



**ATESST2 Open Workshop
Introductory Note**

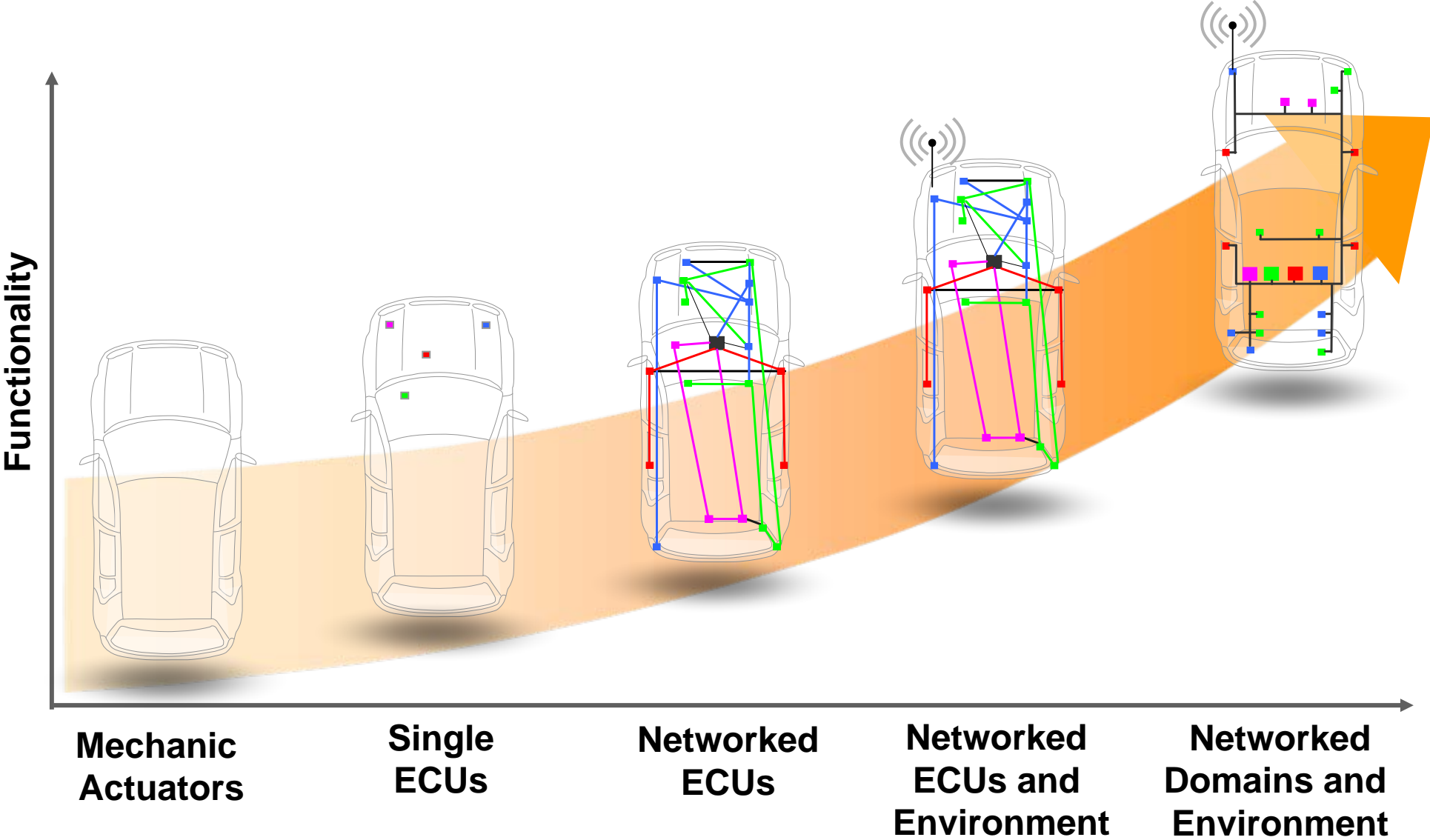
Dr. Stefan Bunzel

European Car Market

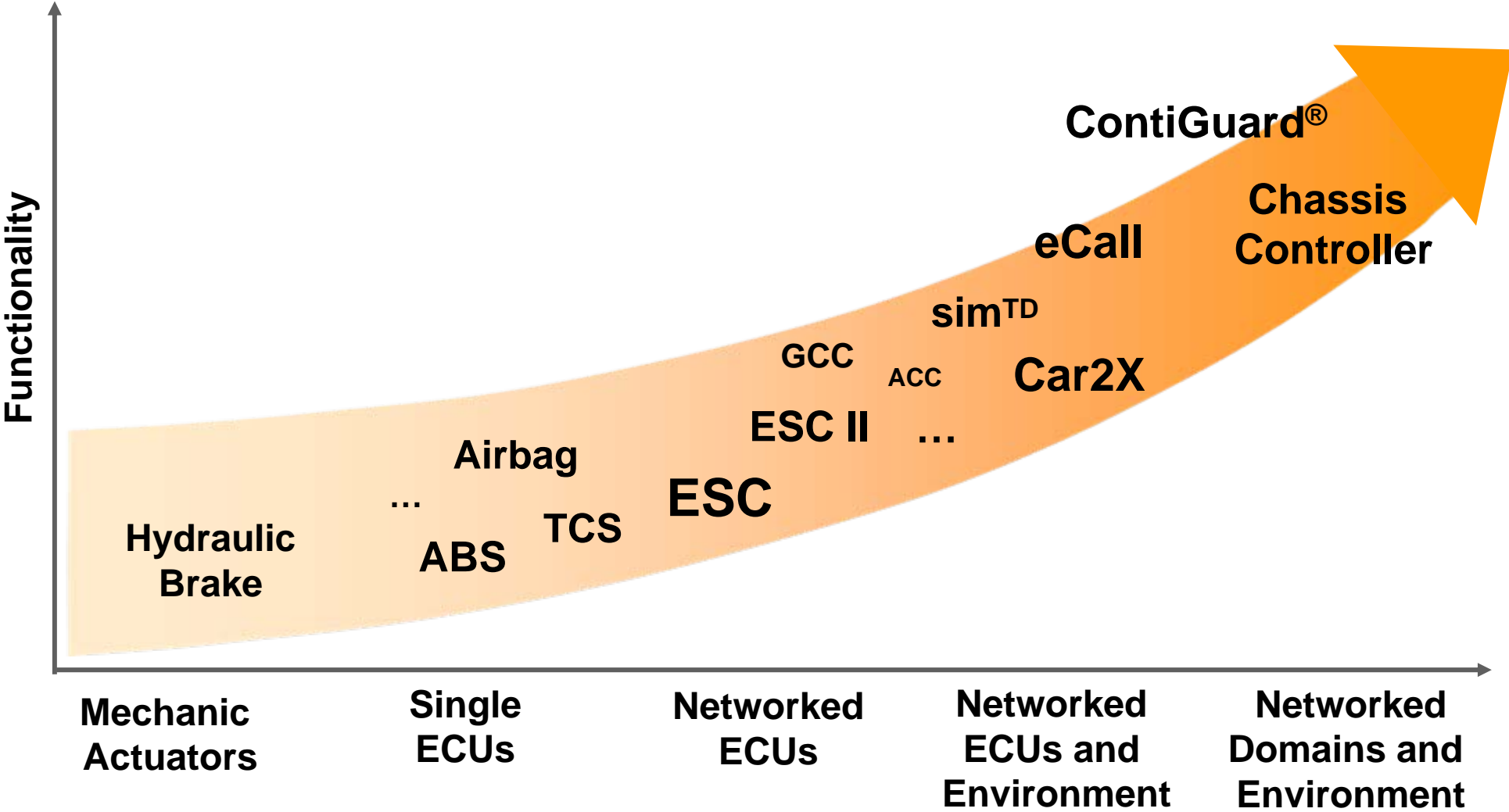
- ▶ European car market is driven by **premium** cars with **innovative** and complex features and functions.
- ▶ Customers demand new features with every new car generation, **at reasonable value for money.**
- ▶ Functions are increasingly **implemented by** electronics and **software.**



Increasing Functionality

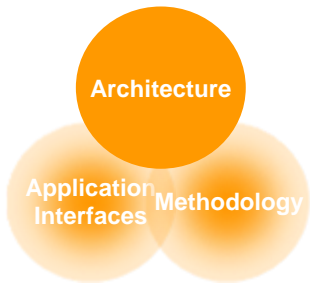


Complexity of Cooperative Active Safety Systems



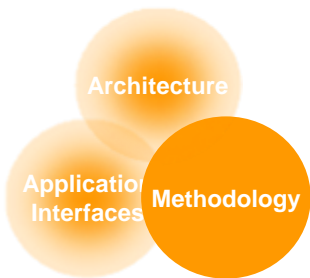
The Response: Standardization

AUTOSAR – Main Topics



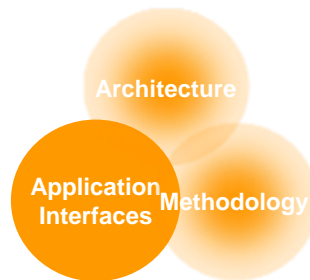
▶ Architecture:

Software architecture including a complete basic or environmental software stack for ECUs – the AUTOSAR Basic Software – as an integration platform for hardware independent software applications.



▶ Methodology:

Exchange formats or description templates to enable a seamless configuration process of the basic software stack and the integration of application software in ECUs and it includes even the methodology how to use this framework.



▶ Application Interfaces:

Specification of interfaces of typical automotive applications from all domains in terms of syntax and semantics, which should serve as a standard for application software.

EAST-ADL Complements AUTOSAR

- ▶ An information structure including aspects beyond the Software Architecture
 - ▶ Requirements, traceability, feature content, variability definition, safety, etc.
- ▶ Provides means to define what the software does
 - ▶ An AUTOSAR specification defines the software architecture and information required for SW integration - but is neutral to its functionality
- ▶ Provides means to model strategic properties
 - ▶ Key vehicle aspects are captured independently of the software architecture
- ▶ Supports modelling of error behavior and the representation of safety-related information and requirements

