

Benefits of a standardized diagnostic framework



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Development Engineer

Agenda



Diagnostics with standards – Motivation

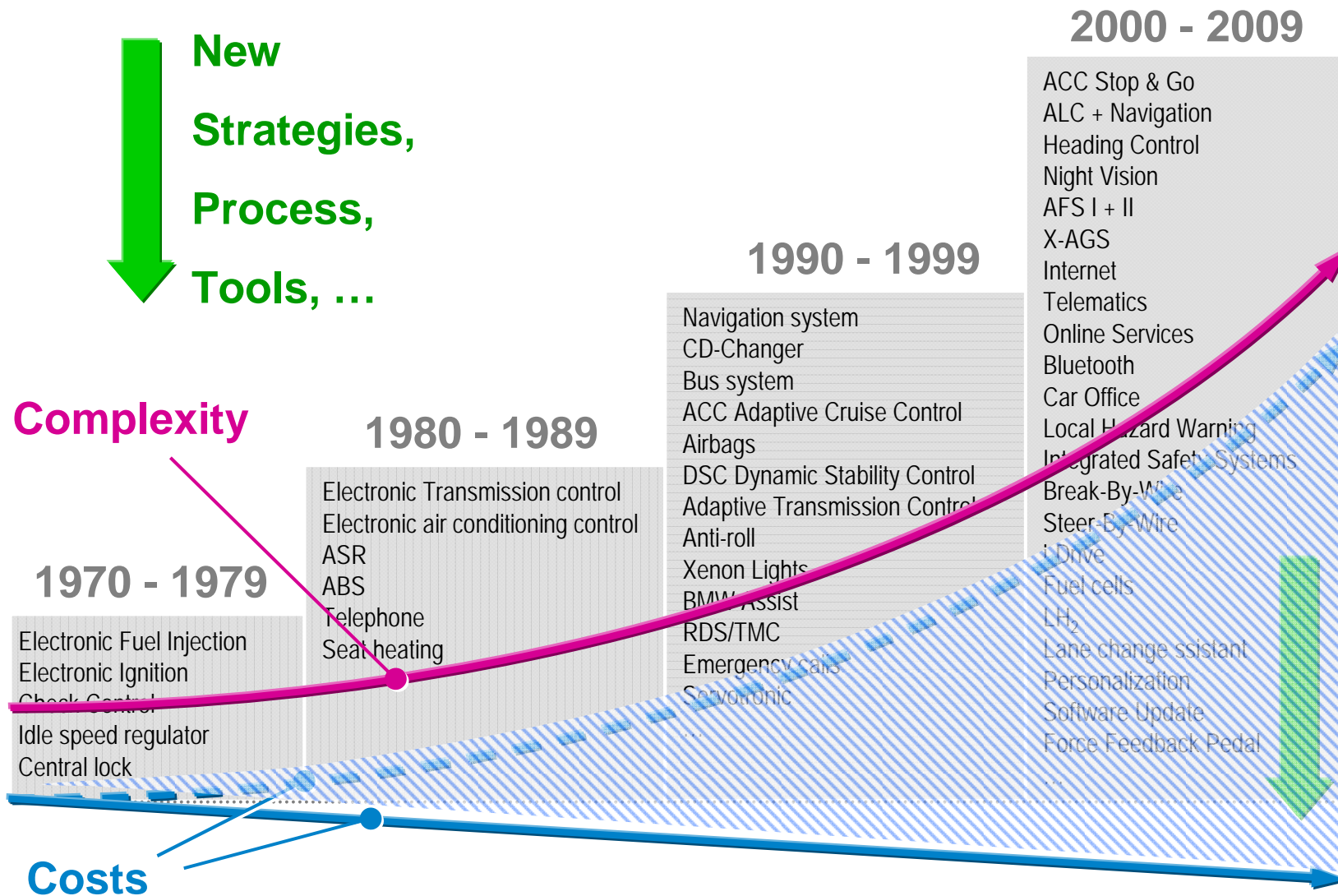
ODX – ODXplorer

MCD-3 Server – samMCD3 server

MVCI-D-PDU-API – HSX

samtec Diagnostic Framework

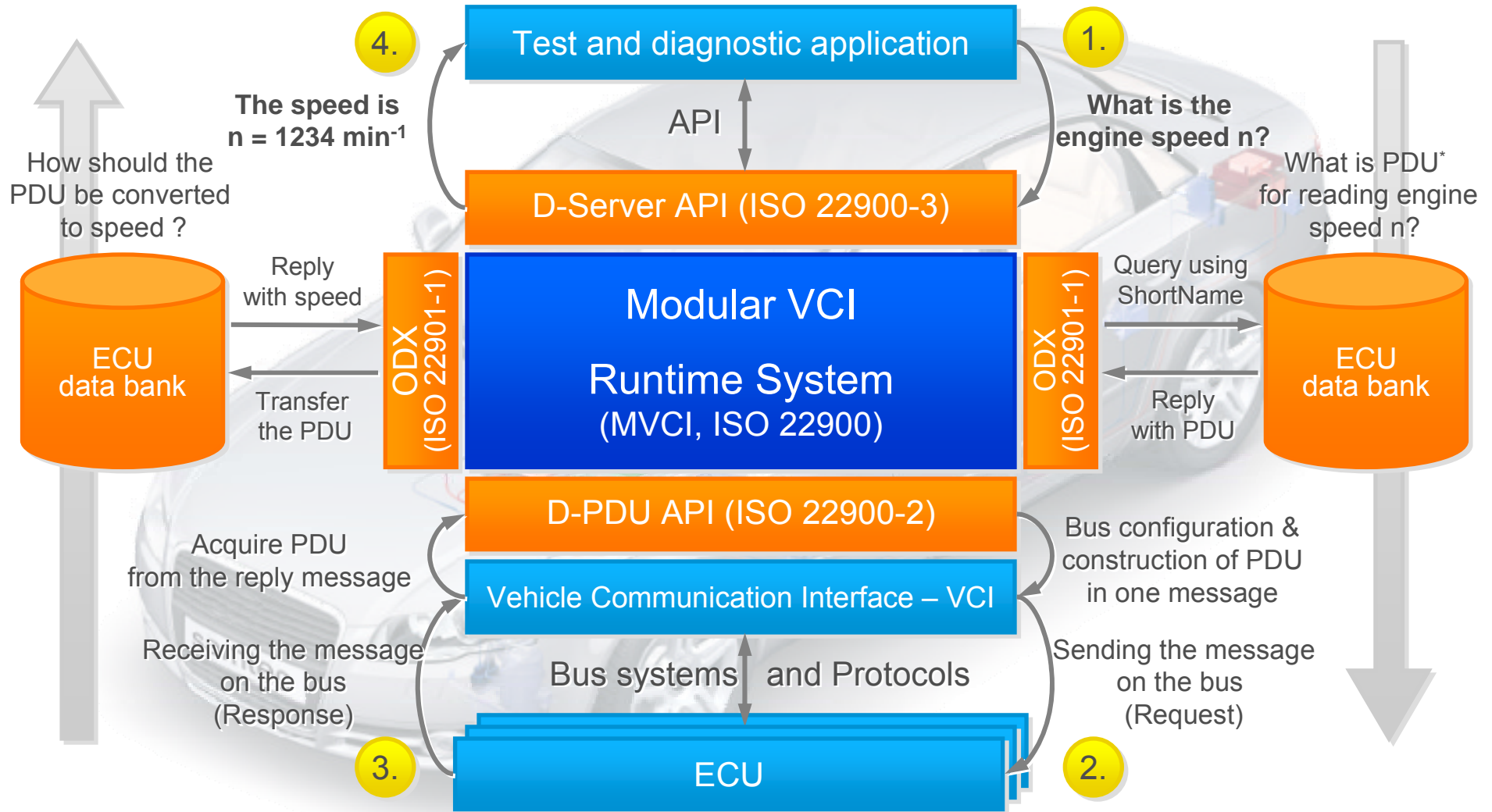
Diagnosics with Standards Motivation



Source: [2] Hudi; [4] Reichert

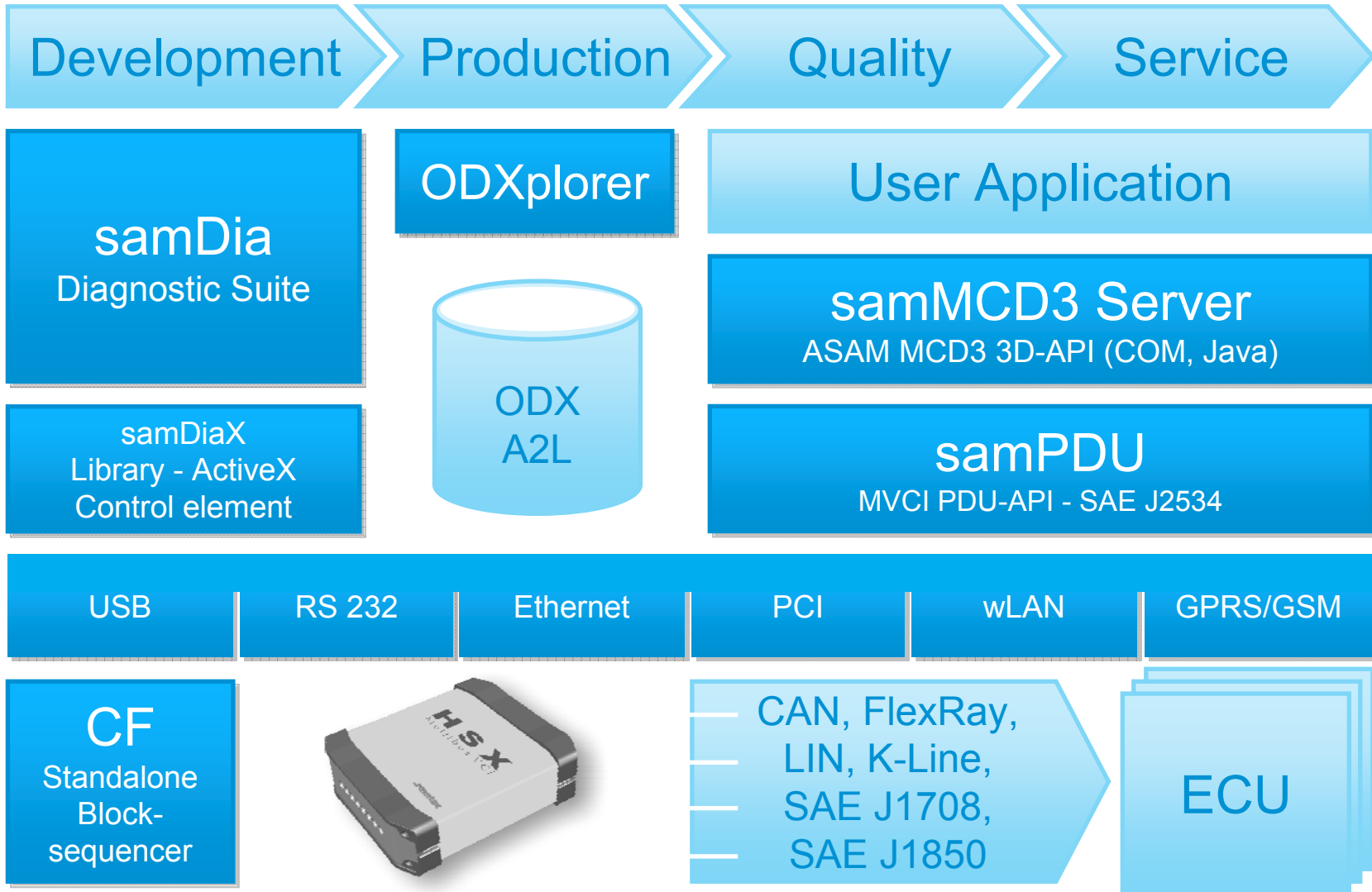
Standardization - „Big Picture“

ASAM MCD (ISO MVCI)



*PDU = Protocol Data Unit

samtec Diagnostic Tools



ODXplorer



ODXplorerSampleProject - samtec ODXplorer Professional Edition

DiagLayers\Basis-Varianten\ECU1_Base_Variant\Diag-Comms\Diagnostic Services\ProgrammingMode_Start

Browseransicht - Diagnostic La...

- Bibliotheken
- Protokolle
- Funktionale Gruppen
- Basis-Varianten
 - ECU1_Base_Variant
 - Access-Levels
 - Diag Data Dictionary Spec
 - Aut-Methods
 - Diag-Variables
 - Dynamically Defined Messages
 - Requests
 - Diag-Comms
 - Diagnostic Services
 - Default_Mode_Start
 - DiagnosticsSWNumber_R...
 - ECUReset
 - Fault_Memory_ReadDt...
 - Fault_Memory_ReadSta...
 - GPS_Position_StartRou...
 - GPS_Position_StopRou...
 - ProgrammingMode_Start
 - ReadDataByAddress (fr...
 - requestDownload
 - requestTransferExit
 - ResultChecksum

Eigenschaften

Element-ID

Description (Daten)

ID: **_214123**

Long-Name: **Programming Mode Start**

Short-Name: **ProgrammingMode_Start**

Sonstiges

Addressing: **FUNCTIONALORPHYSICAL**

Audience (Daten)

Diagnostic-Class: **NONE**

IsCyclic: Nein

IsExecutable: Ja

IsFinal: Nein

IsMandatory: Nein

IsMultiple: Nein

Security Access-Level: **0**

Semantik-Attribut: **SESSION**

Special-Data-Groups (Daten)

Verweise

Referenz auf Request: **-> StartProgrammingSession_R**

Referenzen auf Comparams (Auflistung)

Referenzen auf Funktionale Klasse (Auflistung)

Referenzen auf Negative Response (Auflistung)

Audience

AUDIENCE definiert die Zielgruppe oder Benutzergruppe für die ein DIAG-COMM verfügbar ist.

Admin-Data (ProgrammingMode_Start)

DOC-REVISIONS | COMPANY-DOC-INFO | LANGUAGE

Hinzufügen | X

Datum	Revision-Label	Status	Tool	Team-Mem
17.04.2008	000.001.008	PreRelease	ODXplorer	

Hilfe

Diag-Comms

Definiert Services und Jobs, die mit dem Steuergerät kommunizieren.

Referenzen

Übernehmen | All

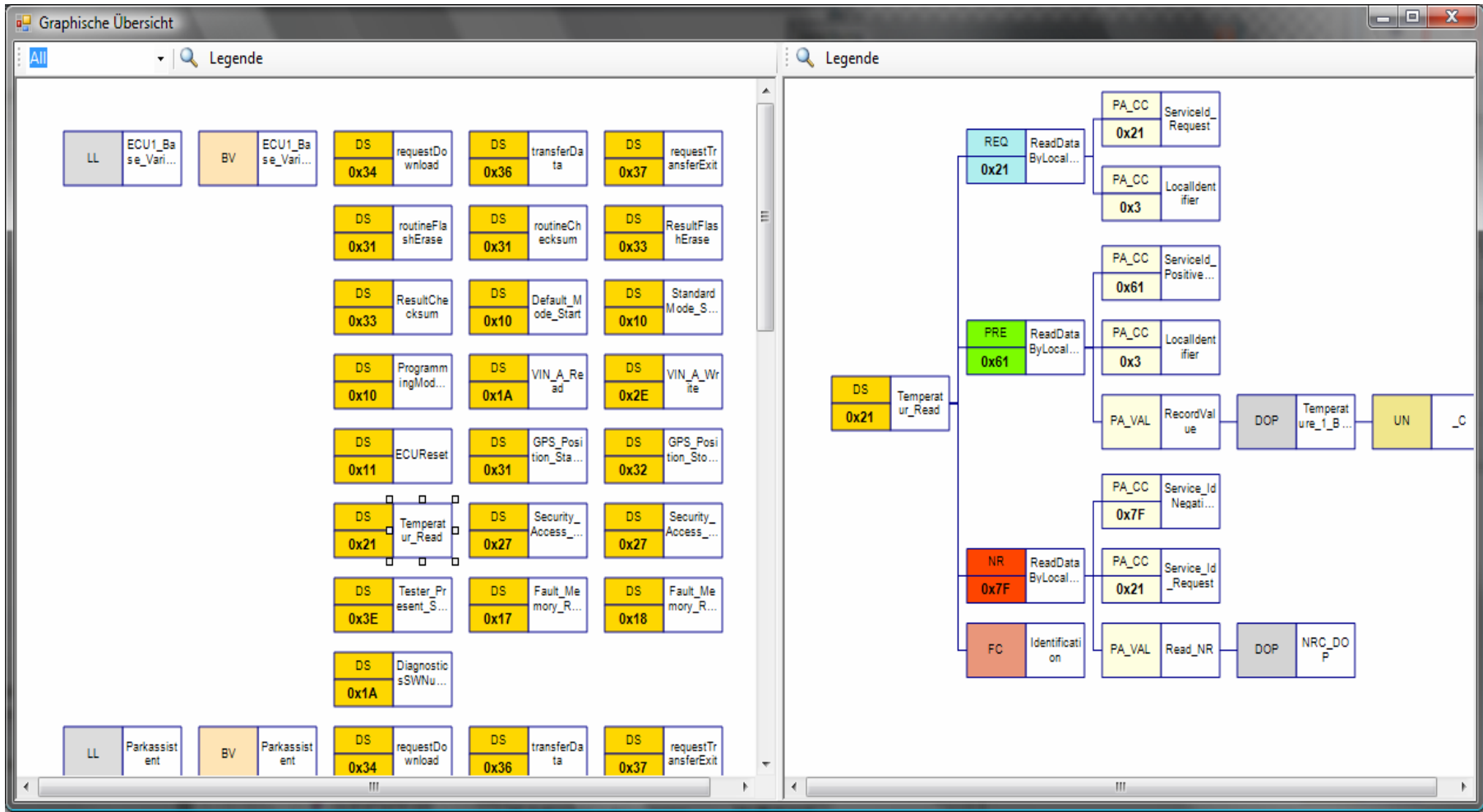
Verlauf löschen

Graphisches Diagramm | Baumansicht

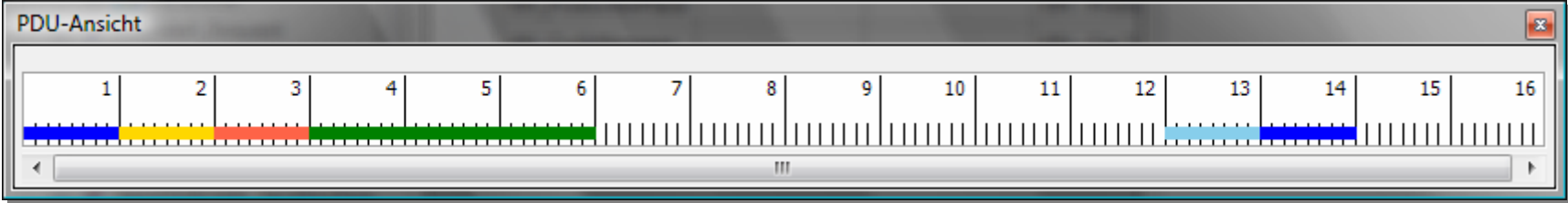
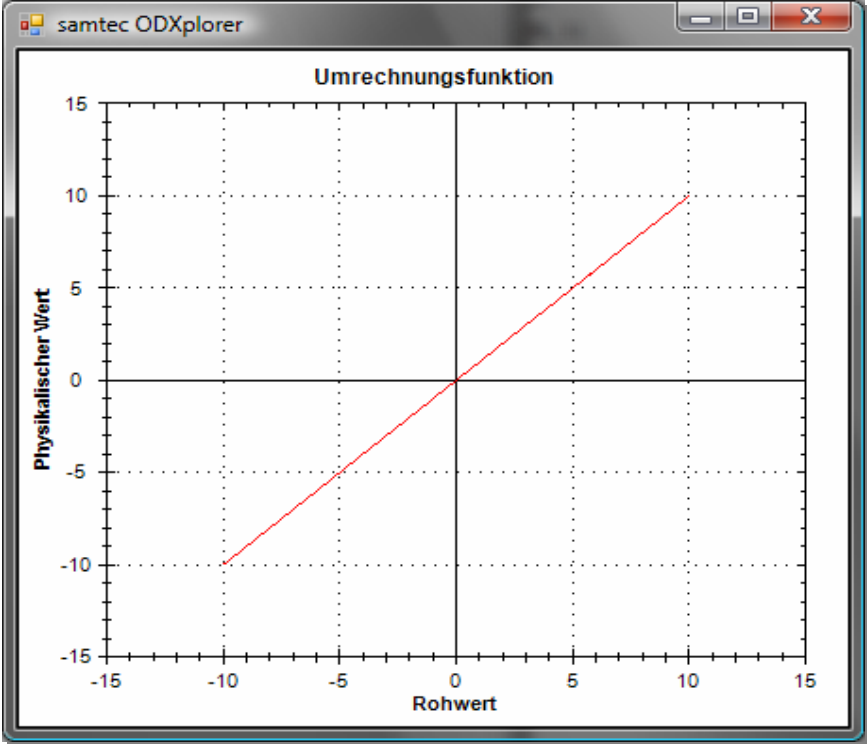
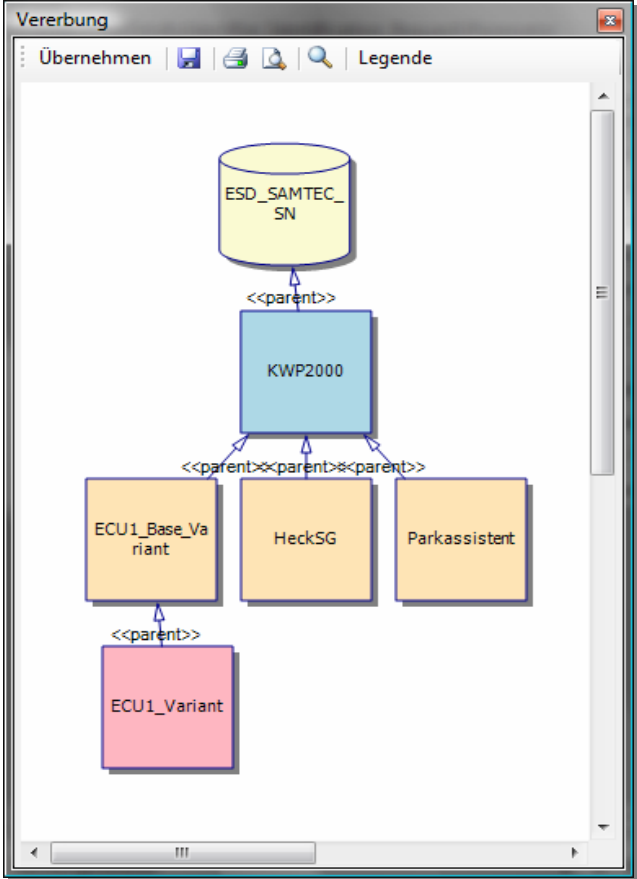
Bereit

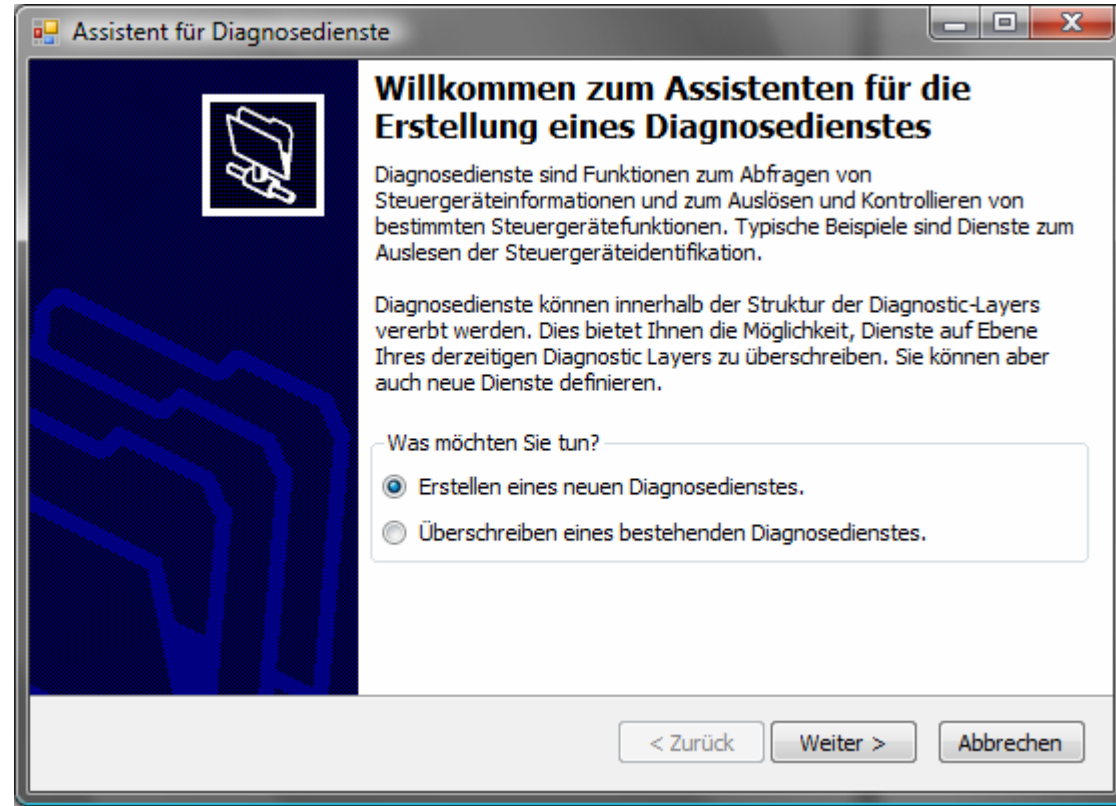
Admin-Data (ProgrammingM... | Plugin Ma... | Suche... | PDU-An... | Logical-Links | Vererbung | Referenzen

ODXplorer



ODXplorer



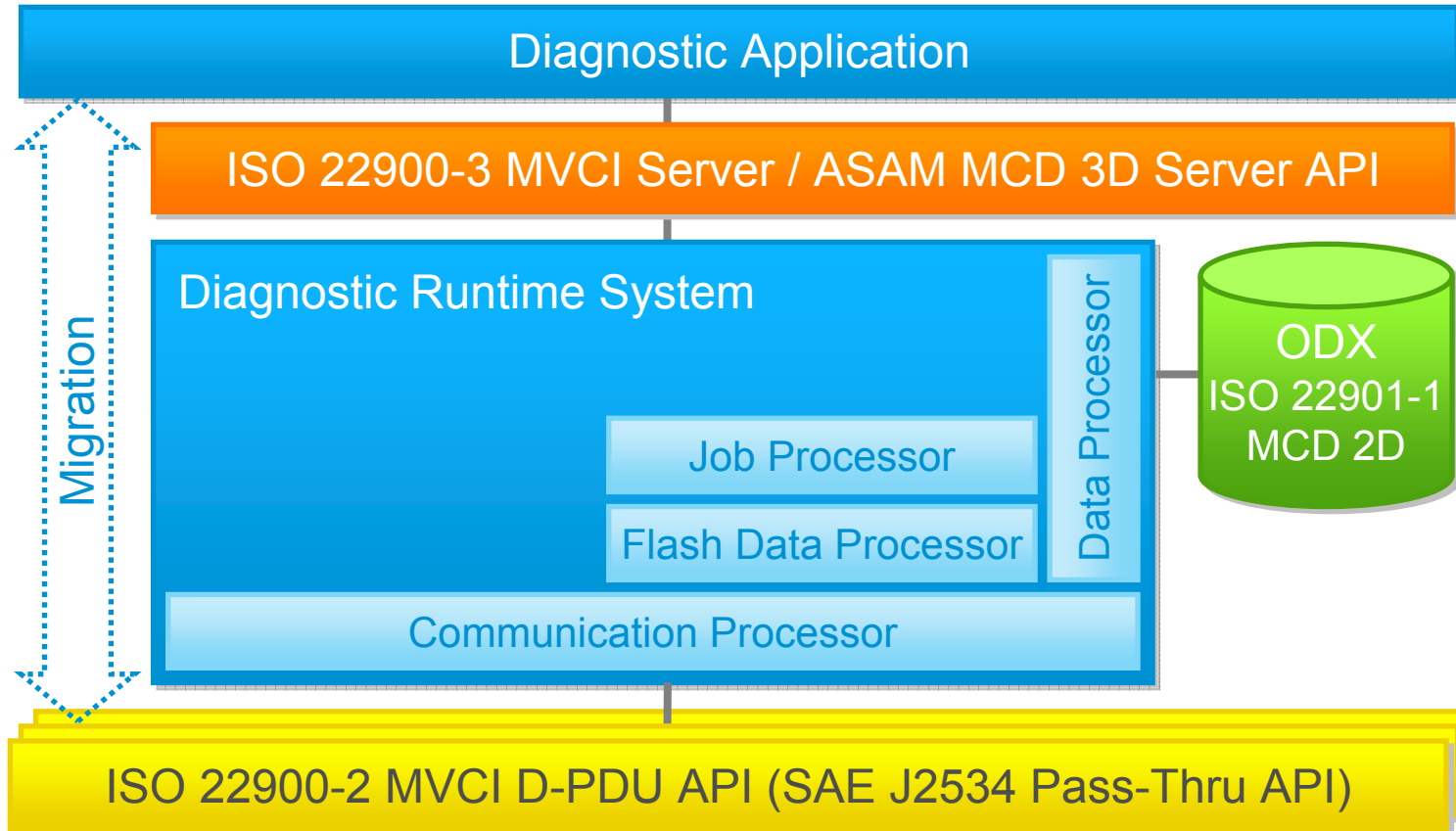


ODXplorer – Features



- ✓ Direct access to ODX data
- ✓ All diagnostic layers supported, inheritance within layers
- ✓ Automatic generation of element ID's and ShortNames
- ✓ Integrated checker and plausibility checks
- ✓ Import of third party templates
- ✓ Plug-in Interface

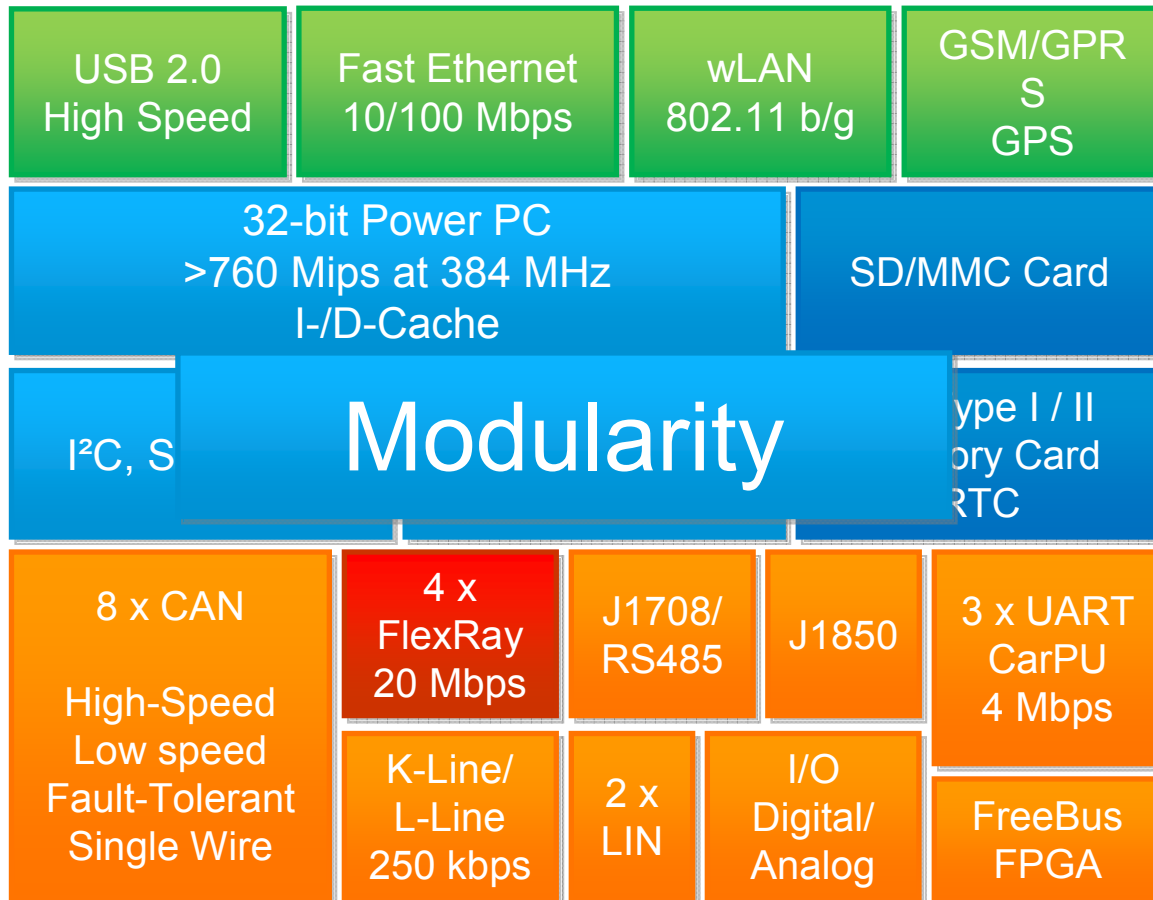
samMCD3 Server



MVCI D-PDU API HSX Multibus VCI



HSX Multibus VCI Platform

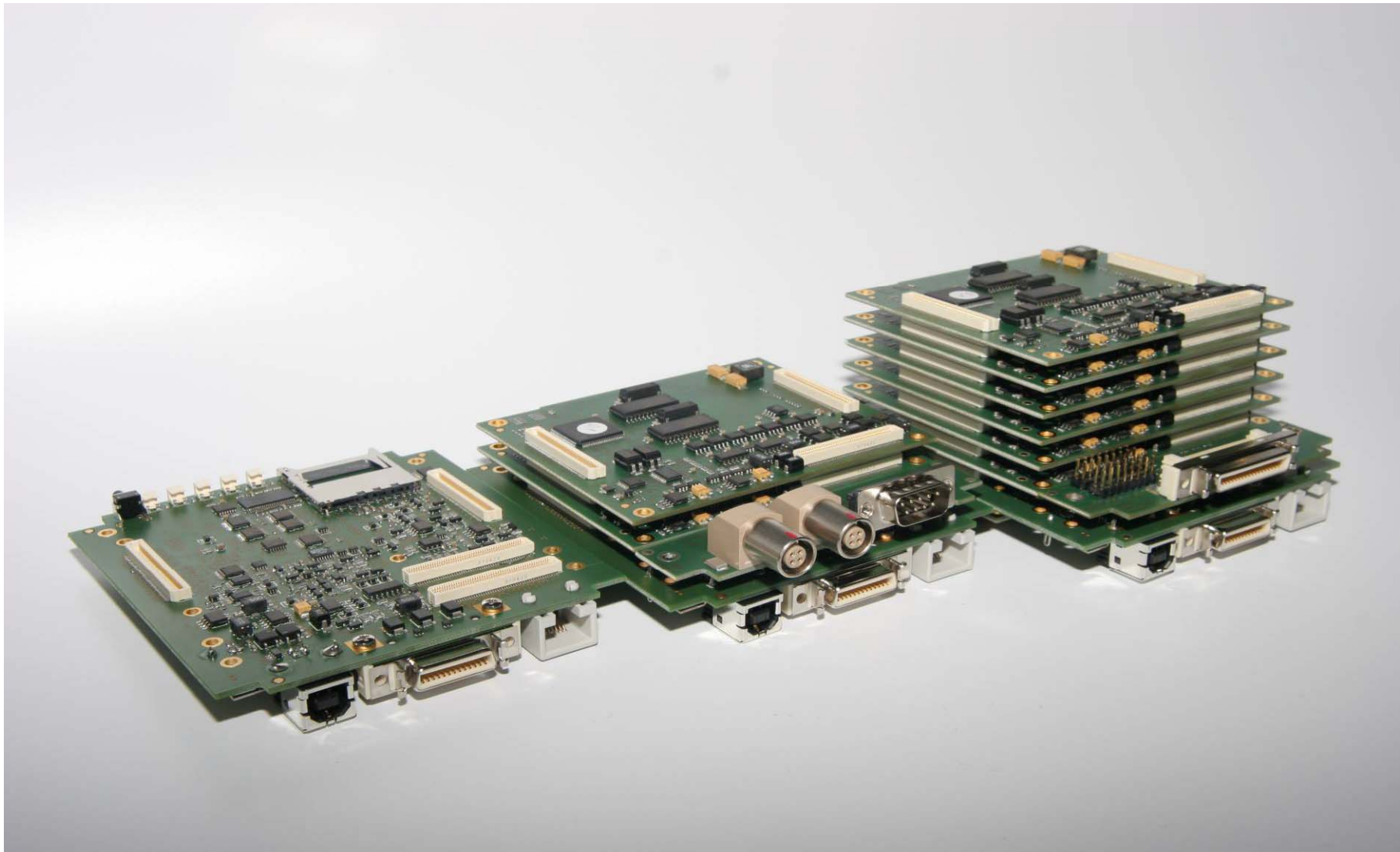


What makes it Special?

HSX Module - Features



HSX Module - Features



HSX Module - Features

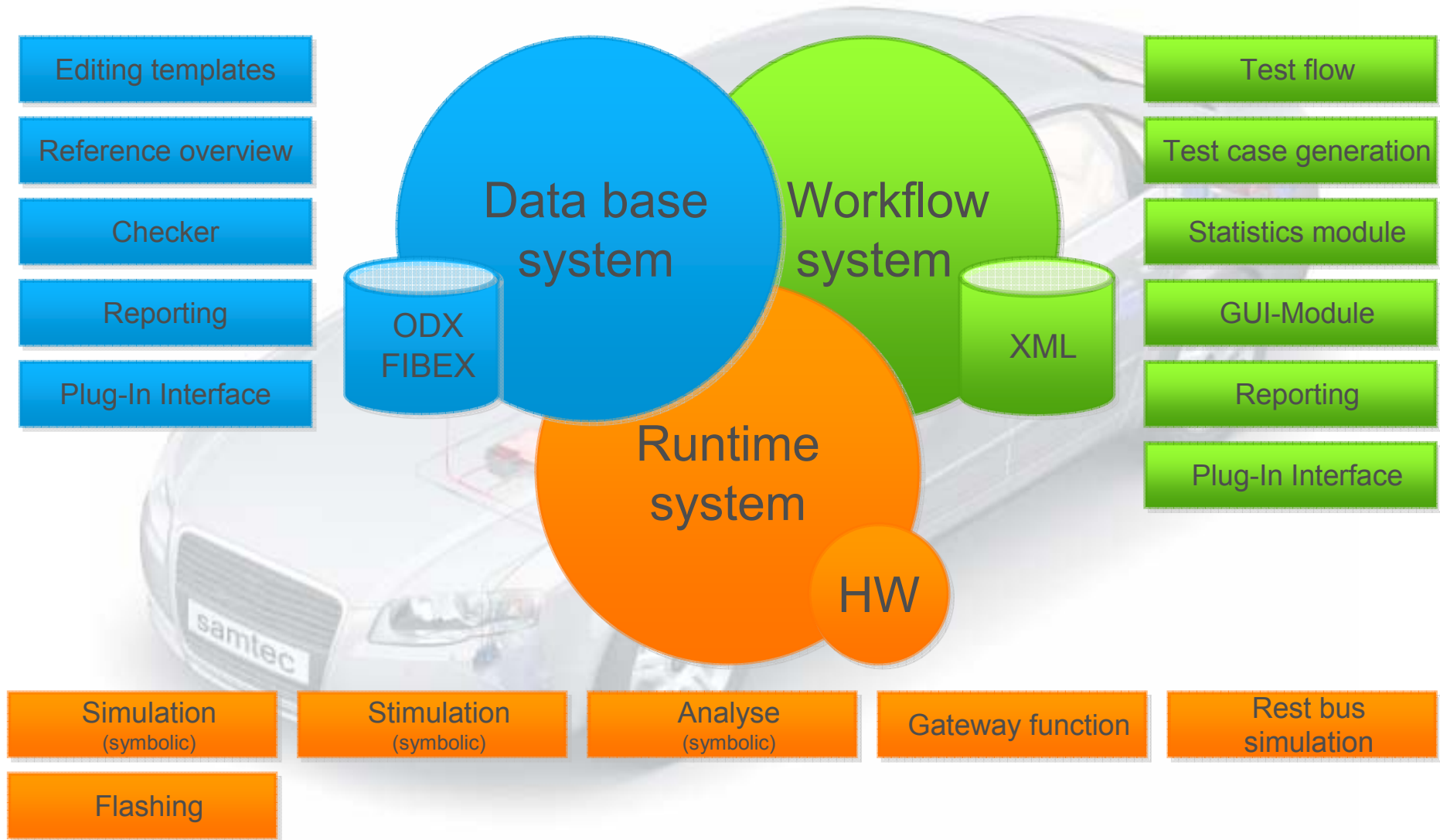


HSX Module - Features



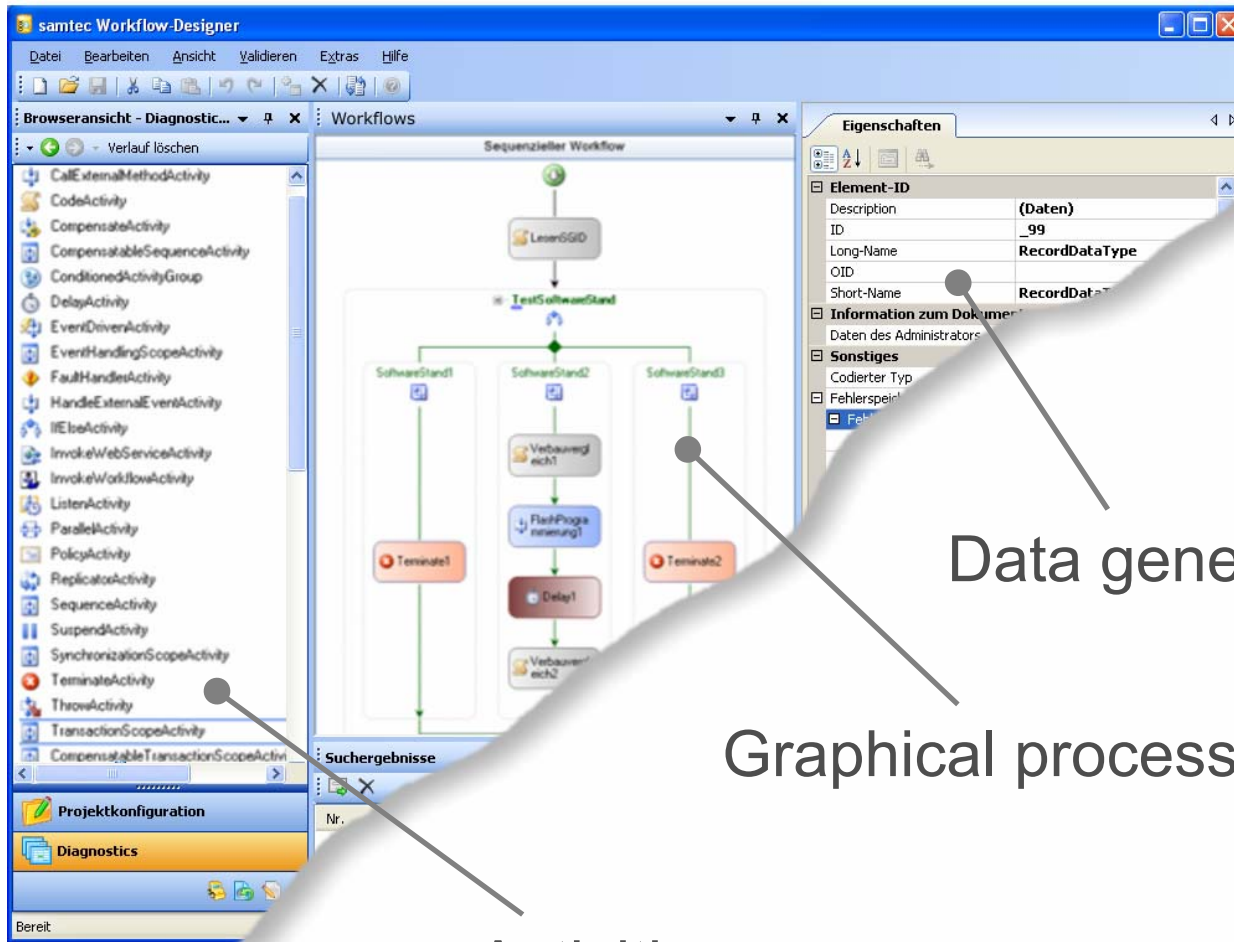
Generation Next!

samtec Diagnostic Framework 2008



Generation Next!

samtec Diagnostic Workflows



- Complex processes can be generated
- Integrated to a GUI Library
- Based on samtec Diagnostic Framework

Data generation

Graphical process flow

Activities

Benefits



- ✓ ODX - the “de-facto” exchange standard
- ✓ Re-usability the key
- ✓ Standards “open-up” the market for diagnostic tool suppliers.
- ✓ samtec is a one stop shop!
- ✓ samtec Diagnostic Framework - The icing on the cake!



Smart. Sensitive. Supporting.