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Software Automation SPICE PAM/PRM

István Kocsis

SPICE Regional Event – 14-15.05.2025, Budapest

Agenda

- Introducing Our Software Automation Work Group
- Introducing T-Systems
- Motivation for Software Automation SPICE
- Scope and Overview of the PRM / PAM
- Processes of the SW Automation PRM
- Piloting / Next Steps
- Summary

Introducing Our Software Automation Work Group

Lead: István Kocsis (T-Systems international GmbH) (istvan.kocsis@t-systems.com)

Co-Lead: Stephan Müller (T-Systems international GmbH) (stephanm@t-systems.com)

Team (in alphabetical order):

- Fatma Alazabi (American Axle & Manufacturing, “AAM”)
- Chetan Bavkar (Visteon Corporation)
- Yasser Elzant (UL Solutions)
- Martin Jung (develop group Basys GmbH)
- Ankur Maan (ZooKoo Consulting Pvt. Ltd.)
- Michael Neher (Accenture)
- John Rufus Nuthakki (UL Solutions)
- Tomas Schweigert (Tomschconsulting)
- Marcel Wettlaufer (Accenture)

Automotive

Customer Experience
Software-Defined Vehicle
Industry-X
Journey to Cloud

Health

Digitalization in the Hospital
Digital Health Insurance
Telematic Infrastructure 2.0
Digitalization of Care

Public

Digital Public Administration
Public Sector Sustainability
Digital Sovereignty

Public Transport

Digital Infrastructure
Transport Operations
Digital Maintenance
Passenger Experience

Advisory — Combining management consulting with deep technology expertise to guide your digital transformation journey

Digital — Development of and support in your digitalization strategy

Cloud — Set-up and operations of multi-cloud environments

Security — Security of your business through state-of-the-art security services

Connectivity — Basis for successful digitization, with fast, agile, and secure access to data and applications worldwide

Retail & Logistics

Connected Customer & Staff
Supply Chain Management
Sustainable Logistics Utilities
Retail IT Modernization

Financial Services

Digitization & Monetization
Transformation & Modernization
Security & Compliance

Manufacturing

Accelerated Innovation
Resilient Supply Chains
Smart & Sustainable Factories
Connected Products & Services

Quality is the key to success.

Audit & compliance including risk

"Sense of urgency"

Quantity & quality of people

ZERO OUTAGE

Health checks

Process adherence & discipline

Product & operational readiness

Being aware of and managing risks

Avoiding failure right from the deal

Scoping according to customer needs

ZERO FAILURE

Quality in delivery through standards

Planning the how of the collaboration

Staffing with the right people with the right skills

Motivation for Software Automation SPICE (1)

Challenges: market pressure, rapid technology development, increasing complexity, shorter development cycles, higher quality demands

Objectives:

- Ensure efficiency, consistency, repeatability, and scalability
- Accelerate delivery / shorten feedback loops without compromising quality and reliability
- Enhance productivity (enabling continuous integration, continuous testing, and continuous deployment)
- Reduce human effort, minimize the risk of errors

Further benefits:

- Enabling rigorous compliance and adherence to regulatory requirements
- Ensuring traceability, reproducibility, automated documentation, verification, and validation
- Contribution to a structured and audit-ready development approach
- Increasing adoption of AI / ML in development and operations

Motivation for SW Automation SPICE (2) – Context at T-Systems

T-Systems' running Automation program:

- Implementing sw automation solutions in projects and domains
- Providing various sw automation assets (e.g., DevOpsaaS Tool Chain)
- Running CIP:
  continually checking for potential automation solutions to be provided for projects and services
- All projects check at initiation, which SW Automation Assets can they use.

Questions:

- Are we doing the right way?
- Do we follow an integrated / end-to-end approach?
- Are we / our projects doing all the possible automation? (→ automation coverage)

→ Requirement for creating a PRM / PAM

→ As big part of T-Systems is Automotive business → create this PAM/PRM as AddOn for Automotive SPICE

Scope of the SW Automation PRM/PAM

Scope

- managing software automation programs at org level
- bundling activities for multiple projects & services
- ensuring continuity and preserving knowledge and solutions
- structuring management of developing software automation solutions along software automation domains
- organizing software automation solutions into an asset repository, providing automation assets for use
- specific processes for developing software automation solutions within development projects

Not in scope / not in focus (examples)

- Hardware or mechanical automation, embedded hardware testing (n.b.: can be used for the sw components)
- Manufacturing automation (e.g., industrial automation, assembly lines)

Overview of the SW Automation PRM

Process Group: AUT - Software Automation

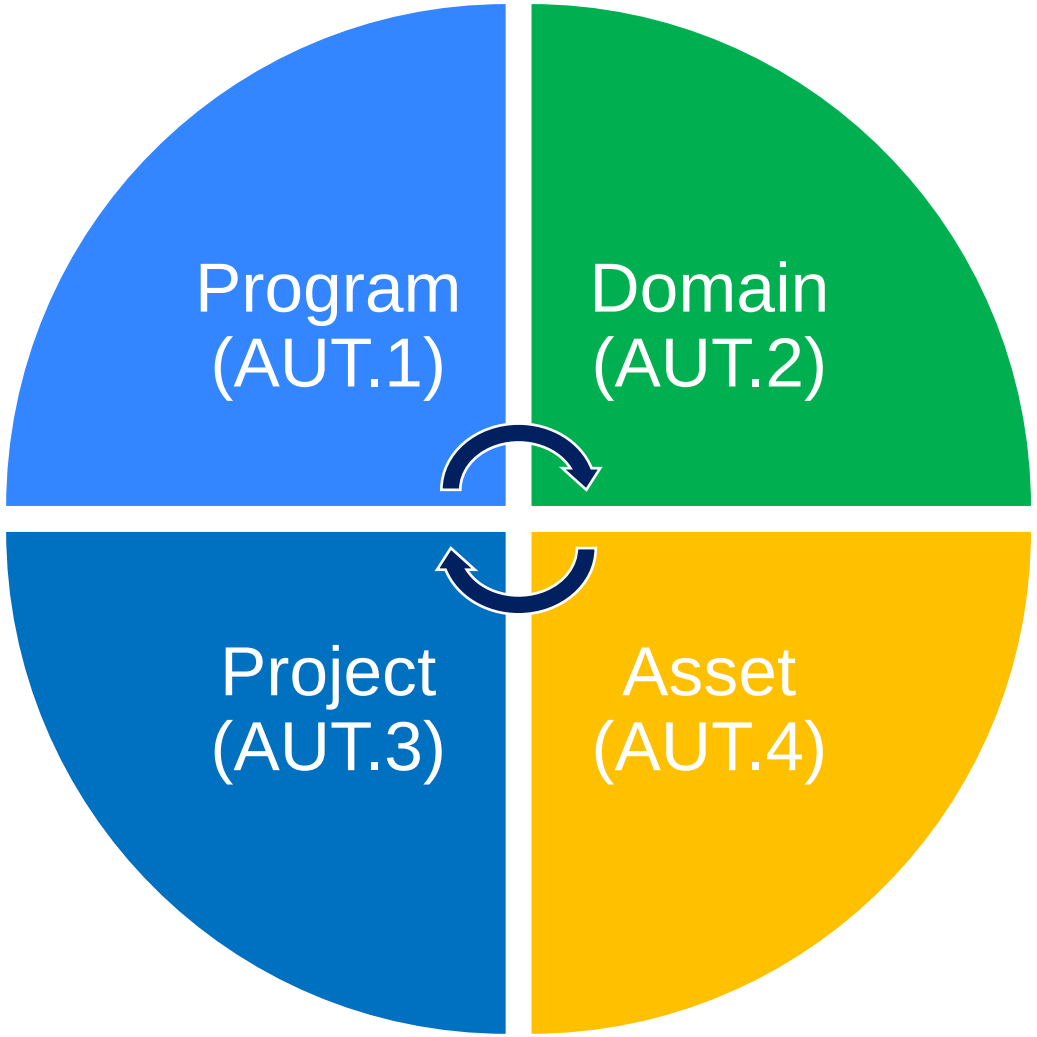
AUT.1 - SW Automation Program Management

AUT.2 - SW Automation Domain Management

AUT.3 - SW Automation Asset Management

AUT.4 - SW Automation Solution Development and Application

Embedding processes
of the software automation PRM/PAM in SPICE/ASPICE:
→ Connections to the other processes

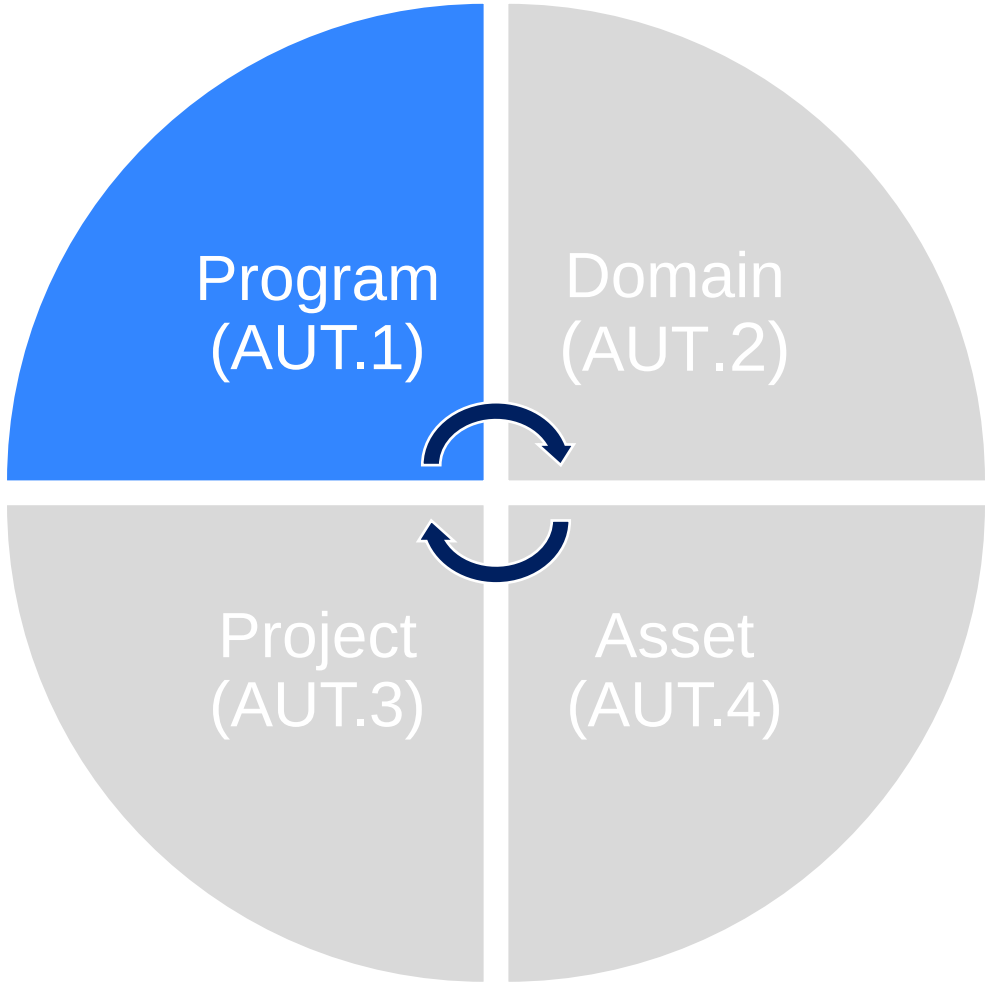


AUT.1 - SW Automation Program Management

Process ID
AUT.1
Process name
SW Automation Program Management

Topics / BPs:

- Goals, scope, governance, and committment
- Plan the software automation program
- Execute, monitor & control the software automation program
- Review, evaluate, and adjust execution of the program
- Change and improve
- Review and assess results, adjust for benefits

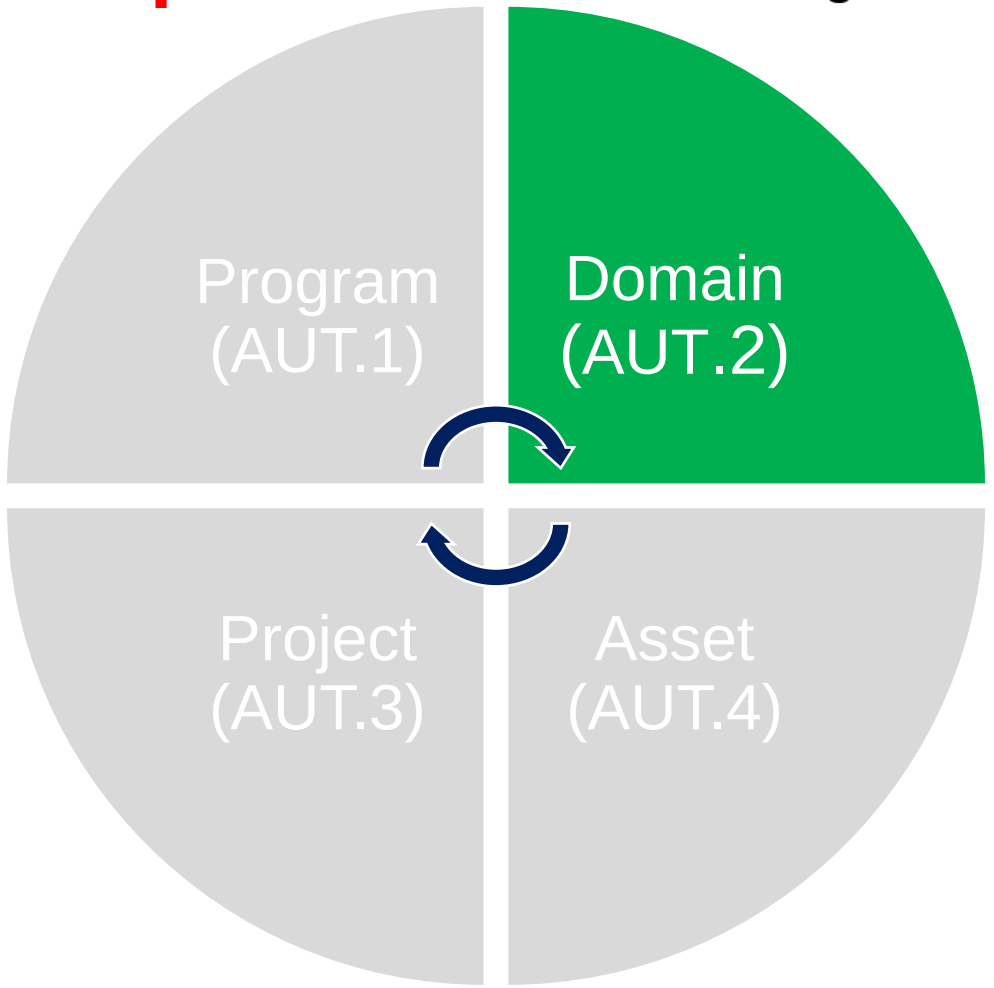


AUT.2 - SW Automation Domain Management

Process ID
AUT.2
Process name
SW Automation Domain Management

Topics / BPs:

- Define criteria, rules and requirements for domains
- Define and maintain domains according to the criteria, and rules
- Monitor, evaluate and adapt domains and domain activities
- Review, evaluate, and adapt domains and domain activities
- Collect, and evaluate software automation proposals
- Create a list of software automation proposal for the software automation program

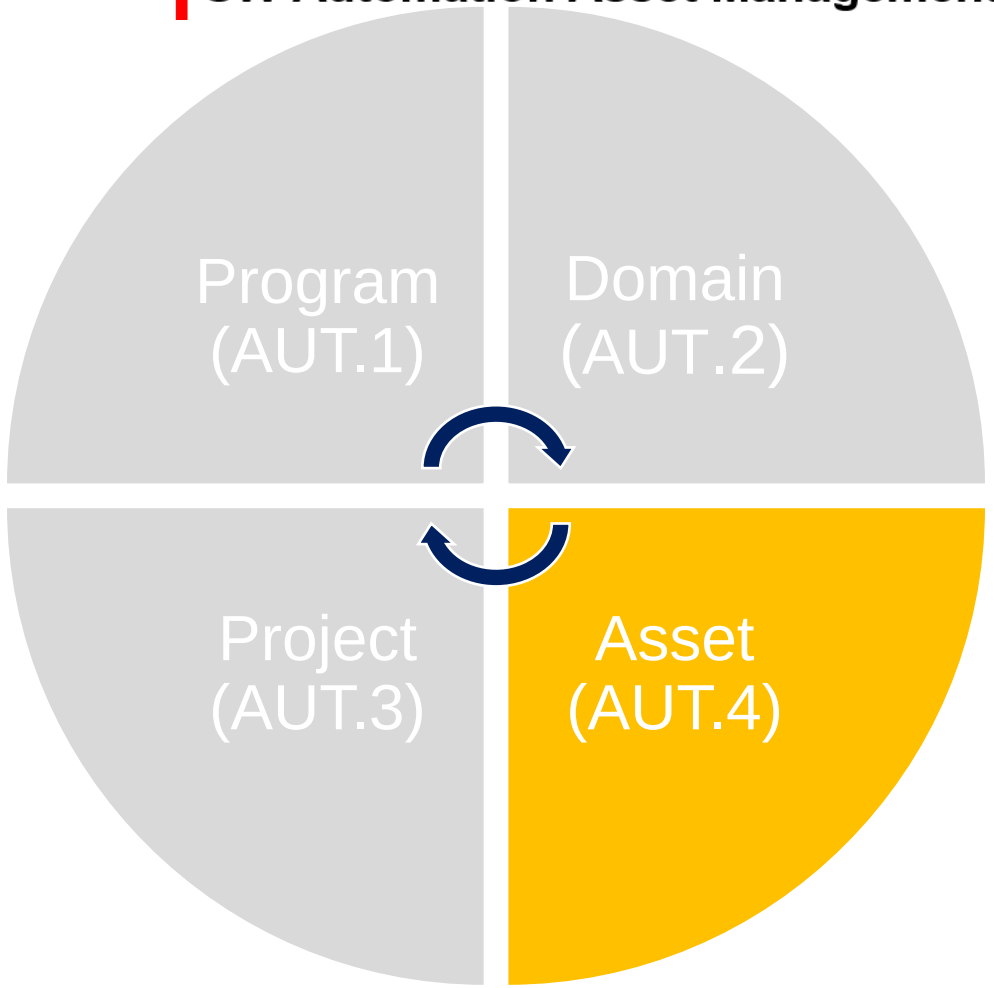


AUT.3 - SW Automation Asset Management

Process ID
AUT.3
Process name
SW Automation Asset Management

Topics / BPs:

- Define, and maintain criteria, rules and requirements for sware automation assets
- Define, and maintain sw automation assets according to rules and criteria
- Operate a sw automation asset repository (create, maintain, operate, make available to users)
- Communicate automation repository status
- Integrate software automation assets into the repository (check, store, maintain, control, make available to users)
- Communicate automation asset status to users
- Initiate actions to assets
- Monitor, control, record, review and evaluate asset usage



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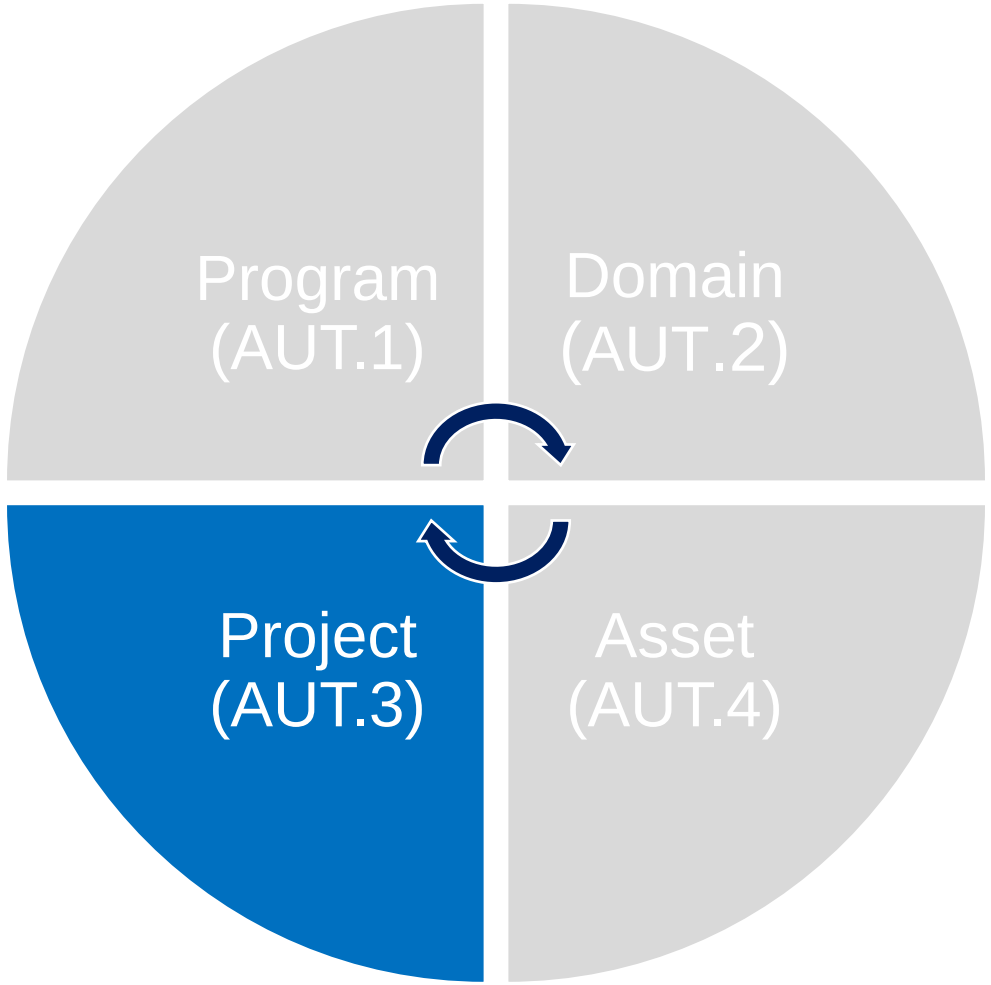
AUT.4 - SW Automation Solution Development and Application

Process ID
AUT.4
Process name
SW Automation Solution Development and Application

Topics / BPs:

- Identify automation needs and requirements for the project
- Identify available automation assets and solutions
- Identify and decide on realization options
- Software automation plan:
  Create / update project plan for sw automation
- Software automation solution within the project:
  create, approve and implement it for project use
- Software automation solution: make it ready for asset usage
- Manage changes and improvements
- Communicate results to relevant stakeholders



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Next Steps

- Piloting of the PRM within T-Systems done
- Finalizing the SW Automation PRM/PAM document
- Approval of Advisory Board
- Creating training material
- Creating exam questions

Summary

- A PRM/PAM for software automation is being created
- It can be used from project up to program level, depending on the context:
  - For individual projects you can use AUT.4 only
  - In case of implementing it at program or organizational level, you can use AUT.1 to AUT.3 also
- It helps projects, services and product development to focus on general key points when starting with software automation
- It has a strong link to the Reuse process (→ Product line management)
- We see it as a key step for
  - For reduction of manaual efforts
  - For the future when combining with ML and software automation

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DO YOU HAVE ANY QUESTIONS?

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