



Planning a SMPTE ST 2110 infrastructure for tpc sports, news and technology center in Zurich, Switzerland

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SRG SSR

tpc

METECHNO

QVEST MEDIA

IP SHOWCASE THEATRE AT IBC - SEPT. 14-18, 2018



About SRG and tpc

SRG: in allen Landesteilen präsent

● Hauptstudios

● Regionalstudios/Büros

SRG 1

SRG zwei

SRG INFO

RADIO SRF 1

RADIO SRF 2

RADIO SRF 3

RADIO SRF 4

RADIO SRF 5

RADIO SRF 6

RADIO SRF 7

www.srg.ch

SRG Apps

RTS un

RTS deux

RTS LA 1ÈRE

RTS COULEUR 3

RTS ESPACE 2

RTS OPTION MUSIQUE

RSI 51

RSI 52

RETE UNO

RETE DUE

RETE TRE

www.rsi.ch

RSI Apps

SWI swissinfo.ch

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About Qvest Media

QVESTMEDIA
THE LEADING SYSTEMS ARCHITECT

Design → Build → Service

- Managed Technology
- Professional Products
- Software Development

Locations: 11 offices in Europe, MENA and APAC

Employees: 250 employees and 70 freelancers

Industries: Television, Media, Telecommunications, Governments & NGOs, Entertainment and Sports Production

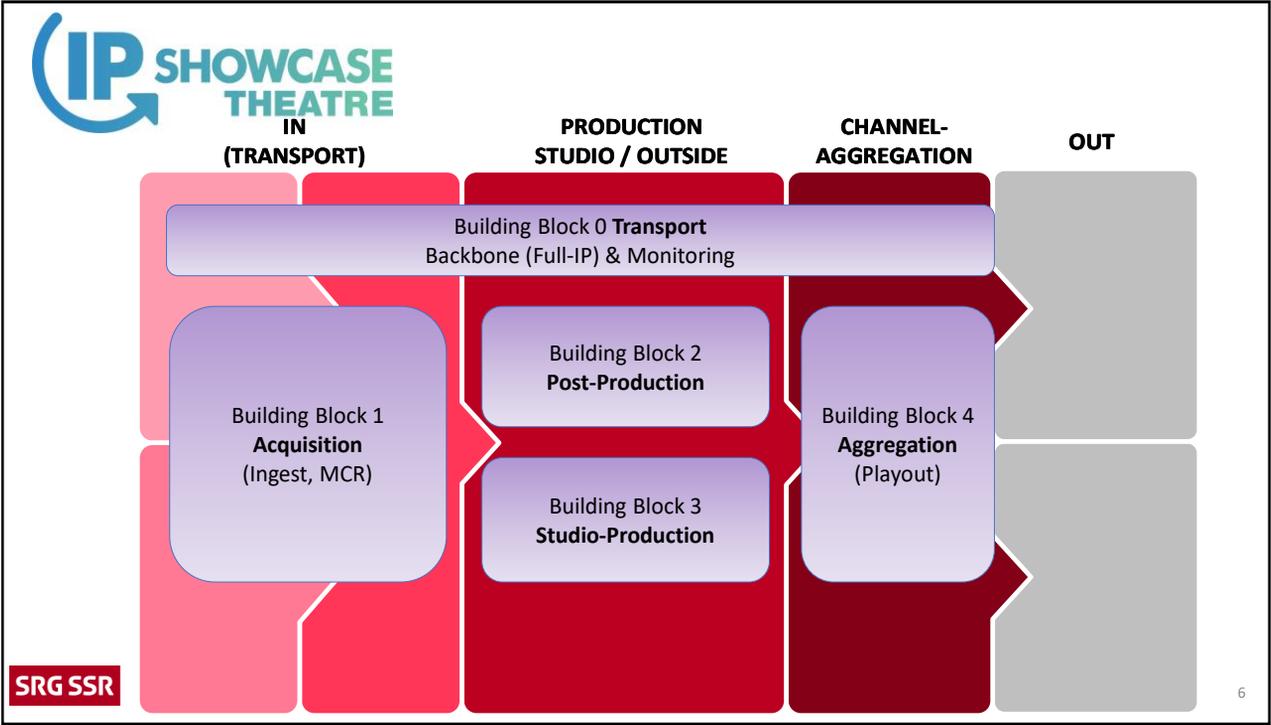
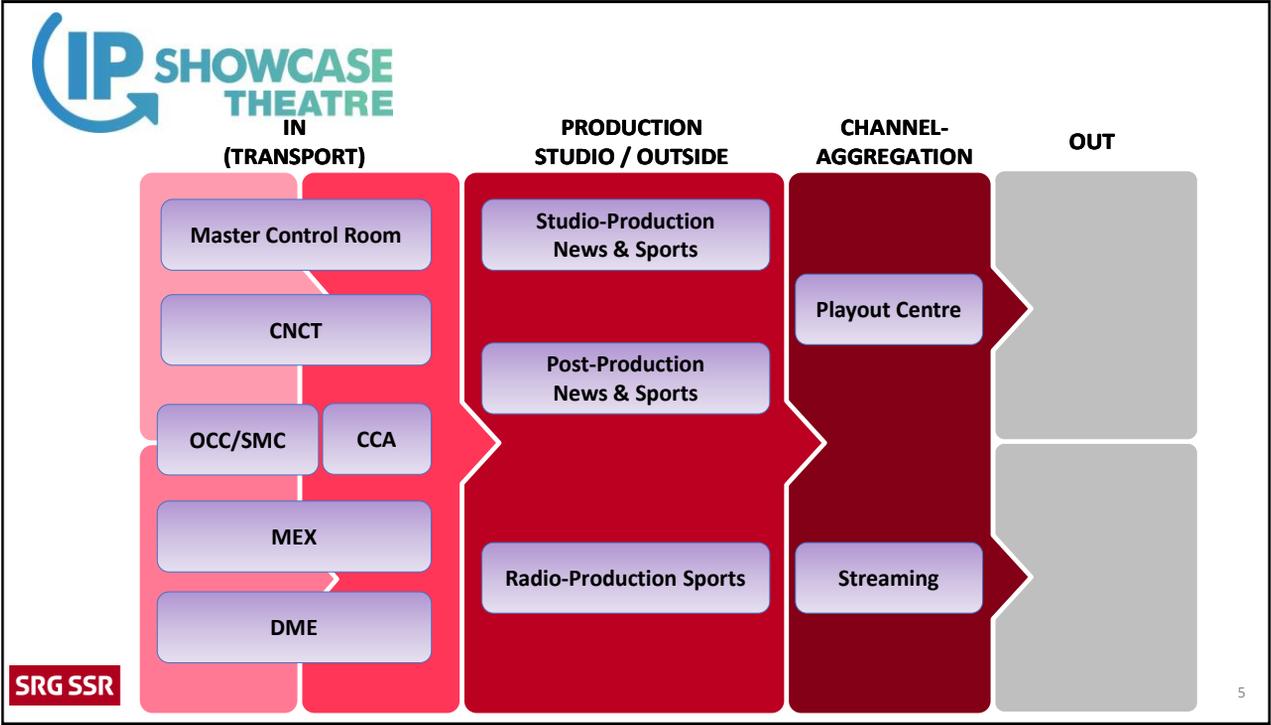
Research Topics: Broadcast IP, AI, Cloud Technology



The New Sports, News and Technology Centre

- News and Sport Studios
- Radio News Studio + Gallery
- News Post Production
- Online Production including small production rooms for live productions
- Playout for the three SRF Channels: SRF1, SRF2, SRF Info
- National MCR (Sports Venus, EBU, SRG SSR exchange)







Technical Standards

- We claim only open Standards
- SMPTE 2110
- AES 67
- NMOS
- tpc is AIMS member
- tpc is SMPTE member
- Greenfield approach
- UHD / HDR ready
- Future proofed
- Uncompressed
- On Air September 2019

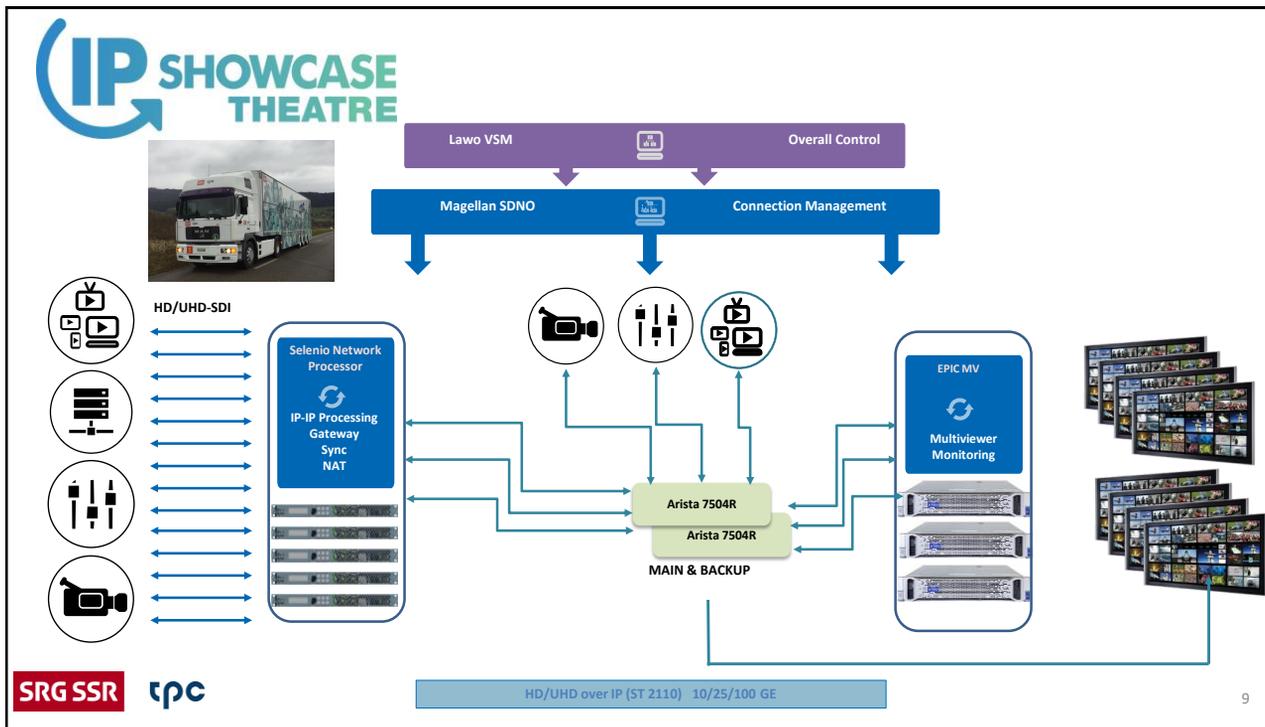
SRG SSR | tpc | METECHNO | QVEST MEDIA

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How to get Experience?







- Start of the project announced during NAB 2017
- What has happened since then?

First All-IP SMPTE 2110 Broadcast Infrastructure for tpc

posted: 01/05/2017



tpc BROADCAST AND BEYOND **QvestMedia**
smaller broadcast solutions

Qvest Media and tpc switzerland ag Are Planning the First All-IP SMPTE 2110 Broadcast infrastructure for the New Sports, News and Technology Centre in Zurich

Qvest Media, one of the world's leading systems architects for broadcast and media technology, has received a major contract from Switzerland. In close cooperation with the production service provider tpc switzerland ag, Qvest Media is planning the media technology infrastructure of the new sports, news and technology centre in Zurich. Amongst others, the level of development of the broadcast IP standard SMPTE 2110 at this year's NAB Show in Las Vegas will be particularly important for the planning of this project.

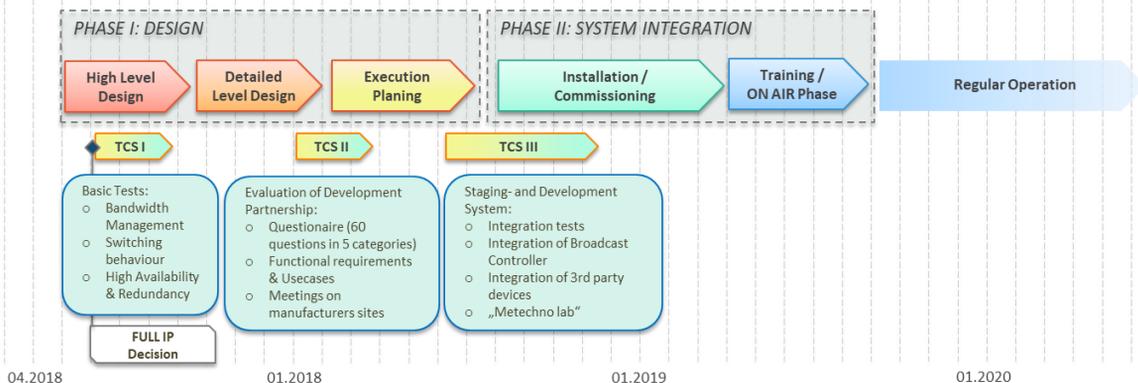




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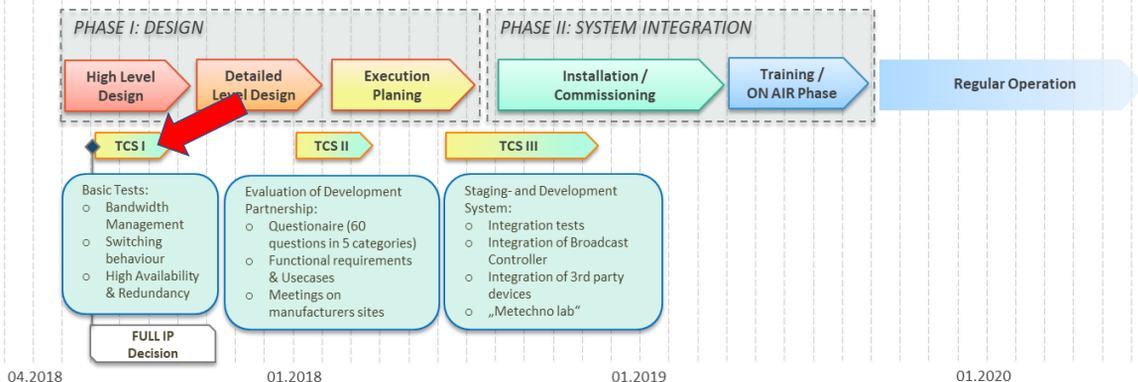
Met techno SMPTE ST 2110 APPROACH



TCS = Technology Certification System



Met techno SMPTE ST 2110 APPROACH



TCS = Technology Certification System





TCS 1 – Fall 2017

Primary test of the orchestrator platforms

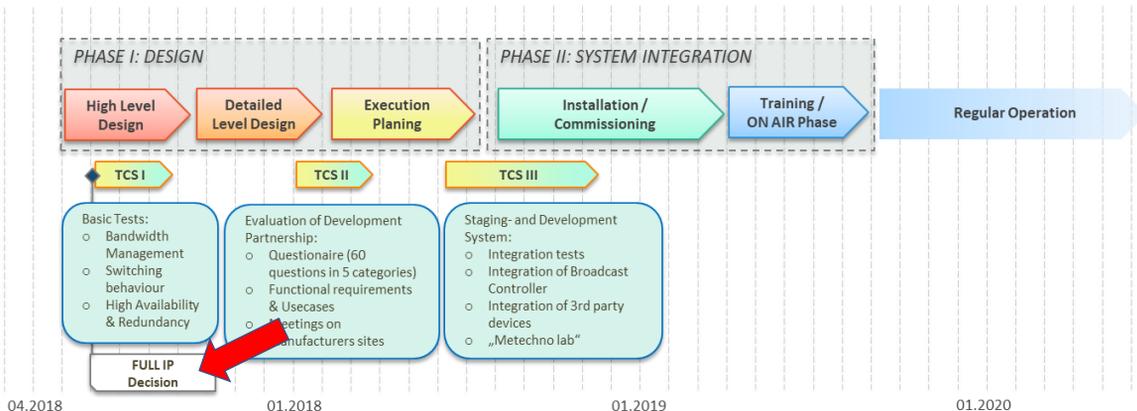
6 vendors 3 weeks 49 tests 8 categories

- Basic Setup (Setup & Configuration)
- Basic Tests (Basic features)
- Bandwidth Management
- Switching Behavior
- Audio/Video
- High Availability & Redundancy
- Security
- Communication with vendor

Vendor	Test ID	Test Name	Test Description	Test Method	Requirements	Pass/Fail	Expected Results	Actual Results
SRG SSR	TCS1-001	Basic Setup	Verify basic setup and configuration of the orchestrator platform.	Manual configuration	Vendor documentation	Pass	Configuration completed successfully.	Configuration completed successfully.
tpc	TCS1-002	Bandwidth Management	Test bandwidth management capabilities.	Automated test script	Vendor documentation	Pass	Bandwidth management works as expected.	Bandwidth management works as expected.
METECHNO	TCS1-003	Switching Behavior	Test switching behavior and latency.	Automated test script	Vendor documentation	Pass	Switching behavior is stable and low latency.	Switching behavior is stable and low latency.
QVESTMEDIA	TCS1-004	Audio/Video	Test audio and video playback quality.	Automated test script	Vendor documentation	Pass	Audio and video quality is high and stable.	Audio and video quality is high and stable.
SRG SSR	TCS1-005	High Availability & Redundancy	Test high availability and redundancy features.	Automated test script	Vendor documentation	Pass	System remains operational during failover.	System remains operational during failover.
tpc	TCS1-006	Security	Test security features and access control.	Manual configuration	Vendor documentation	Pass	Security features are properly implemented.	Security features are properly implemented.
QVESTMEDIA	TCS1-007	Communication with vendor	Test communication and support from vendor.	Manual configuration	Vendor documentation	Pass	Vendor communication is responsive and helpful.	Vendor communication is responsive and helpful.



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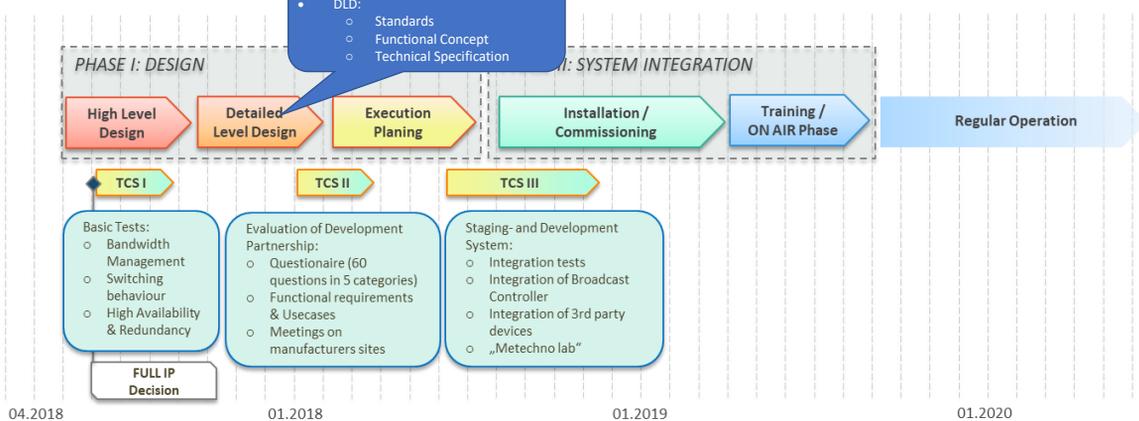


Full IP decision

- Decision for
 - A future proof system
 - UHD-ready
 - Aware of the risk
 - Scope of "Full IP"
- Defined as "Full IP":
 - SMPTE ST 2110 and AES67
 - Spine Leaf-Architecture
 - "2110-COTS"
 - Non-blocking Fabrics but blocking Bandwidth
- Thus not in Scope of "Full IP":
 - UHD 12G SDI
 - UHD 4x3G-SDI
 - SMPTE ST 2022 In-house
 - Proprietary formats
 - Compression as a requirement
 - Central architecture



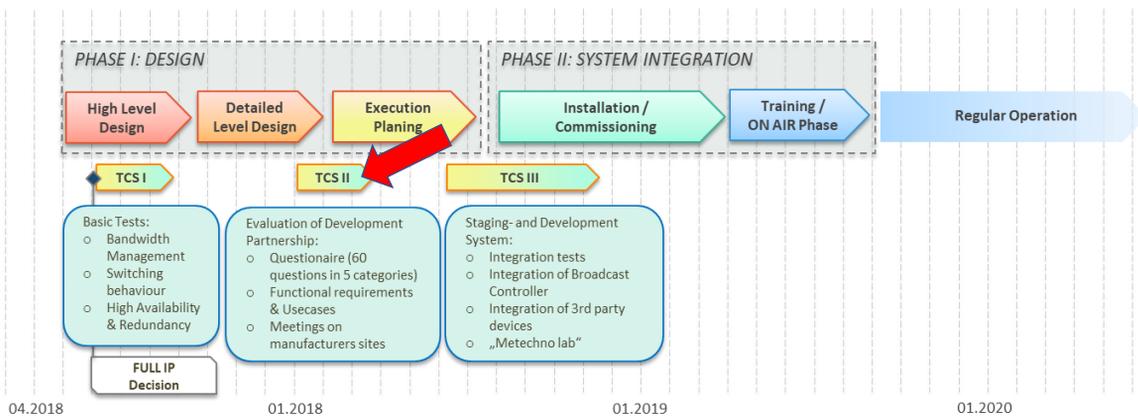
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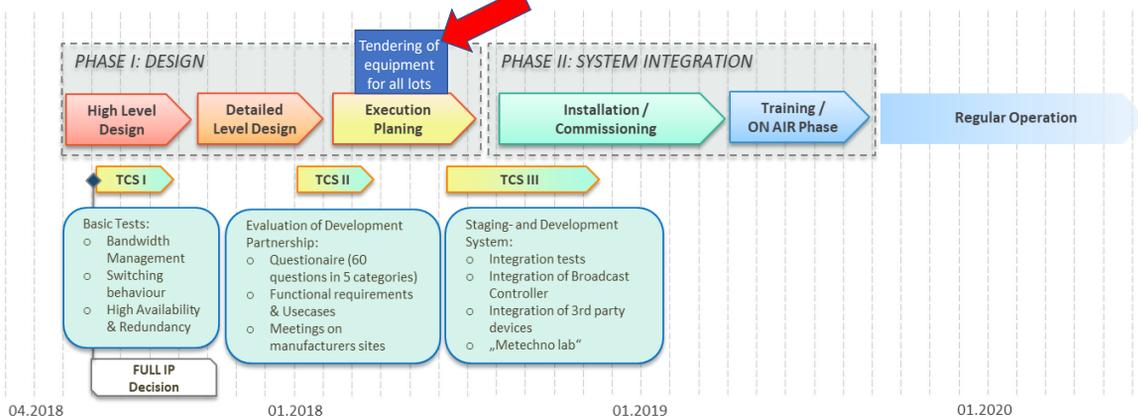
TCS 2 – currently ongoing, almost finished

- Results of work so far: The solution we are looking for is not available with the required maturity
- Goal: find the right vendor to realize the orchestration functionalities for the project
- Looking for a potential supplier to work together on a solution matching our requirements
- 120 pages document as input to the vendors





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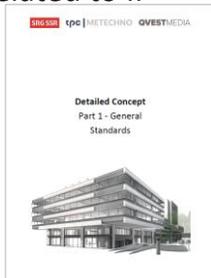


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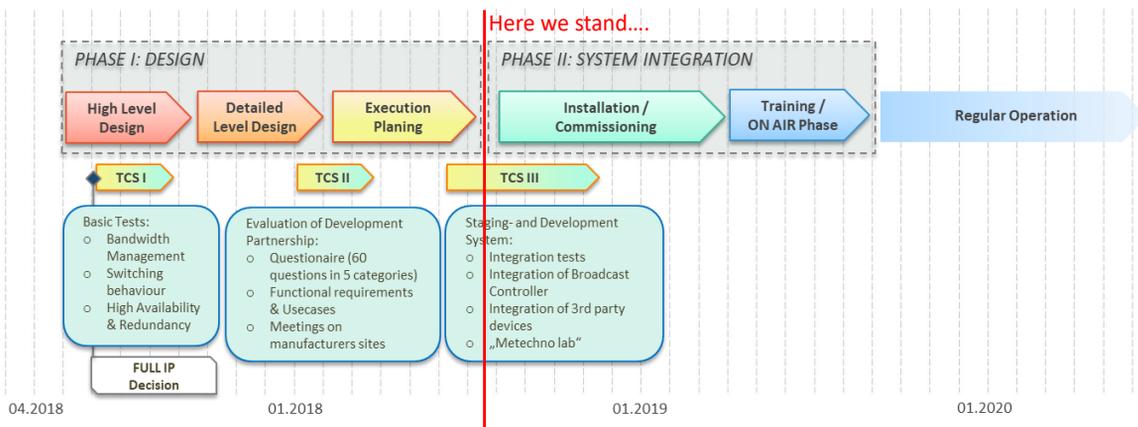
Tendering of equipment for the others lots

- Remember...we are planning a complete new technology building: studios, galleries, MCR, radio, ...
- We have issued about 60 tenders for equipment, most of them are somehow also related to IP
- We defined a “Standards” document with our requirements for IP
- Where necessary, SDI gateways will be used





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Thank You

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