

MOST-Forum 2010

MOST150 – Development and Production Launch from an OEM's Perspective

Stephan Esch, Frankfurt, 23.03.2010

AGENDA

- ▶ History of MOST Cooperation
- ▶ MOST at Audi
- ▶ Production Launch of MOST150
- ▶ Future Prospects
- ▶ Summary

AGENDA

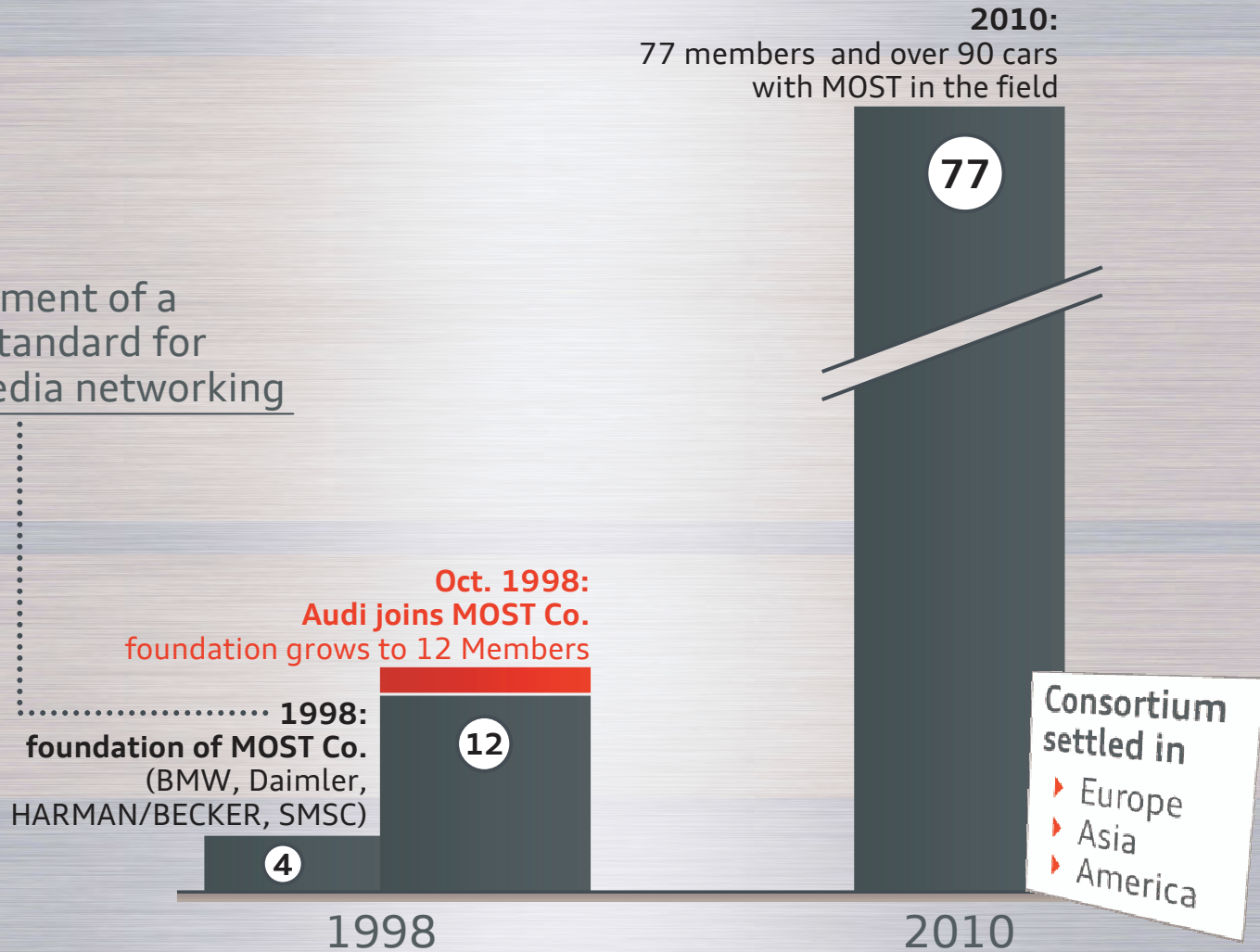
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MOST Cooperation – the story of success

Goal:

Development of a
global standard for
multimedia networking



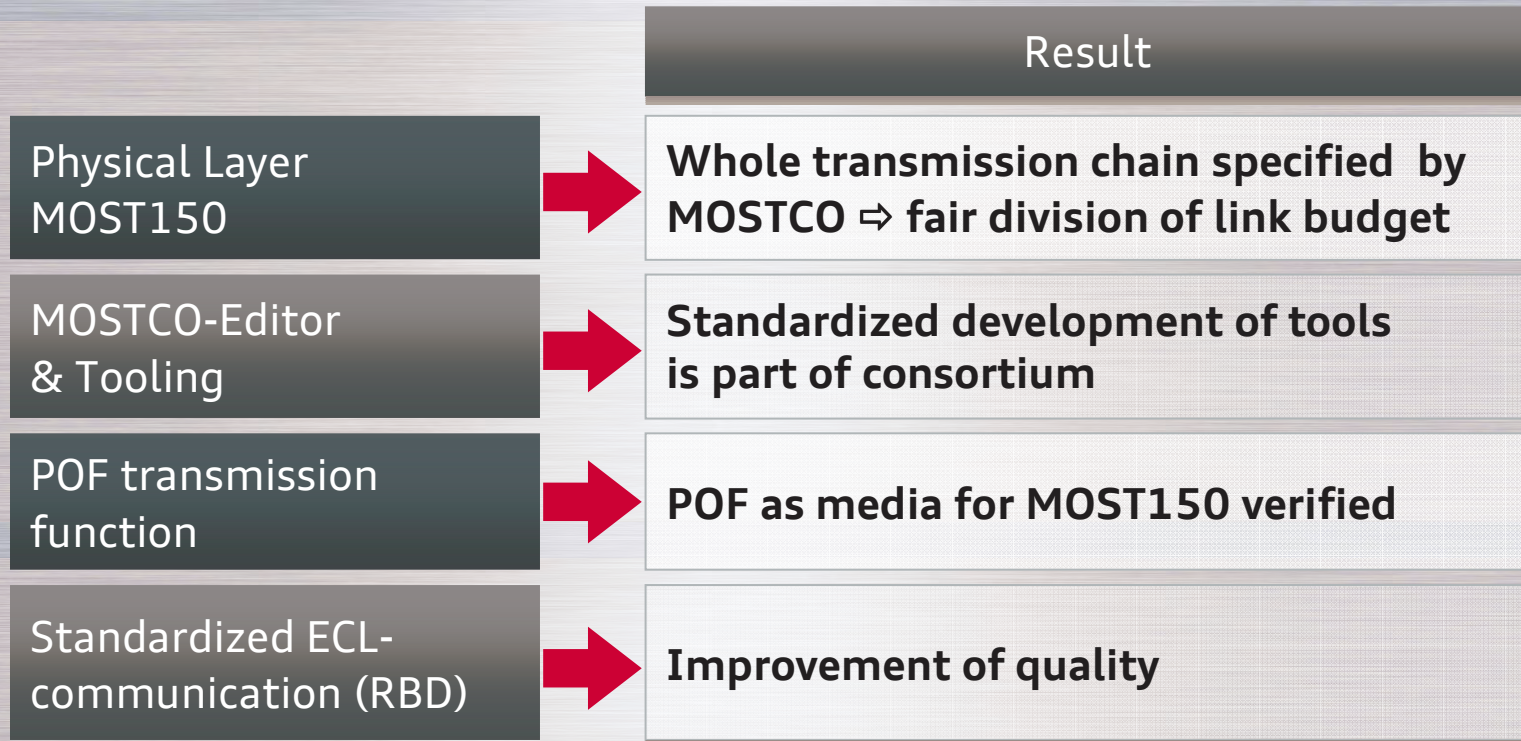
MOST Cooperation – the story of success

Success factors:

- ▶ Active participation of developers for 12 years
- ▶ Combination of Networking- and Infotainment-know-how
- ▶ Changing technical leadership accepted (depending on series-projects)



Successes of work in consortium

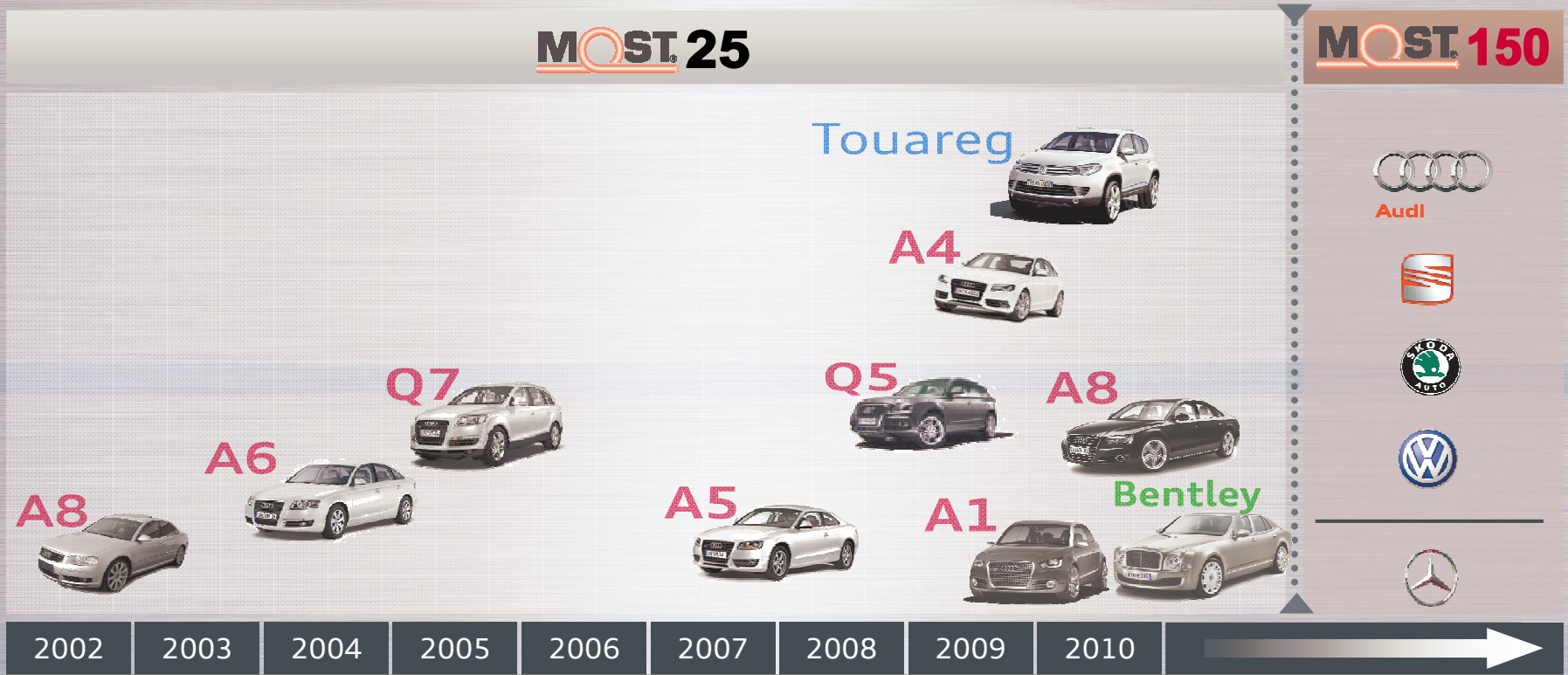


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MOST at Audi and VW

- ▶ MOST in the field since 2002 in MLB (starting with A8)
- ▶ Rollout of technology over all production series

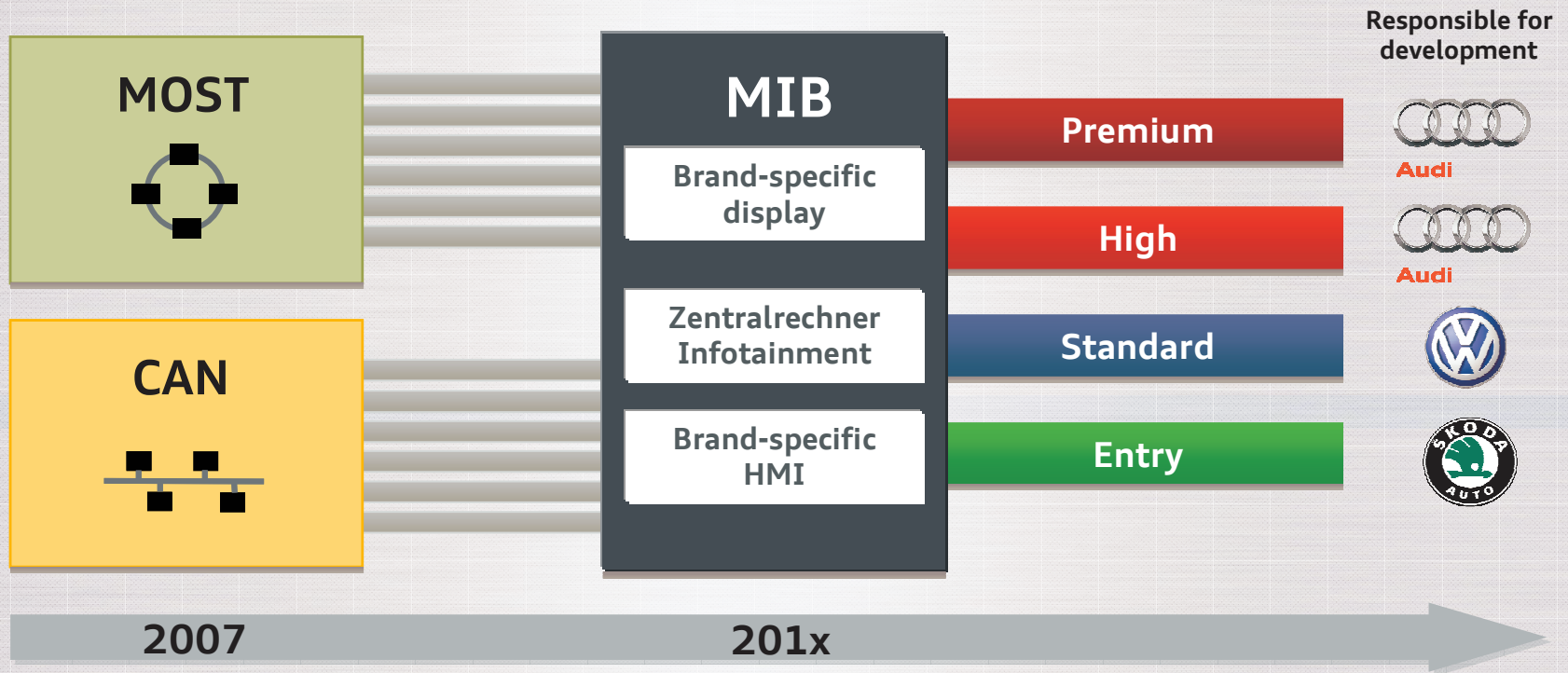


Rollout of MOST technology into volume segment

Infotainment

Challenges and solutions

Modularer Infotainment Baukasten MIB (Volkswagen Group)



MIB → One Infotainment Construction Kit for whole Volkswagen Group

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Infotainment

Requirements for Multi-Media-Networking
under strong influence by consumer electronics

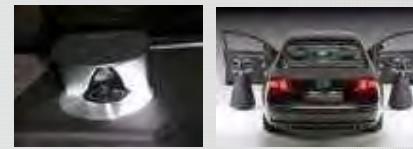
Decreasing prices



MOST150:

comparable
costs per
node like
MOST25

Premium-Sound-Experience



MOST:

Digital End-to-End
without
compression
(Audio)

Connectivity and
Online-Services



MOST150:

Ethernet-
channel+
Isochronous
Streaming

Navigation



MOST:

NAV-Map-Data
transmission
to cluster
instrument

High performance and
large scale integration



MOST150:

Video-
transmission,
High-
Bandwidth

Link of Infotainment
und Driver assistance



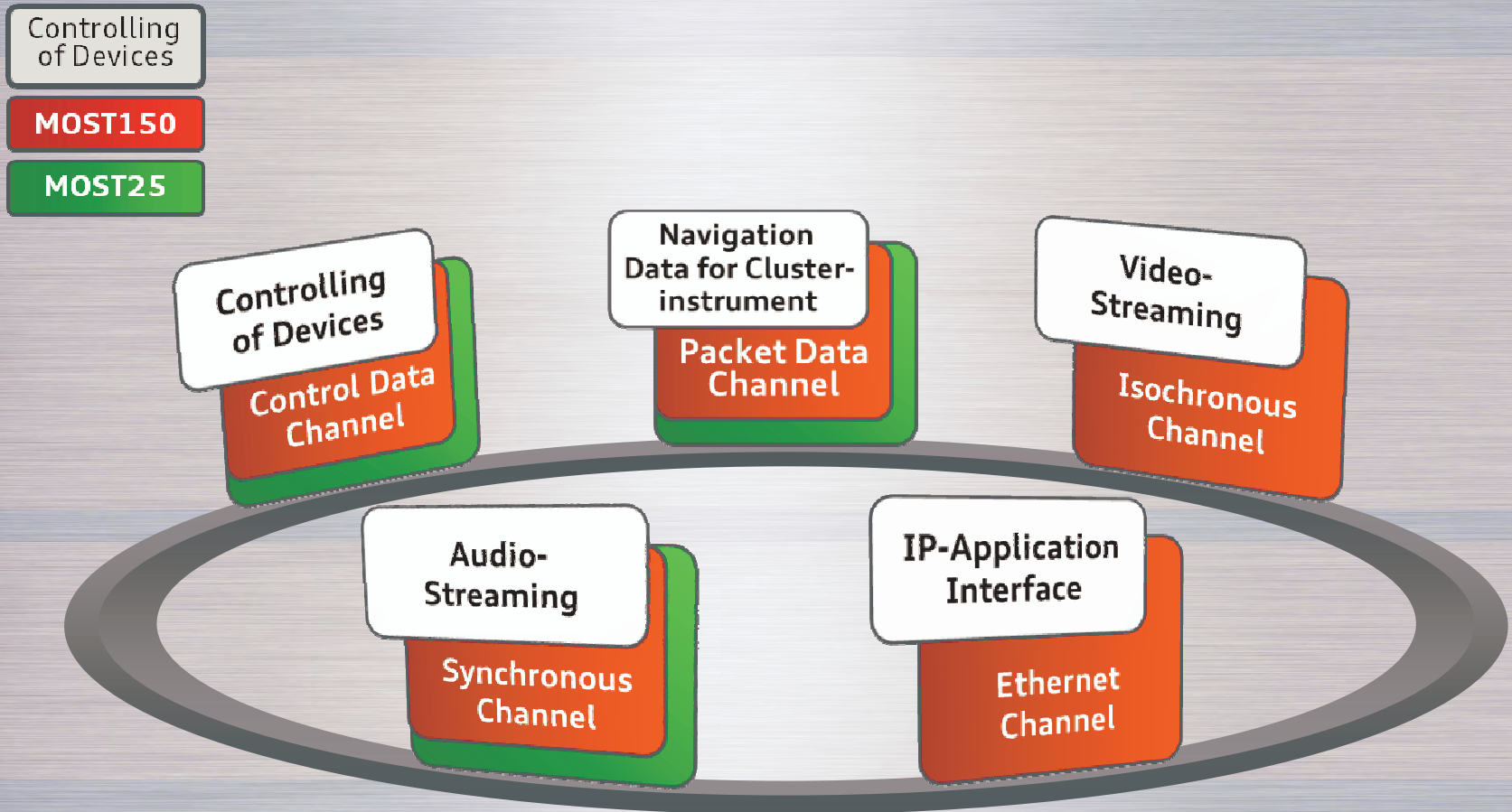
MOST:

future-proof
and flexible
architecture

MOST150 – ALL OVER ONE WIRE

More Bandwith demand

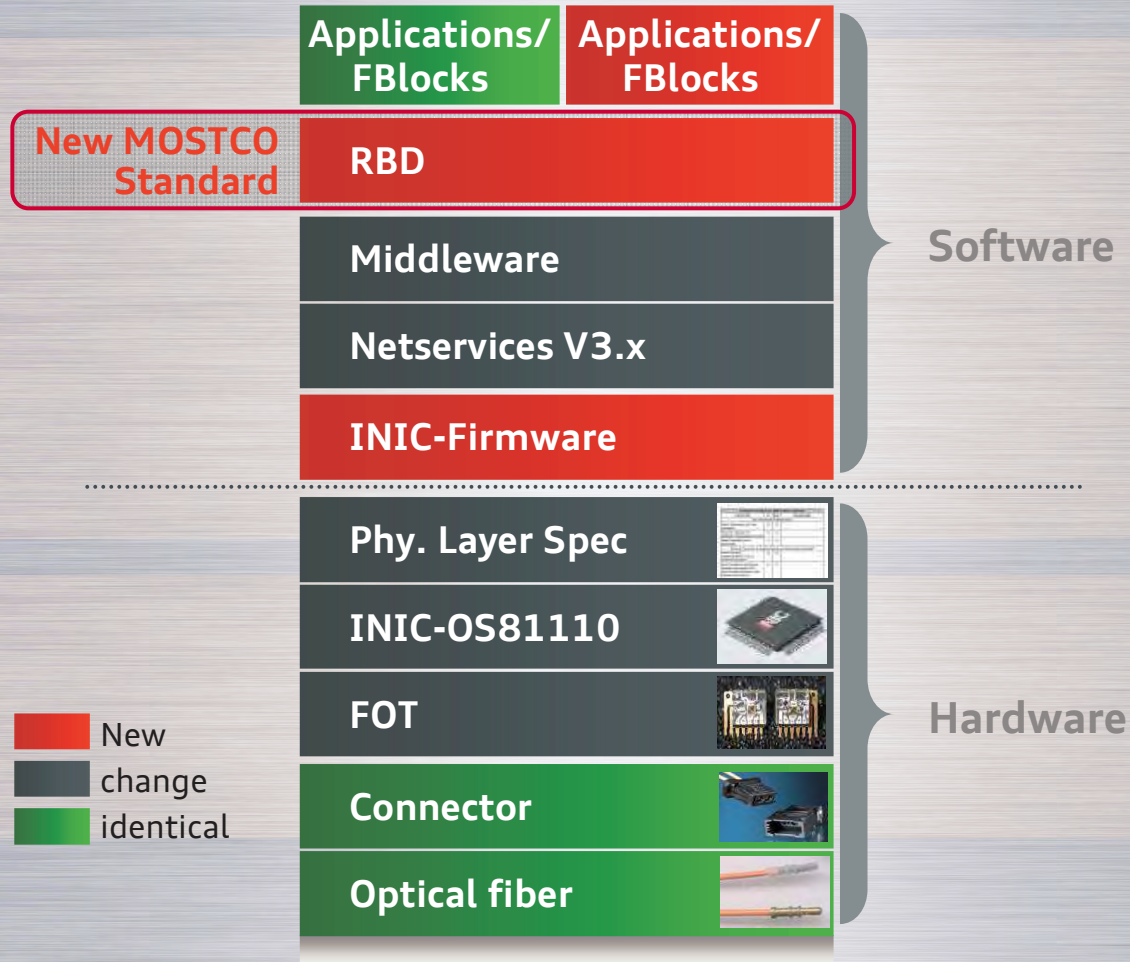
Services required in infotainment systems



MOST150 → All needed communication channels in one network

Migration –

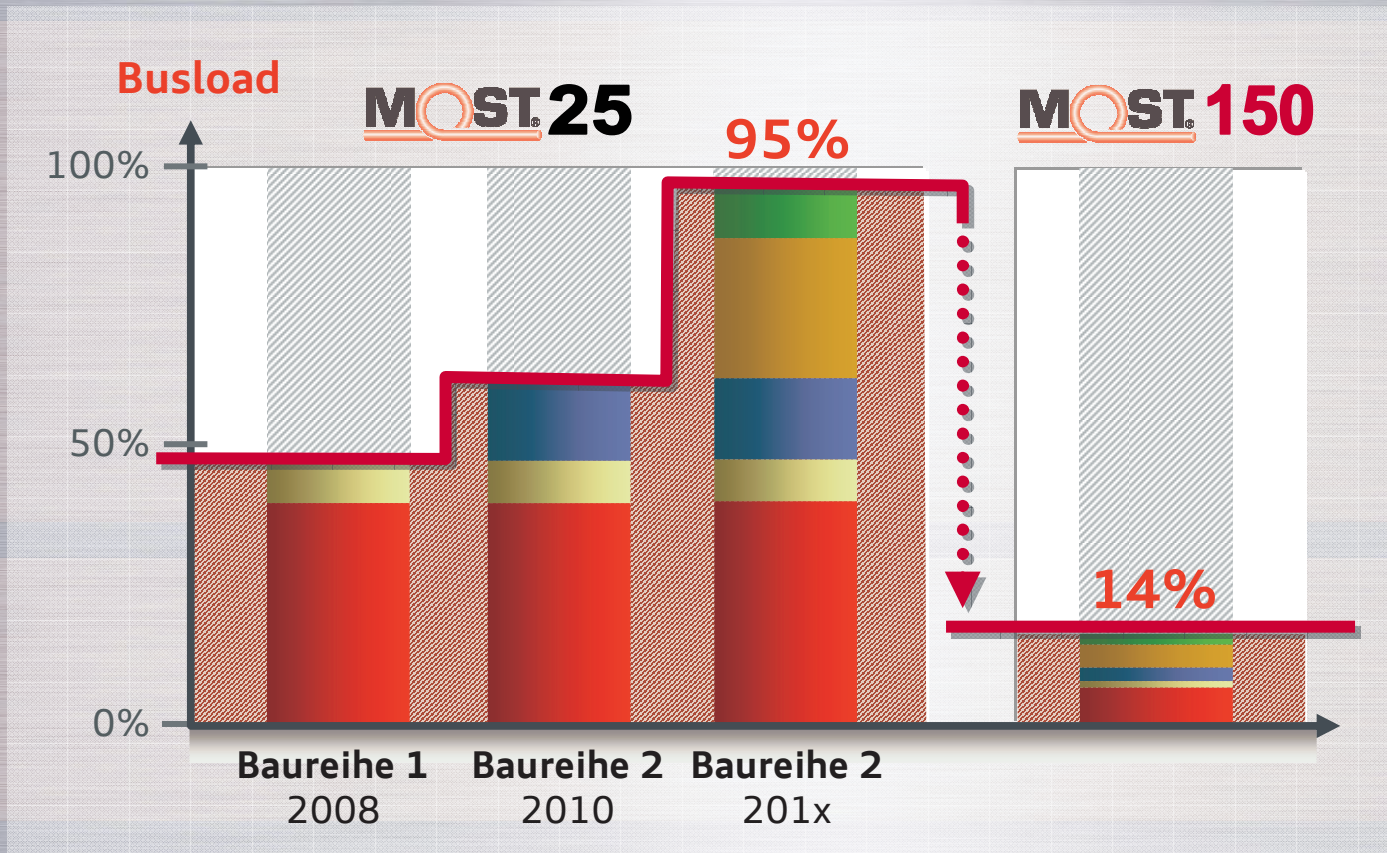
Hardware & Software changes MOST25 vs. MOST150



Only change of network related infrastructure necessary

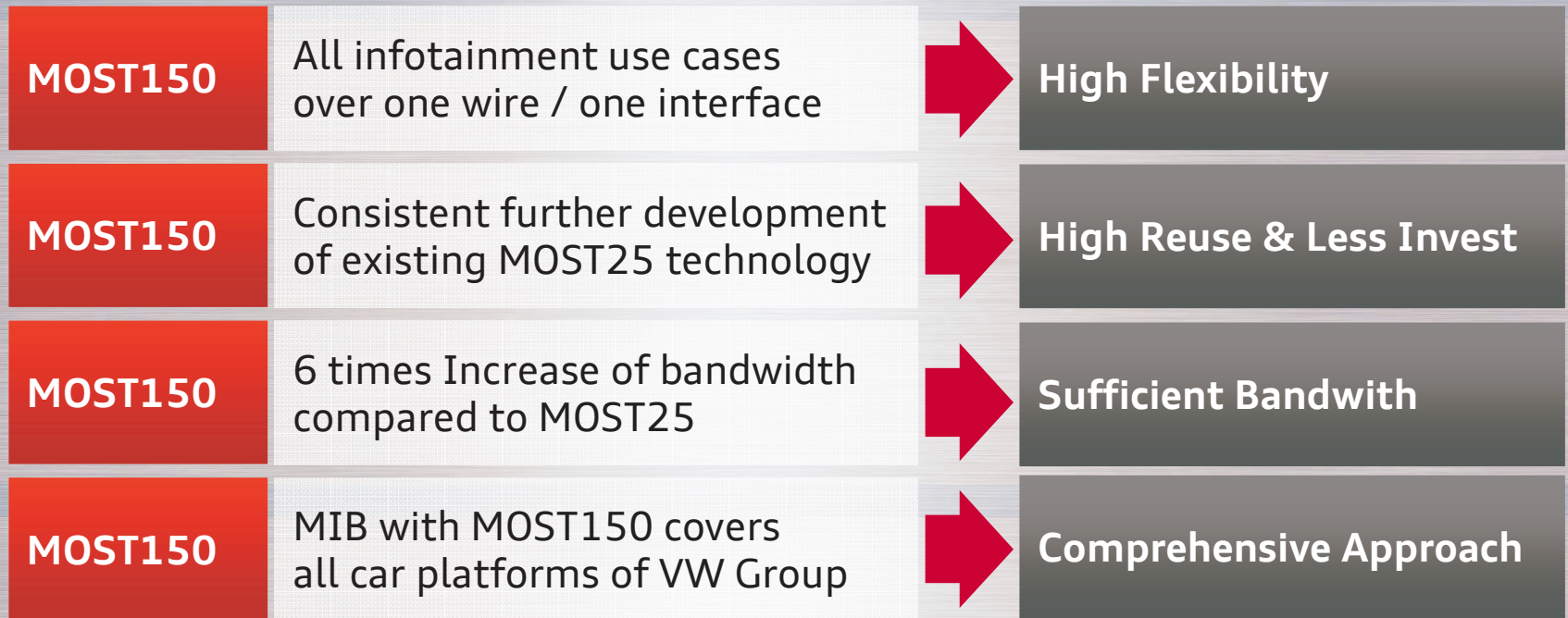
MOST150

Growing demand for bandwidth



**Bandwidth of MOST25 not sufficient in future
→ MOST150 offer reserves for future use cases**

MOST150 – The Solution



➔ MOST150 is technical and economical the best choice for a future-proof infotainment network

Evaluation of MOST150 technology

Technical changes

Applications/
FBlocks

Applications/
FBlocks

RBD

Middleware

Netservices V3.x

INIC-Firmware

Phy. Layer Spec



INIC-OS81110



FOT



Connector



Optical fiber



Issues of evaluation

Use Cases: Communication Setup

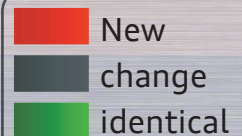
MOST Diagnosis (RBD, ECL, SSO/CU)

Networkmanagement, WakeUpSleep

NS-Functions, Performance, Stability

Physical Layer (Jitter, Sensitivity, Stress,..)

Tools: Datalogger, Optolyzer



All use cases and network layer covered by evaluation

Evaluation of MOST150 technology – Test Systems

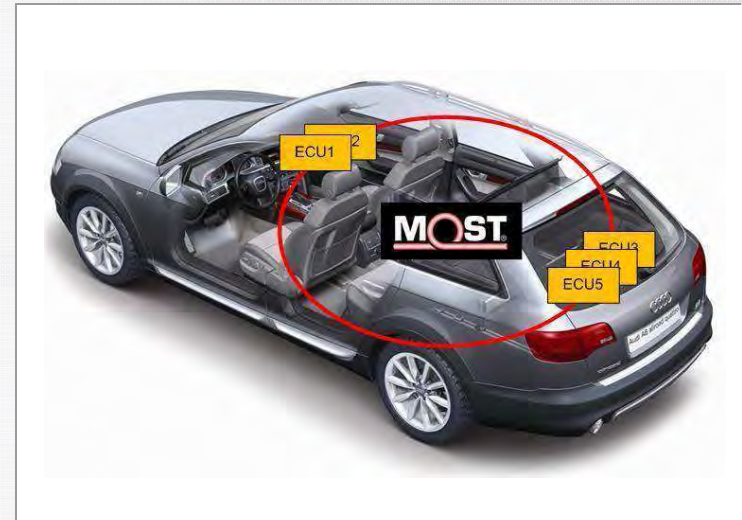
MOST150 Reference platform

- ▶ Evaluation-boards
- ▶ **Focus:**
Prototyping of all relevant Usecases



MOST150 InCar

- ▶ 5 MOST150-ECUs
- ▶ **Focus:**
Influences of car-environment



**Before starting serial projects at Audi
MOST150 technology has been evaluated !**

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Future Prospects - Driver assistance

- ▶ Complexity of Image Processing Systems comparable to complex development of Infotainment Systems
 - ▶ Specification and SystemArchitecture
 - ▶ Implementation and System Test
- ▶ Enhanced functionalities and cost down due to sensor transmission
- ▶ Infrastructure sensor networking → Task of Networking Department



MOST150 – possibility for image and sensordata transmission?

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Summary

- ▶ **Standardization MOST150 successful finalized in MOSTCO**
- ▶ **MOST150 is the best backbone for Infotainment solutions**
 - ▶ High flexibility to cover automotive requirements
 - ▶ High Reuse of existing MOST25 technology to minimize invest
 - ▶ High quality of MOST technology
 - ▶ Comprehensive Approach for a future-proof network technology
- ▶ **MOST150 already evaluated to start serial projects**

**MOST150 is ready
for production launch**