IBM Webcast Show me the Way to ASPICE Compliance

Michael Halder, March 19th 2019





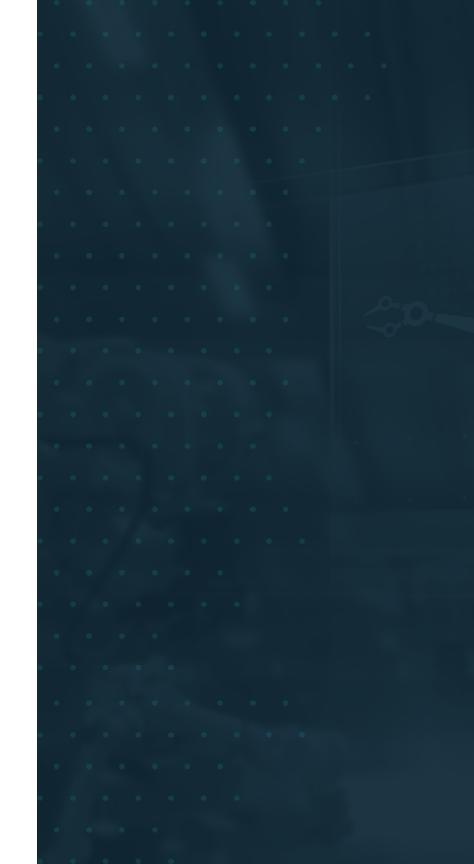
Agenda

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?







ASPICE in a nutshell

Automotive Software Process Improvement and Capability Determination (ASPICE)

Governance

Maintained by Automotive Companies & required by Automotive OEMs

Projects shall follow state of the

Assessment

art system & software engineering practices



Key technology drivers for the automotive industry

Electrification

Electric motors, power electronics, advanced batteries



IoT Hardware Advanced Sensors, Corner Modules



Industrial Design Advanced User Interfaces, Modular Bodies



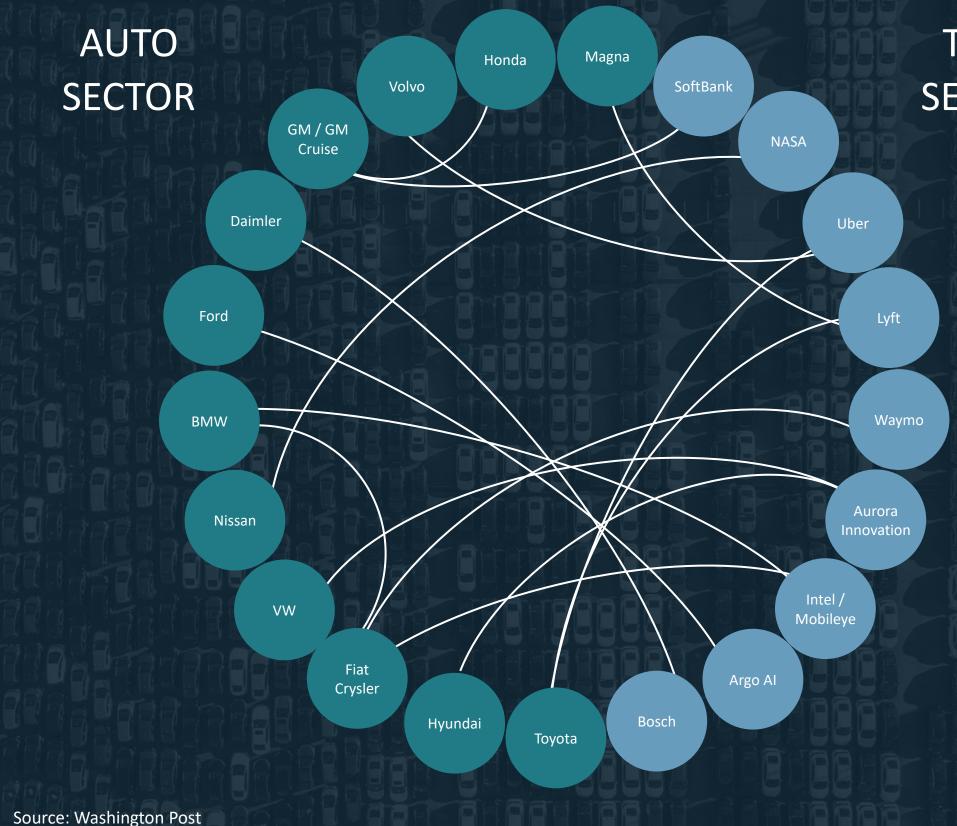
Autonomous Driving

Advanced central operating system with self-driving capability

Changes in technology lead to a new ecosystem of suppliers



Automotive & tech companies collaborate to develop Autonomous driving



TECH SECTOR



Factors that accelerate relevance of ASPICE

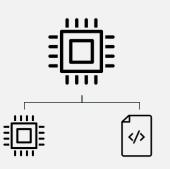


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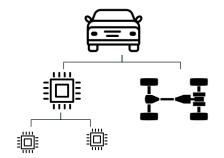
Software only part of the control unit



ASPICE primarily common among German OEMs 



ASPICE burden for suppliers of single components





Software share in car development increasing

Accepted standard by Automotive OEMs worldwide

OEM's strive for ASPICE on vehicle level (System of Systems)



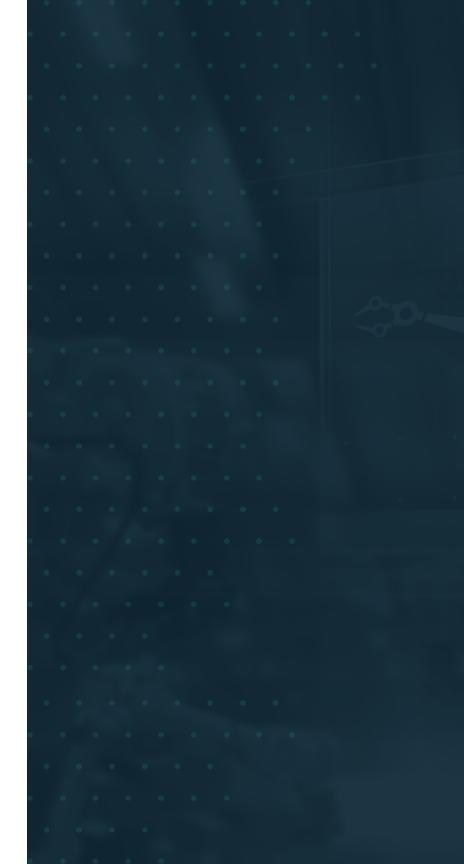
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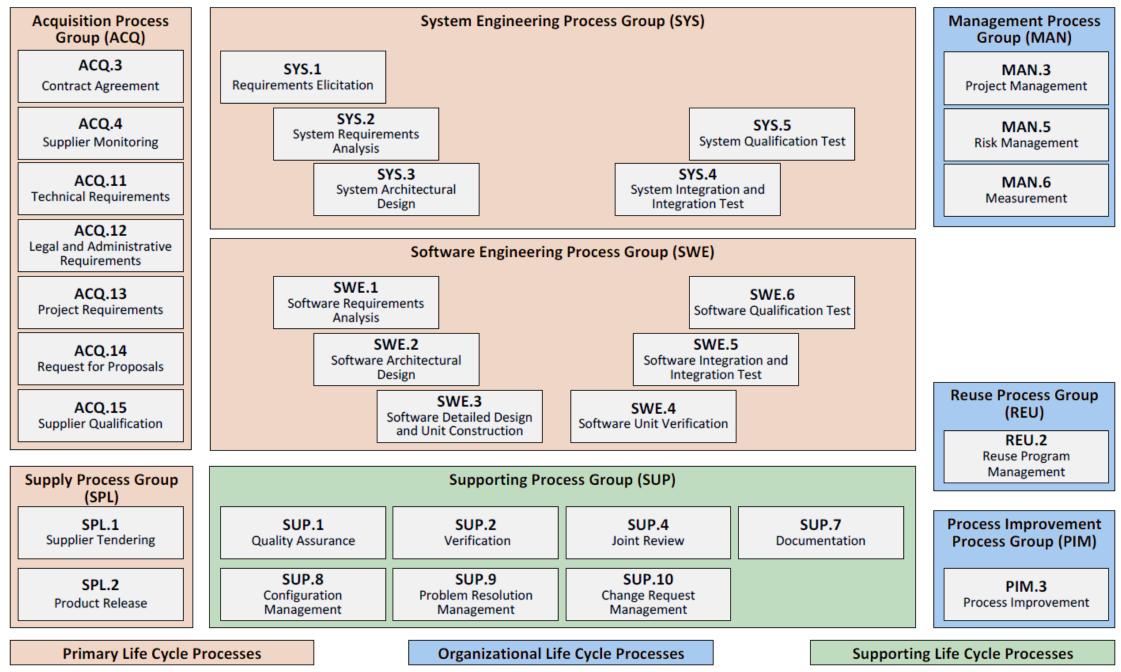
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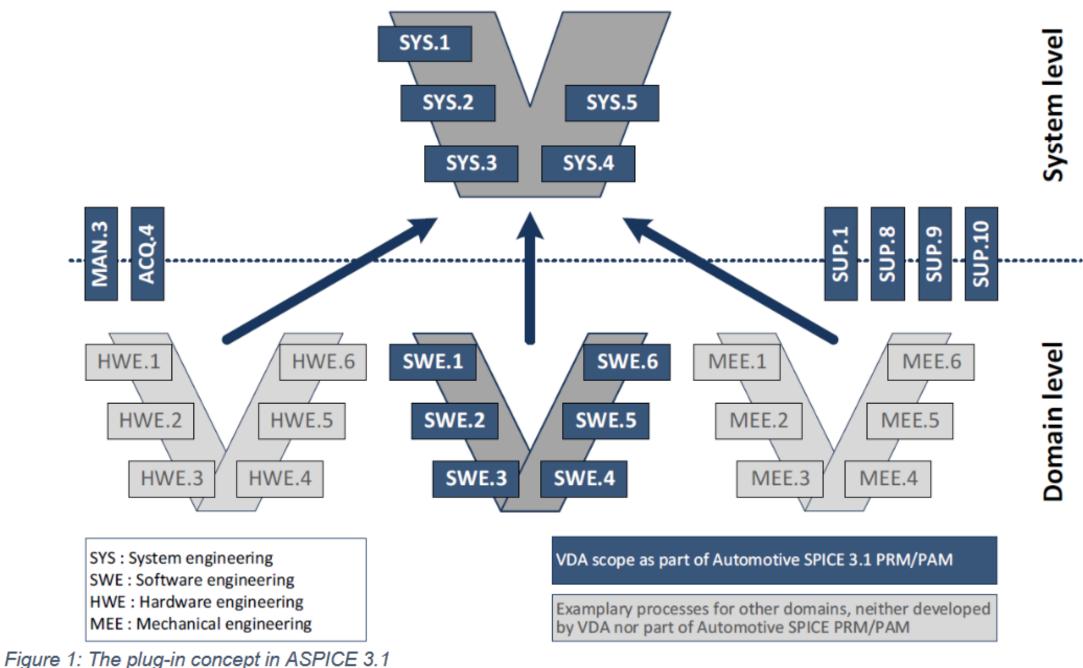


ASPICE covers various Process Groups

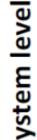




ASPICE defines a Plug-in concept for different domains



Source: intacsTMnewsletter --edition 2017-12



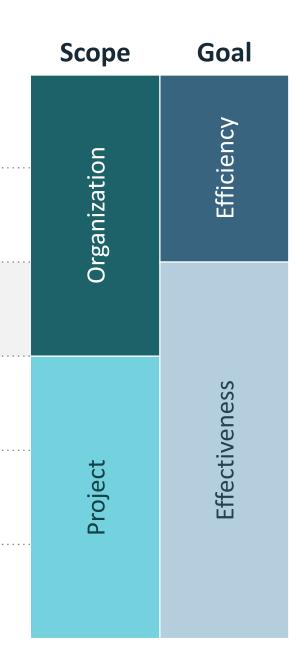


ASPICE defines Levels

OEMs commonly require and aim for Level 3

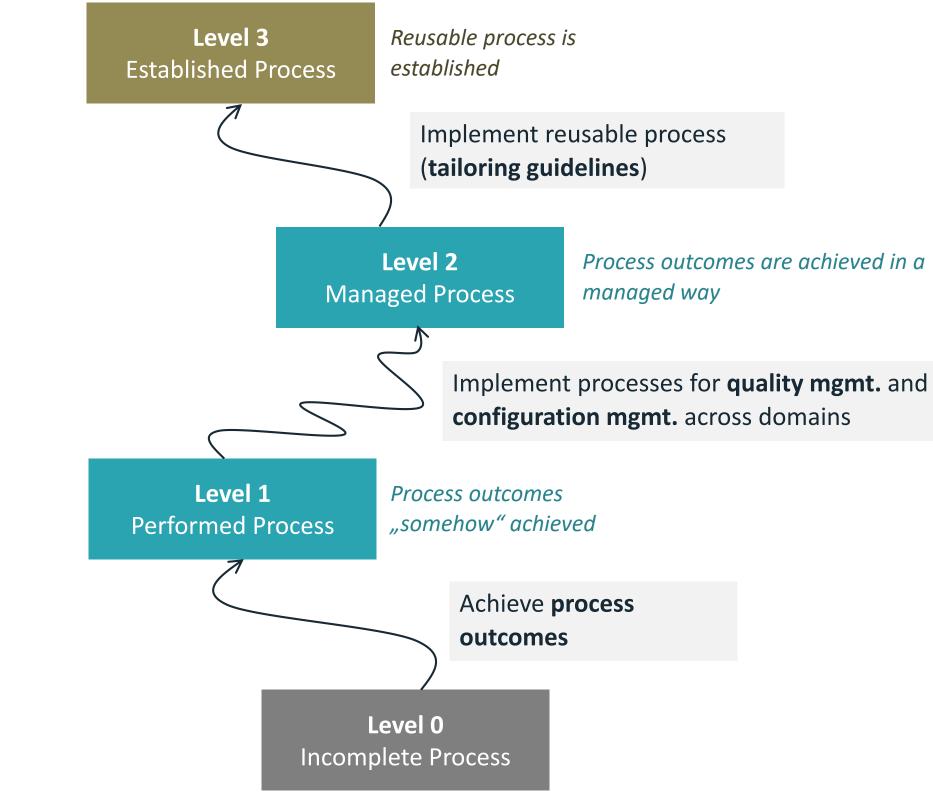
ASPICE Levels

5 **Innovating Process Predictable Process** 3 **Established Process** 2 Managed Process **Performed Process Incomplete Process**





The Way to ASPICE Compliance





ASPICE key challenge

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Handle dependencies of work products and processes

19 March 2019

Transparency Traceability Consistency

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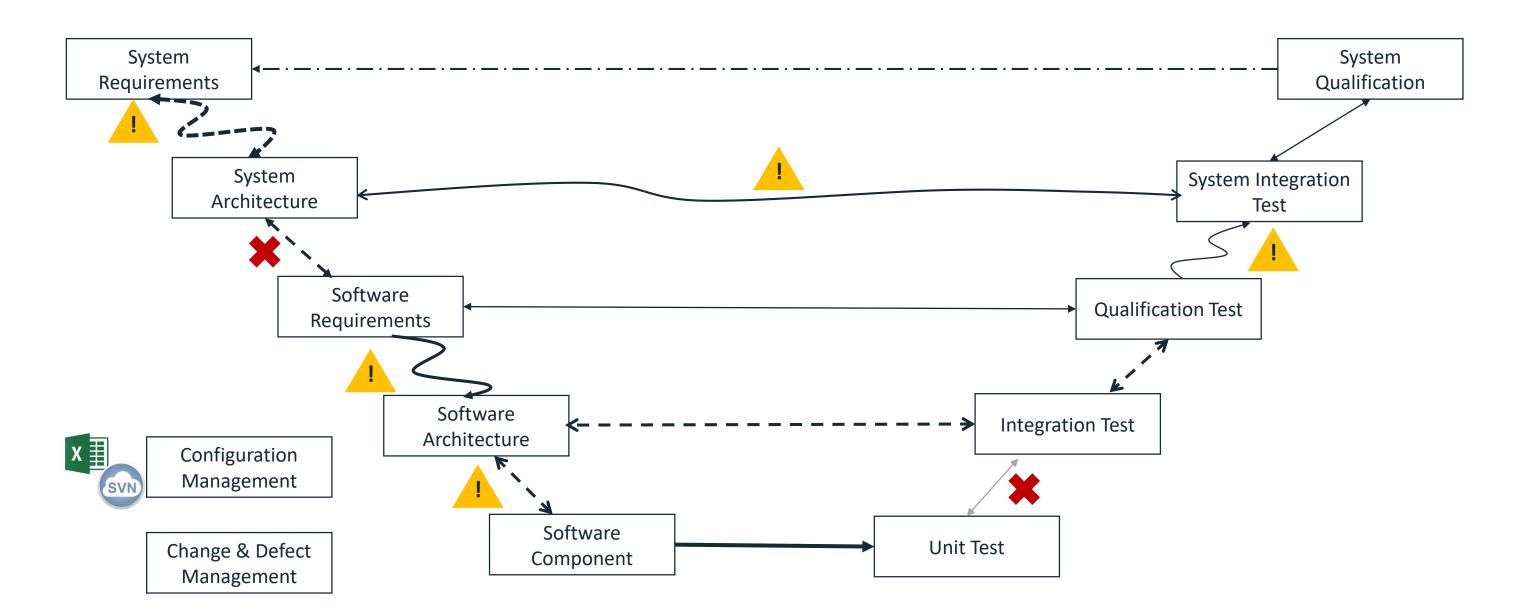
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Traceability is a common issue in tool landscapes





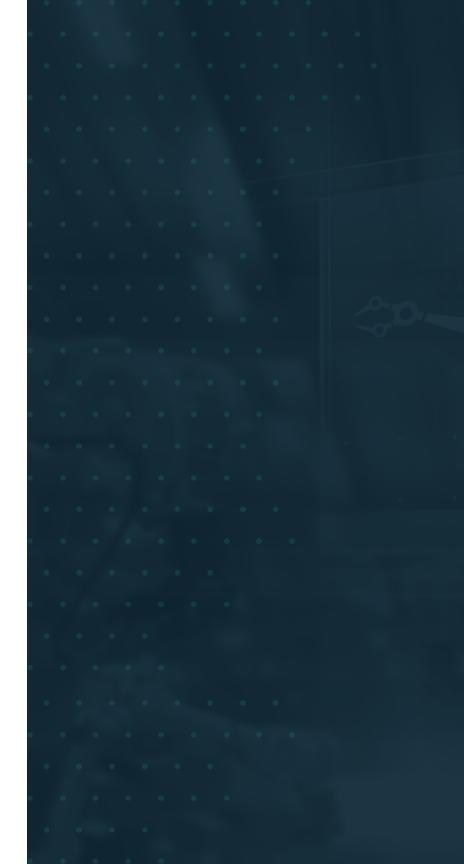
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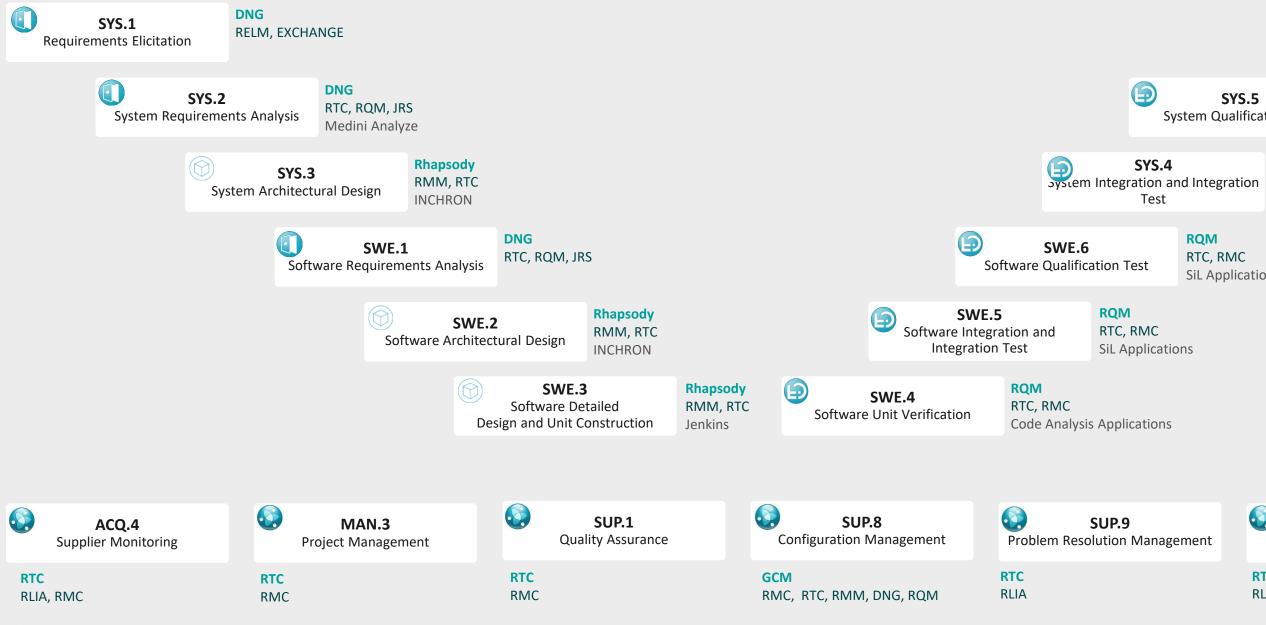
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IBM ELM offers an end-to-end tool landscape suitable for ASPICE



Legend **Main Application** Support Application **3rd Party Application**

SYS.5 System Qualification Test

RQM RTC, RMC **HiL Applications**

RQM RTC, RMC **HiL Applications**

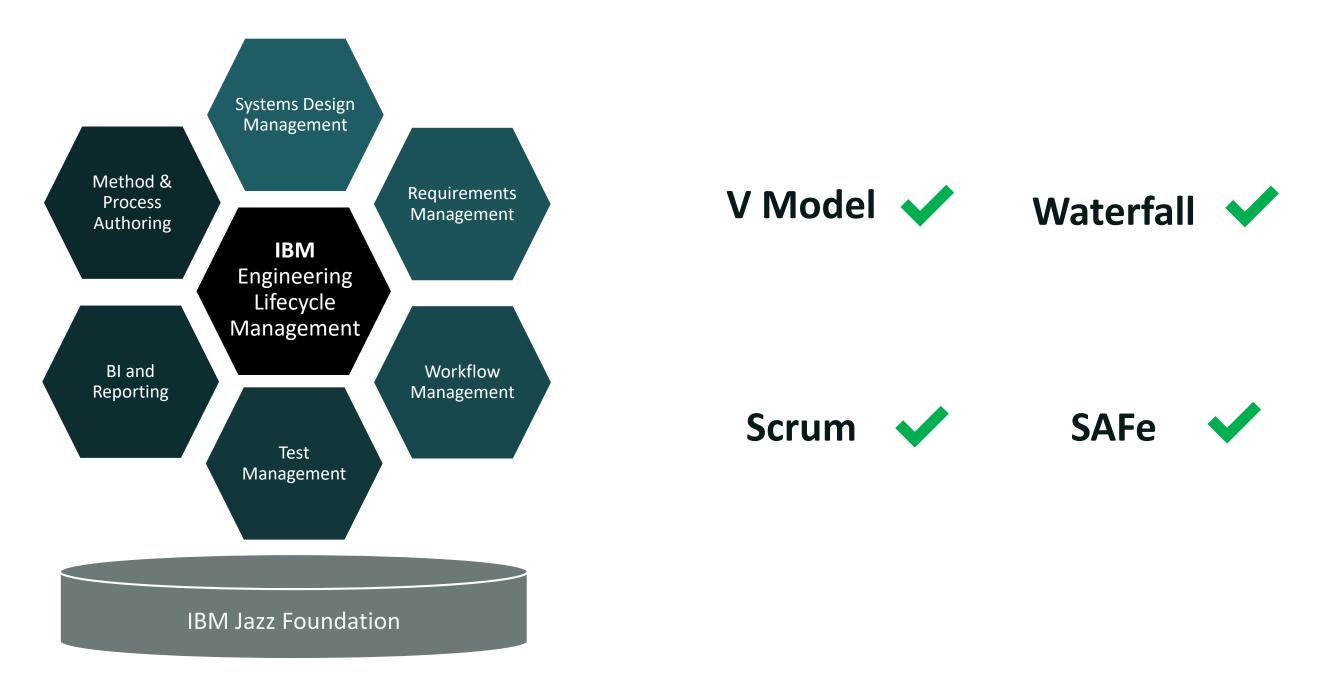
RQM RTC, RMC SiL Applications







IBM ELM capabilities work with every methodology





IBM ELM allows for integrated work product management

	Dashboard	
Requirements Management	Workflow Management	Test Management
DNG Rational DOORS Next Generation	RTC Rational Team Concert	RQM Rational Quality Manager
RQA Requirements Quality Assistant	Track & Plan	
Requirement 1 Requirement 1.1 Requirement 1.2	Plan Task Source code	Test case
DOORS Rational DOORS	SCM & Continuous Integration	
		······
	GCI Global Configuration DNG Rational DOORS Next Generation RQA Requirements Quality Assistant	Requirements Management Workflow Management GCR Global Configuration Management DNG RC Requirements Quality Assistant Track & Plan Requirement 1 Requirement 1.1 Requirement 1.2 Plan Toors SCM & Continuous Listension





IBM Rational Engineering Lifecycle Manager (RELM) View

Features Selection	E Feature 488	E Feature 445	E Feature 415	E Feature 424	E Feature 384	E Feature 399	E Feature 401
	DIAG-FUN-REQ-1640	DAB Side Show	AMFM+FUN+REQ-023	Rear-view Camera (R	V8-FUN-REQ-02523:	AMFM/2-FUN-REQ-0	VOLv2-REQ-014817/
Feature 370	Feature 371	Feature 372	Feature 381	Feature 388	Feature 380	Feature 368	Feature 389
AMFMv2-FUN-REQ-0	VOL-9R-REQ-014824	AUDSET-FUN-REQ-0	AMFM-FUN-REQ-023	V8-FUN-REQ-025341	AMFM-FUN-REQ-023	V8-FUN-REQ-025218	AMFM-FUN-REQ-023
Feature 283	Feature 295	Feature 294	Feature 298	Feature 297	Feature 288	Feature 299	Feature 329
DAB-FUN-REQ-1329	AMFM-FUN-REQ-023	AMFM-FUN-REQ-023	AMFM-FUN-REQ-023	AMFM-FUN-REQ-023	AMFM-FUN-REQ-023	AUDSET-FUN-REQ-0	AMFM-FUN-REQ-023
Feature 283	Feature 268	Feature 289	Feature 212	Feature 281	Feature 189	Feature 288	Feature 234
AMFM-FUN-REQ-023	VOL-FUR-REQ-01483	AUDSET-FUN-REQ-0	AMFM-FUN-REQ-023	V8-FUN-REQ-025213	VOL-FUR-REQ-0882	AMFM-FUN-REQ-023	VOLv2-FUR-REQ-026
E Feature 200	Feature 184	E Feature 143	E Feature 149	E Feature 131	E Feature 132	E Feature 109	E Feature 110
V8-FUN-REQ-025206	VOL-FUN-REQ-0148	AMFM-FUN-REQ-023	VOL-SR-REQ-014829	DIAG-UC-REQ-01645	DIAG-FUN-REQ-0164	DIAG-SR-REQ-10365	DIAG-FUN-REQ-0164
E Feature 72 DIAG-FUN-REQ-1157	E Feature 29 DIAG-FUN-REQ-0164						

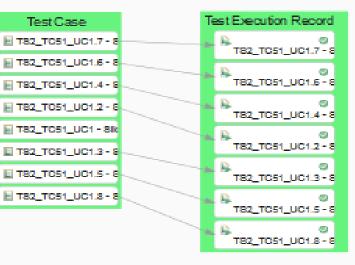
Doors Next Generation

Rational Team Concert

Feature		System Requirements		Software Requirements	
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TriggerTime less than

Rational QualityManager

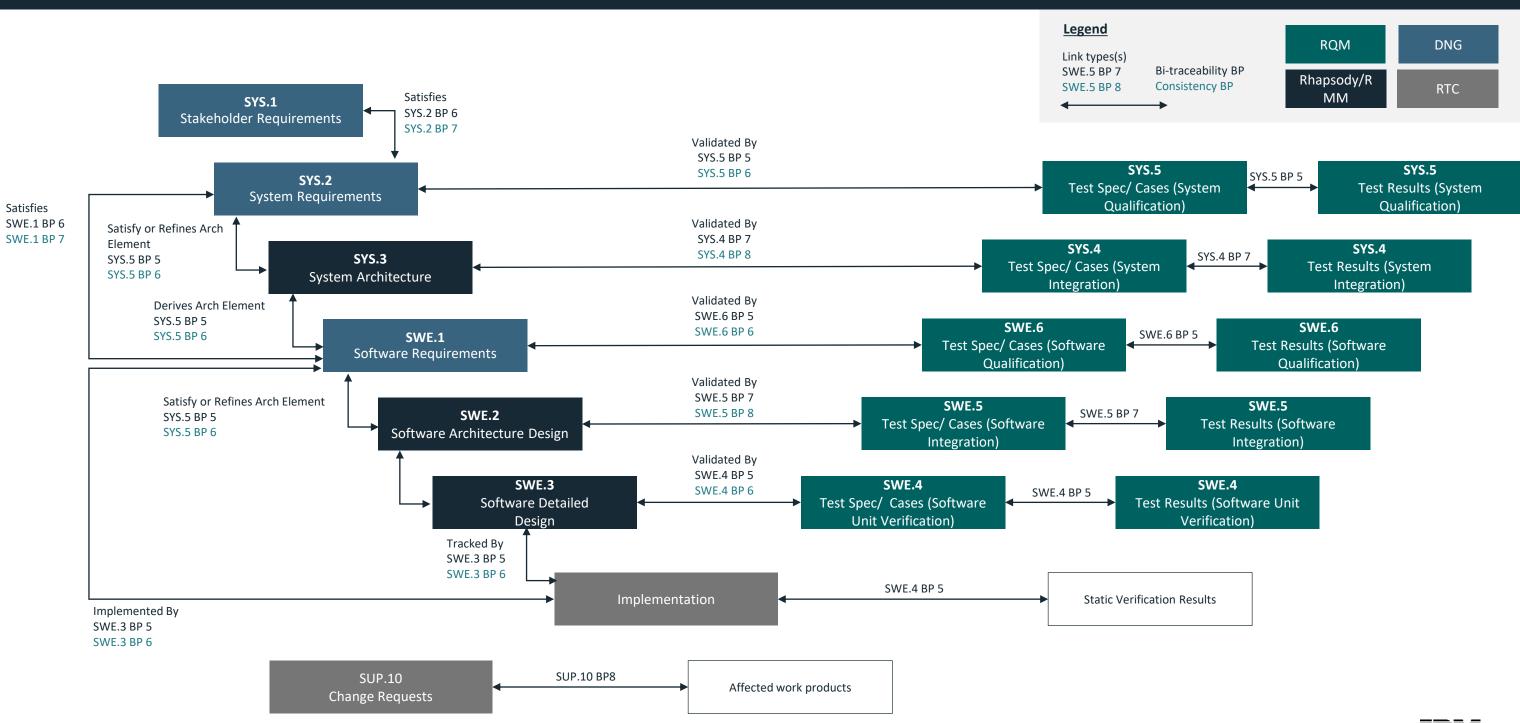


Rational Design Manager



10.00

ASPICE Essential IBM Engineering Domain Model





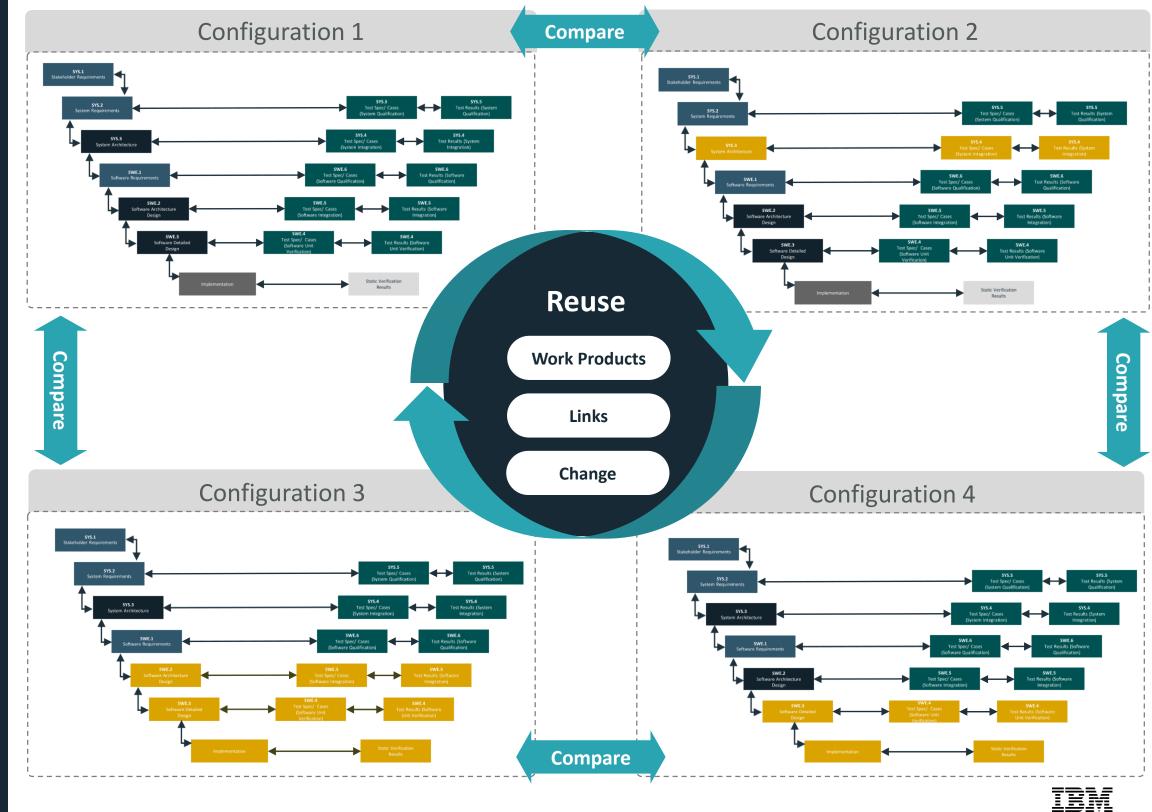
How to avoid cost explosion when dealing with multiple variants?





Global Configuration Management

provides sophisticated reuse capabilities



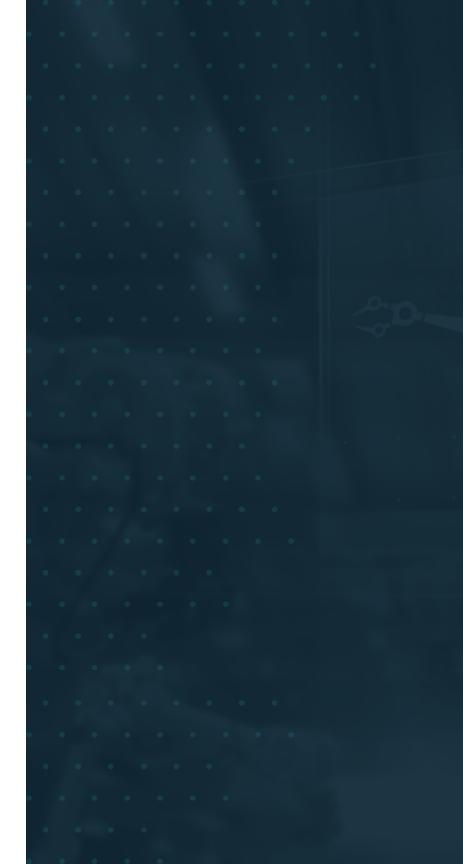
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IBM ELM accelerates ASPICE Compliance with five pillars

ELM Base Solution

1) Create sample content for usage patterns

2) Close gaps that hinder compliance / certification

3) Identify core features related to compliance

Accelerators

Simplify compliance with industry standards by providing repeatable patterns as templates and SaaS

IBM Services

Harmonize customer processes with industry standards and support them in leveraging accelerators

Partner **Ecosystem**

Integrate with compliance tools and connect IBM customers with industry experts

Practitioner Board

Collaborate with mature practitioners to align compliance support with market demand

Thought Leadership

Publish insights about industry challenges and best practices



IBM ELM collaborates with industry experts to create a reference solution



Evaluation & Best Practice Exchange

Joint Discussion

Evaluation

& Guidance

ASPICE Assessors

IBM ELM Base Solution

Compliance Accelerators

AI Capabilities Reports Sample Data Templates Method



Where to go next?

Learn more



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

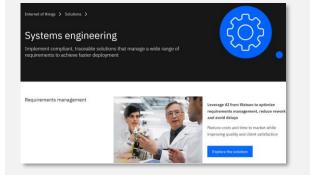
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IBM Website

for Systems Engineering https://www.ibm.com/internet-ofthings/ solutions/systems-engineering



Jazz Community

IBM ELM release updates and exploration possiblities https://jazz.net



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