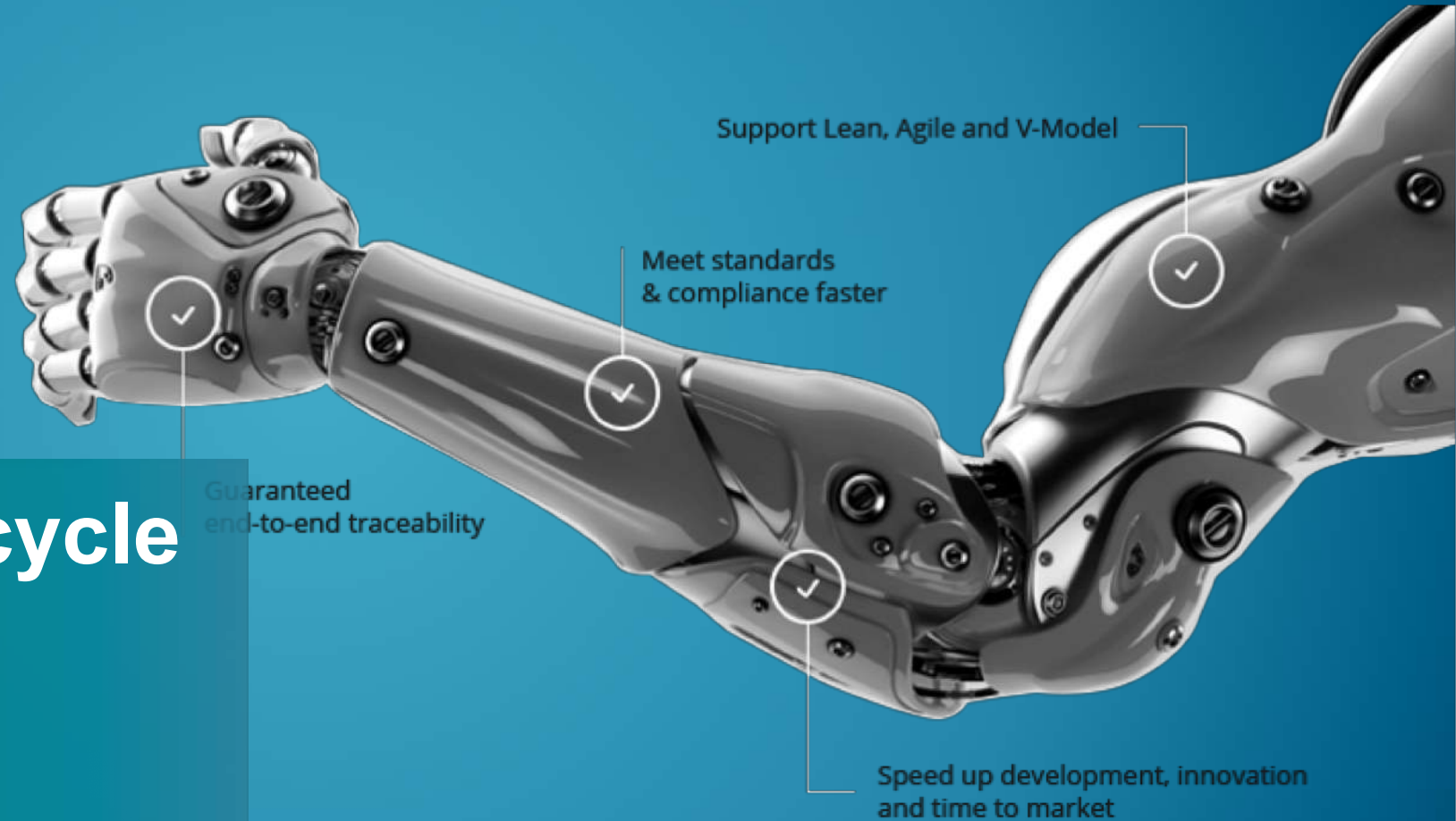


Application Lifecycle Management

Accelerate Innovation
By Rick Stroot - InnoFour



Agenda



Trends & Challenges

3 Core Pillars of ALM

Key Differentiators

A hand is holding a tablet computer. The screen shows a data visualization with a line graph and a bar chart. A red cable is plugged into the bottom of the tablet. In the background, a white drone controller is visible.

“Software is eating the world”

2011 - Marc Andreessen (founder of Netscape - first web browser)

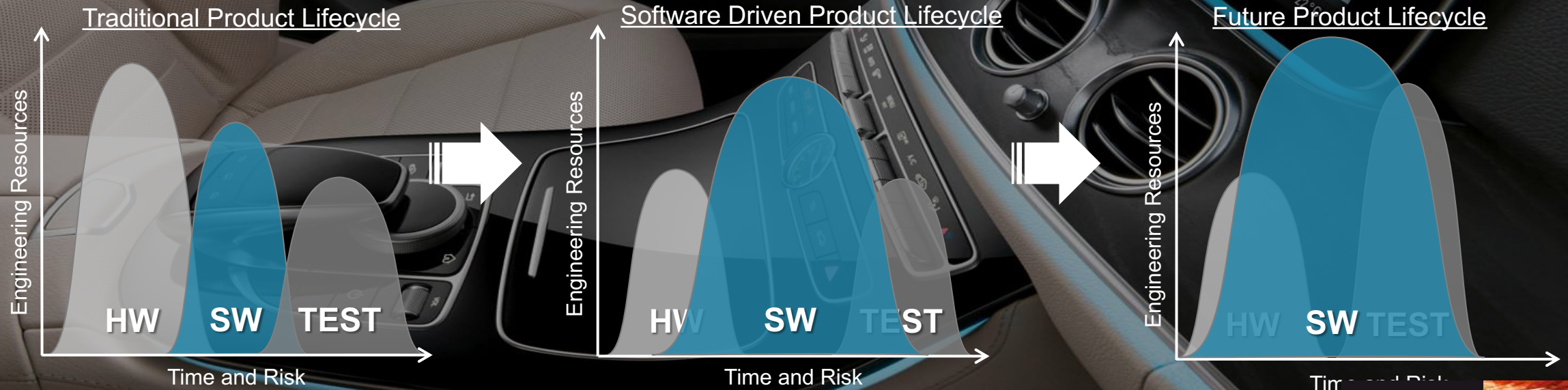


Software as the key Differentiator



***“80% of Product Innovation and Differentiation
now Electrical, Electronics and Software. Not
Mechanics”***

Siegmund Haasis
R&D CIO



What is ALM

Challenges Today



Release More Frequently

Bigger Complexity

Increasing Variability

Better Quality



time



Complexity

Managing 100+ million lines of code

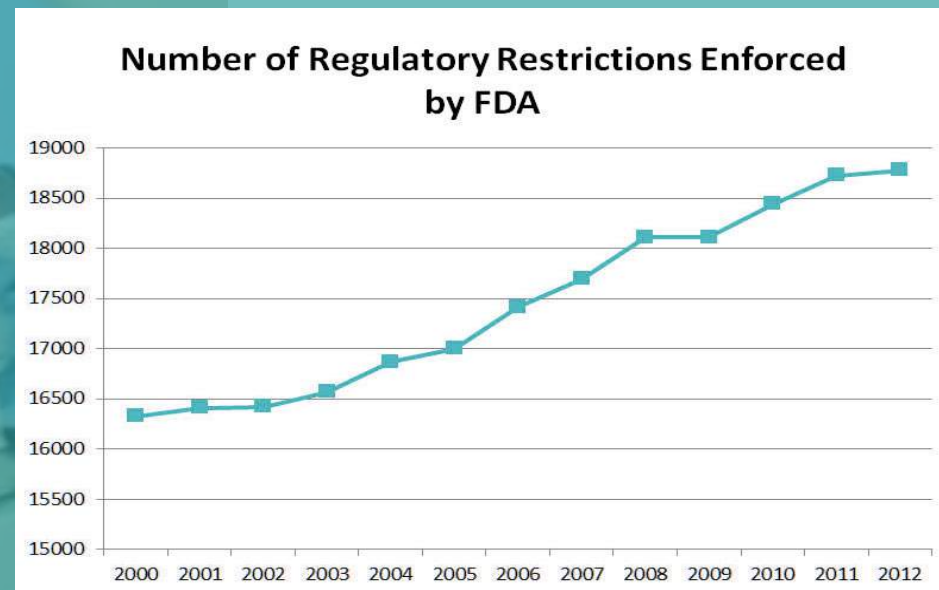


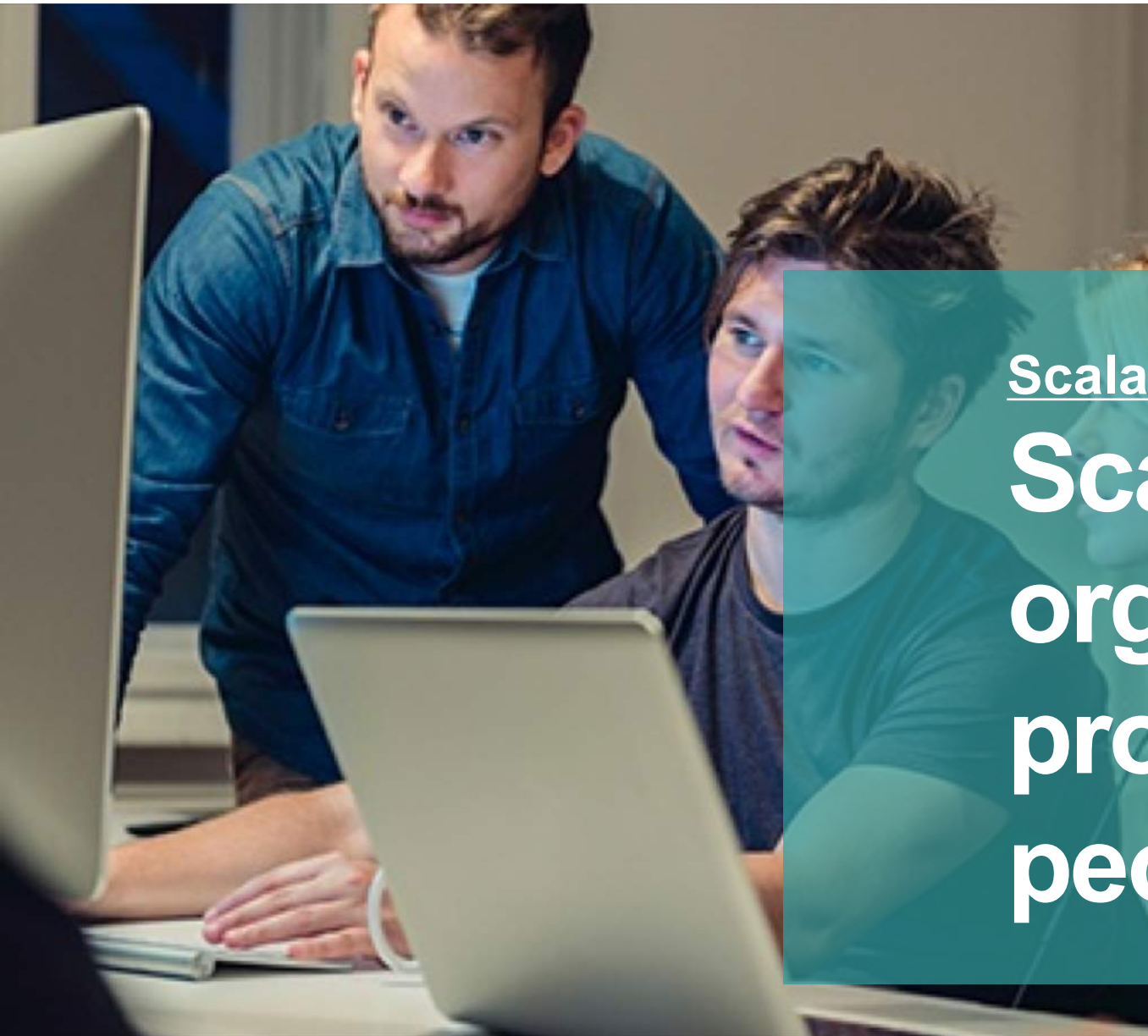
Quality

**24% of medical
device recalls due to
software**



Functional Safety & Compliance





Scalability

Scaling your organization – its processes – and its people

Application Lifecycle Management

Connect teams and projects, and improve application development processes with a single, unified solution for requirements, coding, testing, and release.



3 Core Pillars of ALM

Collaboration

Traceability

Reuse



Collaboration

Traceability

Reuse

Collaborate on shared assets **easily**
and **securely** via granular
permission controls and robust
configurable workflow automation.

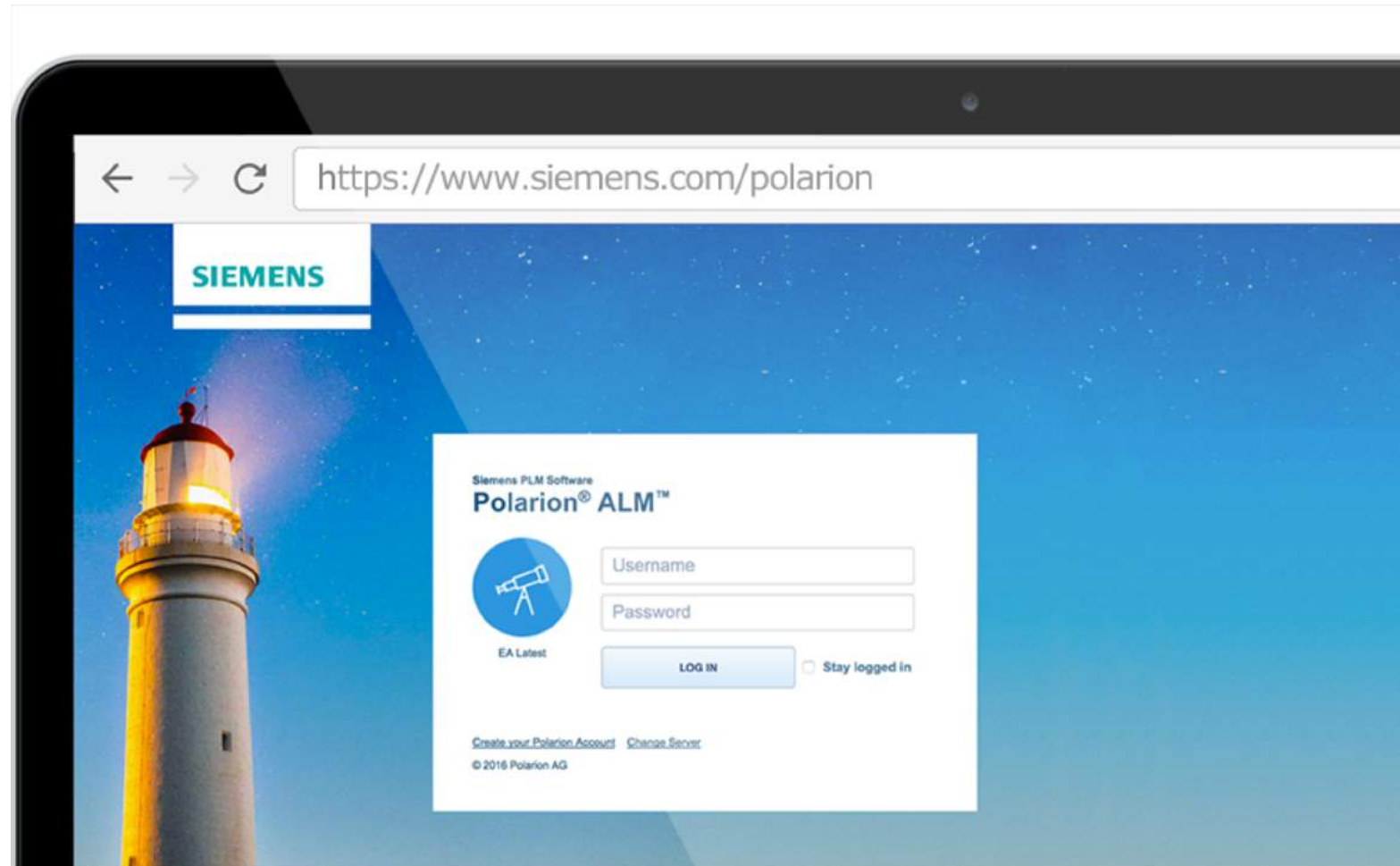
3 Core Pillars of ALM

Collaboration - Web based



100%
Web based

Easy to use
Easy to access
Easy to deploy
Easy to configure



3 Core Pillars of ALM

Collaboration - Role based user interface

SIEMENS
Ingenuity for life

Fits to the people in your business



System Requirements < Requirements

almdemo.polarion.com/polarion/#/project/drivepilot/wiki/Requirements/System%20Requirements

Electro-Mechanical Design

almdemo.polarion.com/polarion/#/project/fuelsys/wiki/Design/Electro-Mechanical%20Design%20Specification

3 Re

3.1 Ge

DP-313 - C

DP-314 - C

- provi
- provi

DP-315 - C

DP-316 - C

DrivePi

DP-317 - C

- Gear
- Brake
- User
- Acc
- Turn

DP-332 - C

Some mod

out.

DP-350 - C

Online - Start Chat

Online - S

Drive Pilot

Search

Jiri Walek
My Polarion

Home

Concept

Requirements

- Index
- System Requirements
- System Requirements by Status
- System Test Specification
- System Validation and Verification Plan
- System Verification Test Statistics

Design

Risks

Development

Maintenance

Work Items

Documents & Wiki

Plans

Test Runs

Baselines

72 found
Load all

Show Backlinked Work Items having Any role expanded to 0 levels Include Commits Filter Linked Items

Outline Number	Title	Updated	Status	Priority	Assignee(s)
3	Requirements	2014-06-13 13:38	✓		
3.1	General Operations	2014-06-13 13:38	✓		
3.1-1	DrivePilot shall easily engage operations while the vehicle is at rest.	2014-06-13 13:38	✓	50.0	
3.1-2	DrivePilot may not be engaged while the vehicle is under manual control.* provid...	2014-06-13 13:38	✓	50.0	
3.1-3	DrivePilot shall be easy to operate without extensive training.	2014-06-13 13:38	✓	50.0	
3.1-3.1	Before any user may engage DrivePilot on public roads, that user must successful...	2014-06-13 13:38	✓	50.0	

Edit Save Cancel Open in Document

DP-315 +

Created: 2013-01-21 20:54, Updated: 2014-06-13 13:38

DP-316 - Before any user may engage DrivePilot on public roads, that user must successful...

DP-450 DP-463 F15-263 DP-224 +

Type: System Requirement

Project: Drive Pilot

Author: System Administrator

Categories:

Status: Approved

Resolution:

Severity: Must Have

Target Version: Version 1.0 (2013-12-27)

Initial Estimate:

Assignee(s):

Description

Before any user may engage DrivePilot on public roads, that user must successfully complete a tutorial and test DrivePilot exercise.

Comments

Create Comment Collapse All Expand All View: Tree Show resolved comments

#1 Item was e-signed by Robert Project by Robert Project on 2013-04-23 08:25

3 Core Pillars of ALM

Collaboration – Everything is versioned



Understand “Who”, “When”, “What” and “Why” for every change.

Document

Object

Configuration

Process

3 Core Pillars of ALM

Collaboration – Time Machine

SIEMENS
Ingenuity for life

Succeed through audits

Literally travel in time and
navigate, open and search
any moment in history

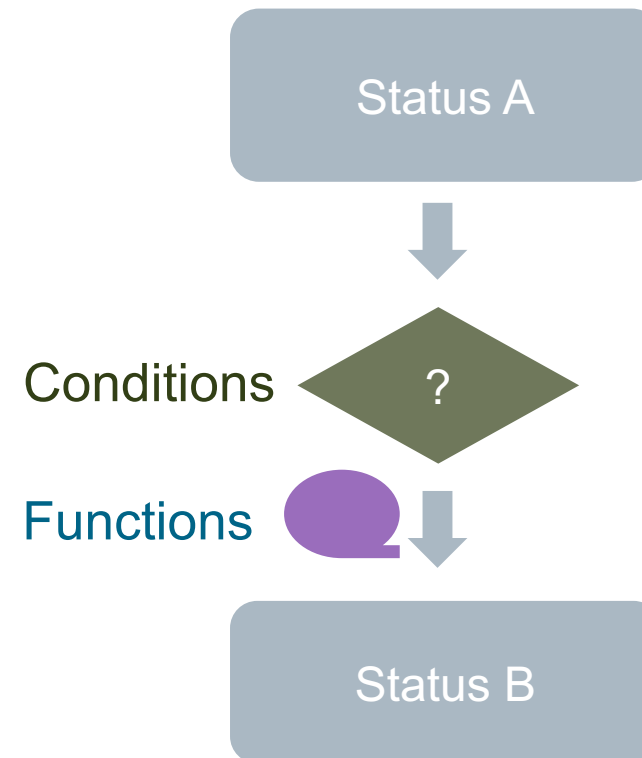


3 Core Pillars of ALM

Collaboration - Workflow

**Workflow Automation reduces
routine manual work and prevents
errors**

**Workflow Conditions guides users
and ensures
the process to be followed.**





Collaboration

Traceability

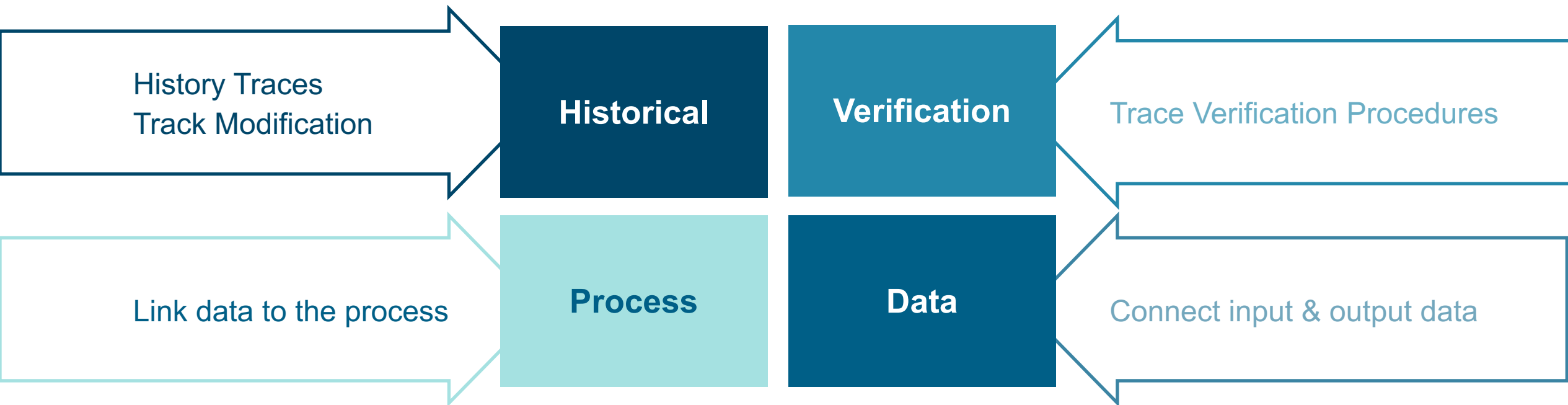
Reuse

*With Polarion you can ensure
**completeness of the information about
every step in a development process.***

*Every step is just a click away - starting with
modified lines of code up to high-level
change requests*

Core pillars

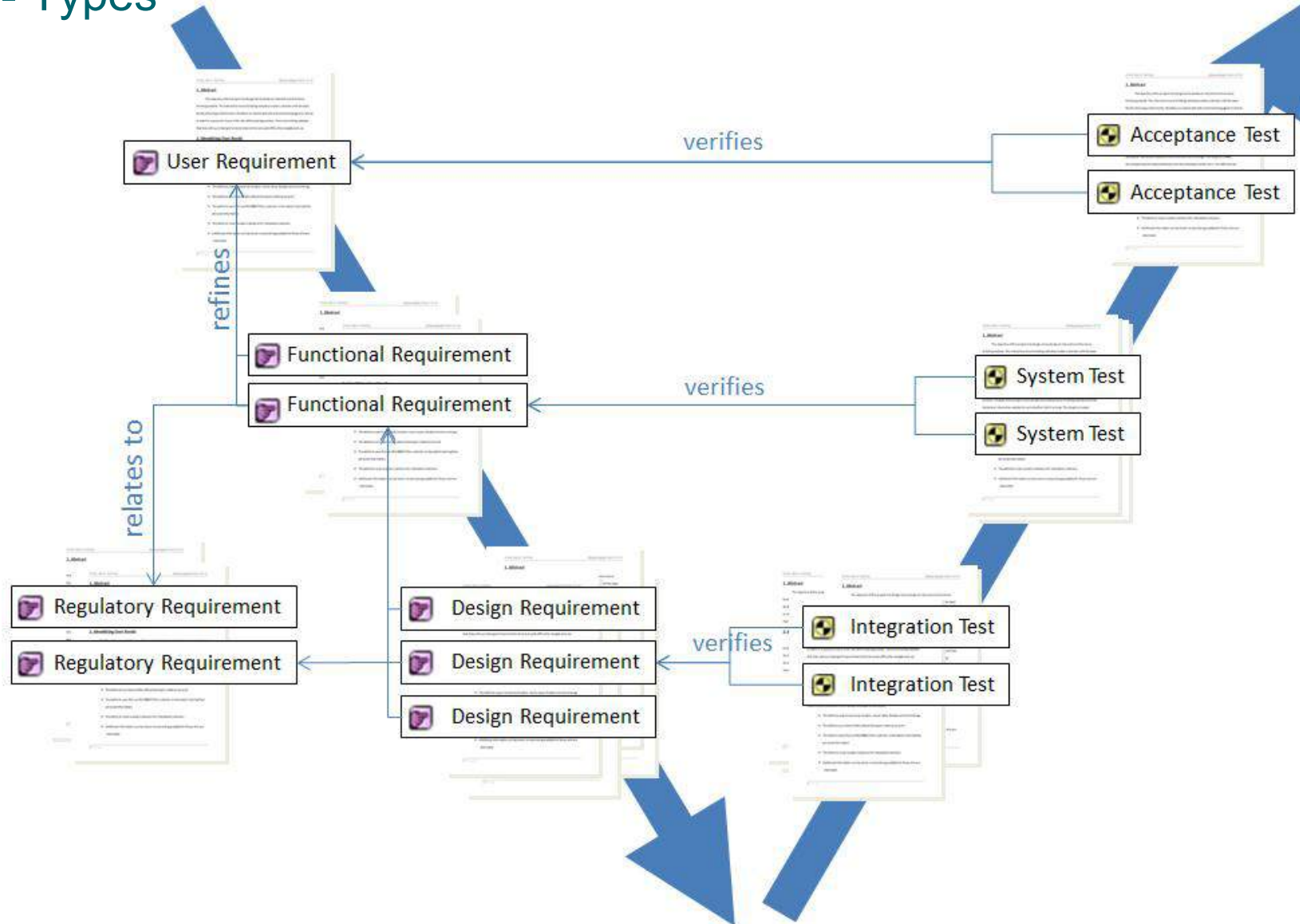
Traceability - Types



Core pillars

Traceability - Types

SIEMENS
Ingenuity for life





Collaboration

Traceability

Reuse

60-80% of requirements, code and test are being shared between projects.

Reuse, branch and merge your data for effective sequential or parallel project or product line development.

3 Core Pillars of ALM

Reuse – What to reuse

Compliance

Test Library

Code

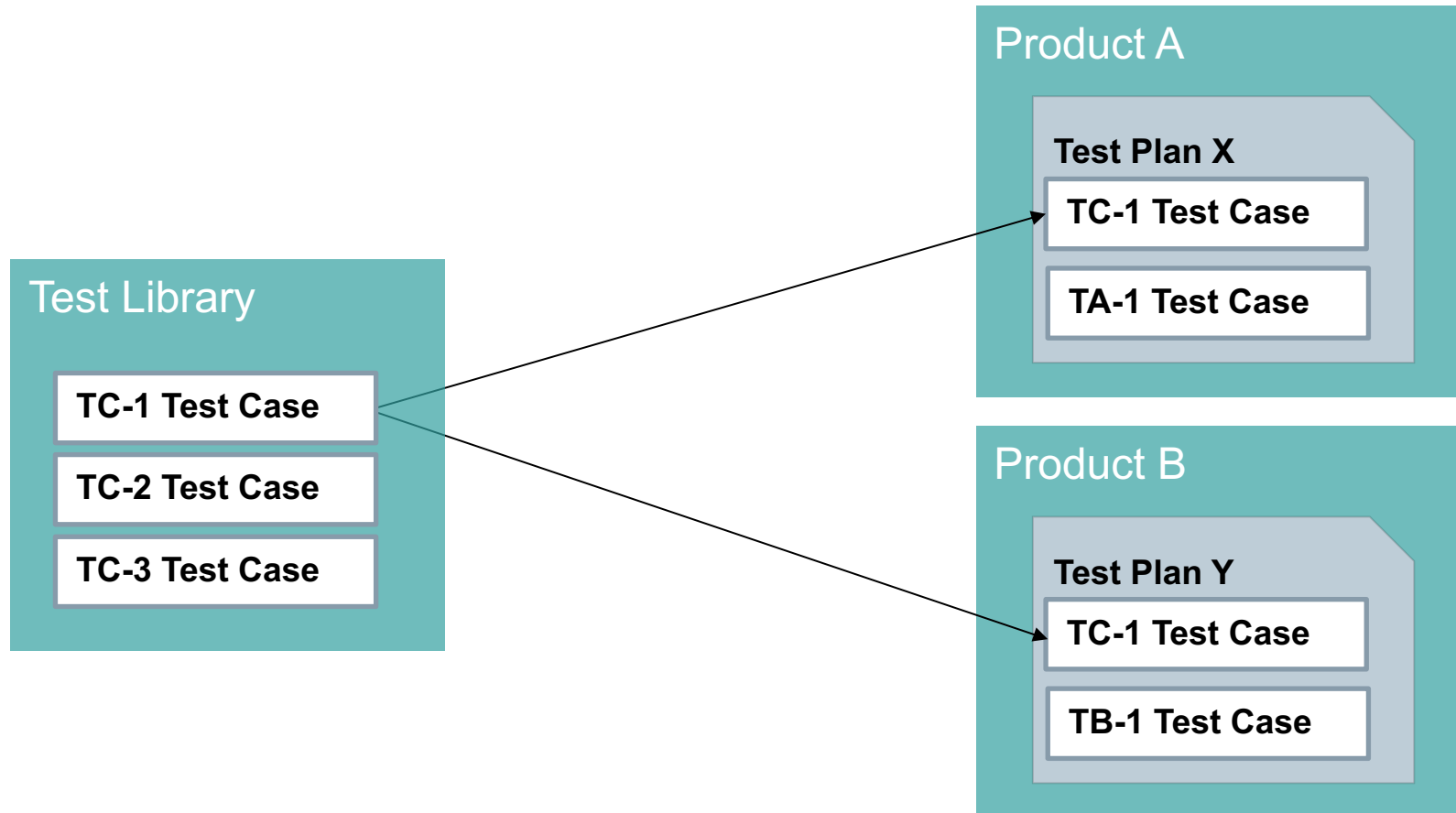
**None Functional
Requirements**

Design Specifications

And more...

3 Core Pillars of ALM

Reuse – Test Library



3 Core Pillars of ALM

Reuse – Regulatory Requirements

Regulatory Requirements Library

Context of Product X

A Regulatory Specification

FS-4 Controls

FS-5 ...

FS-6 ...

Read-only, derived from library

The screenshot displays the Polarion ALM web application interface. The main content area shows a regulatory specification titled "11.10 – Controls for Closed Systems". The specification includes a description, a compliance status (Comply), a response, and evidence links. The evidence links include "CF-187 - Authorized Access", "TQ-83 - Work Item History", and "CF-188 - Security Architecture". The right sidebar shows "Work Item Properties" for "CF-506 - Persons who use closed systems to create, modify, maintain, or transmit electron...". The properties include a response, severity (Normal), and status (Open). The bottom right shows a "Links" section with "derived_from" and "has parent" links.

Compliance	Response	Evidence
Comply	Polarion ALM is a web based application where each request requires a unique username and password combination. All the data are stored in a version control system, so any request that produce a change is tracked and the unique identification who and when the change occurred is logged.	<ul style="list-style-type: none">CF-187 - Authorized Access (CF-43 - Certification Use Cases Specification)TQ-83 - Work Item History (CF-43 - Certification Use Cases Specification)CF-188 - Security Architecture

(a) Validation of systems to ensure accuracy, reliability, consistent intended performance, and the ability to discern invalid or altered records.

Compliance	Response	Evidence
Comply	Polarion ALM is delivered with the built in workflow engine that ensures the data and process integrity. It is possible to configure the audit trail for validation purposes.	

Work Item Properties

CF-506 - Persons who use closed systems to create, modify, maintain, or transmit electron...

Properties

Response: Polarion ALM is a web based application where each request requires a unique username and password combination. All the data are stored in a version control system, so any request that produce a change is tracked and the unique identification who and when the change occurred is logged.

*Severity: Normal

*Status: Open

Links

derived_from

CF-24 - Persons who use closed systems to create, modify, maintain, or transmit electron...

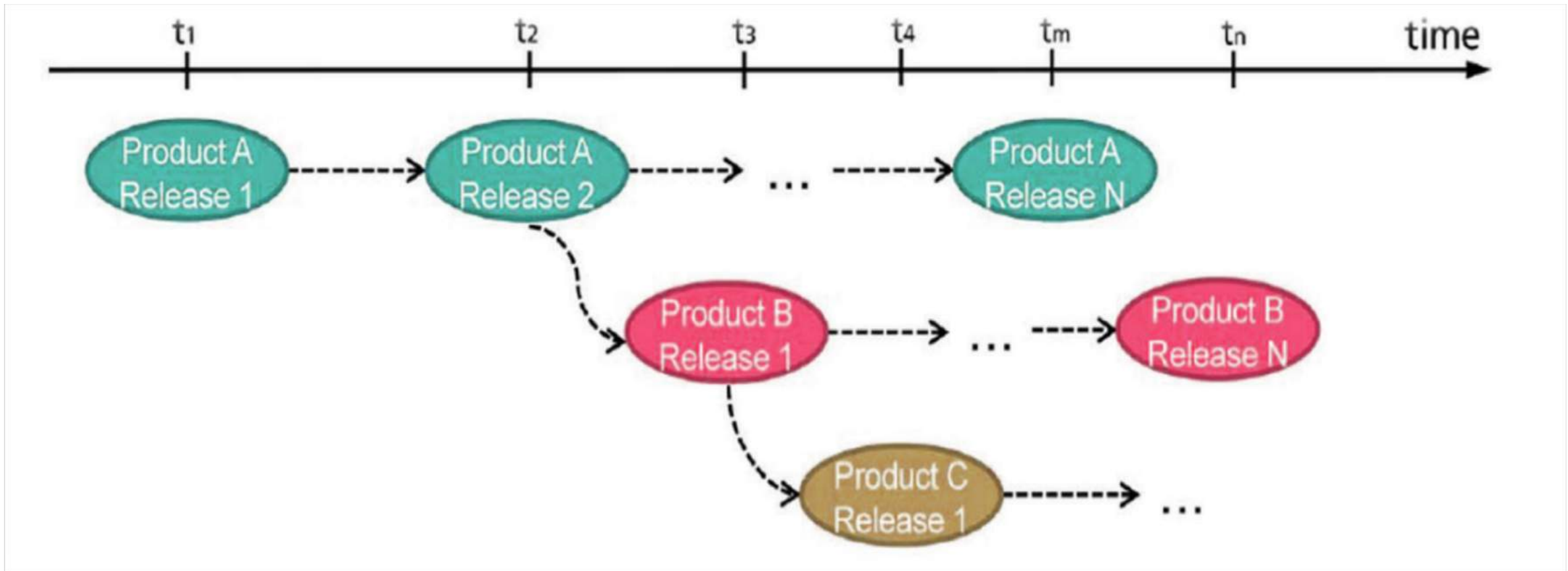
has parent

CF-505 - 11.10 – Controls for Closed Systems

Context related information

Reuse effectively

Branch, Modify and Merge





Polarion ALM

Connect teams and projects, and improve application development processes with a single, unified solution for requirements, coding, testing, and release.

Application Lifecycle Management - Polarion

Deployment



Get up and running in days not months

Flat learning/training curve – intuitive UI

Zero footprint – 100% web-based

Deployment

Maintainability – easily self configuration & customization

Upgradability – 85% of Polarion's customer base is on the latest major release

Scalability – Enterprise ready

Realize benefits quickly for a fast return-on-investment

Thank you