



Automotive SPICE® 3.0

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## Introduction (1/2)

- Automotive SPICE® is a domain-specific variant of ISO/IEC 15504-5 and is used by several OEMs and tier-one suppliers to assess the capability of the development process of their suppliers
- Automotive SPICE was developed by the **Automotive Special Interest Group (AUTOSIG)** from 2001 (first publication in 2005)
- In the meanwhile, Automotive SPICE is a registered trademark of VDA (Verband der Deutschen Automobilindustrie), the German association of the automotive industrie
- The current version of the Automotive SPICE Process Assessment Model (PAM), version 2.5, was published in 2010
- The working group 13 (AK13) of VDA is working on a new version of the model, version 3.0, which should be published in 2015
- AK13 presented some of the expected changes at the VDA conference Automotive SYS last June in Berlin



## Introduction (2/2)

Main reasons for an update of Automotive SPICE

### **Misalignment Automotive SPICE / ISO/IEC 15504-5**

#### **Vague terminology**

**Element, SW unit, item**

**Verification criteria**

**Missing "V" for hardware and mechanical engineering**

In the following, we provide a summary of the announced changes...

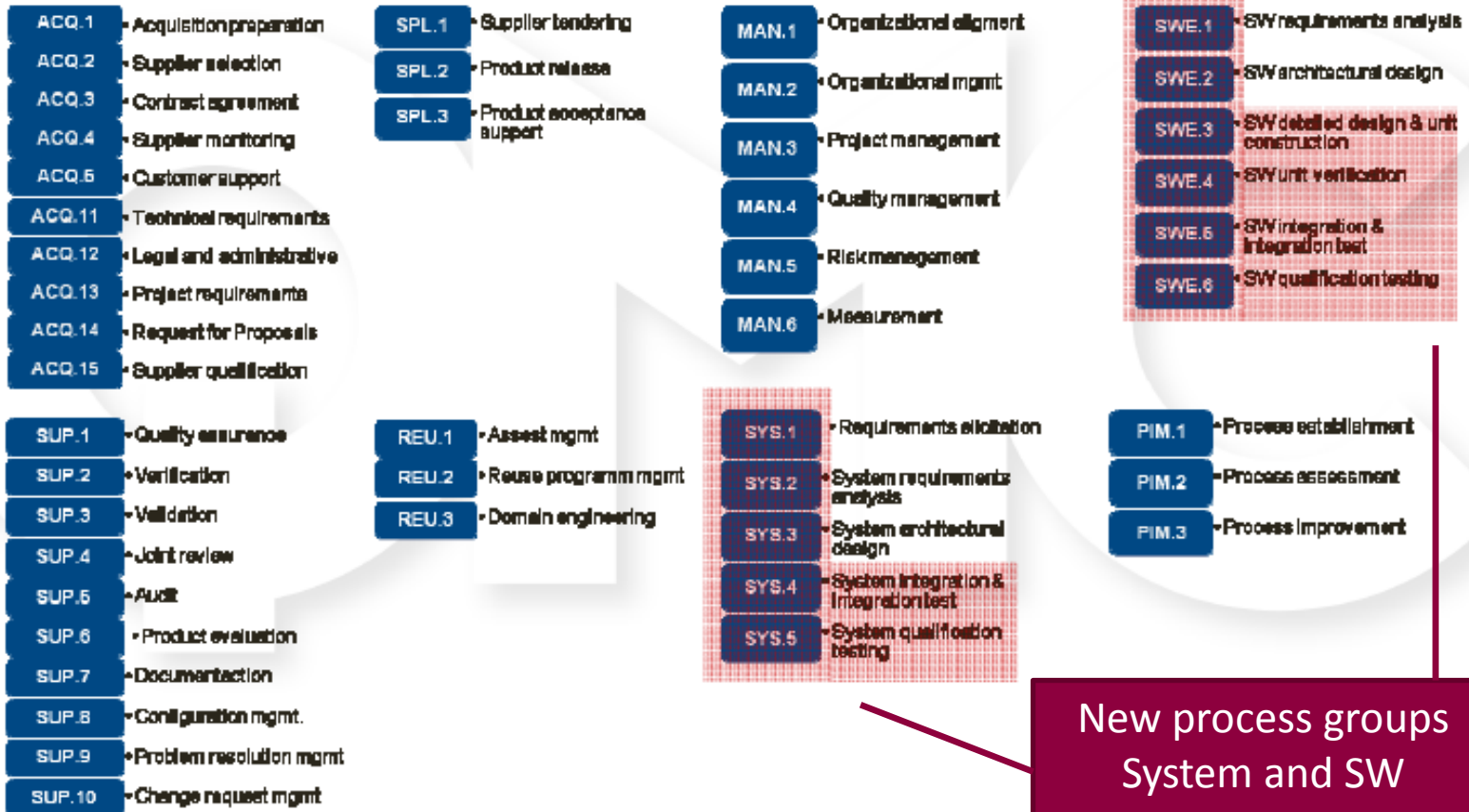
[Source: AK13, „Automotive SPICE® 3.0 – Current Concept and Structure“, VDA Automotive SYS, Berlin, 2013]





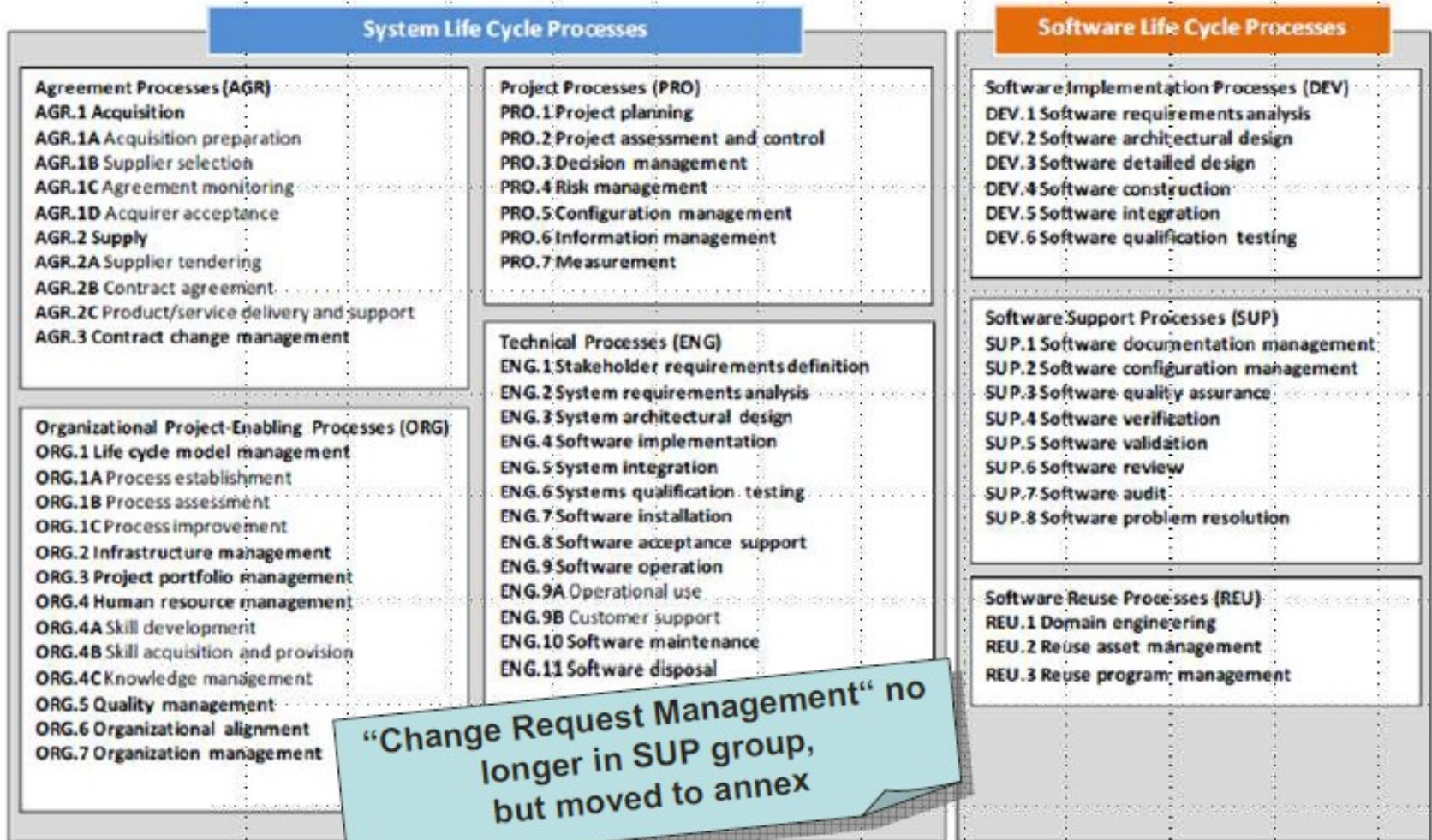
## Changes in Structure for Automotive SPICE® v3.0

- Backwards compatibility to v2.5's structure and process IDs maintained otherwise



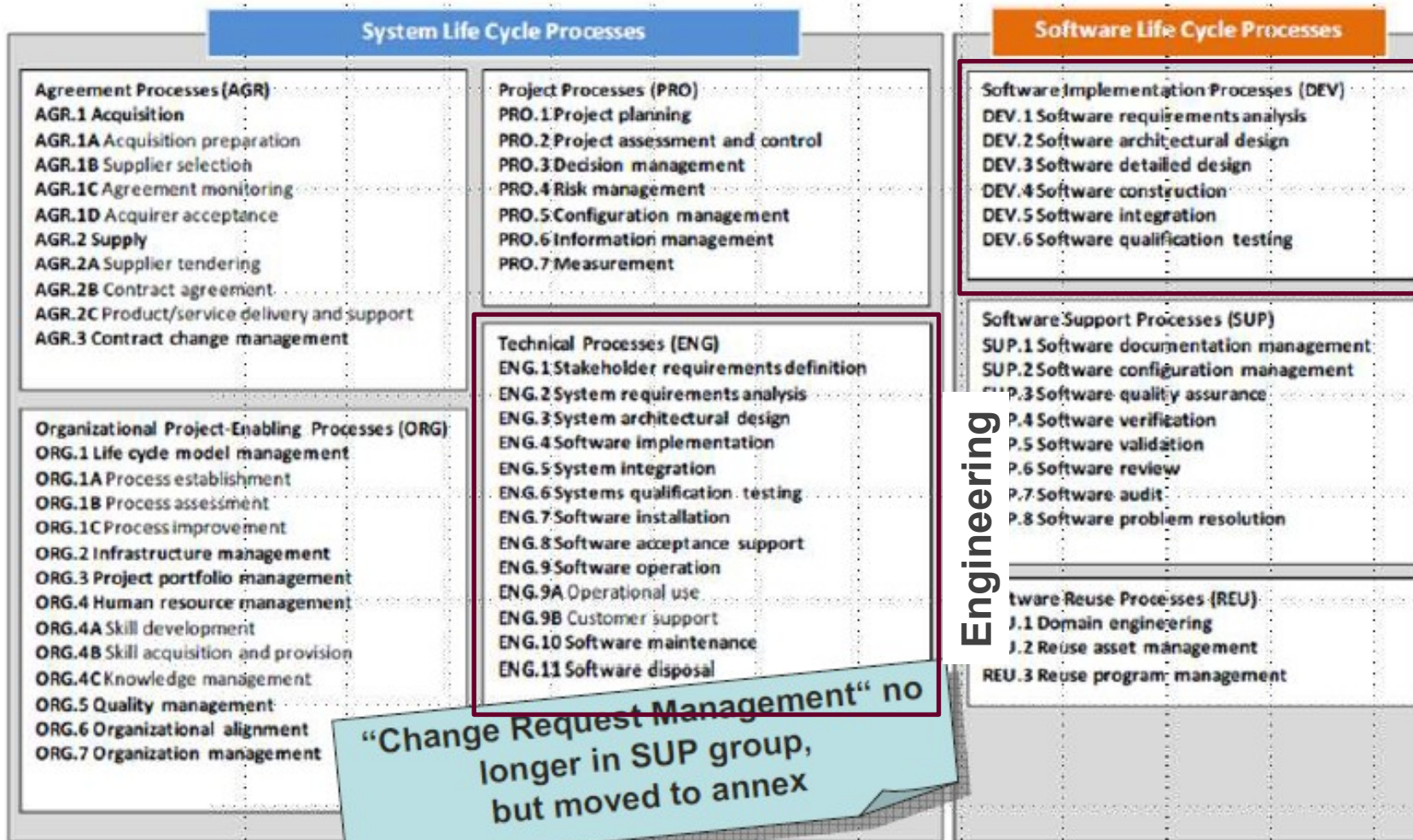


## Structure of ISO/IEC 15504-5:2012

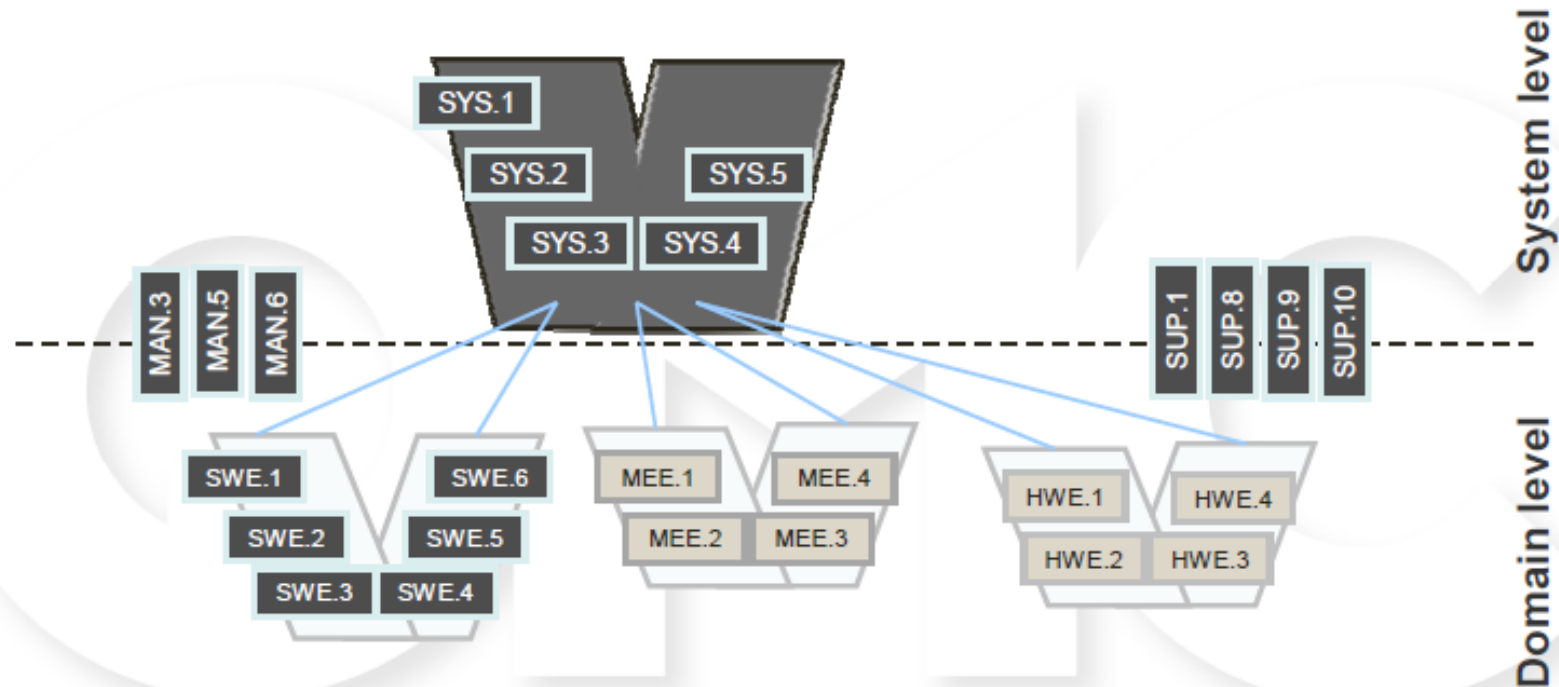




## Structure of ISO/IEC 15504-5:2012



## This structure reveals a “plug-in” concept for other domains



SYS = System Engineering

SWE = Software Engineering

HWE = Hardware Engineering

MEE = Mechanical Engineering

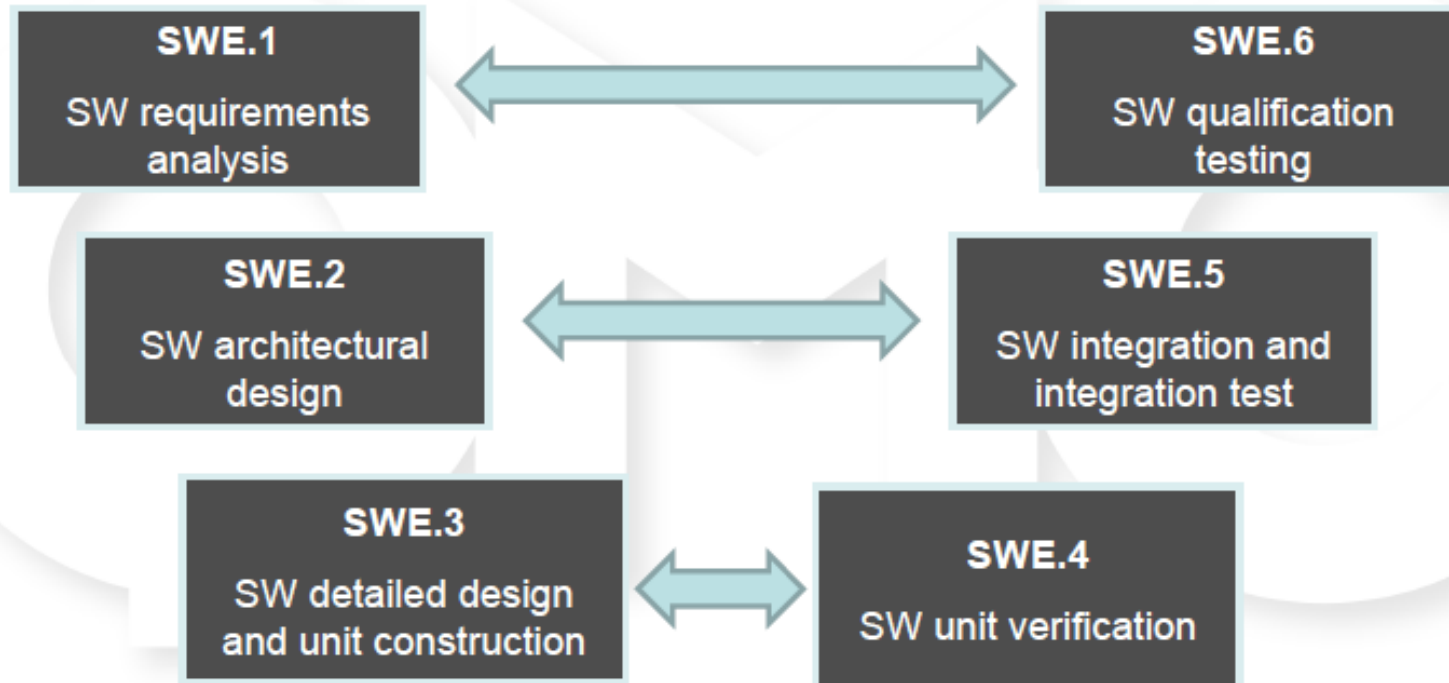
  = developed by VDA, will be part of final Automotive SPICE® release

  = not developed by VDA, will not be part of Automotive SPICE® release





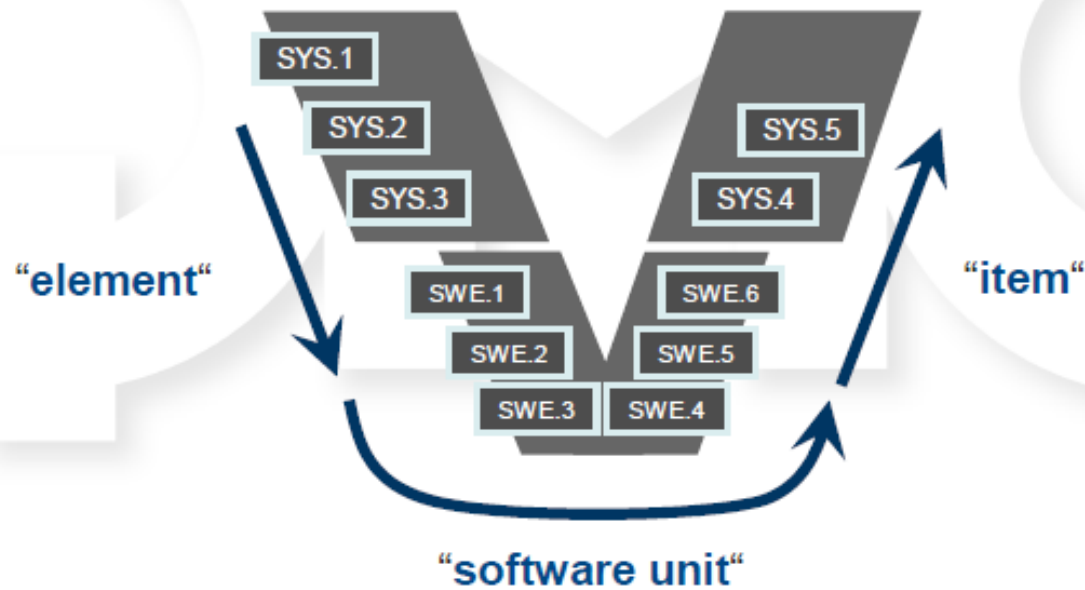
## Symmetrical tip of the software V





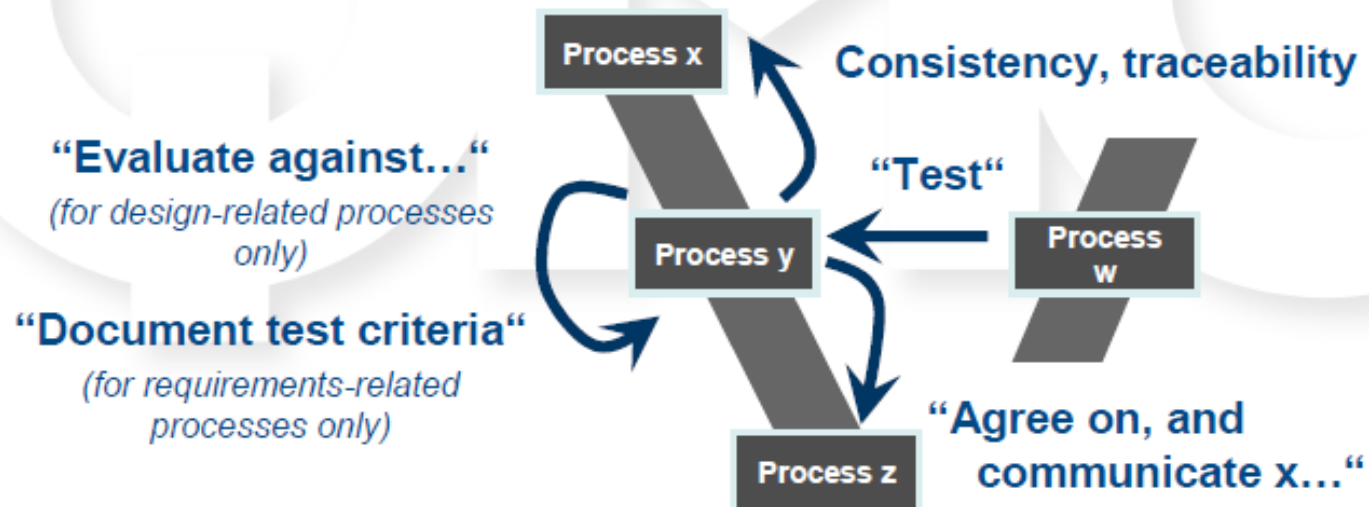
## Changes in Terminology (1/2)

- **Issue:**
  - how to distinguish between “component”, “element”, “unit”, “item” etc.?
- **Decision:**
  - the following new terminology is used consistently



## Changes in Terminology (2/2)

- **Issue:**
  - How to interpret “verification criteria” in ENG.3 and ENG.5
  - The “communicate requirements” BPs in ENG.2/3/4 have no counterpart in ENG.5
- **Decision: new terms used consistently in BPs across V-branches**



## Example



**SWE.2.BP6: Evaluate software architectural design.**  
Evaluate software architectural design against explicit architectural requirements.

*NOTE 7: Architectural requirements may include compatibility to standards like Autosar or characteristics like scalability, robustness, modularity, reliability.*

*NOTE 8: The results of the evaluation can be used as input for software integration testing.*

**SWE.3.BP4: Evaluate software detailed design.**  
Evaluate the software detailed design in terms of interoperability, interaction, criticality, technical complexity, risks and testability.

*NOTE 2: The results of the evaluation can be used as input for software unit verification.*



## Current Status and Roadmap

- **At present, VDA AK 13 are working on the systems & software processes (about 70% finished).**
- **Next steps:**
  - MAN.3 and SUP processes
  - Processes outside HIS scope
  - Formal mapping to ISO/IEC 12207
  - Guidelines for the interpretation of Automotive SPICE®
- **The Automotive SPICE® 3.0 release is planned for 2015.**
- **A liaison has been established between VDA AK 13 and AK 26-02 (former sub-group of former VDA AK 16) for considering relevant and necessary activities and suggestions in the context of aligning Automotive SPICE® and ISO 26262 content & the performing of process assessments/functional safety audits in practice.**



*Thank you for your attention.*

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Thank you for your  
attention.

Questions? Comments?

Automotive SPICE 3.0, Version A

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