



# Process Management in the AI Age

The Stages roadmap

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SOFTWARE INTENSIVE SYSTEMS

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# The Big Transformation: Fast, Lean, Nimble

## Less

Bureaucracy  
Manual work  
Theoretical processes  
Long cycles



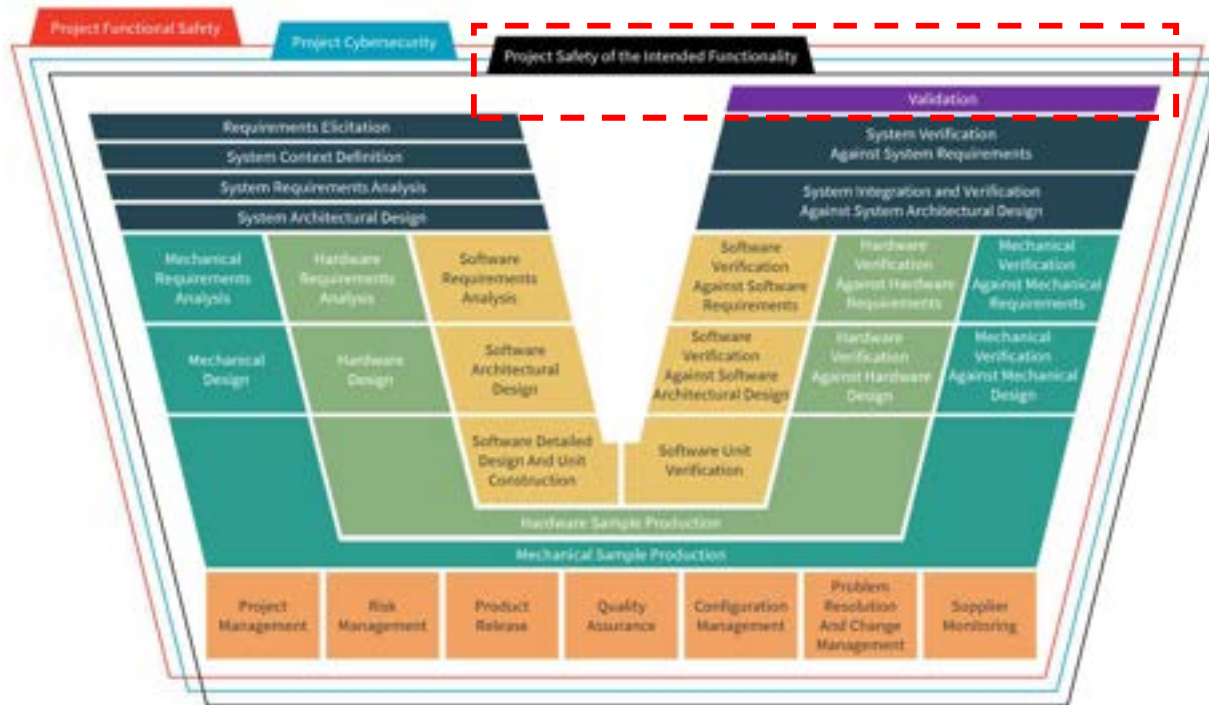
## More

Lean processes  
Automation and AI  
Agile changes  
Continuous short iterations

## While

Maintaining high quality, safety, security  
Not drowning in complexity

# Automotive Process Framework (APF)



- Process templates for system, software, hardware and mechanical development
- Complete mapping to ISO 26262, ISO 21434, and Automotive SPICE® project scopes
- **Added support for ISO 21488 (SOTIF) and APQP v3**
- **Added support for product validation**
- **Next: AI Safety with support for ISO/PAS 8800 and other upcoming AI frameworks**

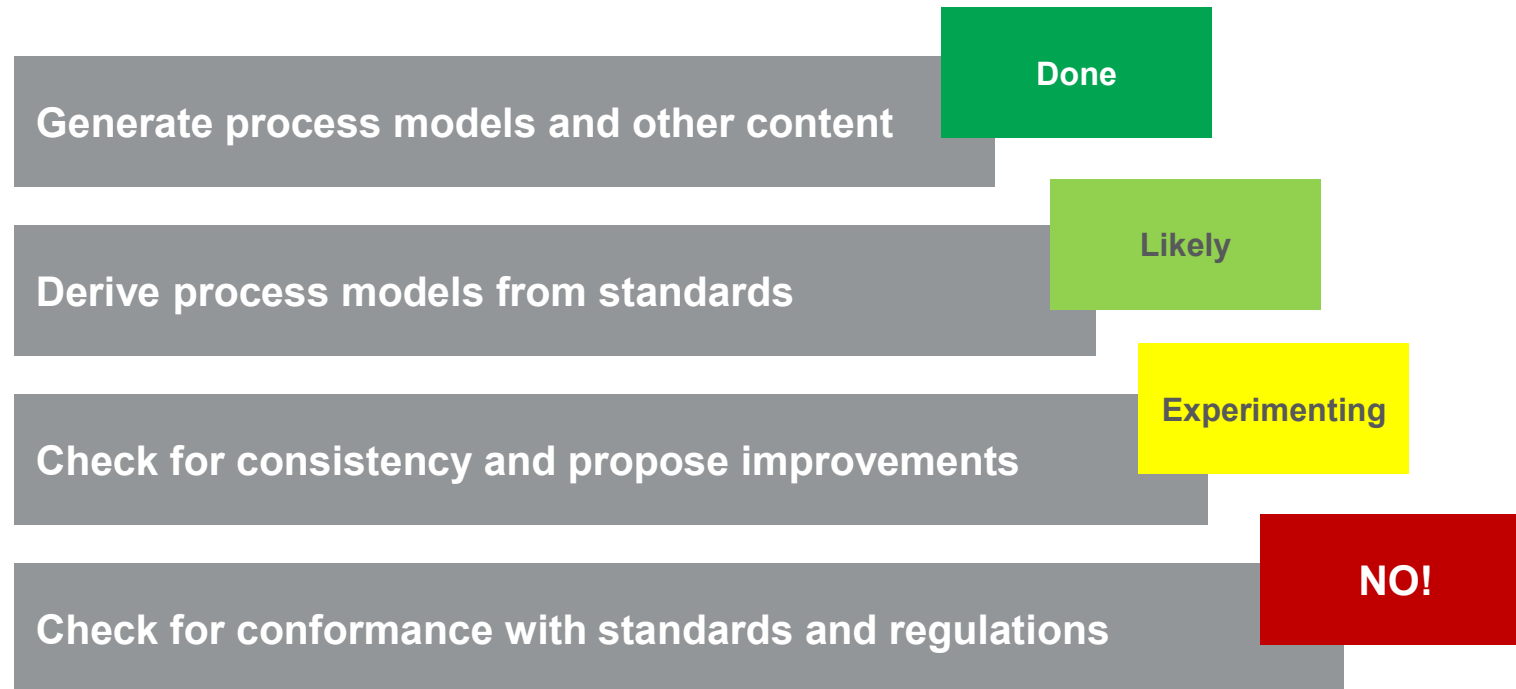
**A „pre-argued“ framework to accelerate automotive process definition**

# From APF to XPF



**Address other software-intensive industries**  
**Become involved and partner with us!**

# Process management in the AI age



# Engineering in the AI age

GitHub Copilot      Lovable      CodeWhisperer

Cline      Perplexity      Windsurf      Cursor

Devin      Bolt      Replit      V0      AIDE

Tempo Labs      CodeGuide.dev      Sonnet

Grok

**Have you already heard of „Vibe Coding“?**



[Source: <https://www.youtube.com/watch?v=5k2-NOh2tk0>]

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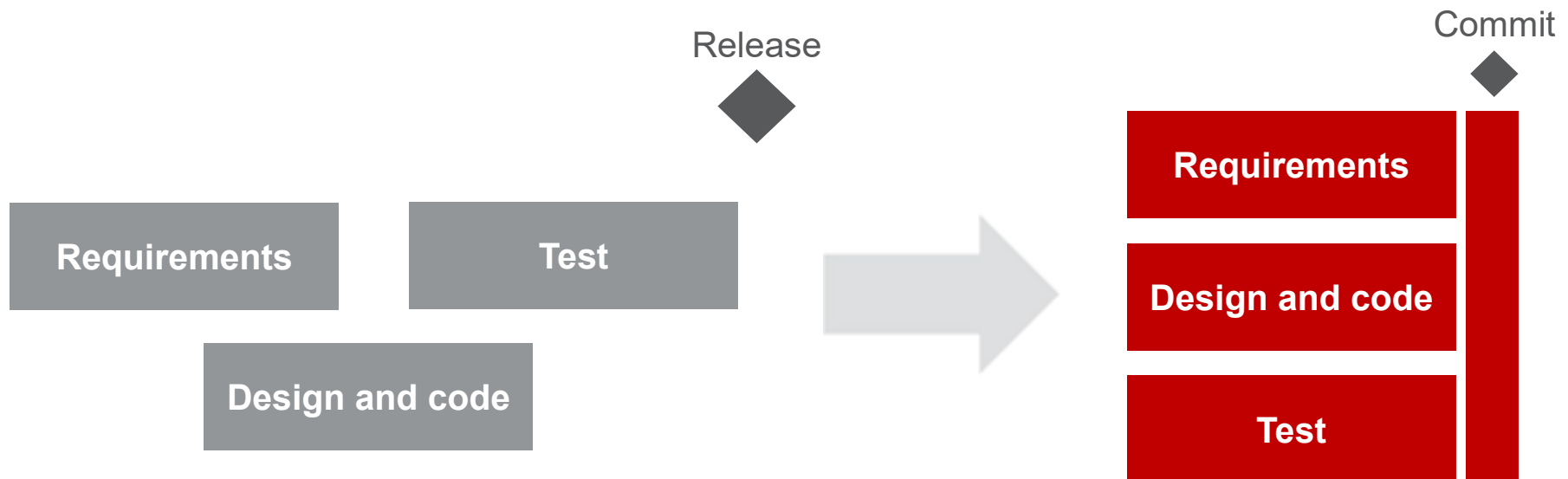
**„We have reduced the  
duration of simulation runs  
from 24 hours to 5 seconds.“**

Burkhard Huhnke  
Scout Motors CTO

[CES 2025 in Las Vegas on January 9, 2025]

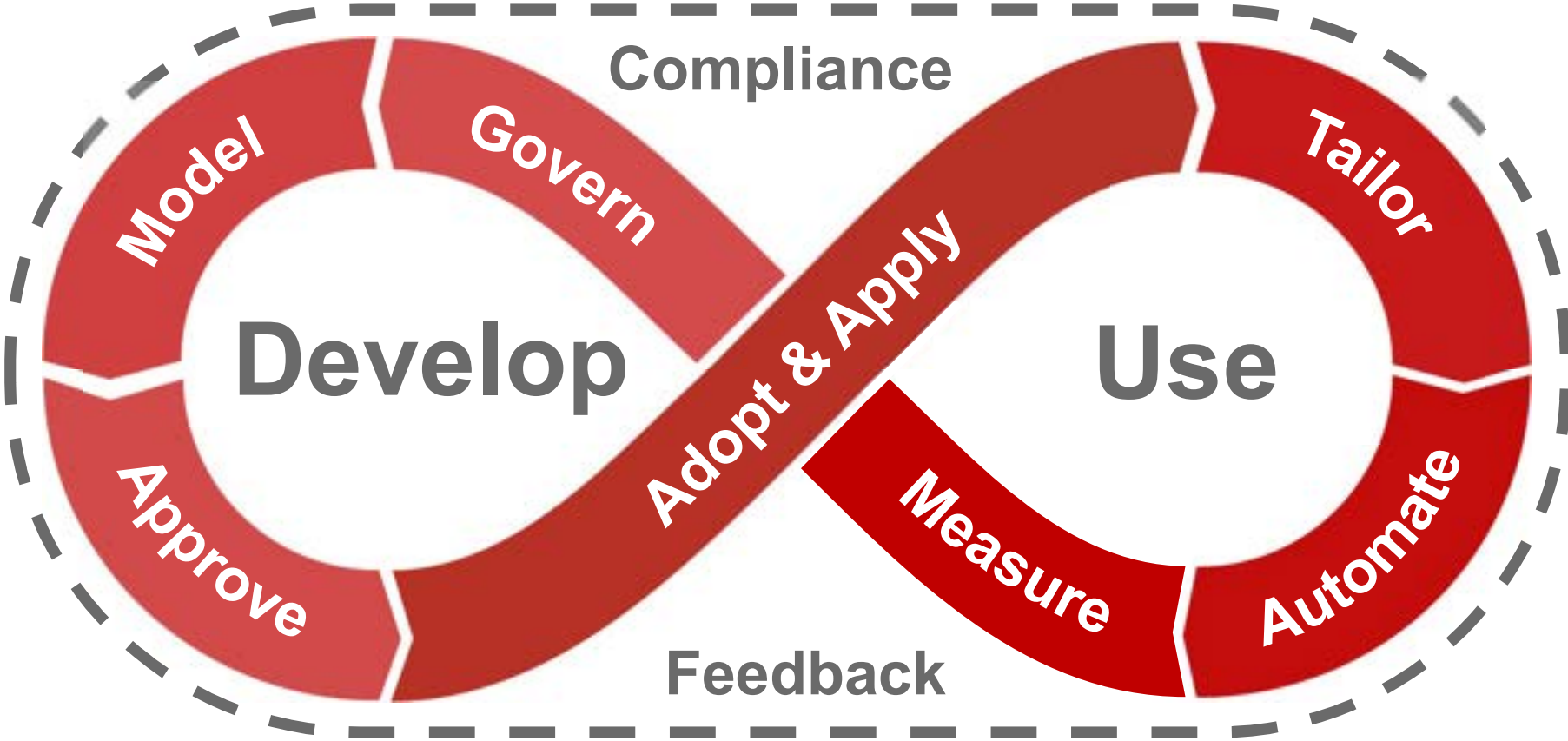


# How do engineering processes change in the AI age?

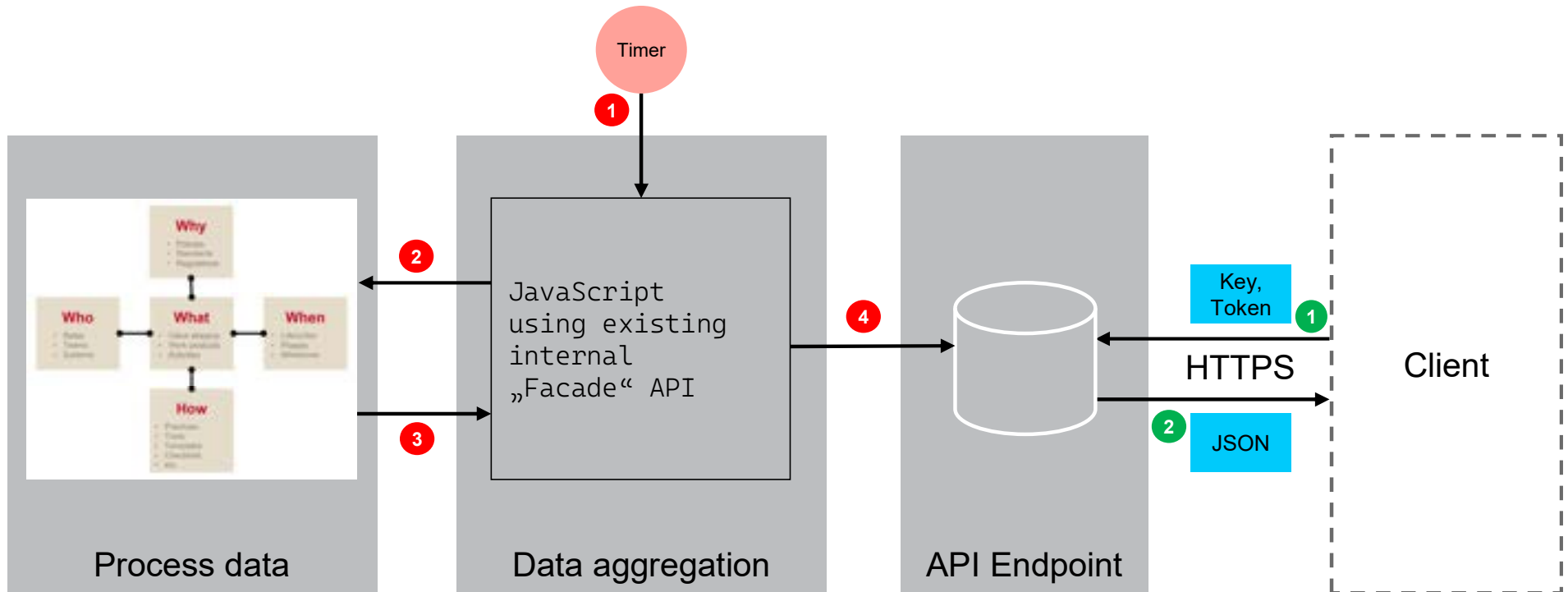


**Parallel continuous engineering along the entire product lifecycle**

# Accelerated process management lifecycle



# Be open to a new world of tools and repositories



**Use Stages process data efficiently anywhere via HTTPS REST API**

**Become intelligent**



# Stages roadmap

We build

## Now

### Provide conversational interface

Allow end users to ask natural language questions to find relevant process content faster

### Enhance AI-based process modeling\*

Adjust and improve process descriptions via Generative AI

### Readonly API

Provide aggregated process data efficiency through REST API for integration in other tools, repositories, and AI solutions

### Direct edit in Sharepoint

Authorized process participants can directly edit Sharepoint Online documents in Stages without download/edit/upload cycle

### Automotive Process Framework

Support for AI Safety according to ISO/PAS 8800 and other relevant AI frameworks and regulations

We discover

## Next

### Extend search scope

Allow end users to find information in guidance files by indexing DOC, PPT, PDF, etc.

### Improve end user navigation

Reduce efforts for end users to find processes relevant for them

### Speed up process understanding

Reduce time for end users to orientate within relevant process content, e.g. by reducing clicks

### Document management in Confluence

Access and baseline guidance in Confluence through Stages

### X Process Frameworks

Support aerospace & defense industry (DO-178C, DO-254, AS9100D), agriculture technology, industrial automation and other adjacent industries

We consider

## Later

### Improve process guidance

Enable process participants to comfortably edit process guidance (like in Confluence)

### Support Agentic AI

Provide interfaces and services to support the execution of AI agents with process data, e.g. via MCP.

### Process execution in PTC Codebeamer

Create relevant process activities and work products as issues in Codebeamer ALM

### Process execution in Polarion

Create relevant process activities and work products as issues in Siemens Polarion ALM

Creator

Consumer

Delivery

Content

\* Only available on Managed Service

Thank you.

Any questions?

