

sim^{TD} – The Development

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Sichere Intelligente Mobilität
Testfeld Deutschland

sim^{TD}



Development Goal of sim^{TD}

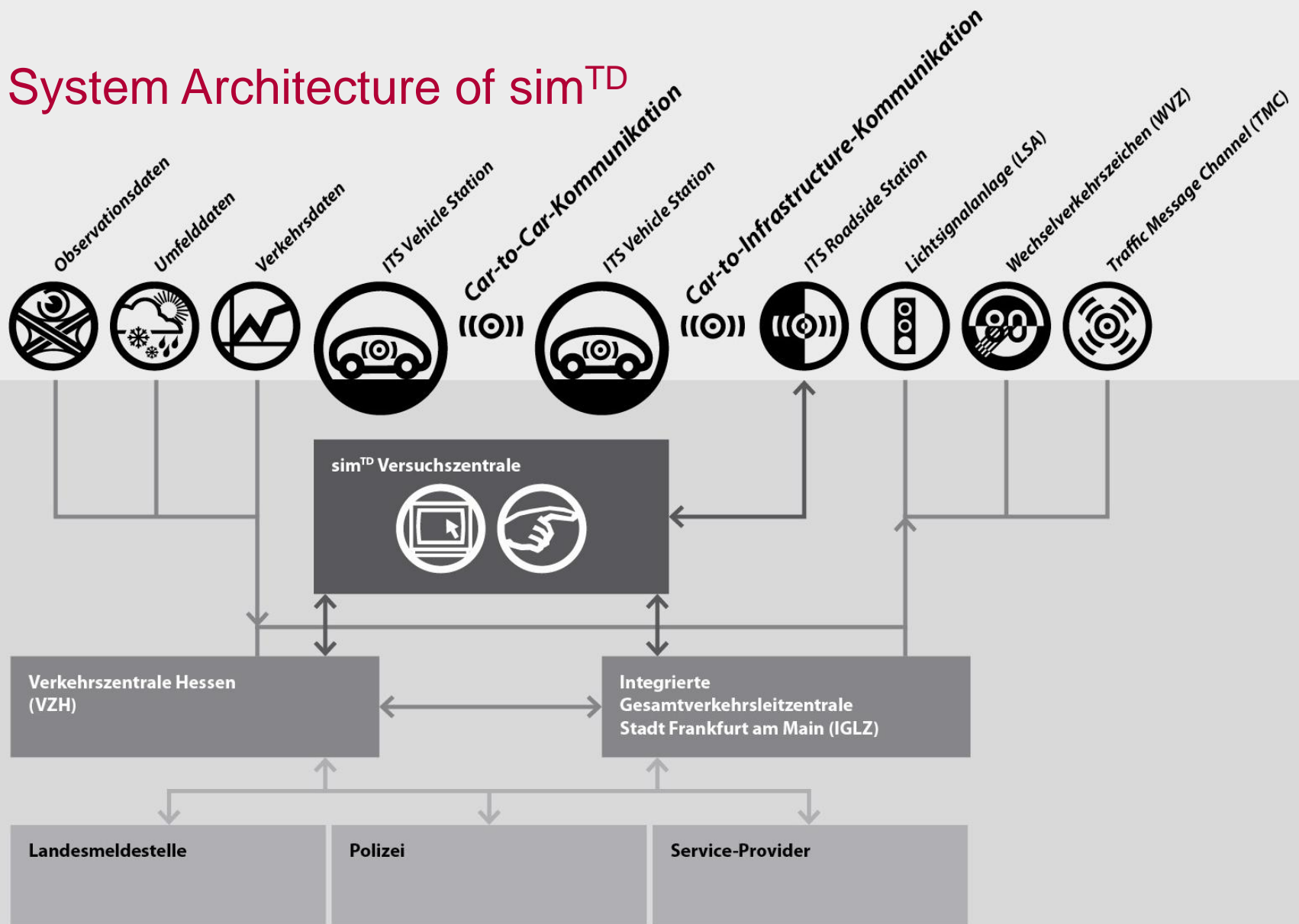


21 Applications
36 Use Cases

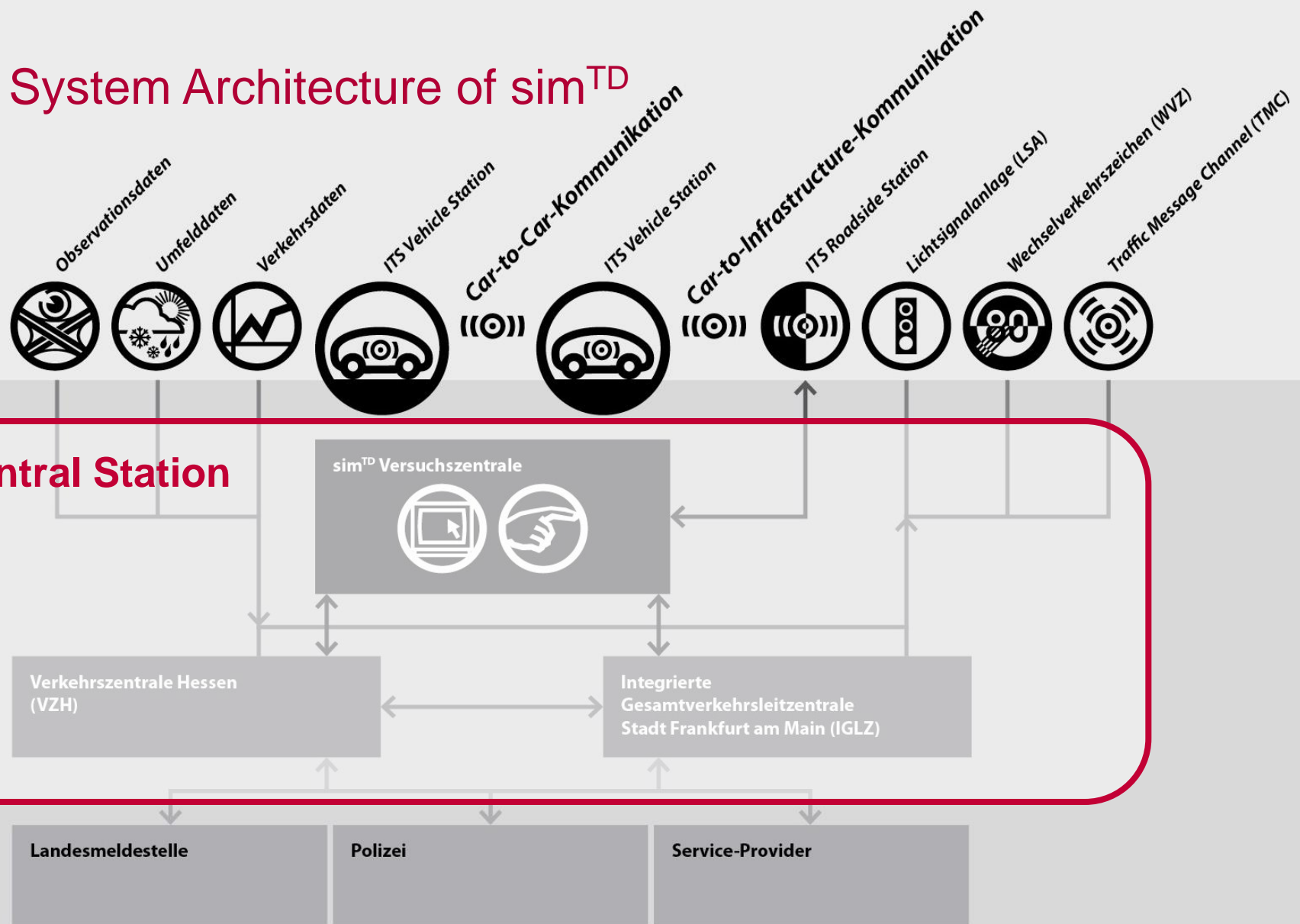
... realisation in FOT quality!



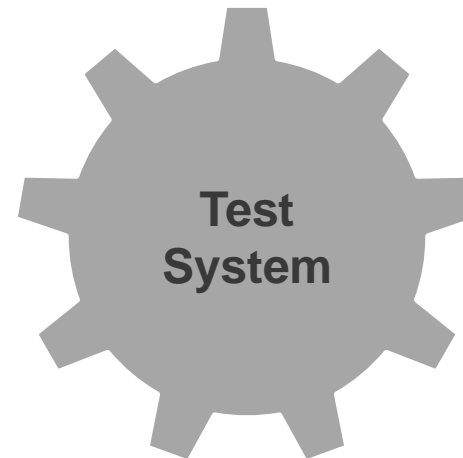
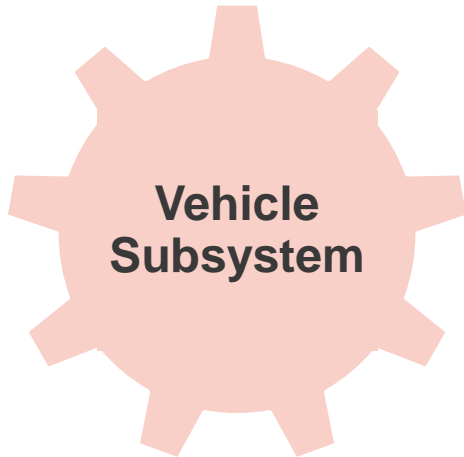
System Architecture of sim^{TD}



System Architecture of sim^{TD}



1. Step: Implementation of Subsystems



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**Vehicle
Subsystem**

**Central
Station**

GeoServer



1. Step: Implementation of Subsystems



**Roadside
Stations**

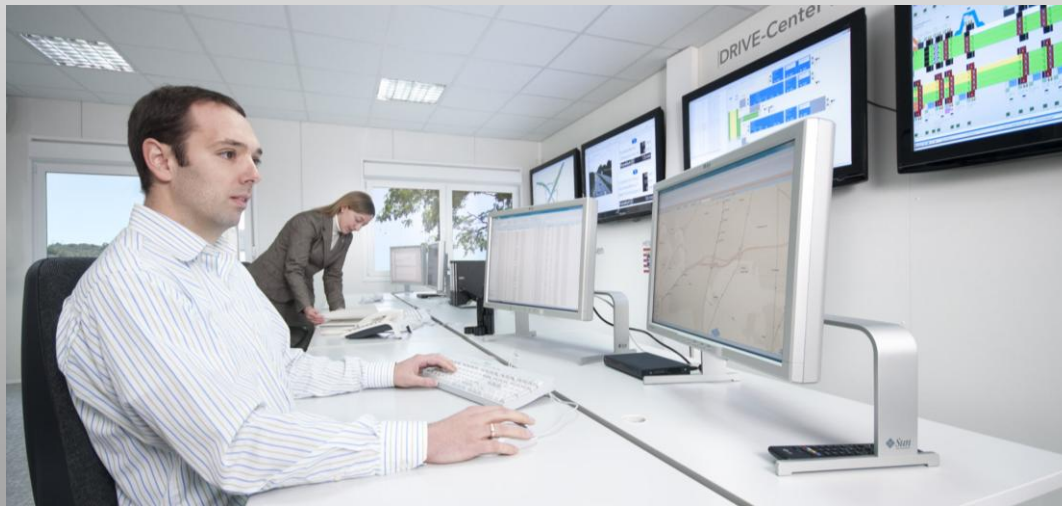
**Test
System**

1. Step: Implementation of Subsystems

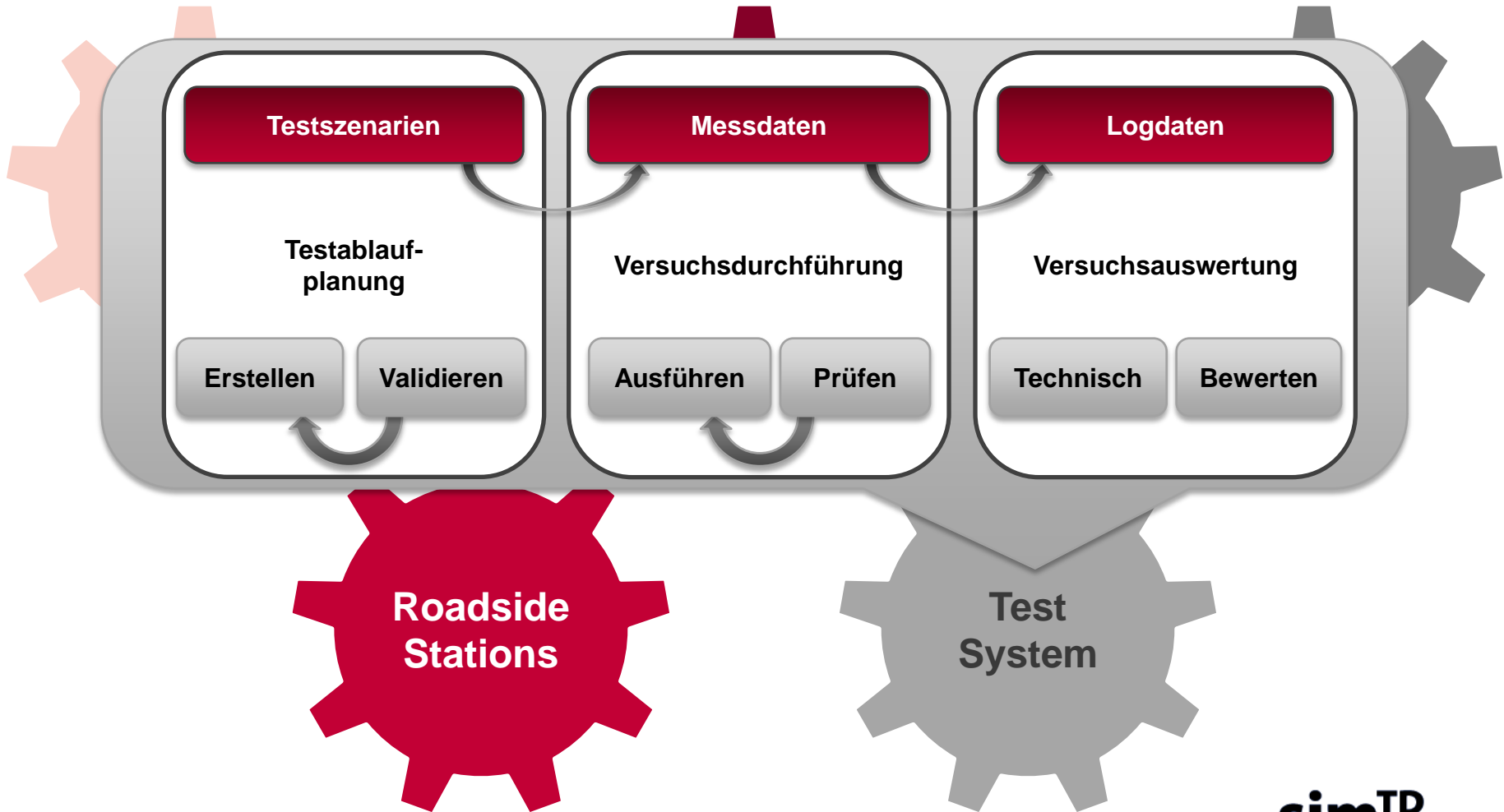
**Vehicle
Subsystem**

**Central
Station**

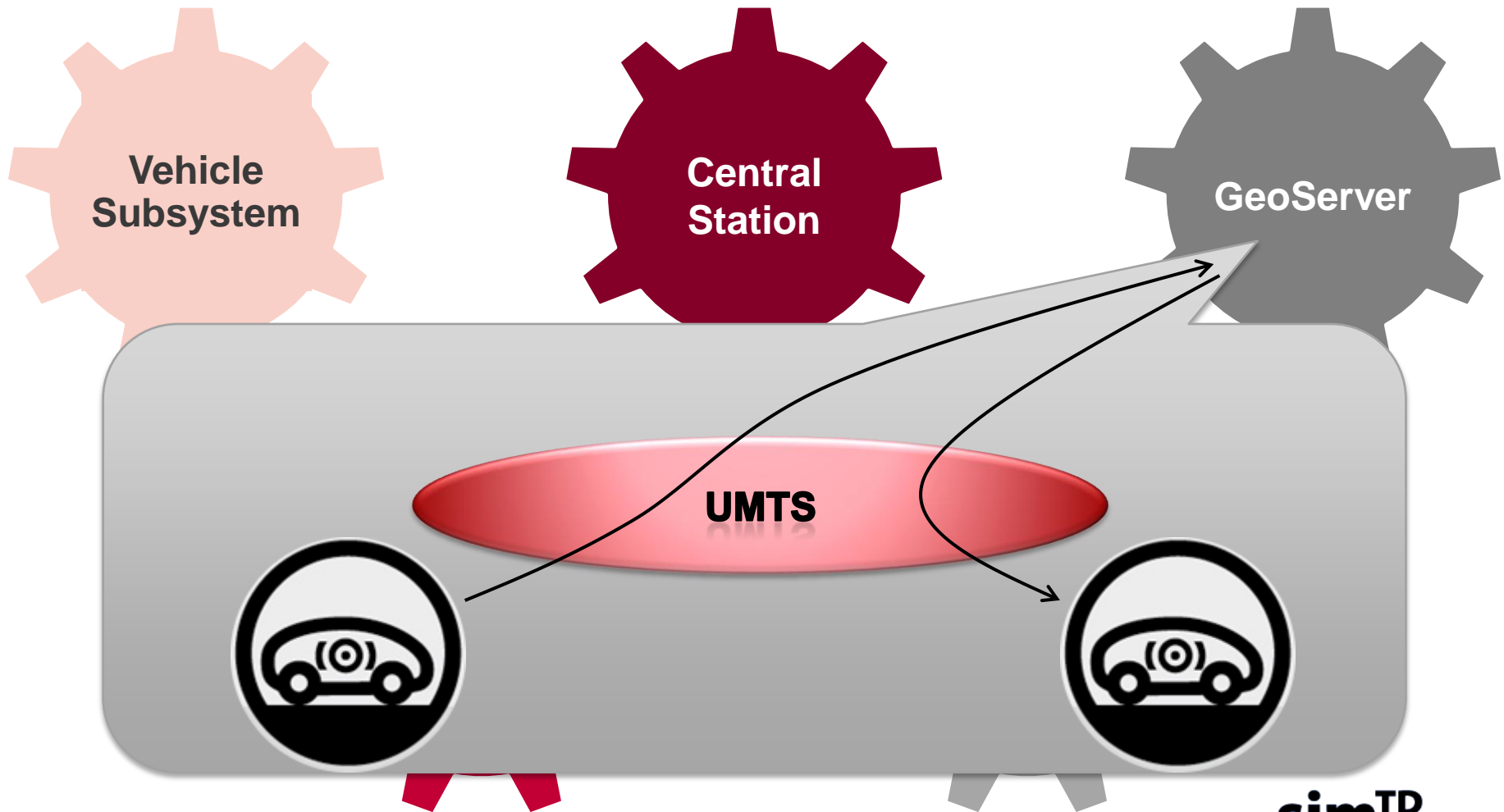
GeoServer



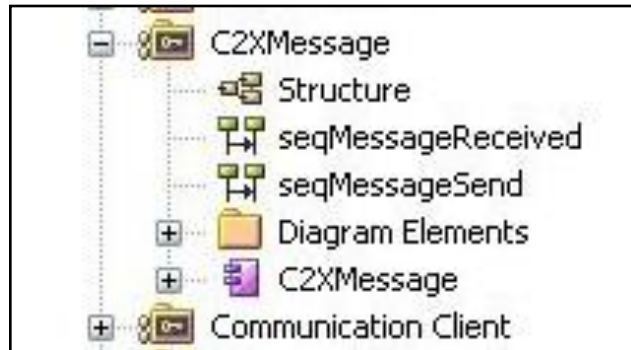
1. Step: Implementation of Subsystems



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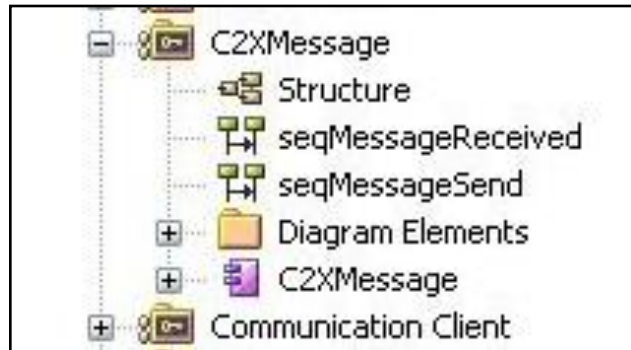


Example: Implementation Vehicle Application Unit



System Model (UML)

Example: Implementation Vehicle Application Unit



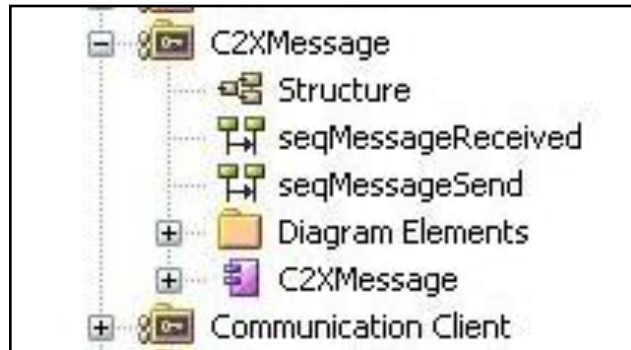
**System Model
(UML)**



**Interface
Specification**



Example: Implementation Vehicle Application Unit



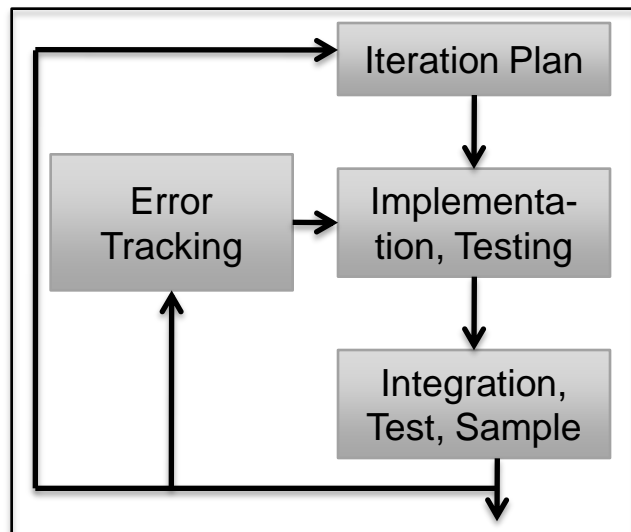
**System Model
(UML)**



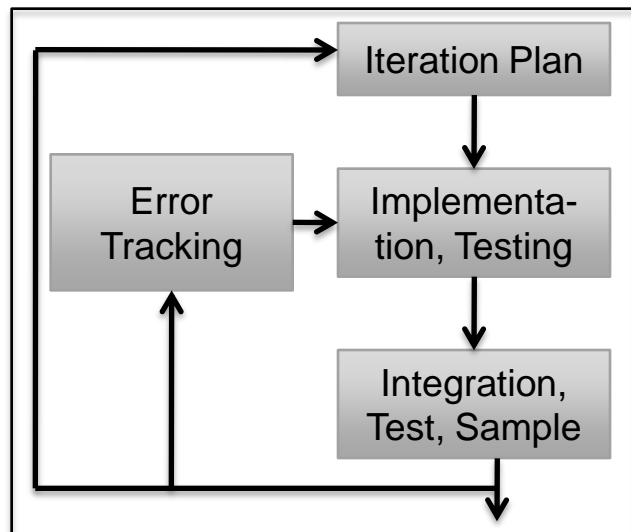
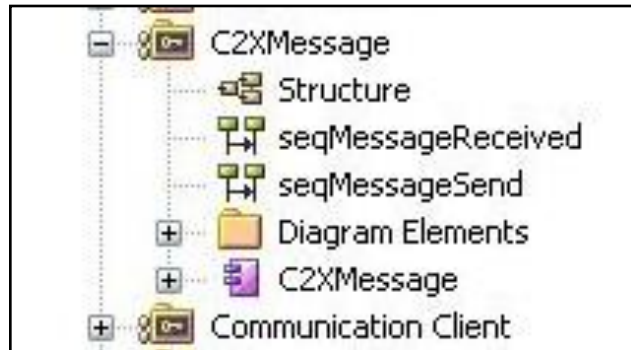
**Interface
Specification**



**Iterative Component
Integration**



Example: Implementation Vehicle Application Unit



**System Model
(UML)**



**Interface
Specification**



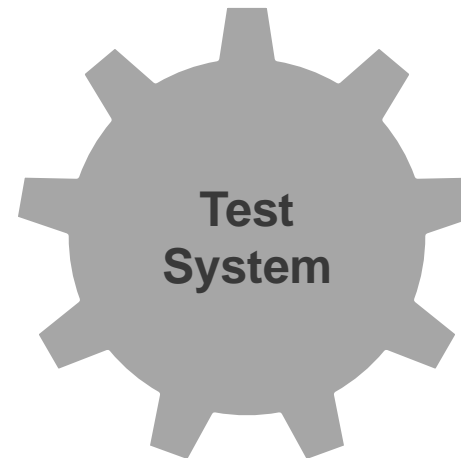
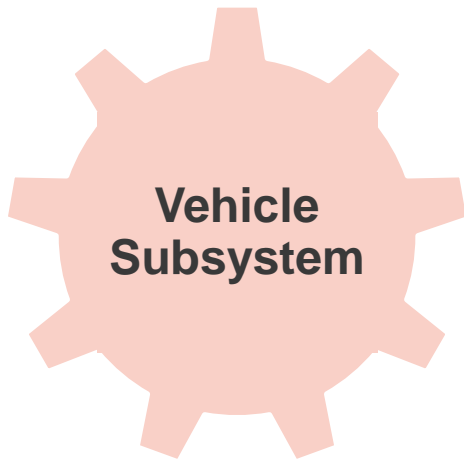
**Iterative Component
Integration**



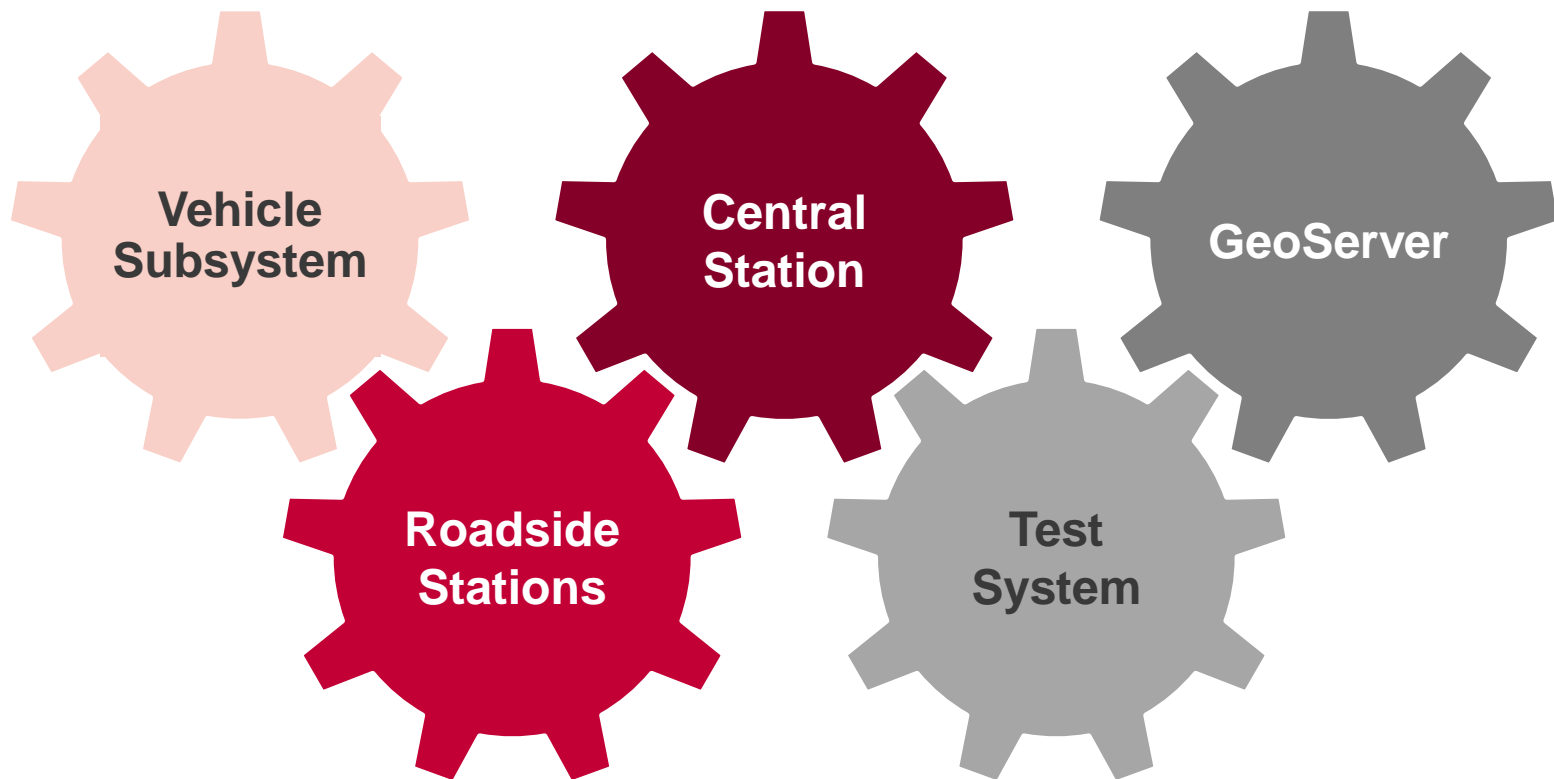
**Subsystem
Test**



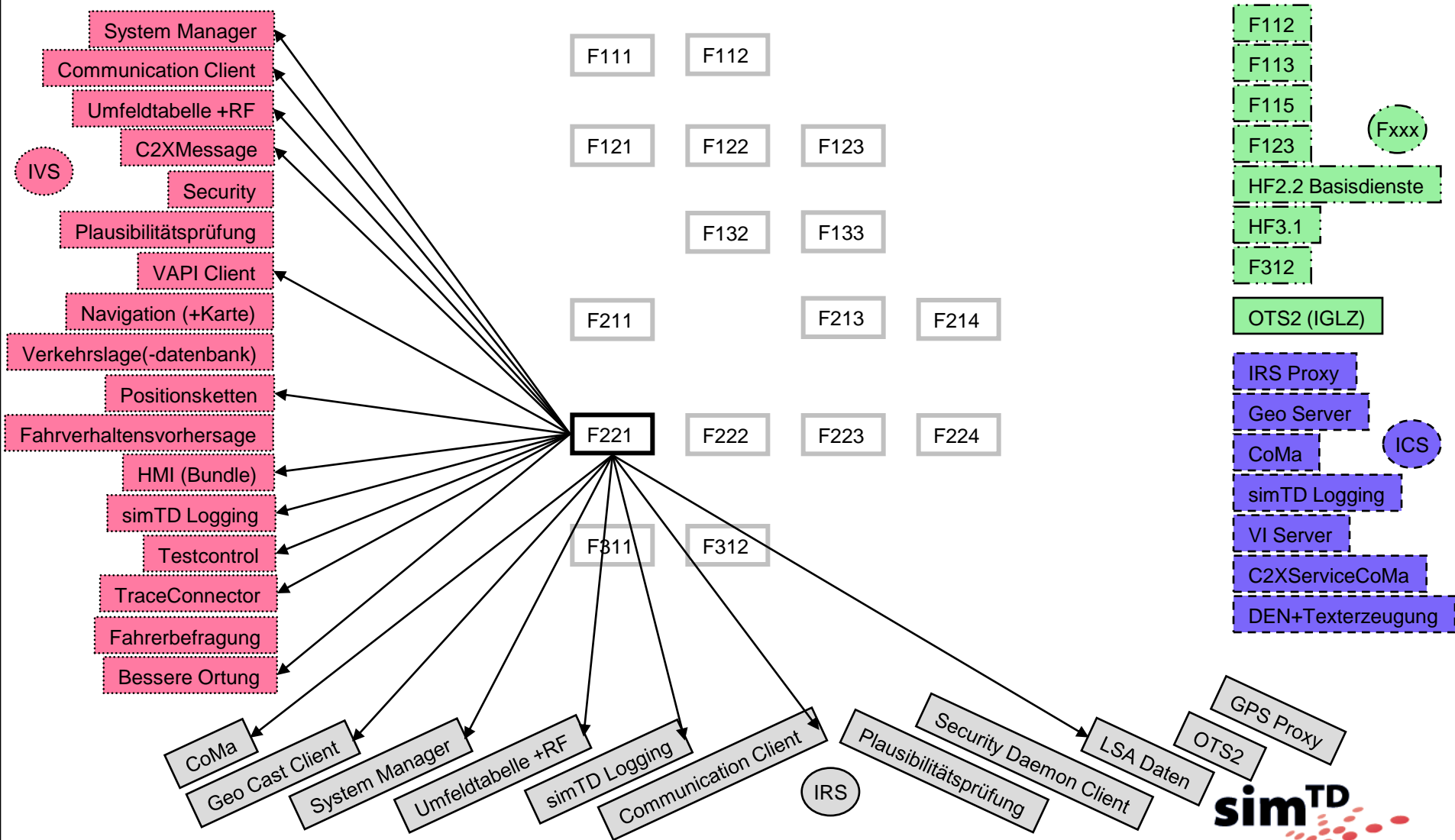
2. Step: System Integration



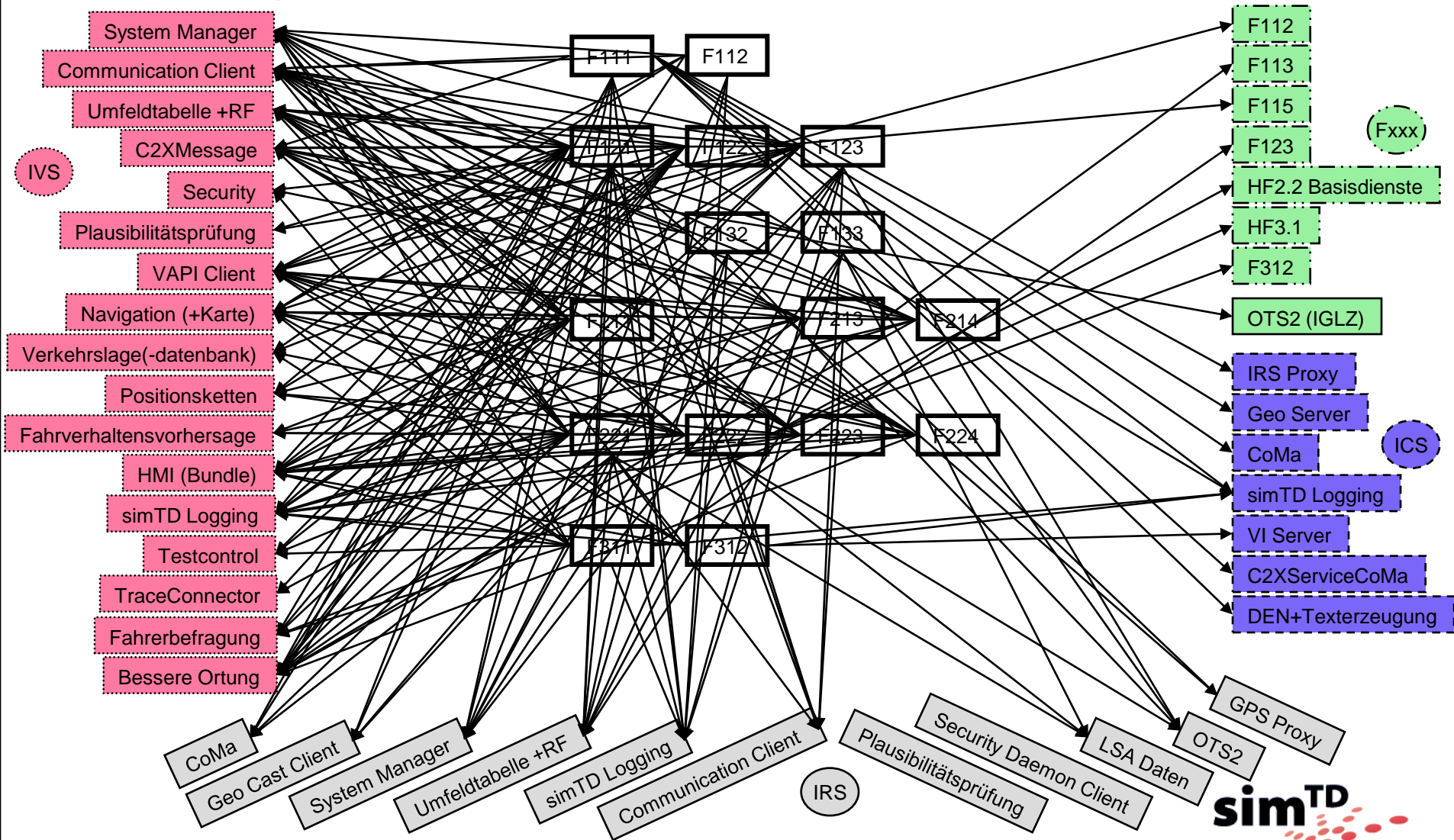
2. Step: System Integration



Challenge: Complexity



Challenge: Complexity



System Integration

- Methodology: iterative integration of applications
 - Definition (and documentation) of acceptance criteria and regression tests, evaluation in test bench
 - Diligent and intensive integration workshops
 - → Stabilisation/Validation of base components
 - → Stabilisation/Validation of overall system
- Incorporation of test designers and evaluators at early stage



Where are we?



- Integrated system available
 - Solid base system (hardware and software)
 - Test system integrated into central station
- Robust system wrt. field operational testing
 - Strict acceptance criteria, diligent development processes
 - Documented results
- Close to (preliminary) standards
 - ETSI, Mobile IPv6
 - Security from the beginning
 - Results are important input for standardisation
- Homogeneous HMI for all vehicles, thus reproducibility

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Deliverable D11.3
Funktionsspezifikation
- Zentraldokument -

Version	1.0
Verbreitung	Öffentlich
Projektkoordination	Daimler AG
Fälligkeitsdatum	31.08.2009
Erstellungsdatum	25.09.2009

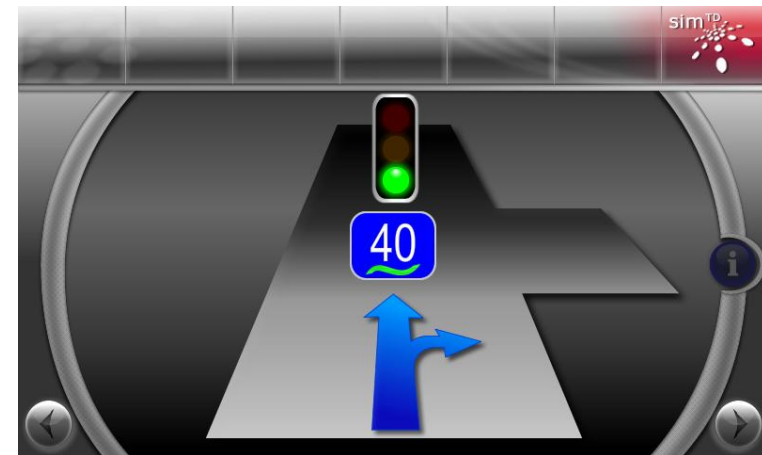


sim^{TD} wird gefördert und unterstützt durch

Bundesministerium für Wirtschaft und Technologie
Bundesministerium für Bildung und Forschung
Bundesministerium für Verkehr, Bau und Stadtentwicklung

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Next Integration Steps

- System optimisation for trials for test site
- Equipment of test site and test vehicles with hardware
- Knowledge transfer towards test planners and evaluators.





Thank you very much!

Dr. Marc Bechler
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