Agenda

ASPICE

▪ Why is ASPICE relevance increasing?
▪ How to achieve ASPICE compliance?

ASPICE and IBM Engineering Lifecycle Management

▪ What is IBM Engineering Lifecycle Management?
▪ What is IBM’s vision to support ASPICE?
Automotive Software Process Improvement and Capability Determination (ASPICE)

Governance: Maintained by Automotive Companies & required by Automotive OEMs

Assessment: Projects shall follow state of the art system & software engineering practices
Key technology drivers for the automotive industry

Changes in technology lead to a new ecosystem of suppliers

- **Electrification**
  Electric motors, power electronics, advanced batteries

- **IoT Hardware**
  Advanced Sensors, Corner Modules

- **Industrial Design**
  Advanced User Interfaces, Modular Bodies

- **Autonomous Driving**
  Advanced central operating system with self-driving capability

Automotive & tech companies collaborate to develop Autonomous driving
## Factors that accelerate relevance of ASPICE

<table>
<thead>
<tr>
<th>Past</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software only part of the control unit</td>
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**Past**

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ASPICE covers various Process Groups

Source: ASPICE PAM (http://www.automotivespice.com/fileadmin/software-download/Automotive_SPICE_PAM_30.pdf)
ASPICE defines a Plug-in concept for different domains

**Figure 1: The plug-in concept in ASPICE 3.1**

Source: intacsTMnewsletter – edition 2017-12
ASPICE defines Levels

OEMs commonly require and aim for Level 3

<table>
<thead>
<tr>
<th>ASPICE Levels</th>
<th>Scope</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Innovating Process</td>
<td>Organization</td>
</tr>
<tr>
<td>4</td>
<td>Predictable Process</td>
<td>Project</td>
</tr>
<tr>
<td>3</td>
<td>Established Process</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Managed Process</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Performed Process</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>Incomplete Process</td>
<td></td>
</tr>
</tbody>
</table>
The Way to ASPICE Compliance

Level 0
Incomplete Process

Level 1
Performed Process

Level 2
Managed Process

Level 3
Established Process

Process outcomes are achieved in a managed way

Process outcomes "somehow" achieved

Implement processes for quality mgmt. and configuration mgmt. across domains

Implement reusable process (tailoring guidelines)

Reusable process is established

Achieve process outcomes
ASPICE key challenge

Handle dependencies of work products and processes
Traceability is a common issue in tool landscapes.
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- What is IBM Engineering Lifecycle Management?
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IBM ELM offers an end-to-end tool landscape suitable for ASPICE
IBM ELM capabilities work with every methodology

IBM Jazz Foundation

- Systems Design Management
- Requirements Management
- Workflow Management
- Test Management
- BI and Reporting
- Method & Process Authoring

IBM Engineering Lifecycle Management

- V Model
- Waterfall
- Scrum
- SAFe
IBM ELM allows for integrated work product management
IBM Rational Engineering Lifecycle Manager (RELM) View
How to avoid cost explosion when dealing with multiple variants?

**Milestone Release 1**

**Variant A**

**Milestone Release 2**

**Variant B**

**Milestone Release 3**

**Variant C**
Global Configuration Management

provides sophisticated reuse capabilities
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**IBM ELM accelerates ASPICE Compliance with five pillars**

<table>
<thead>
<tr>
<th>ELM Base Solution</th>
<th>Accelerators</th>
<th>IBM Services</th>
<th>Partner Ecosystem</th>
<th>Practitioner Board</th>
<th>Thought Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Create sample content for usage patterns</td>
<td>Simplify compliance with industry standards by providing repeatable patterns as templates and SaaS</td>
<td>Harmonize customer processes with industry standards and support them in leveraging accelerators</td>
<td>Integrate with compliance tools and connect IBM customers with industry experts</td>
<td>Collaborate with mature practitioners to align compliance support with market demand</td>
<td>Publish insights about industry challenges and best practices</td>
</tr>
<tr>
<td>2) Close gaps that hinder compliance/certification</td>
<td></td>
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<td></td>
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<tr>
<td>3) Identify core features related to compliance</td>
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</table>
IBM ELM collaborates with industry experts to create a reference solution

Diagram:
- Practitioner Committee
- ASPICE Assessors
- Joint Discussion
- Evaluation & Best Practice Exchange
- Compliance Accelerators
  - AI Capabilities
  - Reports
  - Sample Data
  - Templates
  - Method
  - IBM ELM Base Solution
Where to go next?

Learn more

6-Part ASPICE Webcast Series with Amit Talwar (IBM) by 321Gang
https://www.youtube.com/watch?v=CwbKPP4tmvg

IBM Website
for Systems Engineering

Jazz Community
IBM ELM release updates and exploration possibilities
https://jazz.net

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