



Connecting Capella with Jama Connect®

Requirements and Test Cases

2025-Dec-11

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Agenda

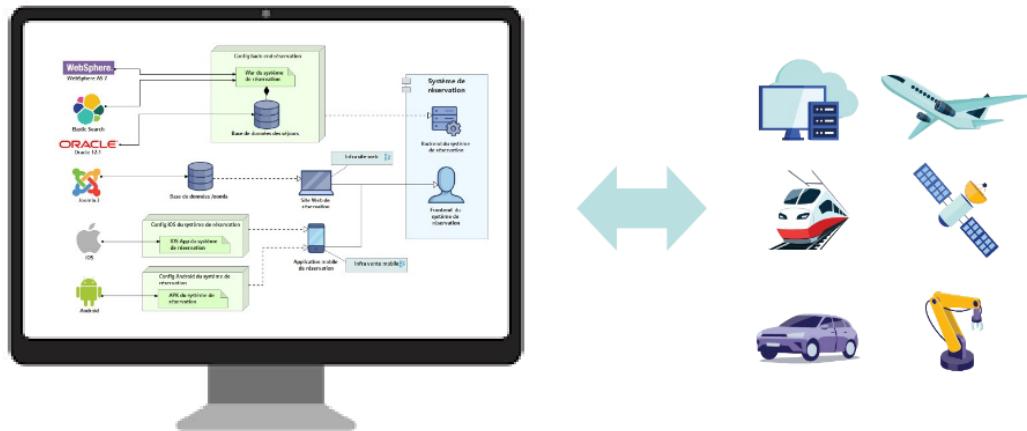
- **Short Presentation of Obeo & Jama Software**
- **Problem Description**
- **Solution: Publication for Capella and Jama Connect®**
- **Demonstration**
- **Conclusion**

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Obeo | Visual Tools for Designing Innovation

We develop cutting-edge **modeling** software
to empower teams **designing** or **transforming**
complex systems



We are a global reference player
in the field of open-source

2500

Number of FTE days of
open-source contributions in 2023

Obeo | Visual Tools for Designing Innovation



Open-Source
Software



Commercial
Software



Services

Domain-Specific Modeling



Collaboration
add-ons

Cloud
Platform

- ✓ Custom Workbenches Development
- ✓ Open-Source Core Development
- ✓ Support & Expertise
- ✓ Training

Model-Based Systems Engineering



Collaboration
add-ons

System Modeling
Workbench

Publication
for Capella

- ✓ Integration
- ✓ Add-ons Development
- ✓ Open-Source Core Development
- ✓ Training

Enterprise Architecture



- ✓ Custom Development (connectors, extensions, ...)
- ✓ Expertise
- ✓ Training

Obeo | Visual Tools for Designing Innovation



Open-Source
Software



Commercial
Software



Services

Domain-Specific Modeling

Sirius



Collaboration add-ons

Cloud Platform

- ✓ Custom Workbenches Development
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Model-Based Systems Engineering



Enterprise Architecture

jama **connect**

Compatibility



NEW!

- ✓ Custom Development (connectors, extensions, ...)
- ✓ Expertise
- ✓ Training

Jama Software® | #1 in Requirements Management

OUR PURPOSE IS TO ENSURE THAT INNOVATORS SUCCEED

Jama connect® helps teams manage requirements with Live Traceability™ through the systems development process for proven cycle time reduction and quality improvement.

- ✓ Reduce Cycle Times
- ✓ Increase Process Efficiency
- ✓ Streamline & Accelerate Reviews

- ✓ Speed Time to Market
- ✓ Gain Visibility & Control
- ✓ Ensure Compliance & Manage Risk



MEDICAL DEVICE &
LIFE SCIENCES



AUTOMOTIVE



SEMICONDUCTOR



SPACE, AIRBORNE &
DEFENSE SYSTEMS



SOFTWARE
DEVELOPMENT

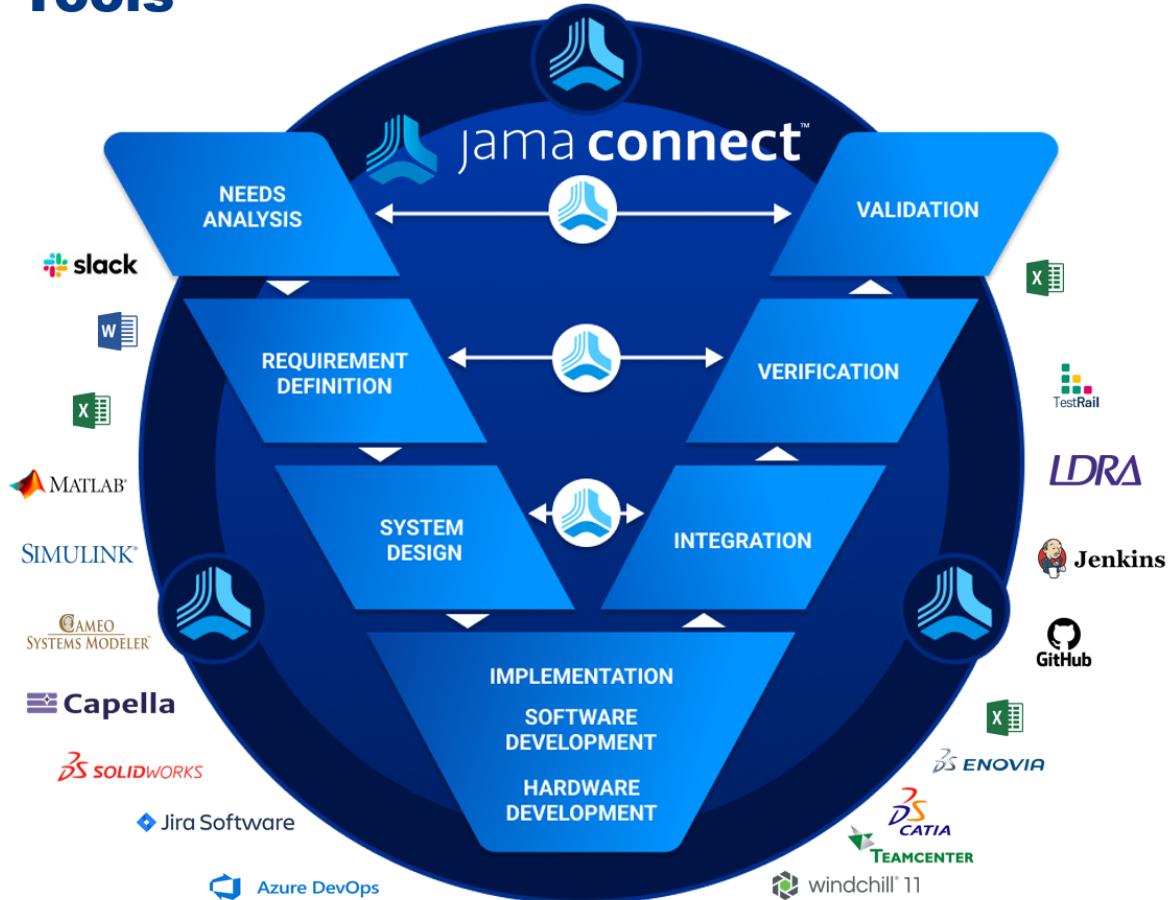


INDUSTRIAL, CONSUMER
ELECTRONICS &
ENERGY

Jama Connect® Delivers Live Traceability™ Across Best-of-Breed Tools

Live Traceability Delivers:

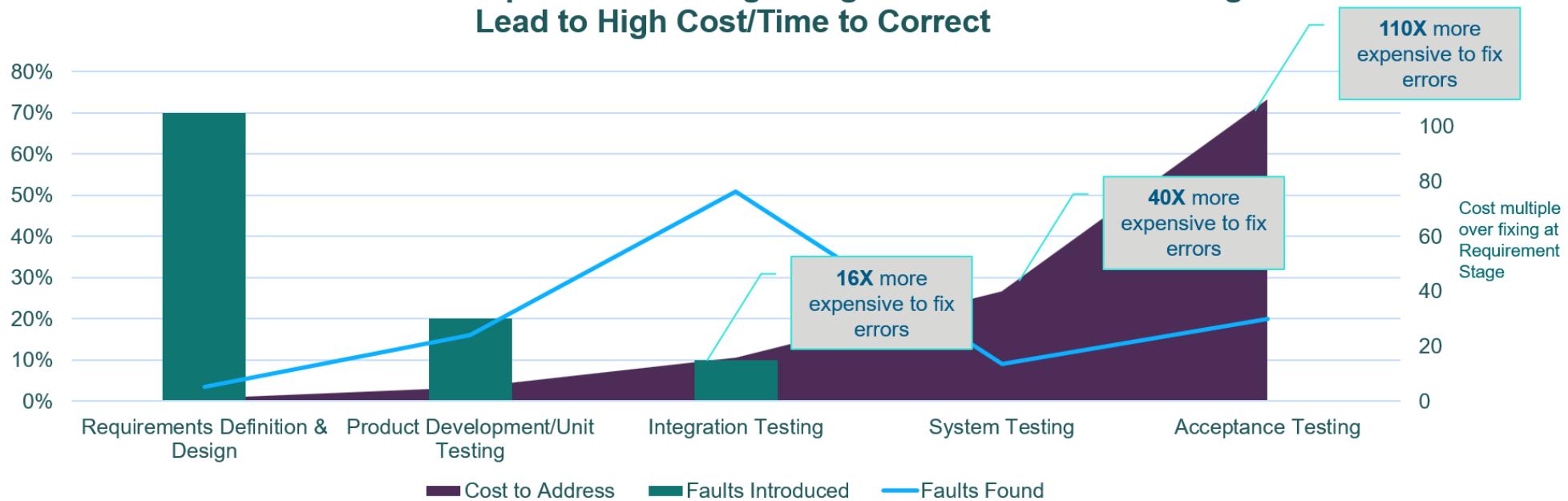
- **1.8X** faster time to defect detection
- **2.1X** faster time to execute test cases
- **2.4X** lower test case failure rates
- **3.6X** higher verification coverage



Result in: Significant Delays, Defects, & Cost Overruns

LATE ISSUE DETECTION LEADS TO MUCH GREATER TIME & COST TO CORRECT

Deficiencies at Requirements/Design Stage Not Found Until Testing
Lead to High Cost/Time to Correct



Source: INCOSE, NIST, [Report](#)

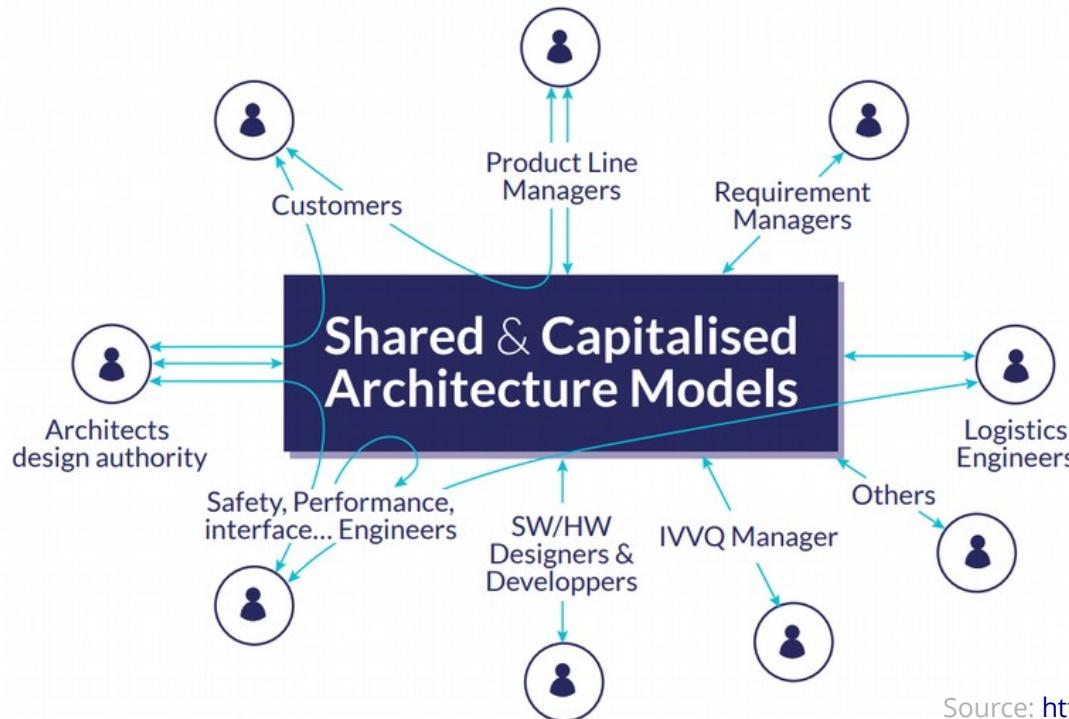
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Problem Approach

- **Architecture becomes essential to all stakeholders**

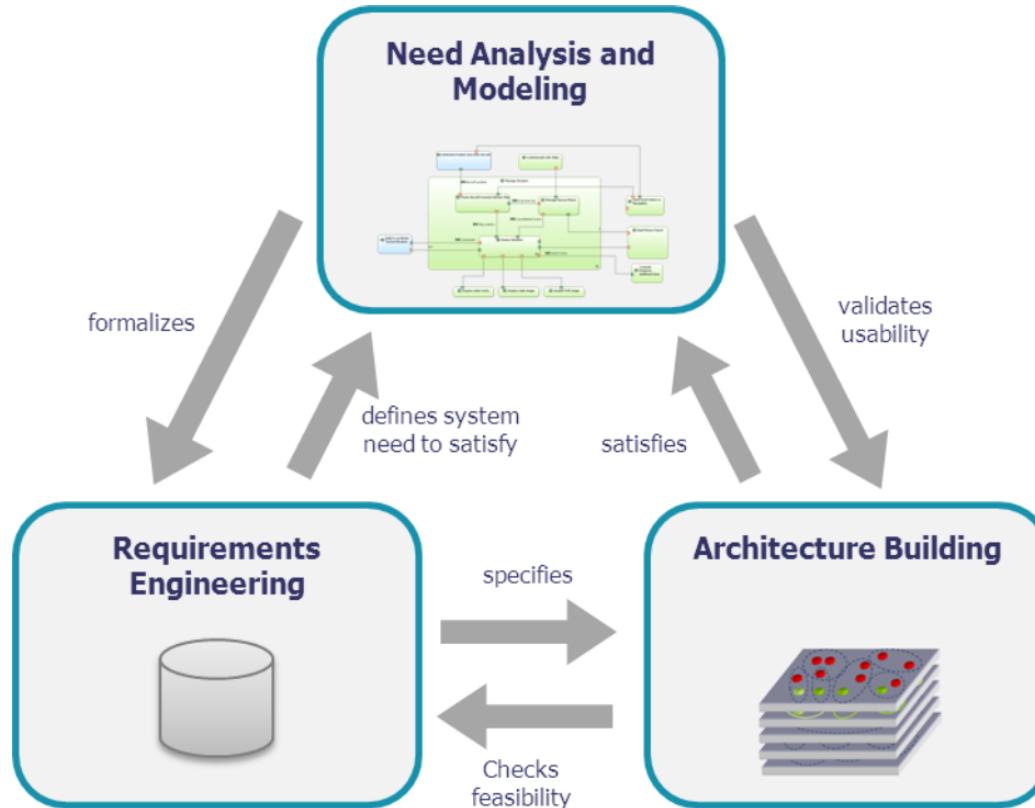
- All project artifacts need to connect with architectural elements.
- Plenty of stakeholders need access to some of the architectural information.



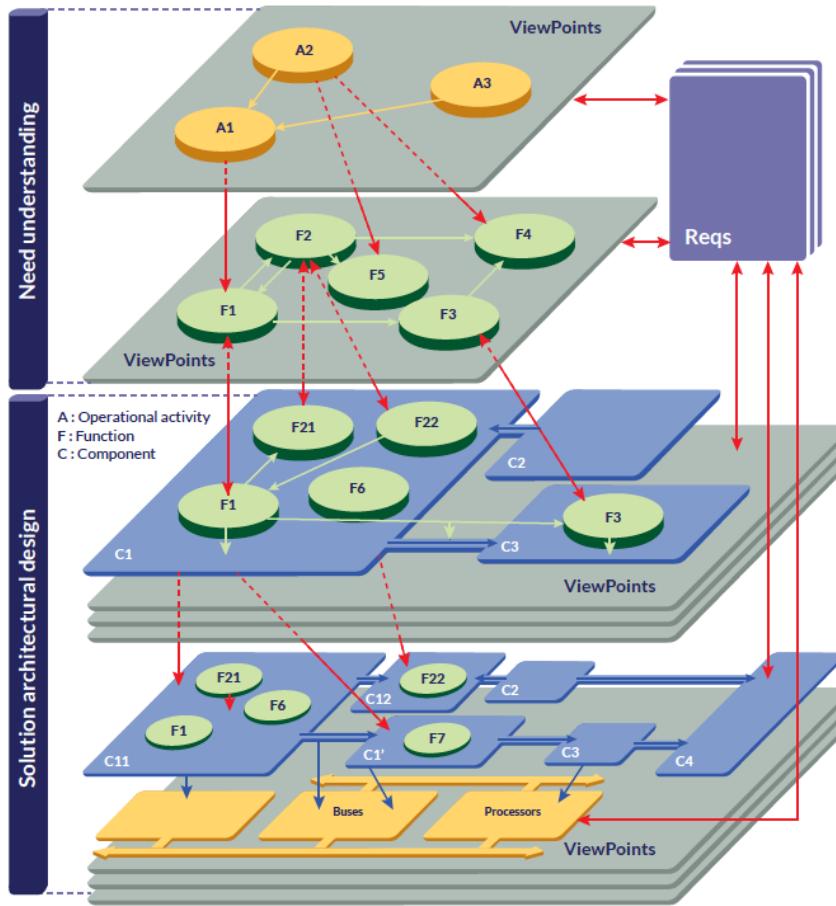
Source: https://mbse-capella.org/what_is_mbse.html

Problem Approach

Arcadia promotes a viewpoint-driven approach (as described in ISO/IEC 42010) and emphasizes a clear distinction between need and solution.



Problem Approach



Operational Analysis

What the users of the system need to accomplish

Functional & Non Functional Need

What the system has to accomplish for the users

Logical Architecture

How the system will work to fulfill expectations

Physical Architecture

How the system will be developed and built

- Trace Architecture with Requirements
- Share Architectures with Stakeholders
- Measure/Verify Coverage
- Beyond Requirements: V&V and other Disciplines

- **Open-Source Capella Requirements add-on**
 - Based on ReqIF file format imports.
 - Traceability information only available in Capella.
- **Ad-Hoc Integration with Specific Requirements Management Tools**
 - These often imply exposing Capella elements as first-class objects in the Requirements Repository.
 - But third-party repositories are not made to display or edit Capella concepts.

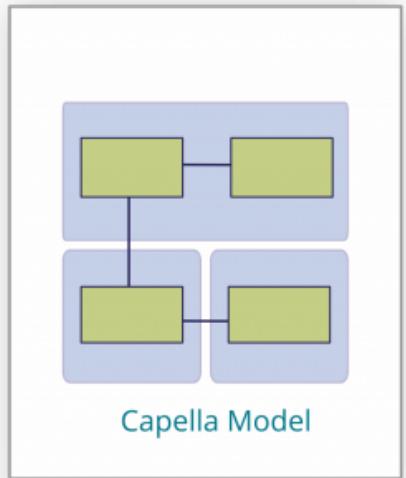
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Publication for Capella

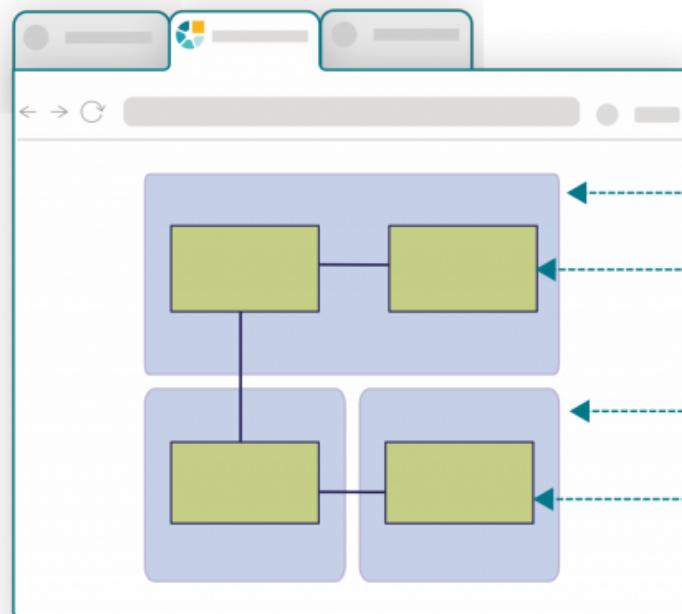
- We want to propose an approach:
 - For **Jama Connect** users;
 - That doesn't suffer from Data Duplication;
 - That scales with the number of requirements, the complexity of models, and the number of stakeholders
 - And above all, that is **easy to use!**

Authoritative System Architecture



Publication
Update Links

Integrated System Architecture Exposed via a Web Browser



Traceability
Links

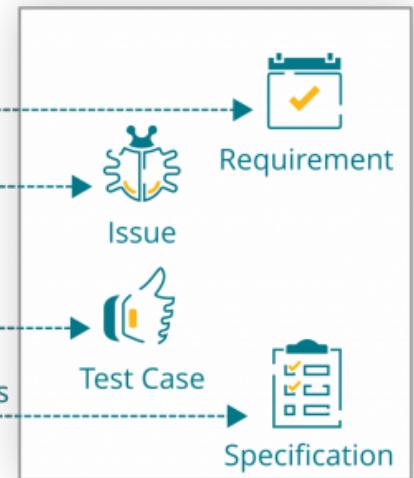
Satisfies

Tracks

Validates

Implements

Authoritative Work Items



 **Capella**

 OBEO

 **OBEO**
Publication
for Capella

 **jama connect®**

Publication for Capella

✓ Manage Traceability

Systems engineers, working with Capella, can collaborate with other engineers working with connected ALM or RMS tools



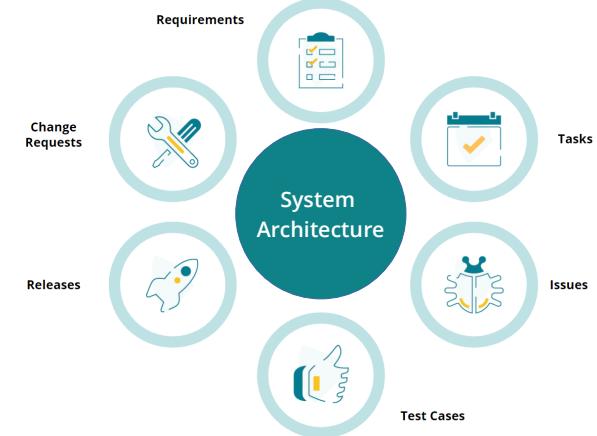
Polarion

DOORS Next

others...

✓ Expose Models

Systems engineers can expose their Capella models by regularly publishing them on a server.



Digital Thread from
requirements to architecture



Single and integrated
sources of truth



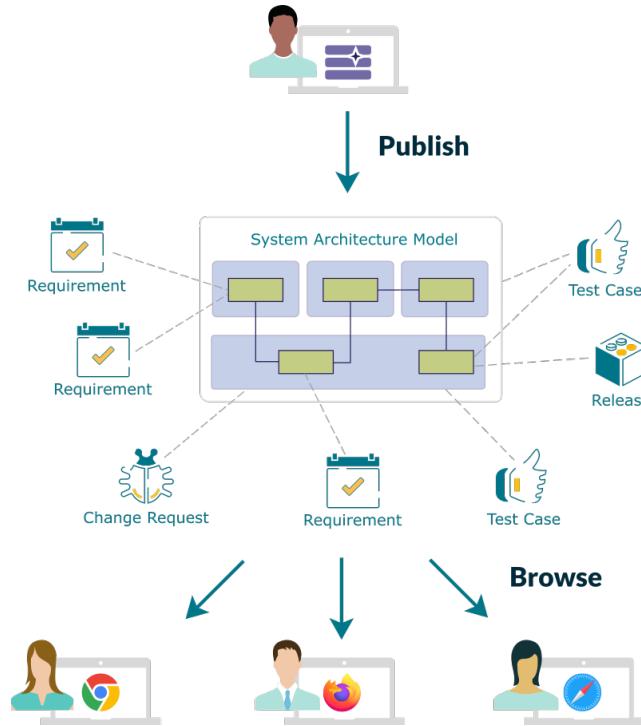
Better communication
and collaboration

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Features

Expose Models Online

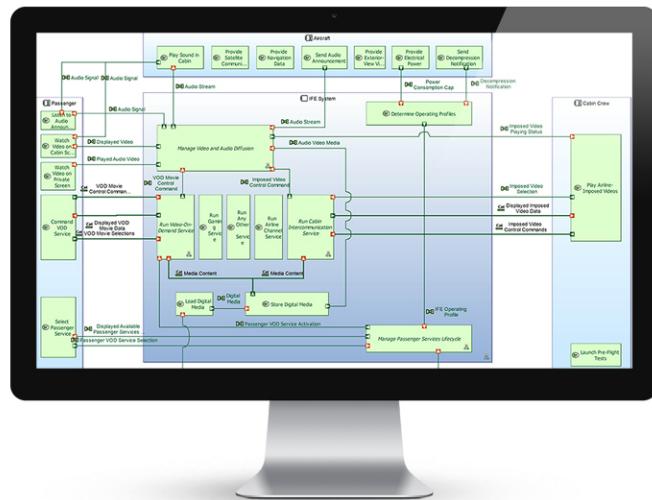


The **model elements**, with all the related **diagrams** and the **linked artifacts**, become **easily navigable** from a web browser to any **authorized** user.

Features

Expose Models Online

Much more than just a static HTML export!



Built-in access control

Manage authorizations to projects based on users' role

Advanced search

Users can locate model elements by using multi-criteria queries

Traceability support

Elements published on the server can be linked to external artifacts

Supported solution

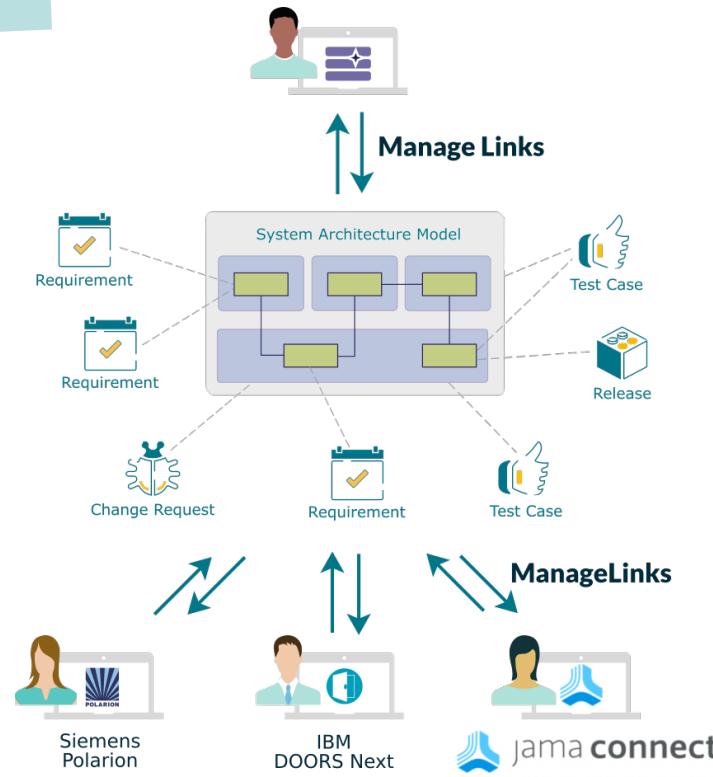
A professionally maintained
and developed product by Obeo

- Interested Stakeholder, Online
 - Access Control
 - Browse models online
 - ✓ Diagrams
 - ✓ Capella Objects
 - Simple and Advanced Search
 - Model History

- Trace Architecture with Requirements
 - ✓ Share Architectures with Stakeholders
- Measure/Verify Coverage
- Beyond Requirements: V&V and other Disciplines

Features

Manage Traceability



Create and manage **synchronized traceability links** between architecture elements and artifacts such as **requirements, test cases, releases, change requests, etc...**

Demo 2

- **System Engineer in Capella**

- Drag & drop
- Palette tools
- Different link types
- Publish Model
- Update from online changes

- **Stakeholder in Jama Connect**

- View links
- Delete links
- View diagrams as attachments

- **Authorized Stakeholder online**

- Delete link
- Creation is not supported (yet)

Challenges

- ✓ Trace Architecture with Requirements
- ✓ Share Architectures with Stakeholders
- Measure/Verify Coverage
- Beyond Requirements: V&V and other Disciplines

- **System Engineer in Capella**

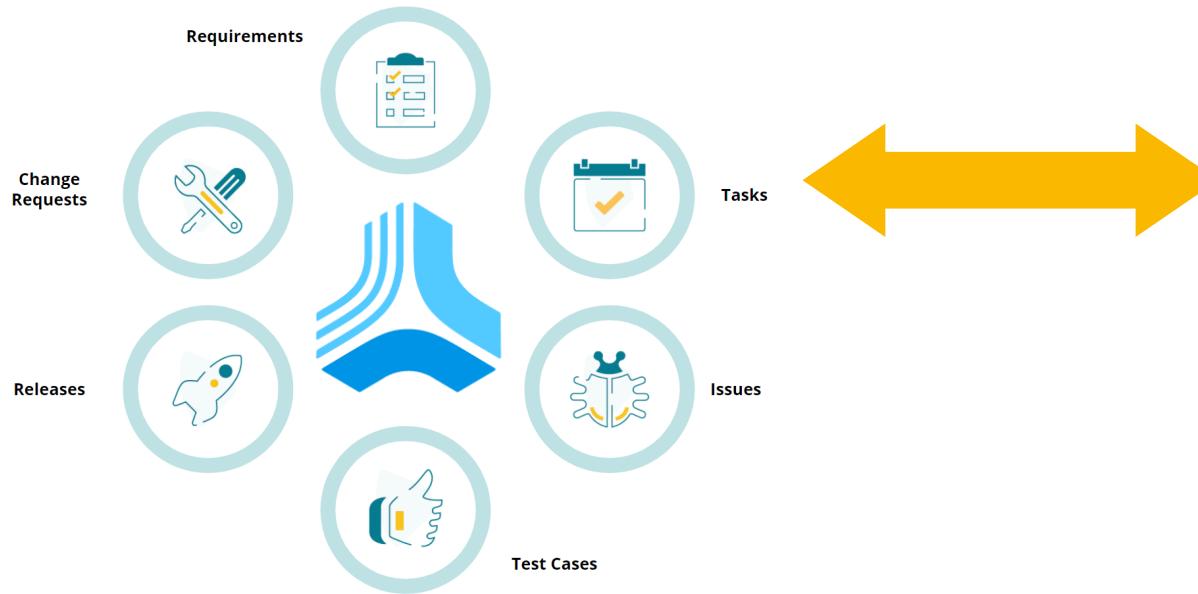
- Use **Python for Capella** to extract or manipulate model data, including traceability
- Use **M2Doc** to produce MS Word reports

- **System Engineer in Capella**
 - Configure Reporting with Python for Capella
 - Generate Reports on demand

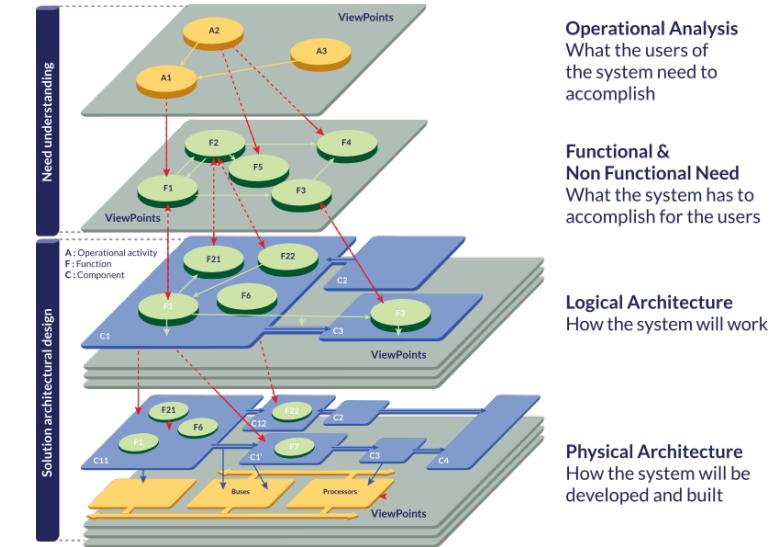
Challenges

- ✓ Trace Architecture with Requirements
- ✓ Share Architectures with Stakeholders
- ✓ Measure/Verify Coverage
- Beyond Requirements: V&V and other Disciplines

Features



Ensure Traceability



Operational Analysis
What the users of the system need to accomplish

Functional & Non Functional Need
What the system has to accomplish for the users

Logical Architecture
How the system will work

Physical Architecture
How the system will be developed and built

Not limited to Requirements:

- ✓ V&V – Links to Test Cases;
- ✓ Project Management – Links to Releases, Change Requests...

Challenges

- ✓ Trace Architecture with Requirements
- ✓ Share Architectures with Stakeholders
- ✓ Measure/Verify Coverage
- ✓ Beyond Requirements: V&V and other Disciplines

Features

Deployment Modes



On-Premises

The server is deployed
on your own infrastructure

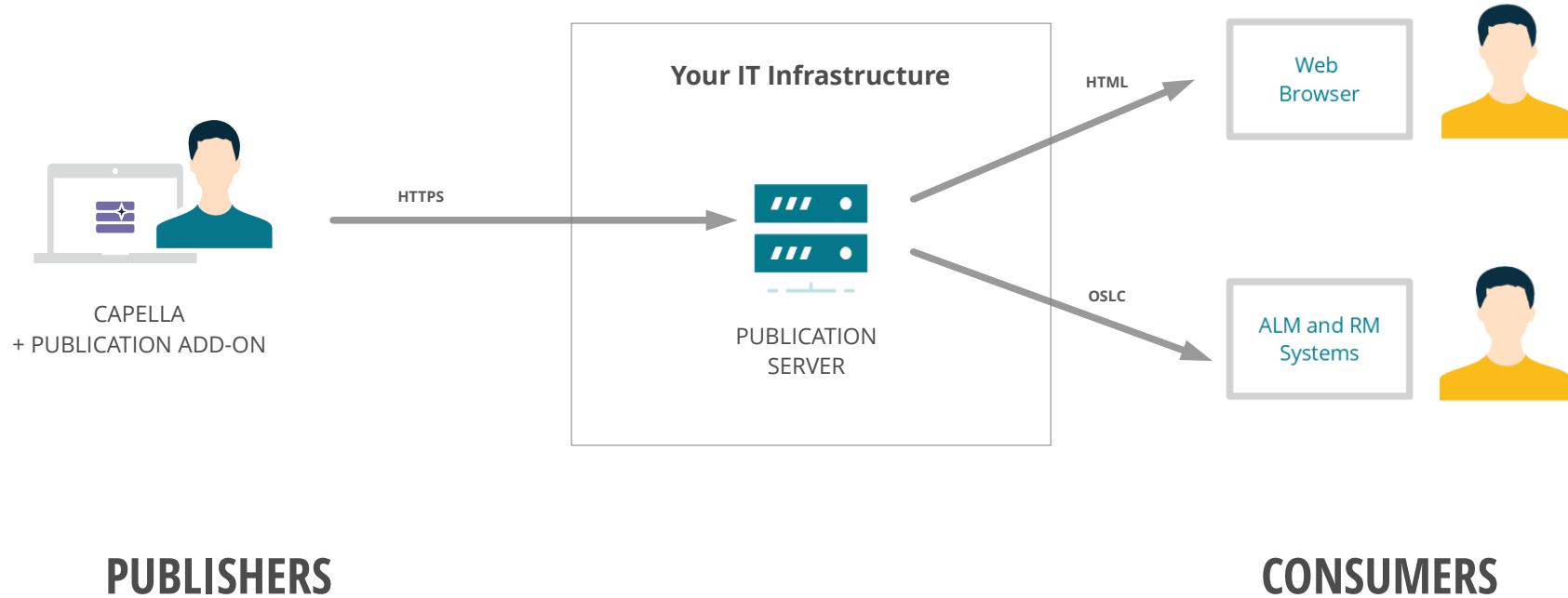


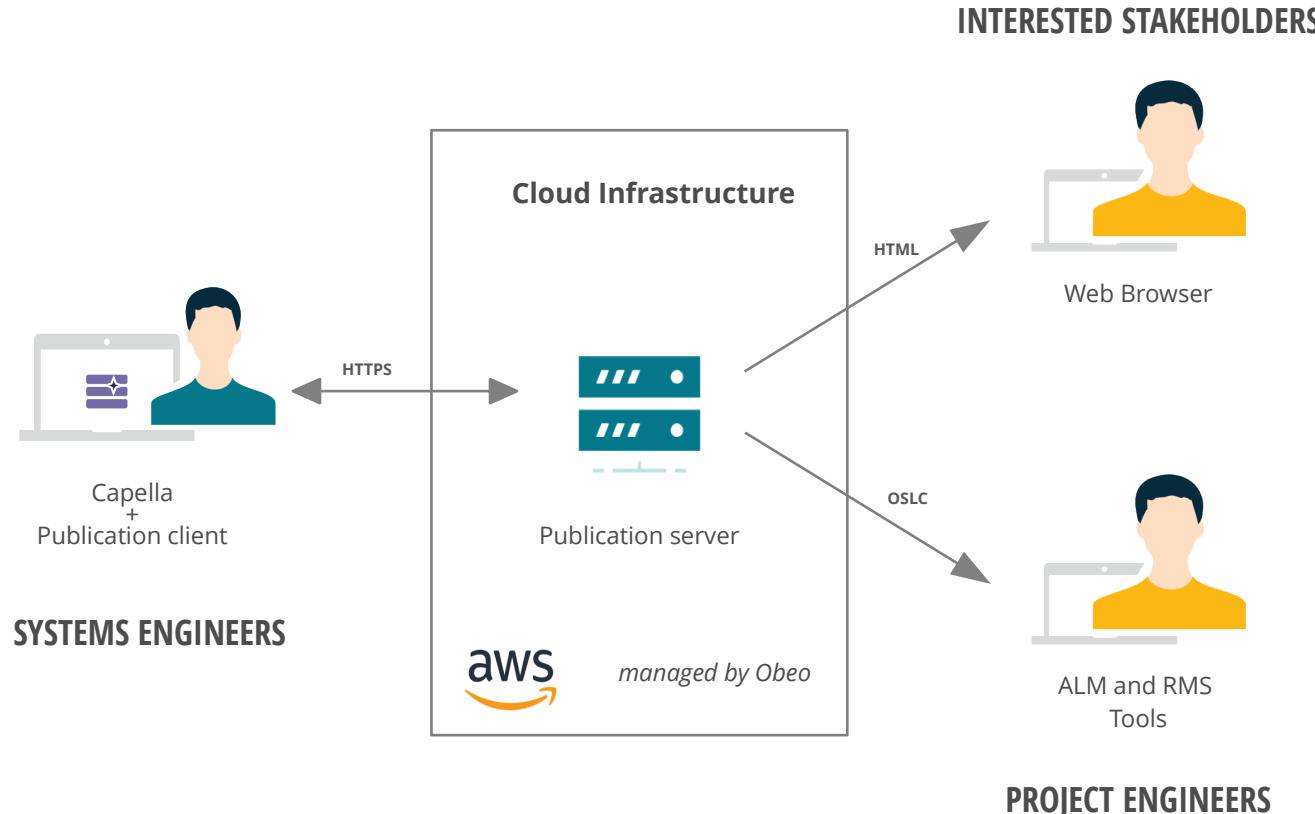
Cloud

The server is installed on a Cloud
infrastructure managed by Obeo

Features

On-Premises | Deployed on your own infrastructure





- **Broaden the audience of MBSE** by exposing your Models online
- Create and maintain **Traceability Links easily** with *Jama Connect*
- Extract links for reporting using *Python for Capella* or *M2Doc*
- **On Premises or Cloud** Deployments
- Compatible with *Team for Capella*
- Contact **Obeo** or **Jama Software** to know more!

Conclusion

<https://obeosoft.com/p4c>

