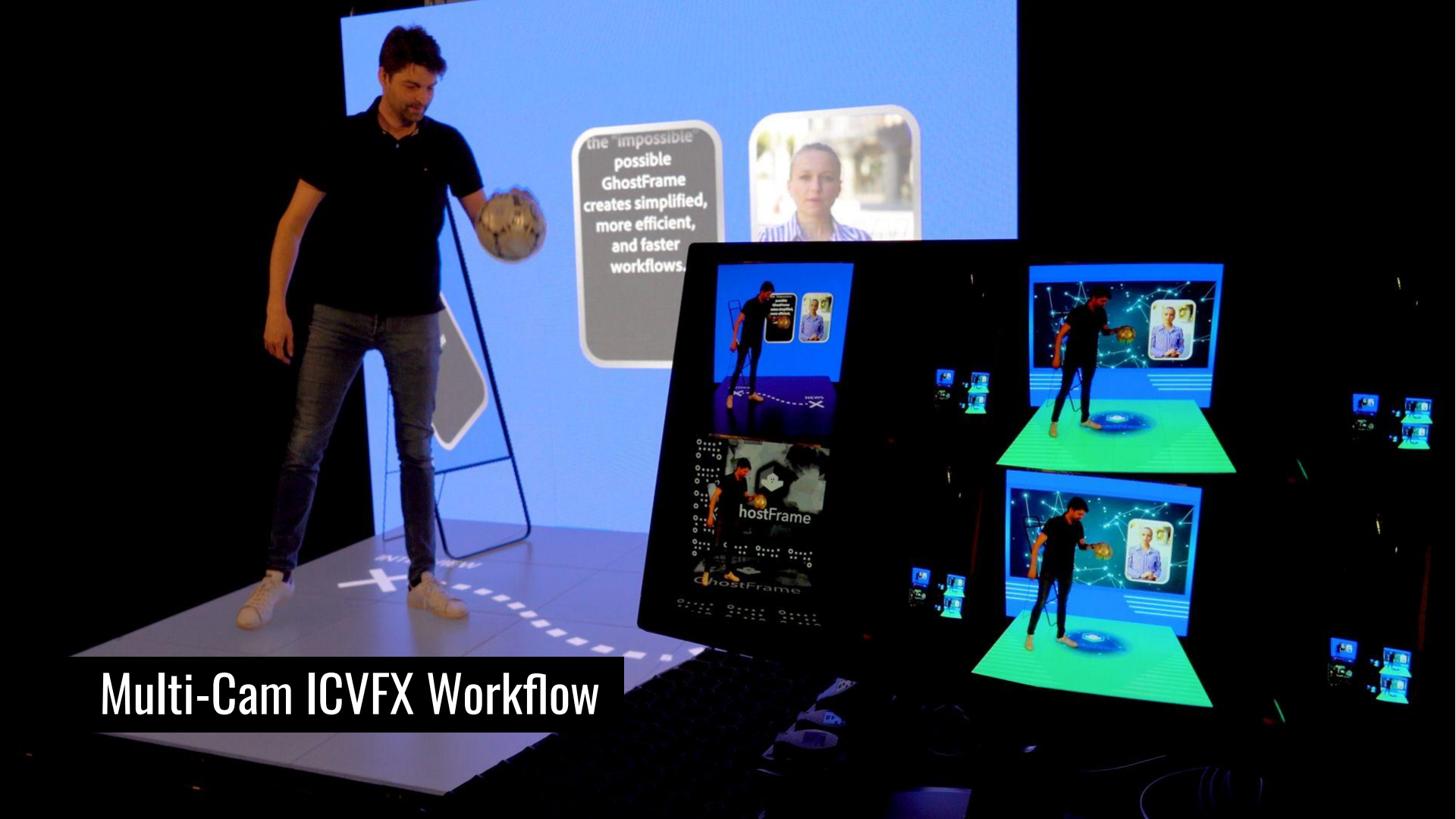
What’s Next??

Universal FIZ Workflow



Automating Color Workflow





Multi-Cam ICVFX Workflow

What's Next??

What's Next - Future Facing

- 2110 inclusive of PTP (2059-2) incorporated into every camera body, film or broadcast!
- Easier to use HDR and timing/signal evaluation tools
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- Stock Libraries of lens distortion data
- Flexible high resolution, fast displays
- Improved high bandwidth production equipment (100/200/400)

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