



Webinar

5 Reasons to Transform Product Development Processes

Jeff Brehm – Accenture
Erich Meier – Method Park



COMPLEXITY AND COMPLIANCE STANDARDS HAVE MANY SEARCHING FOR NEW APPROACHES TO UNIFY HW & SW DEVELOPMENT

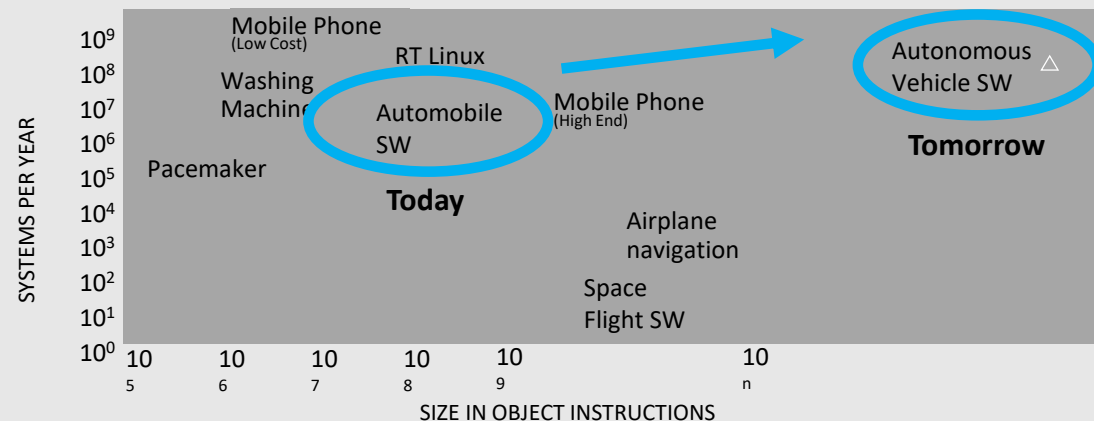
More complex E2E Systems Architecture...



Today, we are facing up to 100 processes and 100 MLOC.

Cybersecurity becomes more safety critical (functional safety), highly integrated and connected.

...a tidal wave of more software...



...combined with increasing compliance standards



80+% of new innovation is coming from SW enabled features.

ISO 26262
Road Vehicles - Functional Safety



SPICE
ISO/IEC 15504

SAE J3061™

AUTOSAR

Automotive development can choose their development approach **BUT MUST BE** compliant to certain standards to win work.

Source: Ebert IEEE Computing

WE ARE SEEING COMPANIES TRANSFORM PRODUCT DEVELOPMENT PROCESSES AROUND 3 KEY THEMES

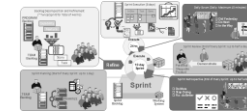
How do we apply & scale **Lean-Agile Methods** to large, globally distributed product development teams to deal volumes of software?

How do we ensure our changing PD processes align with emerging / changing **compliance standards**?

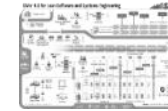
How do we incorporate **modern engineering techniques** into our PD processes to better manage increased product complexity?



Lean PD



Scrum



Agile Scaling Frameworks



Feature Driven Development



SAE J3061™

FuSi & Cyber

AUTOSAR



Systems & Software Architecture



AutoSpice



Product Line Engineering



Model-Based Systems Engineering

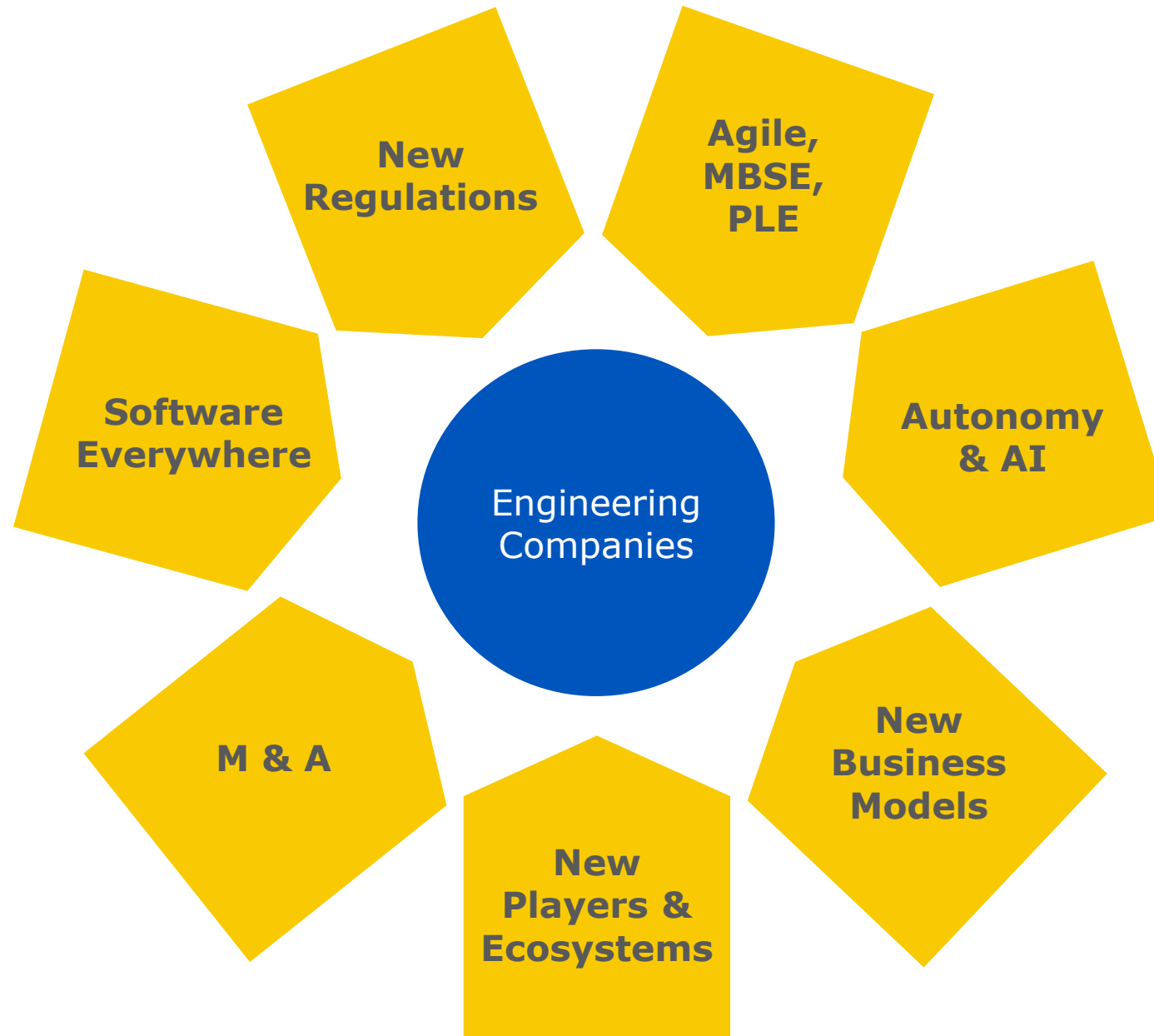


DevOps / Continuous Integration

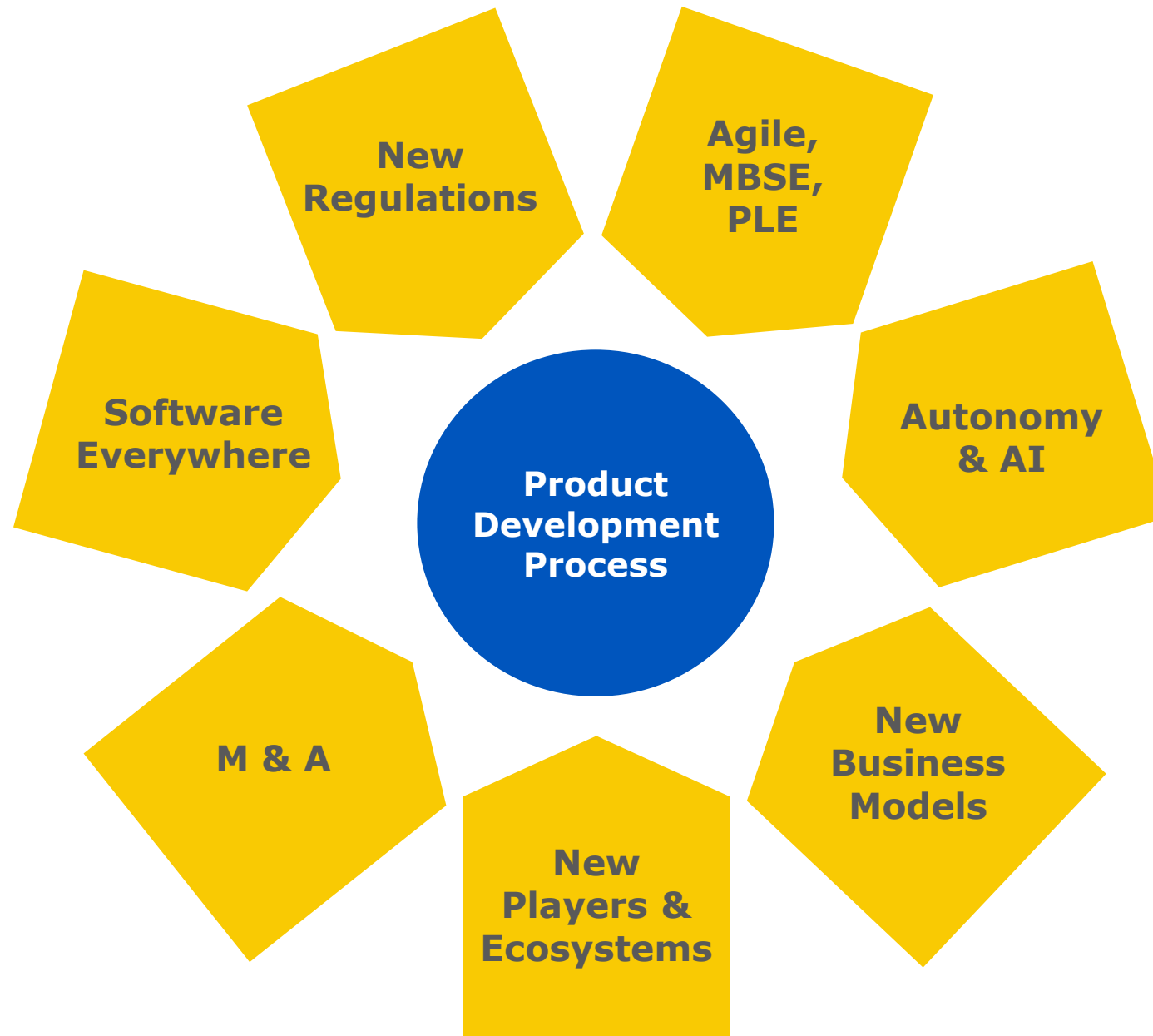


Test Automation / Touchless Testing

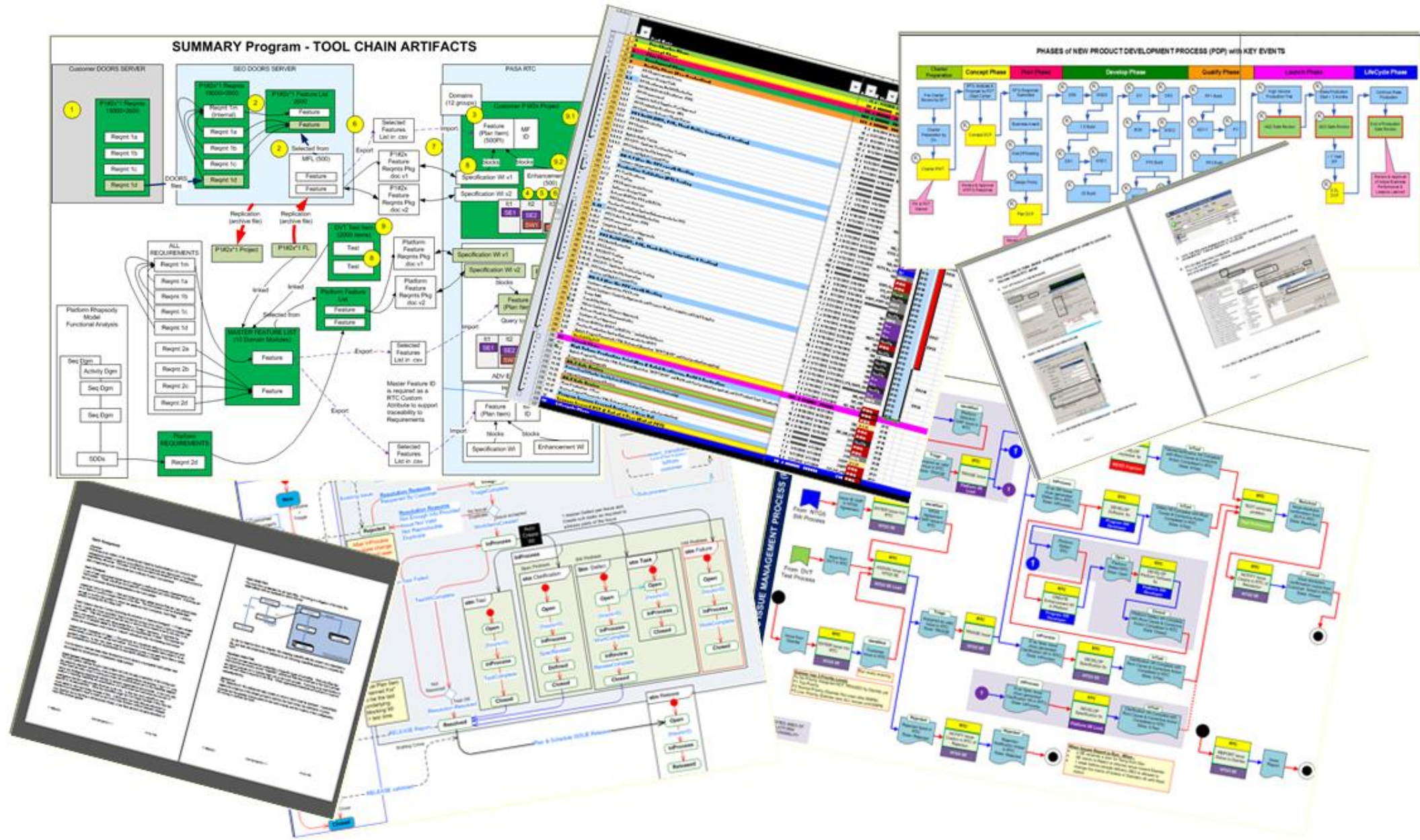
Even More Pressure



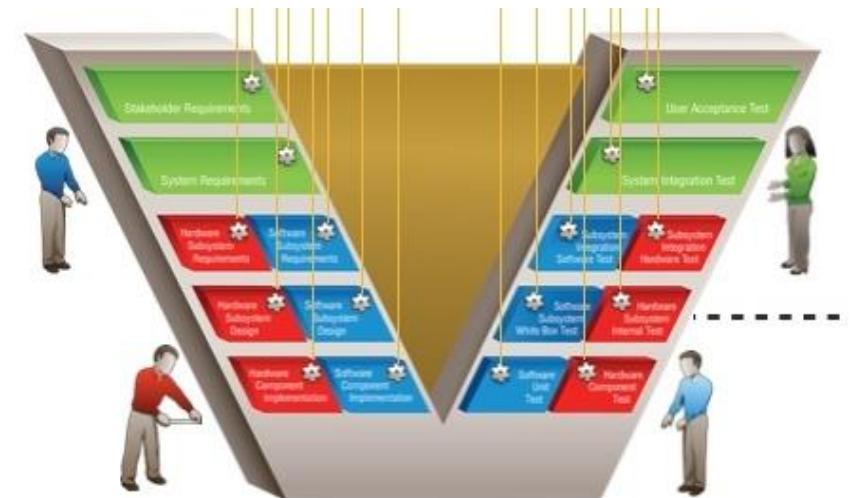
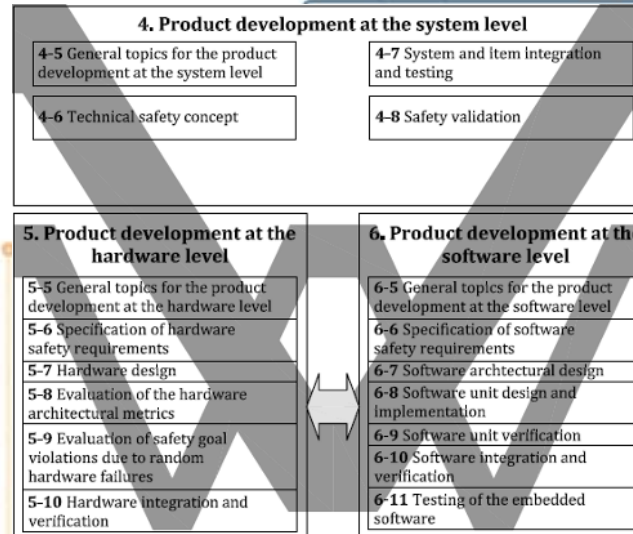
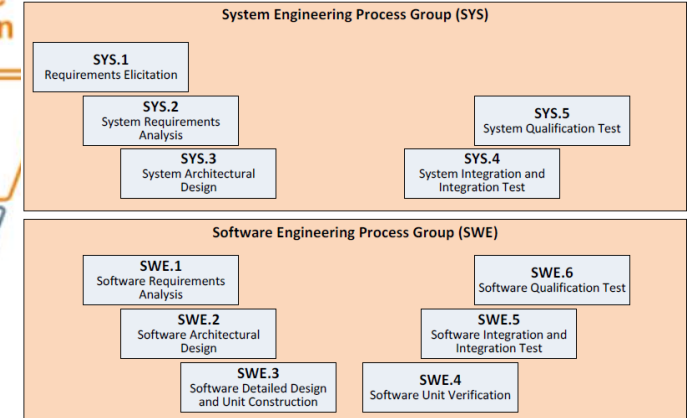
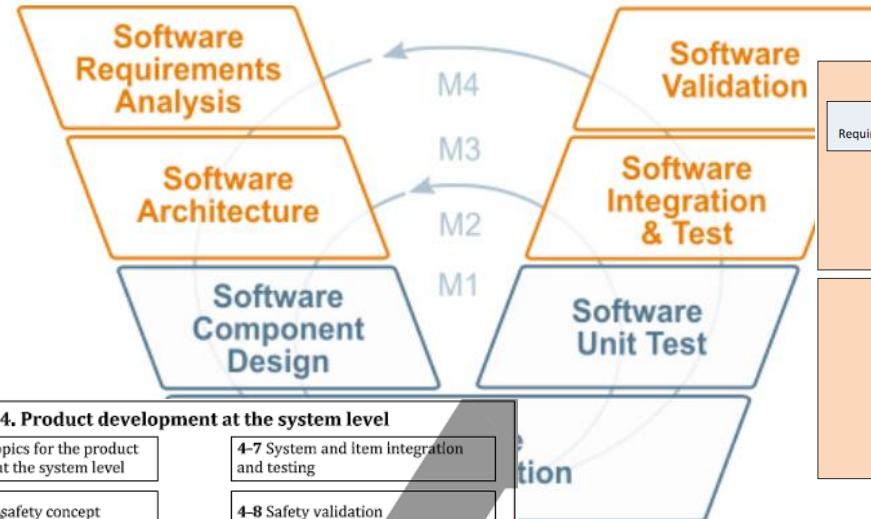
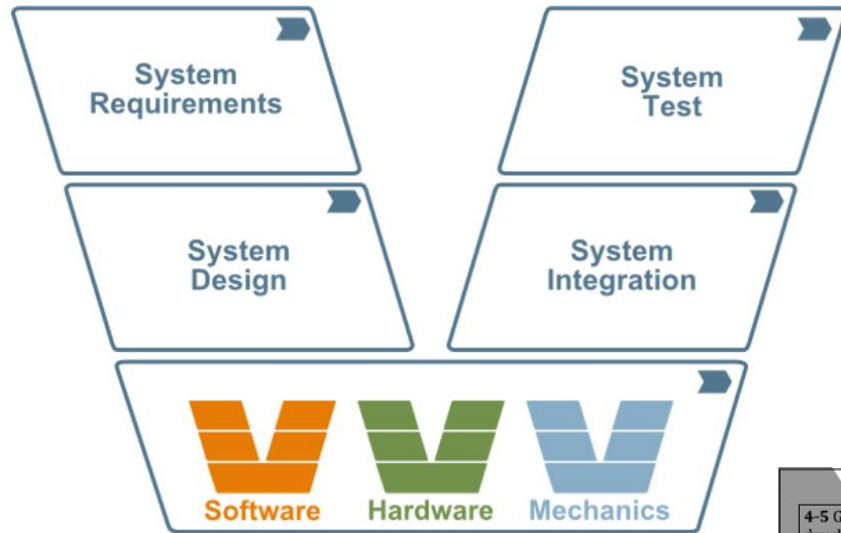
Even More Pressure



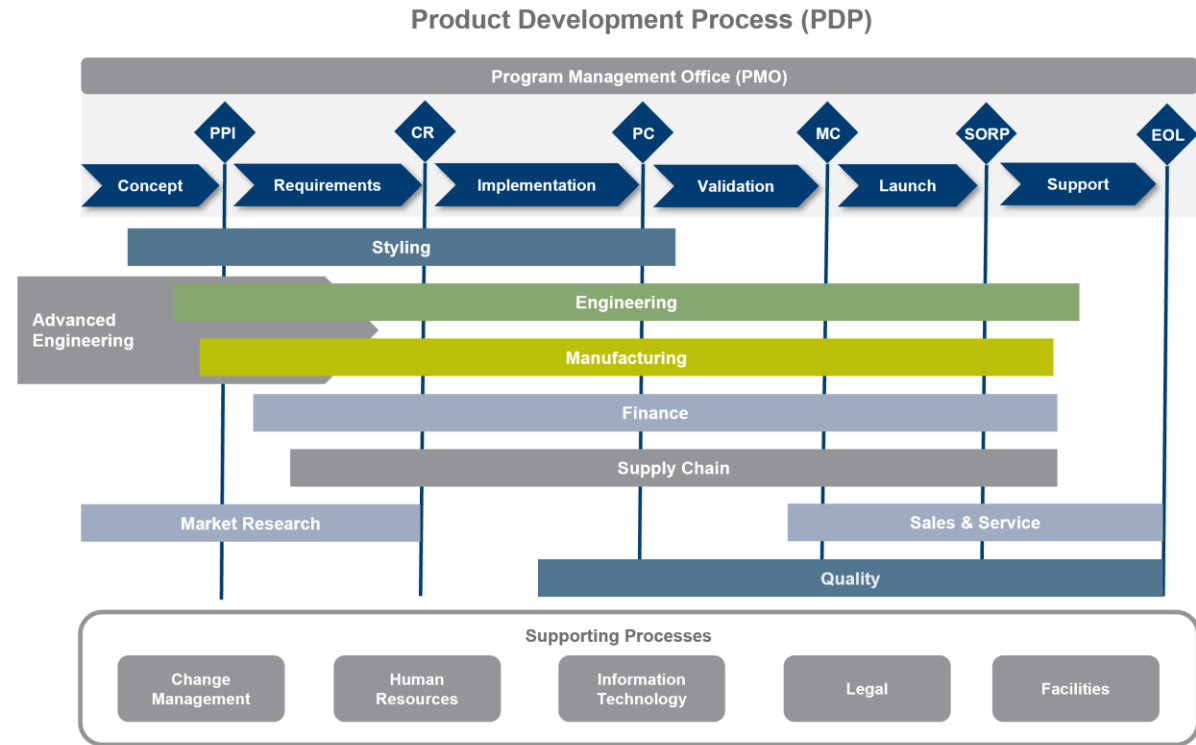
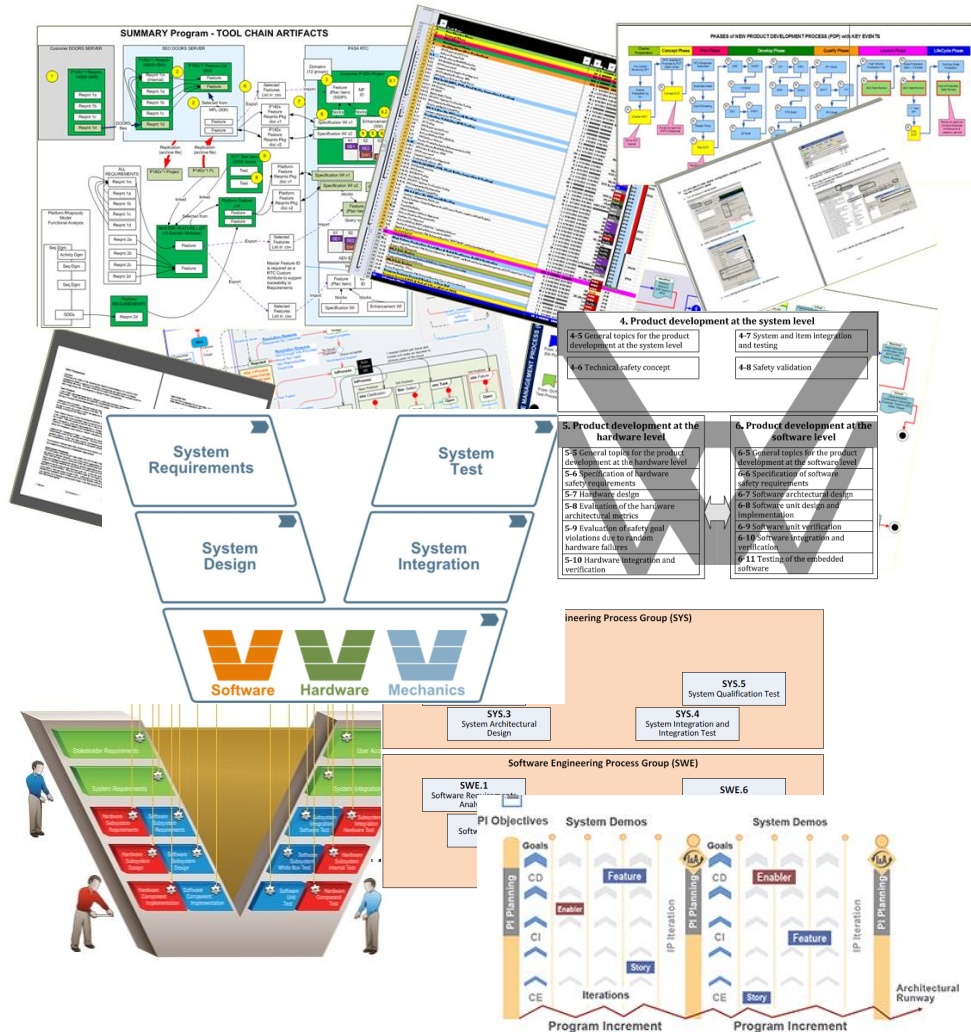
The Sad Reality



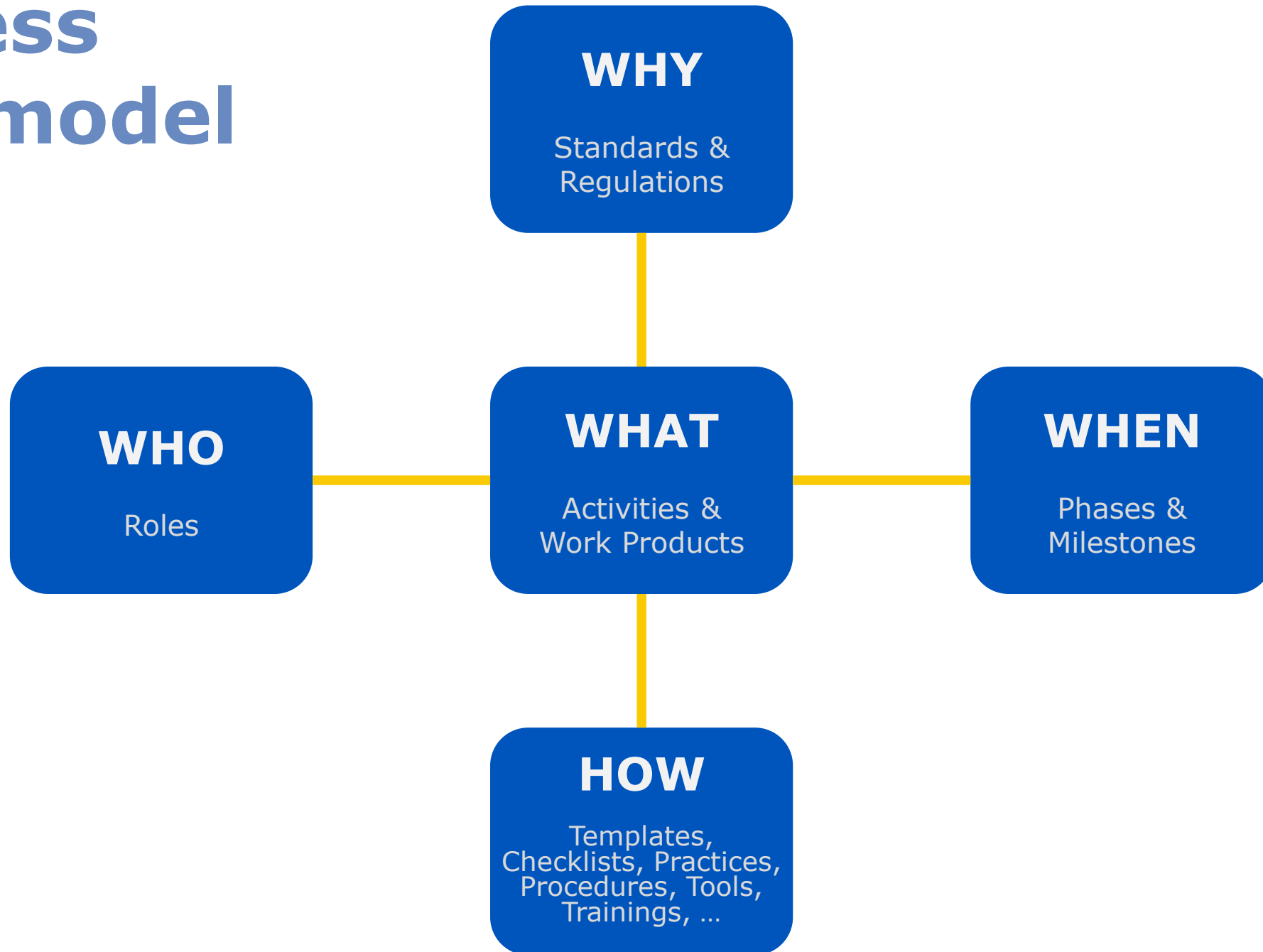
The Complexity Trap



Model-Based Process Management

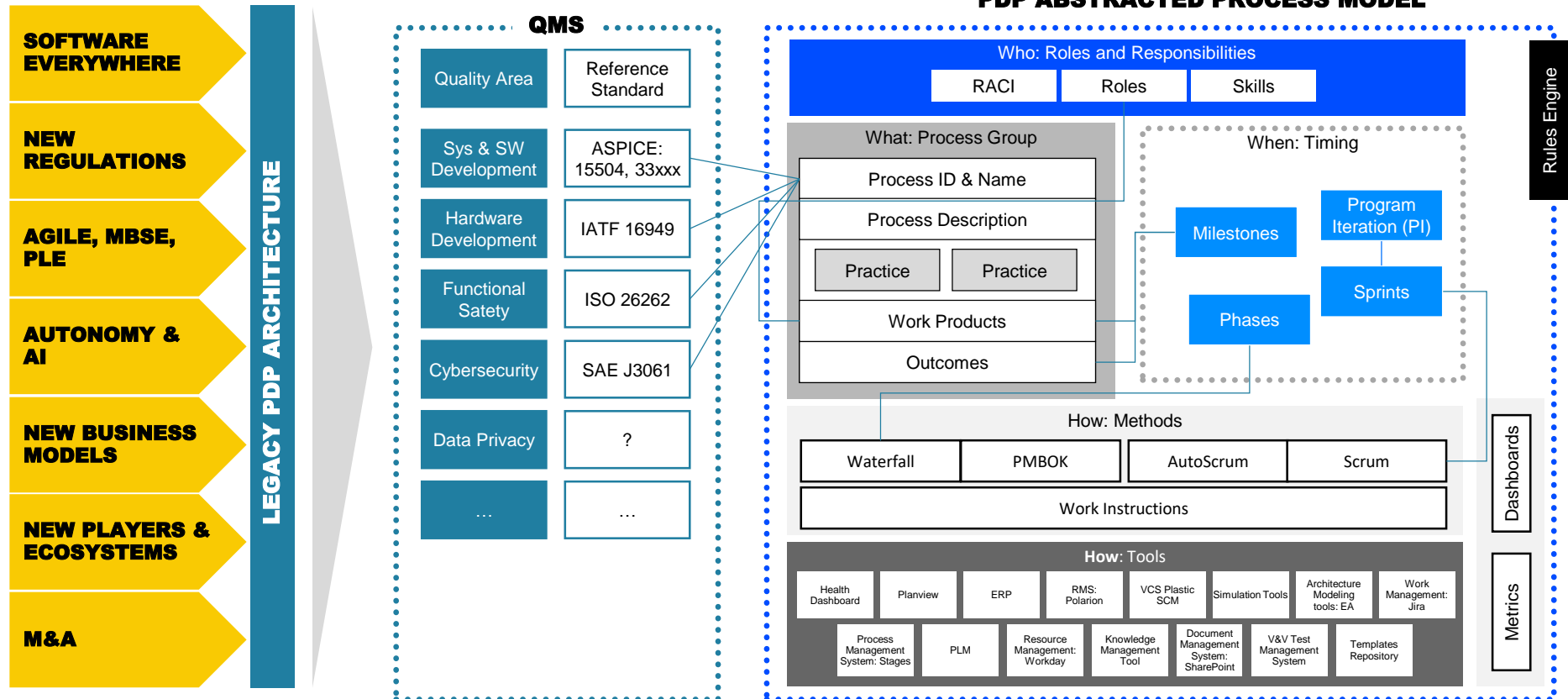


Process Metamodel



BRINGING IT ALL TOGETHER

MANY HAVE BEEN LEVERAGING MODELED PD ARCHITECTURE TO FACILITATE PD PROCESS TRANSFORMATION



- Improved global visibility to process definition & process performance
- Improves management of increasing process complexity
- Facilitates process harmonization & tailoring
- Continuous feedback on process performance
- Increased speed to proficiency for new resources

Process Perspective

Create/Update System Design

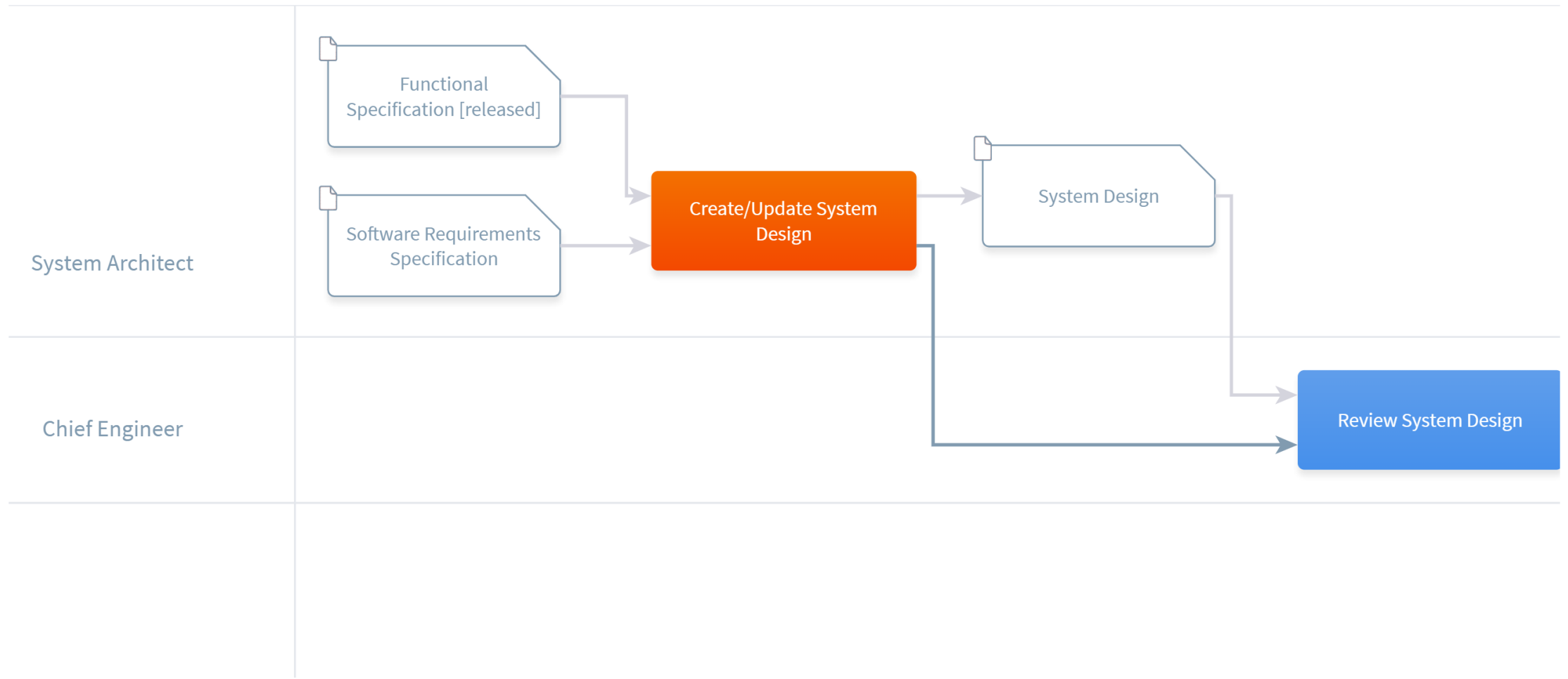
FLOW

TABLE

GRID



100%

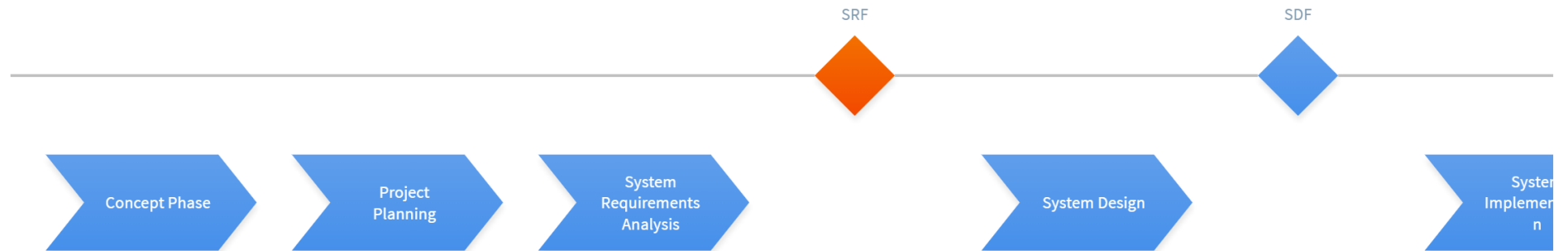


Milestone Perspective

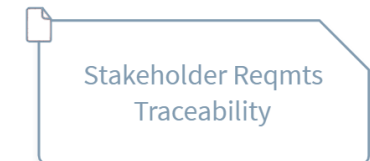
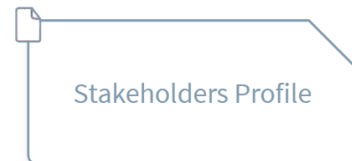
SRF: System Requirements Freeze

GRID

[] - 60% +



Stakeholder Requirements



Technical Requirements

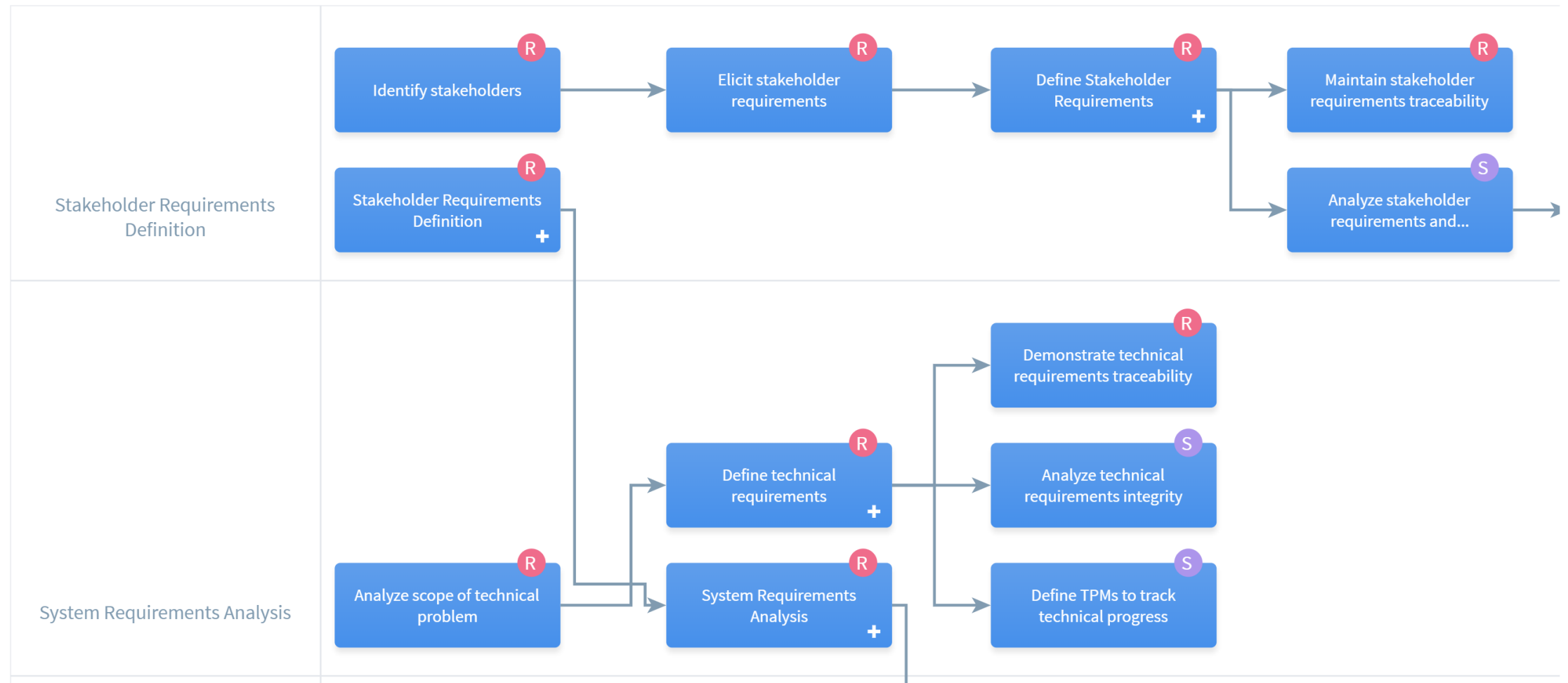


Role Perspective

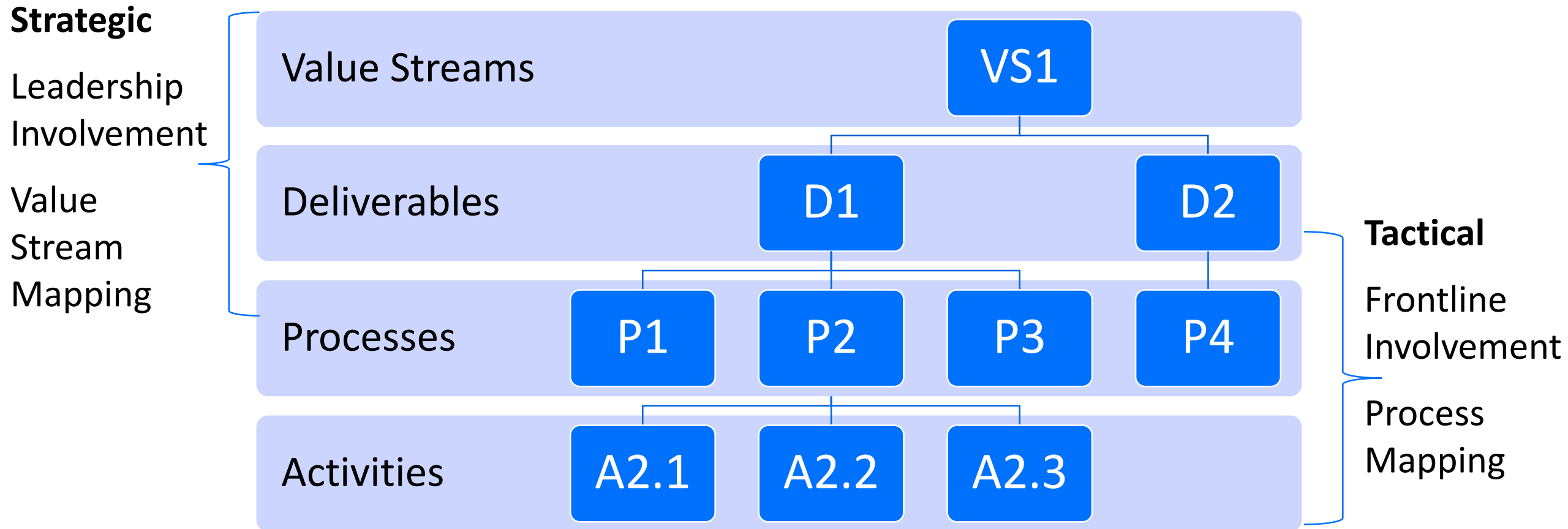
Requirements Manager

FLOW

⌂ - 60% + ⋮

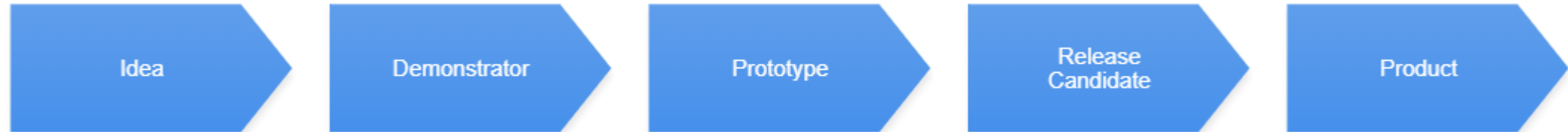


Value Streams & Processes



Sample: Lean Agile PDP

Product Engineering



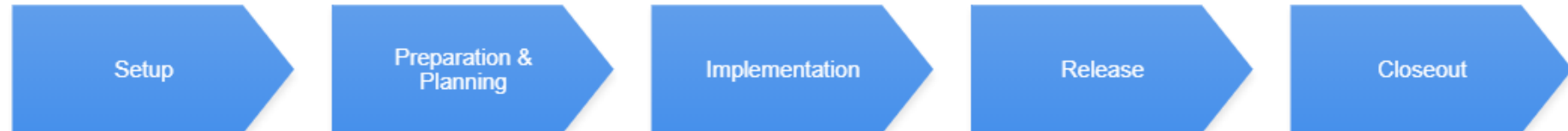
Systems Engineering



Hardware Engineering



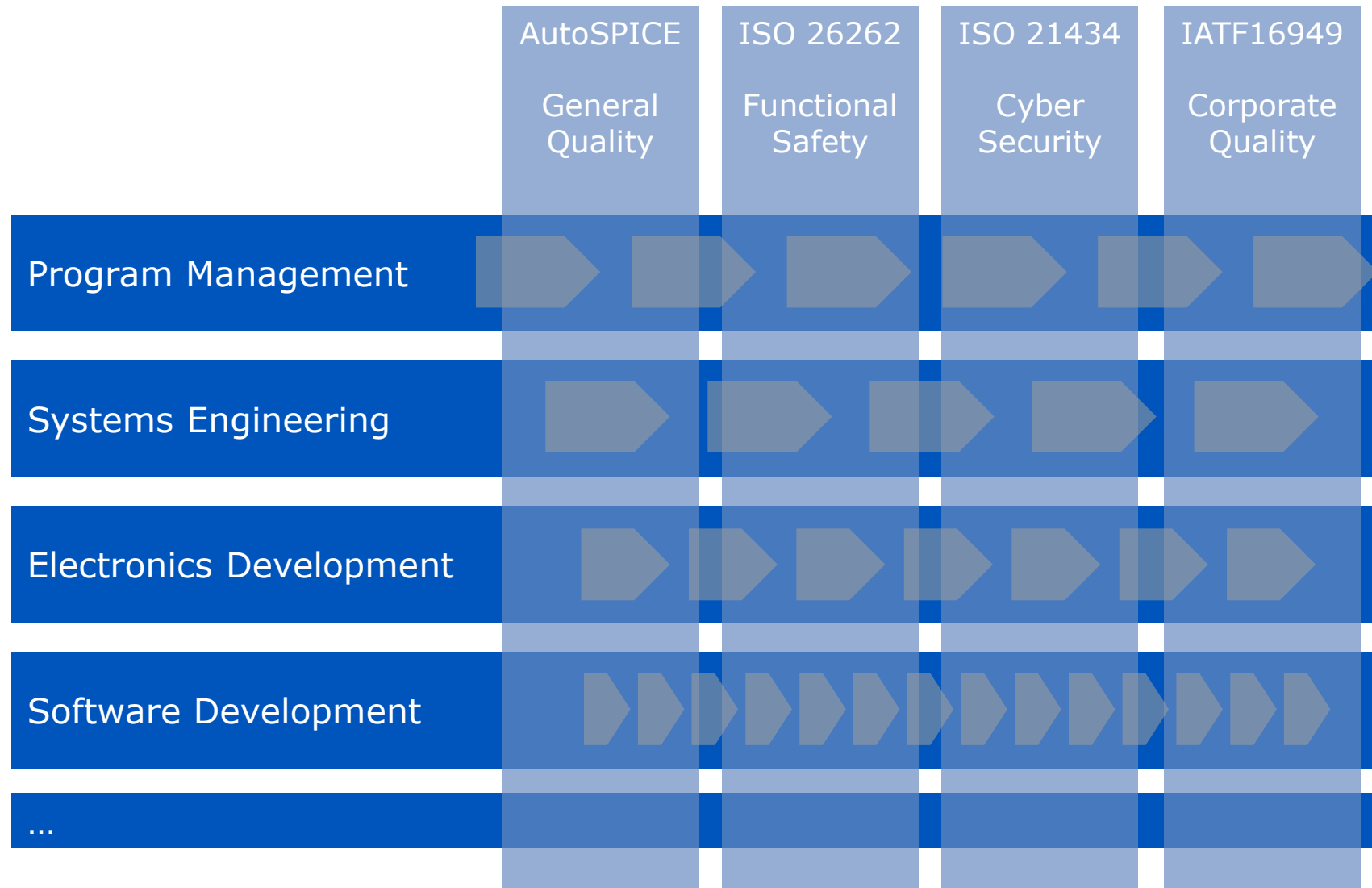
Software Engineering



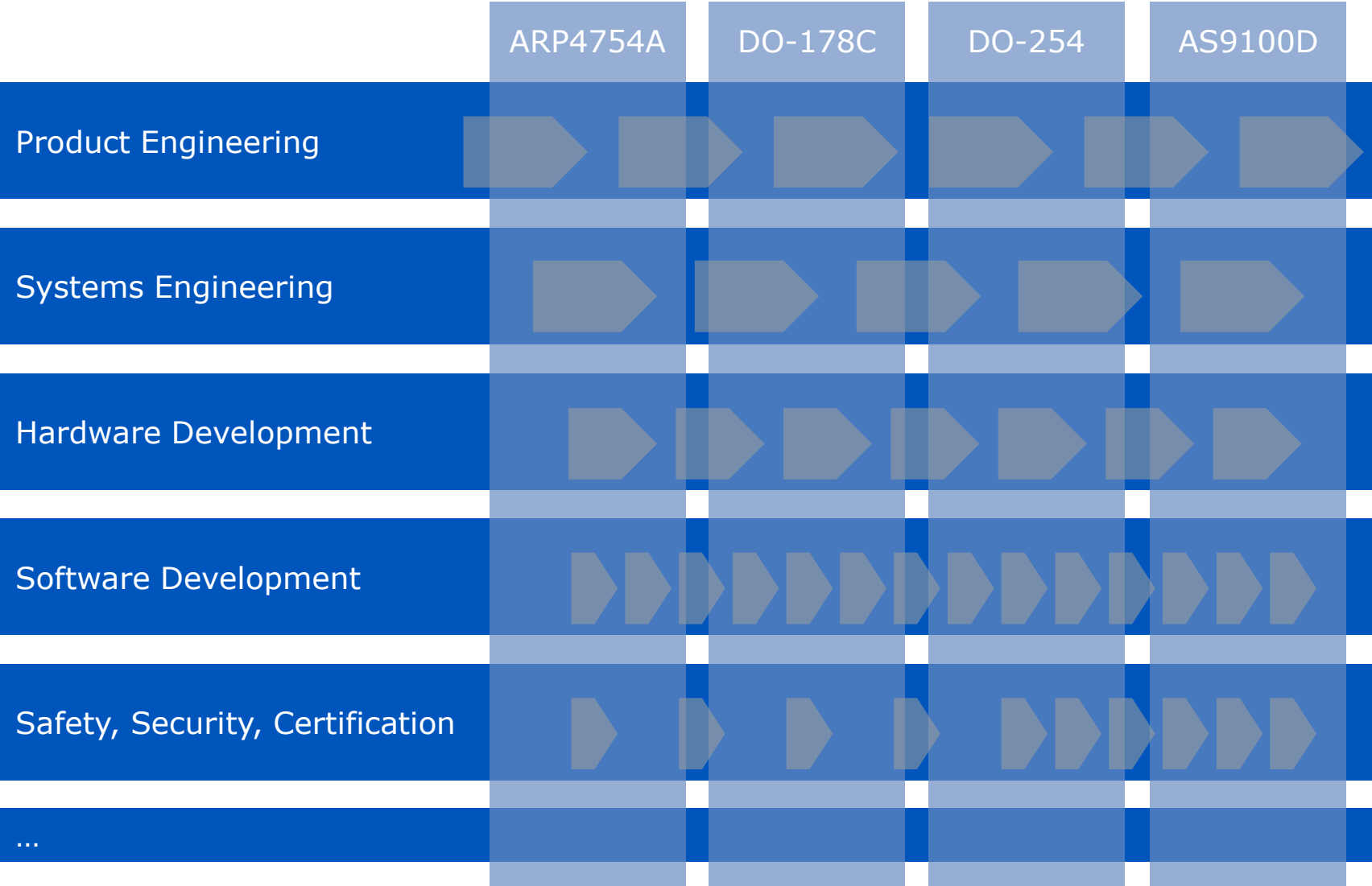
Enabling & Supporting



Compliance Architecture Automotive



Compliance Architecture Aerospace



Generate Compliance Evidence

Reference Model	Scope	PA	Goal	ID	Requirement Name	Workspace Name	Process Version	Process Element Typ	Process Element			
Automotive SPICE 3.0	SWE 2: Architectural Design (I.3)	SWE	SWE 2	SWE 2 BP9	Communicate agreed software archit	Automotive Generic Engineering Pro	Working revision	Activity	Approve Software Architectural Design			
Reference Model						Process						
Reference Model	PA	ID	Requirement Name			Workspace Name	Process Version	Module Name	Module Version	Process Element Typ	Process Eleme	
Automotive SPICE 3.0	CMMI-DEV V1.3	TS	TS SP 2.1	Design the Product or Product Component			Software Engineering	Working revision	System & Software Design	Sys&SwDesign V1.0	Work Product	Component Des
Automotive SPICE 3.0	CMMI-DEV V1.3	TS	TS SP 2.1	Design the Product or Product Component			Software Engineering	Working revision	System & Software Design	Sys&SwDesign V1.0	Work Product	System Design
Automotive SPICE 3.0	CMMI-DEV V1.3	TS	TS SP 2.1	Design the Product or Product Component			Software Engineering	Working revision	System & Software Design	Sys&SwDesign V1.0	Activity	Create/Update S
Automotive SPICE 3.0	CMMI-DEV V1.3	TS	TS SP 2.1	Design the Product or Product Component			Software Engineering	Working revision	System & Software Design	Sys&SwDesign V1.0	Activity	Create/Update C
Automotive SPICE 3.0	CMMI-DEV V1.3	TS	TS SP 2.3	Design Interfaces Using Criteria			Software Engineering	Working revision	System & Software Design	Sys&SwDesign V1.0	Work Product	System Design
Automotive SPICE 3.0	CMMI-DEV V1.3	TS	TS SP 2.3	Design Interfaces Using Criteria			Software Engineering	Working revision	System & Software Design	Sys&SwDesign V1.0	Activity	Create/Update S
Automotive SPICE 3.0	CMMI-DEV V1.3	TS	TS SP 3.1	Implement the Design			Software Engineering	Working revision	System & Software Design	Sys&SwDesign V1.0	Work Product	Technical Soluti
Automotive SPICE 3.0	CMMI-DEV V1.3	TS	TS SP 3.1	Implement the Design			Software Engineering	Working revision	System & Software Design	Sys&SwDesign V1.0	Activity	Create/Update T
Automotive SPICE 3.0	CMMI-DEV V1.3	VER	VER SP 2.2	Conduct Peer Reviews			Software Engineering	Working revision	System & Software Design	Sys&SwDesign V1.0	Activity	Review System
Automotive SPICE 3.0	CMMI-DEV V1.3	VER	VER SP 2.2	Conduct Peer Reviews			Software Engineering	Working revision	System & Software Design	Sys&SwDesign V1.0	Activity	Review Compon
Automotive SPICE 3.0	CMMI-DEV V1.3	VER	VER SP 3.1	Perform Verification			Software Engineering	Working revision	System & Software Design	Sys&SwDesign V1.0	Activity	Review System
	CMMI-DEV V1.3	VER	VER SP 3.1	Perform Verification			Software Engineering	Working revision	System & Software Design	Sys&SwDesign V1.0	Activity	Review Compon

5 Reasons to Transform Product Development Processes



66% LESS
Procedures



33% SHORTER
Process Flows



400 → 80
Tools



50% LESS
Compliance
Efforts

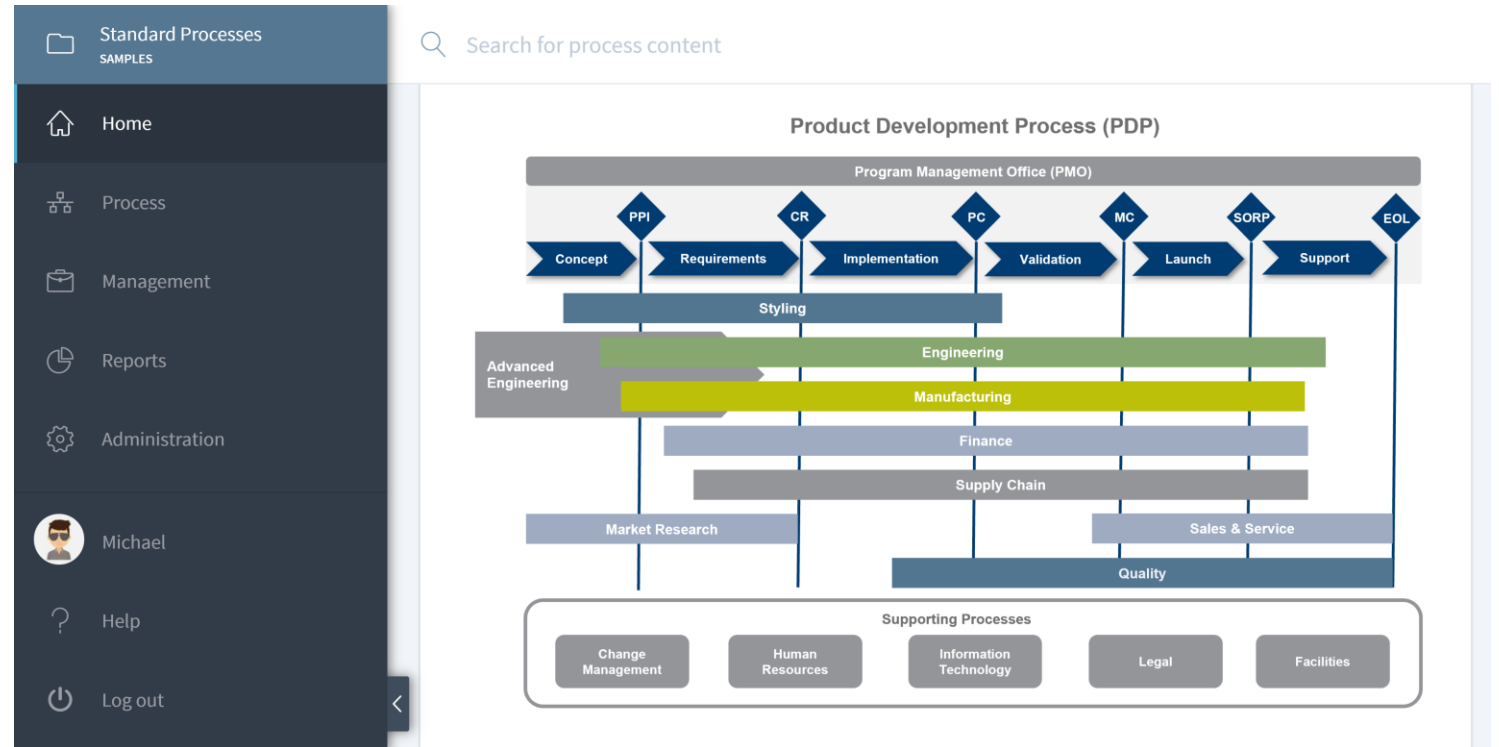


4X FASTER
Process
Changes

Process Management Tooling



Process Modeling
Value Stream Mapping
Process Execution
Compliance Assurance
Continuous Feedback



methodpark.com/stages

What you can do



Jeffrey Brehm · 1st
Managing Director - Industry X.0



Erich Meier
CTO at Method Park

Connect with us on LinkedIn

Find more material at methodpark.com/pdp

Register for a Stages demo at methodpark.com/stages

Next Webinar in this Series:

May 27th 2020 10:00am EDT / 4:00pm CEST

Transforming Product Development:

PLM and Process Practices in Automotive

- Benefits of a harmonized PLM & process management system
- Why ease the user/engineer is key to success
- How to turn the system from a “tool for aid” towards a focal point of applied knowledge and best practices

Register: www.methodpark.com/pdp-webinars

Speaker: **Craig Brown**



Principal Consultant
at Method Park and
former PLM Leader at
General Motors

