# Polarion User Conference 13.10.2015

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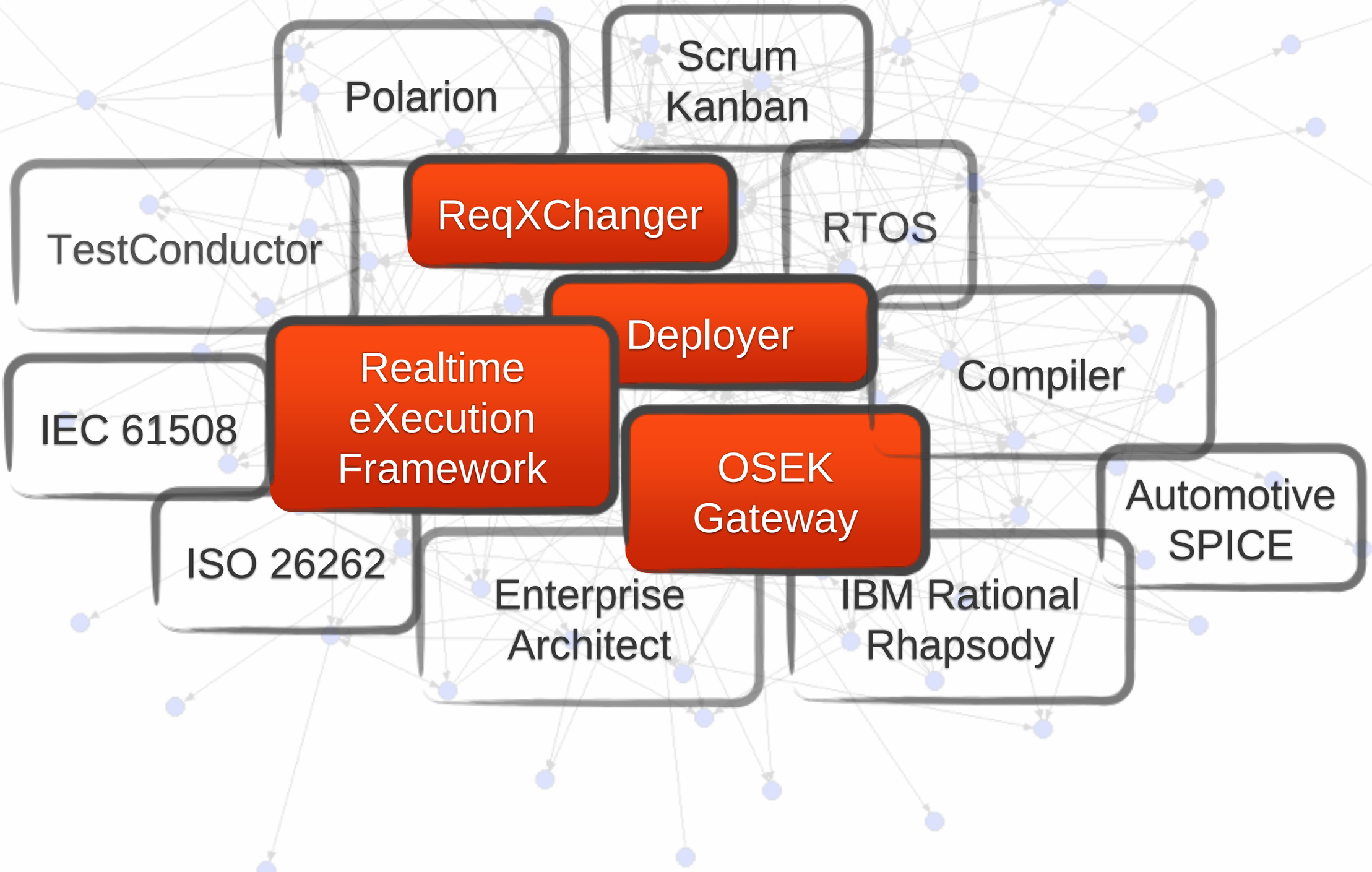
WILLERT.

pioneers in embedded software engineering

# We sell and integrate Tools

based on best practice workflow, reuse of data, standards and process frameworks



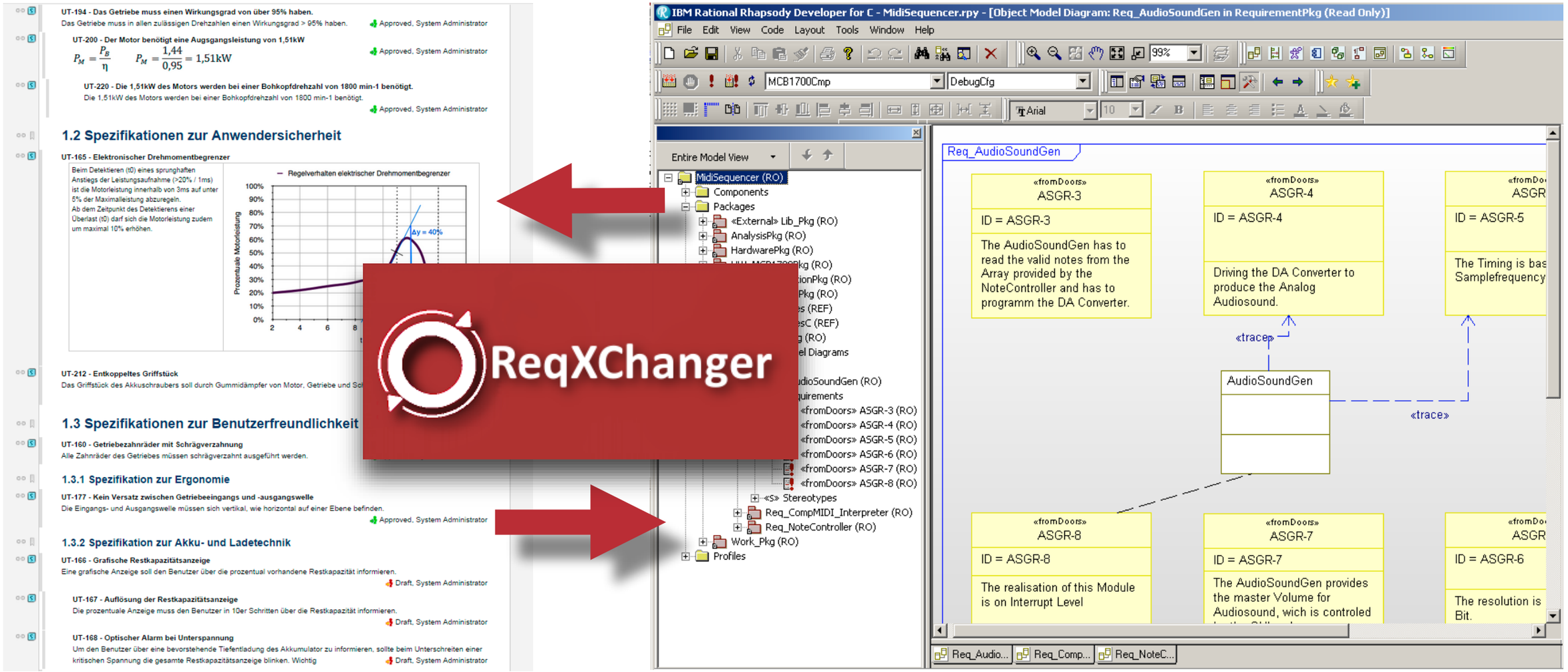
# Safety Integrity Level (1-4) in combination with Polarion

Willert Software Tools is Polarion -seller,  -trainer and -user

Our developer team uses Polarion in different SIL projects

- Railway
- Automotive
- Space

# Data Exchange between Polarion and MDD Tools




ReqManagement Solution

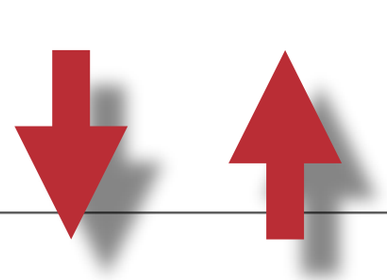
UML / SysML Modelling Solution

# Full Traceability

User Requirements → Software Specifications → UML- / SysML-Artefacts

| User Requirements | Software Specifications | RXC Software Artefact Type |
|---|---|---|
| IC-3 - Self Check functionality<br>**Description:** A faulty system has to be detected before the engine startup. | IC-7 - Check Sensors before Engine Startup<br>**Description:** The controller must check all connected sensors before the engine can be started. | |
| | IC-10 - Fatal Errors Behaviour<br>**Description:** Fatal errors may not allow an engine startup. | |
| | IC-11 - Minor Errors Behaviour<br>**Description:** Minor errors should allow an emergency run in order to reach the next garage. | |
| IC-42 - Camshaft Position Detection<br>**Description:** The ignition controller requires the exact position of the camshaft to determine the startup for every firing sequence. | IC-58 - A Hall Sensor has to detect the Camshaft Position<br>**Description:** A hall sensor has to detect every finalised (trigger is piston 1 in Top Dead Center ) rotation of the camshaft. | IC-81 - Ignition_Controller<br>**Artefact Path:** System::Ignition_Controller |
| | IC-59 - An Ignition Distributor must determine the correct Ignition Timing and Order<br>**Description:** An ignition distributor must determine the correct ignition timing and order for each piston within each ignition sequence. | IC-80 - Ignition_Distributor<br>**Artefact Path:** System::Ignition_Distributor |
| IC-43 - Crankshaft Rotational Speed Detection<br>**Description:** The ignition controller requires the rotational speed of the crankshaft to determine the ignition timing. | IC-66 - Software Timer<br>**Description:** A Software Timer is required to calculate the rotational speed of the crankshaft. | IC-85 - Timer<br>**Artefact Path:** System::Timer |

# Requirements Handover with Automobile Manufacturers

**IBM eXchange Add On**

ReqIF Requirements Interchange Format

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Audi

Volkswagen

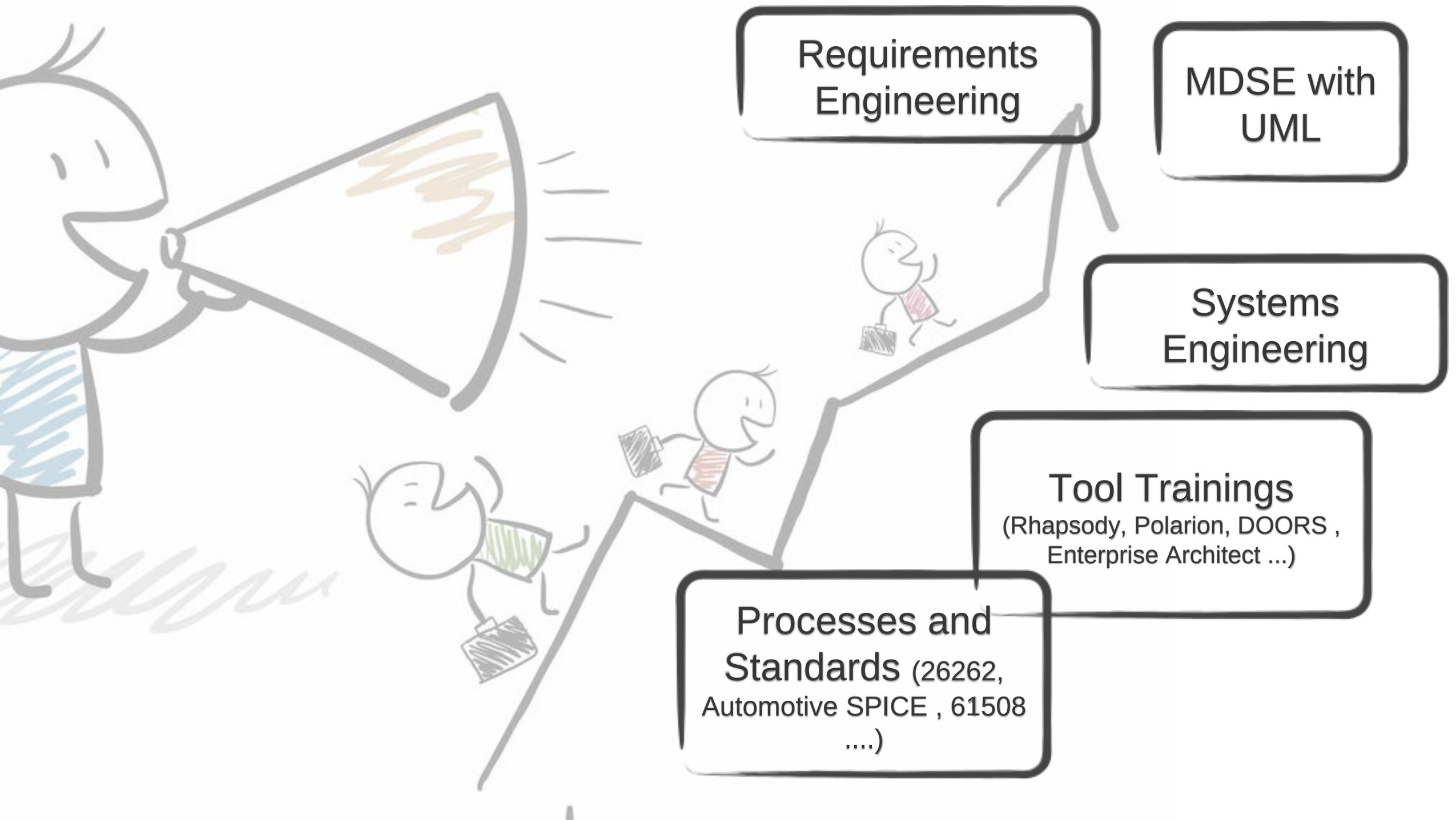
PORSCHE

Mercedes-Benz

BMW

# We train Knowledge

in real life and practical situations....



# QUESTIONS ?

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