



How can you deliver value at the end of each iteration while meeting ASPICE process objectives?

2025

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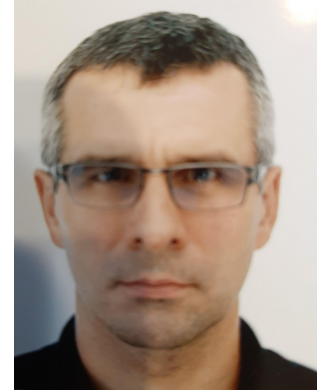
Valéo Agile: How to go?

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01 Introduction

Xavier Chevalier

- Valeo LIGHT Division R&D efficiency Manager
- 28 years of experience in Automotive Systems & Software Engineering
- Certified SAFe Practice Consultant (SPC6)
- SAFe Release Train Engineer certified (RTE)
- ASPICE Provisional Assessor
- 12 years agile experience
- Leader of Valeo Agile network
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VALEO: A GAME CHANGER WITH MASSIVELY USEFUL INNOVATIONS

Our culture of innovation is key to our success because it leads to real technology enhancements that we bring to market fast.

Valeo is developing solutions to revolutionize mobility, making it cleaner, safer and for everyone, everywhere.

- "Move Up" plan to boost our technology, operations & finances
- Dedicated & engaged teams around the world

WE KNOW THE SUCCESS OF THE TRANSFORMATION OF THE MOBILITY SECTOR DEPENDS ON OUR OWN TRANSFORMATION



How can you deliver value increments at the end of each iteration? The ASPICE legacy

- V-Cycle process is delivering V-Cycle work products, following a V-Cycle model
- Each process order is fixed and the lifecycle are long
- Each process step belongs to ASPICE Process group

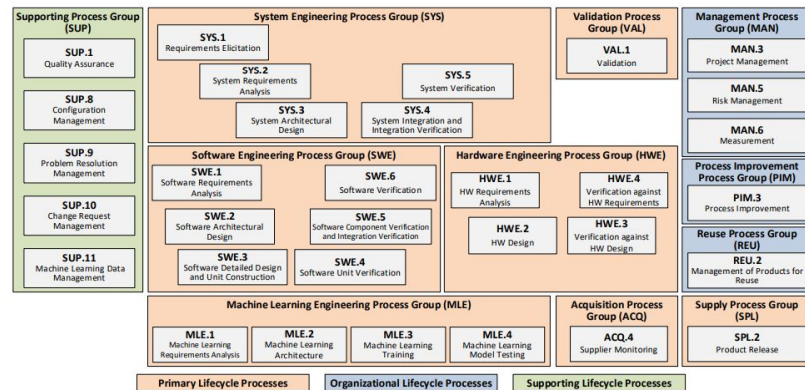


Figure 2 — Automotive SPICE process reference model - Overview



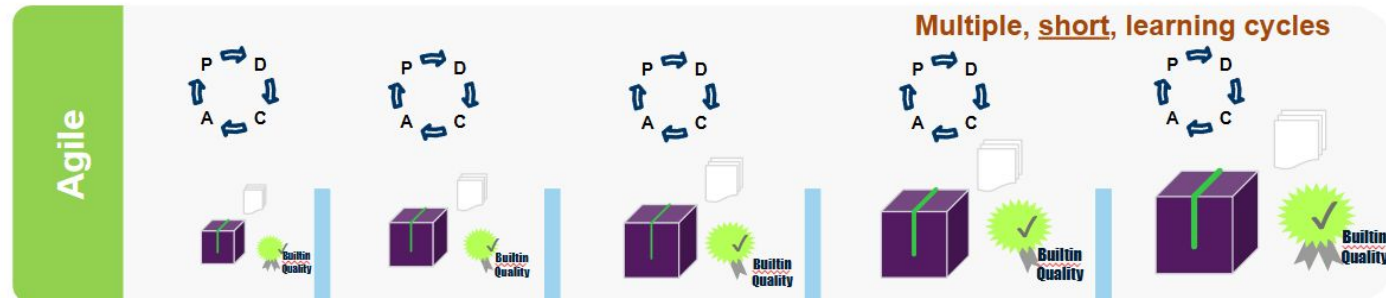
Support Successful Automotive development



Long iteration, while OEMs, suppliers want to develop faster adapted solution on disruptive market

How can you deliver value increments at the end of each iteration? Basic of Agile

- Multiple , short, learning cycles (PDCA) with regular delivery
- Process order is not fixed
- Process must deliver ASPICE* compliance outcomes



Short iteration and capability to adapt the solution frequently



Difficult to comply to all ASPICE process groups on short iterations

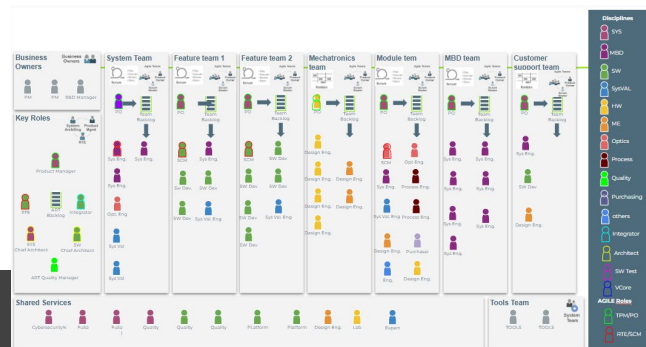
ASPICE*: see Automotive-SPICE-PAM-v40.pdf

02

Basic of Agile deployment in Valeo - LIGHT Division

Lean-Agile applied in Valeo LIGHT division

- “SAFe essential”* for complex product development
- Agile Release Train (ART) are made of Scrum teams and Kanban teams, with a pilot team (Team of Teams)
- Scrum teams focus on System/Software features
- Kanban teams focus on Mechatronic features
- PI of 5/6 iterations + Innovation & planning iteration
- Iteration of 2 weeks or 3 weeks
- System Demo are performed at the end of all iterations
- ASPICE L2 & L3 targeted



Short iteration and capability to adapt the solution frequently

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03

Typical difficulties

Difficulties behind ASPICE legacy

- The classic approach involves successive system engineering steps with extensive control to ensure conformity.
- It assumes infrequent deliveries (every 4 to 8 weeks), focusing on few but near-perfect deliveries.
- Errors are costly due to R&D investment spent, so early error detection in the process, like identifying requirement issues, is crucial to avoid wasting effort.
- Example of “full” control by Quality process applied (SUP.1): at each iteration, the quality assurance is checking everything



Automotive R&D standards need to evolve

Source: Automotive-SPICE-PAM-v40.pdf

Difficulties to do all activities within iteration

- “New” Agile team may meet difficulties on many ASPICE BPs, because of:
 - inputs not “Ready” on time to go in iteration planning
 - Project management processes to be revised
 - Too many activities to do during the iteration execution with too big batch of work per iteration
 - Tests preparation and execution late and too long versus iteration duration
 - Most of “Classic” ALM tools on the market, could be improved to support short iterations of Agile



An adaptation is needed to do short iterations while keeping the ASPICE compliance

Source: Automotive-SPICE-PAM-v40.pdf



04

How Valeo LIGHT Division has succeeded

The approach

MAN.3, progressive evolution with adjustment based on people feedback:

- a. Agile Team planning replaces engineering discipline planings, merging R&D with PI planning.
- b. ALM of Software engineering for all, using Miro for events.
- c. Quality assessments in SAFe include expected evidence.
- d. Product Maturity intermediate levels are removed.
- e. Agile KPIs defined on project board (burndown, technical debt, velocity, PI objectives predictability). Milestone gates are aligned with the development cadence.



Project processes revised for Agile, release



Project tools are adapted to SAFe

Source: Automotive-SPICE-PAM-v40.pdf



The approach

SWE.4, SWE.5, SYS.4, SYS.5:

- a. Test engineers are onboarded in Agile Teams
- b. Input requirements are refined with relevant Test engineers
- c. Test facilities and capabilities are prepared in advance
- d. Strong Integration and verification automation with continuous integration setup
- e. Development of ECU virtualisation to allow early test without available physical target



**Iteration duration is 3 weeks, while test automation is under development
Afterwards, iteration duration is set to 2 weeks for acceleration**



DoR & DoD application are keys to comply to engineering processes

Source: Automotive-SPICE-PAM-v40.pdf

The approach

Moreover:

- a. Stable team resources are crucial for successful iterations
- b. Team composition must match needed activities (eg: team without test skills cannot meet DoD and ASPICE BPs)
- c. System and Software Architecture combine top-down and bottom-up emergent design
- d. Quality assurance must be adapted to short iterations without slowing value production, relying on the Agile team first.



PI planning preparation is key, however the deployment of the approach need for a new ART some time to reach a good level of practice



Constant attention to technical debt is a way to get quick benefits and to comply with ASPICE

Source: Automotive-SPICE-PAM-v40.pdf

05 Conclusion

Take-away

- Breaking down features into small user stories for minimum viable product value increment, is one of the most challenging know-how to be developed.
- See 'Agile' as a way to improve ASPICE levels.
- Ensuring the 'right' Agile Team capacity is fundamental to comply with the process and avoid building technical debt.
- Adaptation of tools for project management, requirement management
- Test automation to shorten testing execution is fundamental to get the result within the iteration



Valeo LIGHT Division has succeeded to deploy Lean-Agile SAFe with short iterations and the ASPICE compliance



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FOR SMARTER MOBILITY