Building a Private Cloud for Live Production
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Eurosport Strategic Challenges and Opportunities

**Today**
- Ageing infrastructure
- Limited ability to enable change
- Limited flexibility and difficult to scale
- Technology not able to support new growth
- Escalating operating cost

**Future with ETT**
- New infrastructure and technology approach enables location and business flexibility
- Common content platform for linear and digital
- Lowers technology cost of new services
- Enables faster time to market for new services and consumer testing

*Cost savings, location flexibility and a true Digital/Linear Production environment*
**Key Technology Challenges**

- Transition to 2110 and AES67 audio
- Leverage public cloud and cloud stack where possible
- Centralized playout
- Central MAM and Content Storage
- Remote production
- Event-based production
- Resource management
- Live data graphics
- Ability to provide customized feeds for all digital platforms and linear services

**Key Project Challenge – Time**

**ETT Enables Business Improvement**

An investment that creates unified digital and linear production ecosystem and common content hub to enable the growth of our digital and linear businesses

1. **Evolution of live production**
   - Remote production = low cost and agile live production

2. **Digital and linear growth**
   - Cloud based approach allows for rapid scaling.
   - Common content hub for digital & linear

3. **Efficiency and the bottom line**
   - Ability to efficiently use technology based on event production instead of channel production
   - Ability to drive cost of production and changes down

**Dynamic, scalable and efficient content production platform**
### ETT Scope

1. **Evolution of live production**
2. **Digital and linear growth**
3. **Efficiency and the bottom line**

Two TechHubs supporting all live production needs for all market and products

#### Distributed
- MCR/Traffic
- Control Rooms
- Edit
- Post
- Event Production
- Playout

#### Centralized
- TechHub A
- TechHub B

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**Common Access to all Content for Digital and Linear Platforms**

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### Key Technology Principles

- Cloud approach for physical kit
  - Flexibility, scalability, redundancy, efficiency, evolution
- Common access to all content with distributed operations
  - Unrestricted support for digital growth
- IP provides the scale and flexibility needed
  - Over 40,000 video flows
  - Up to 32 discreet audio pairs per video
  - Dynamic system deployment and orchestration
- Remote production for all – from simple to complex
Challenges

- Huge amount of change and an aggressive project plan
- Vendor support for 2110 still evolving
- Industry has focused on IP and not IT
- No best practices for system and configuration management
- Breaking new ground with cloud deployment approach for traditional production kit
- Industry consolidation and transformation

Key Project Challenge – Time

Technology Direction

Evolution of Virtualization for Live Production

- DEDICATED HW
  - On Premise
- VIRTUALIZE MACHINES
  - On Premise or Data Center
- SHARED HW
  - Data Center
- PUBLIC CLOUD

Current ETT
JT-NM 1001 – A Great Vision

Our Key Reality – Keeping Everything in Sync
Industry Encouragement

- Embrace, support and evolve IP open standards
  - NMOS, JT-NM 1001
  - We are fully supportive and hope that the industry and vendors enable greatly reduced installation times and simplified deployments
- Create best practices for system management
  - NMOS and JT-NM 1001 provide some good building blocks – but limited deployments and no defined industry best practices makes is very challenging
- Encourage and evolve IT and Cloud approaches leveraging proven models
  - DNS, DHCP, CloudStack services, Micro Services and Cloud/IT application management/deployment
  - Aspects of system configuration and ongoing management is undefined

The industry needs projects to evolve and define best practices

Our Path Forward

- Build out TechHubs
- Launch new MCR and Playout Centers
- Transition PCRs
- Support Tokyo 2020 with ETT
- Encourage industry support and evolution