

WEBINAR RULES

- You'll be muted during the Webinar
- Please write your questions or comments in the question section
- The Webinar will be recorded



STARTING SOON

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CEST

WEB-BASED DIGITAL THREAD FOR SYSTEMS ENGINEERING



WEB-BASED DIGITAL THREAD FOR SYSTEMS ENGINEERING

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01

What we DO

The REUSE Company provides a platform and a set of well-defined methods to support the implementation of an incremental and comprehensive **reuse process**. The approach is based on **knowledge management & elicitation, quality assessment, interoperability** across tool ecosystems, **artificial intelligence**, and smart **search engines**.



Luis Alonso



- **Current Position:**
Consultant Director of The REUSE Company
- **Former position:**
Chief Software Architect of The REUSE Company

Iker Gonzalez



- **Current Position:**
Consultant of The REUSE Company



INTRODUCING THE NEW WEB-BASED DIGITAL THREAD FOR SYSTEMS ENGINEERING



- A modern tool to leverage activities developed on other tools
- Not aiming at replacing the concept of SoT
- But including connectivity to +50 tools:
 - RM, MBSE, ALM, PLM, MS Office, PDF...
- Featuring traceability and interoperability among all these tools:
 - ***Digital Thread as a Synchronized Source of Truth***





- A modern tool to leverage activities developed on other tools
- ...
- And implementing a series of Technical and Technical Management Processes on top of all those tools:





SES Engineering Studio Web and
Desktop editions:
**STRONGER
TOGETHER**

SES ENGINEERING STUDIO WEB AND DESKTOP EDITIONS: STRONGER TOGETHER

- SES Engineering Studio web edition (**new!**):
 - Authoring capabilities: semantic **writing** and **traceability assistant**
 - Including digital thread tools:
 - Global impact analysis
 - Orphan Analysis
 - Semantic search capabilities for detailed impact analysis
- SES Engineering Studio desktop edition:
 - Traceability, Authoring and Quality Management and Reporting
- **Resulting into an outstanding integration and mix of features**



AUTHORING AND TRACEABILITY GENERATION CAPABILITIES

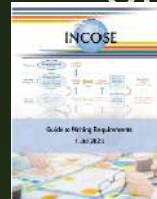
Web add-in to assist during the **authoring and traceability generation** process, providing customizable **quality reports and impact analysis**.

Implements the notion of CCC: correctness for individual requirements, and consistency and completeness among requirements and models.

Fully integrated with web requirement management tools, including a web extension



Implementing the rules in the INCOSE GtWR and many other guidelines

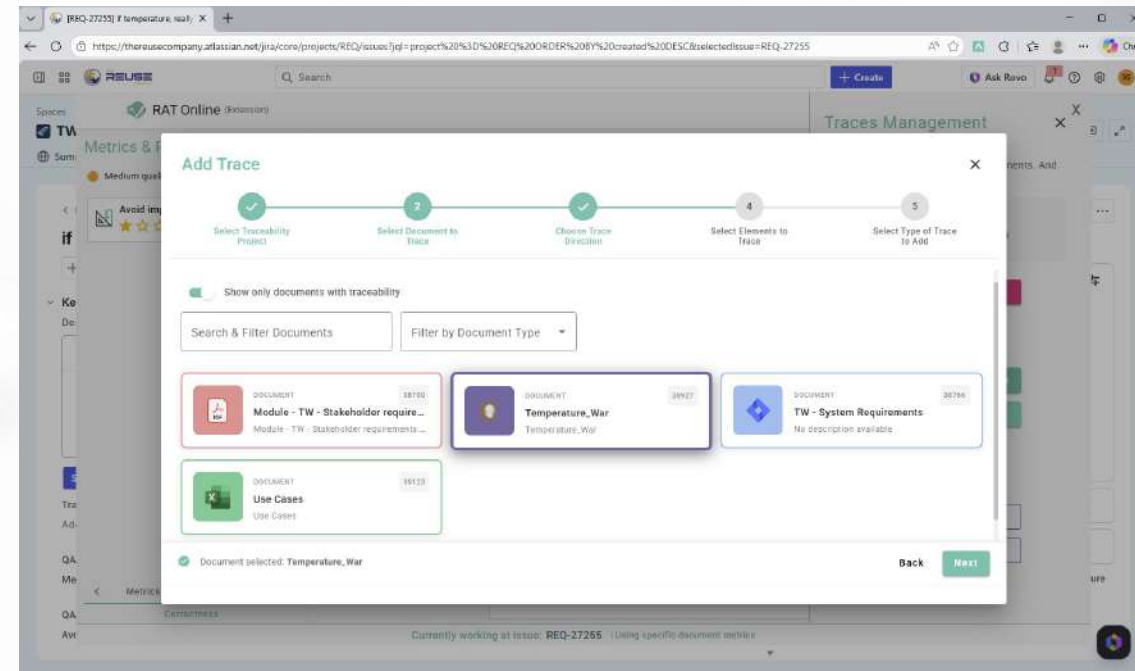


Implementing catalogues of patterns like EARS, INCOSE...



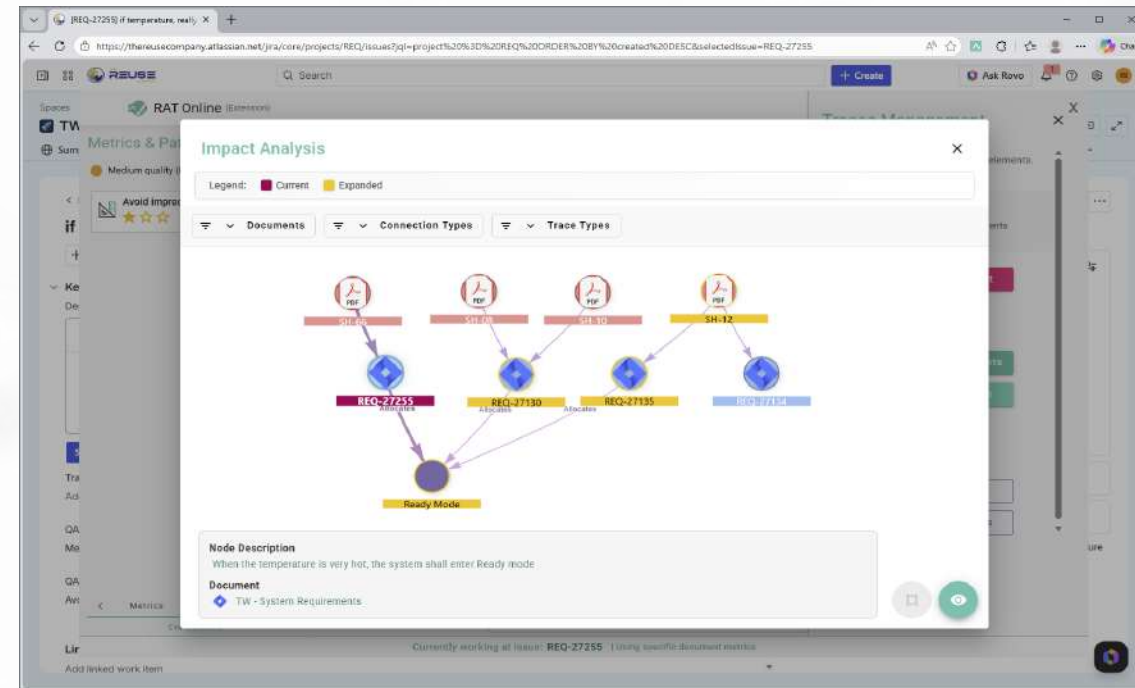
Trace while authoring

- What about connecting your requirements in your web tool with:
 - Regulation that has been parsed in a PDF file
 - External requirements in MS Word, Excel, or other formats
 - Models in an MBSE tool
 - ...



Assessing impact while authoring

- What about revising all your traces in a simple snapshot while you are still authoring your engineering elements
 - Detect missing traces
 - Identify incorrect traces
- Everything before any external review takes place



Quality/Traceability reporting on the web

- What about a reporting inside the requirement management tool (read-only copy)
- Traceability analysis:
 - Detailed list of the traces and its typology with links to the other end.
- Quality analysis report:
 - Quality Level (High, Medium, Low)
 - Quality Summary (list of defects)
 - Quality Date

The screenshot displays a web browser window showing a requirement card in a tool like Jira. The card is titled "Temperature warrior environment" and has a "To Do" status. The main content area is divided into sections: "Key details" with a description, "Traceability" showing "Allocates" and "Derives" relationships, "QA Name" (High), and "QA Summary" (The requirement could be difficult to understand). A right-hand sidebar provides additional details: "QA Numeric" (1), "QA Date" (07 Apr 2026, 18:04), "Priority" (Medium), "Assignee" (Unassigned), and "Reporter" (Ángel Varón Franco). There are also buttons for "Assign to me" and "Automation".

SES ENGINEERING STUDIO WEB: DIGITAL THREAD TOOLS

Assess your digital thread with **SES Engineering Studio web edition** to find inconsistent or missing traceability, and perform **impact analysis** for assessing changes in your engineering workproducts

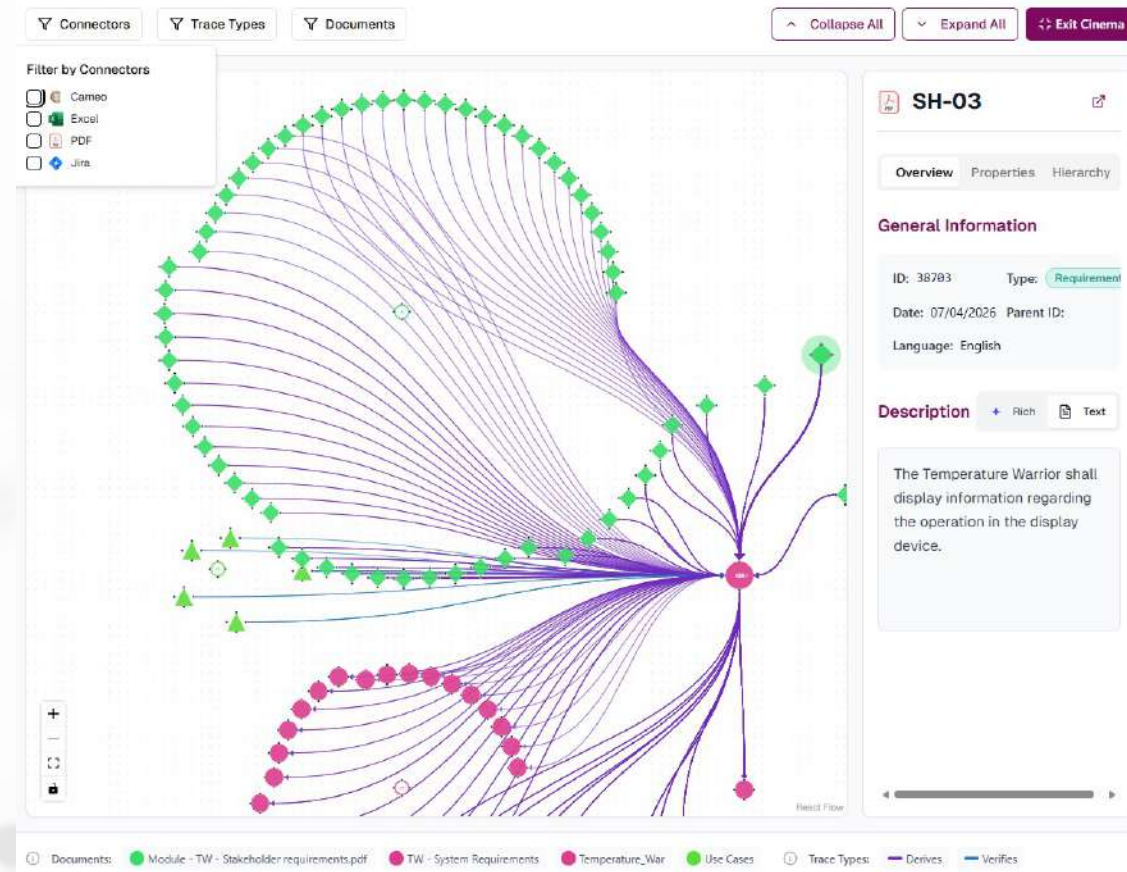
Find improvements in your digital thread by using the **Global Impact Analysis tool**

Find missing threads in your engineering ecosystem by using the **Orphan Analysis tool**

Determine impact analysis of any change set, involving one or many elements with the **Semantic Search and the Impact Analysis tool**

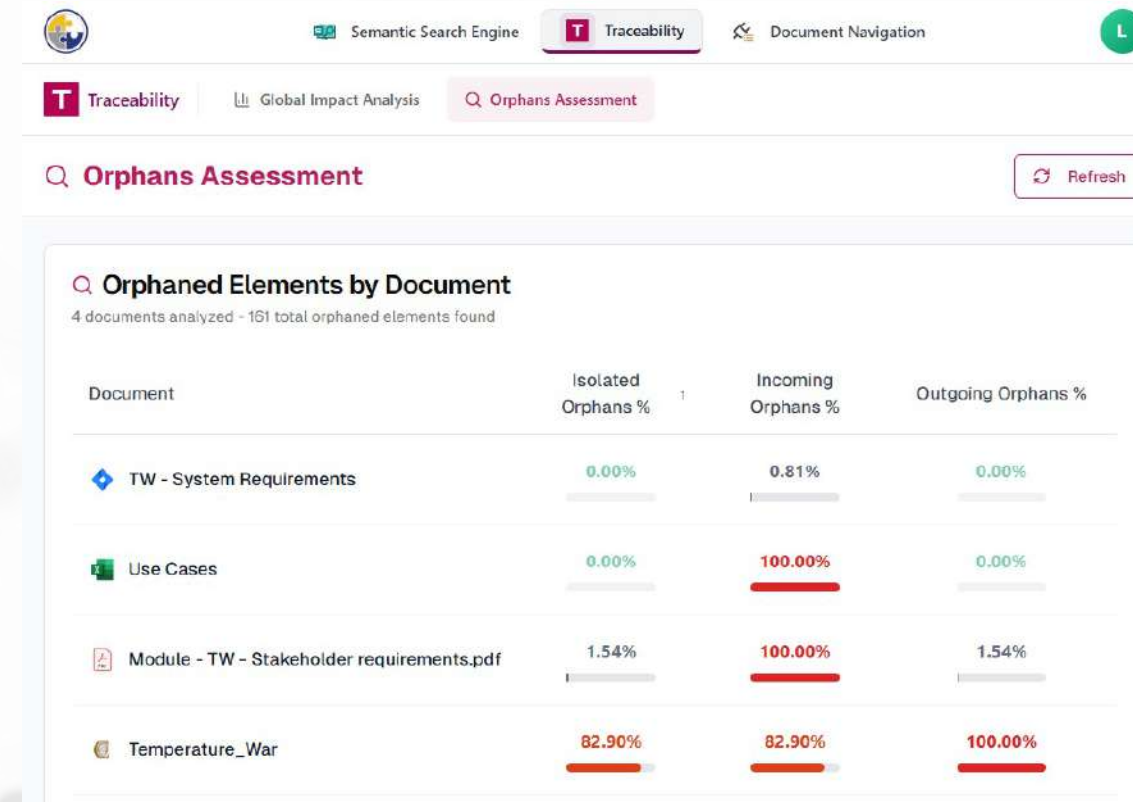
Global Impact Analysis

- Displays the traceability architecture across all documents in the repository.
- Possibility to display detailed traces among elements inside engineering documents.
- Possibilities to refine the analysis by filtering on:
 - Connector type
 - Trace type
 - Document type



Orphan Analysis

- Looks for orphan elements in regards of traceability:
 - No incoming or outgoing traces
 - No incoming traces
 - No outgoing traces
- Show detailed list of elements in each category for each document
- Possibility to discard elements for traceability orphan analysis based on user decision.



Orphan Analysis: Traceability Creation Assistant

- But if you consider traceability a tedious task...:
 - Ask your traceability assistant to identify traces for you
 - Different algorithms that consider the text in your requirements, and the information in the ontology and the connected models
 - Custom methods so that you can develop other means to identify traces
 - Synchronizes the detected traces to your RMS

Traceability

TRACEABILITY Studio > Codebeamer project > TW Requirements flow down to Control System req...

Open Modules Edit Module Allocates Trace Remove Details Navigate Evaluate Suspects Pattern Matching Semantic Retrieval RSHP Views Property Allocation By Workproduct Name Custom Algorithms Impact Analysis Excel Impact Analysis Matrix

Modules: Navigation Configuration Trace Type Traces Navigate Suspect Traces

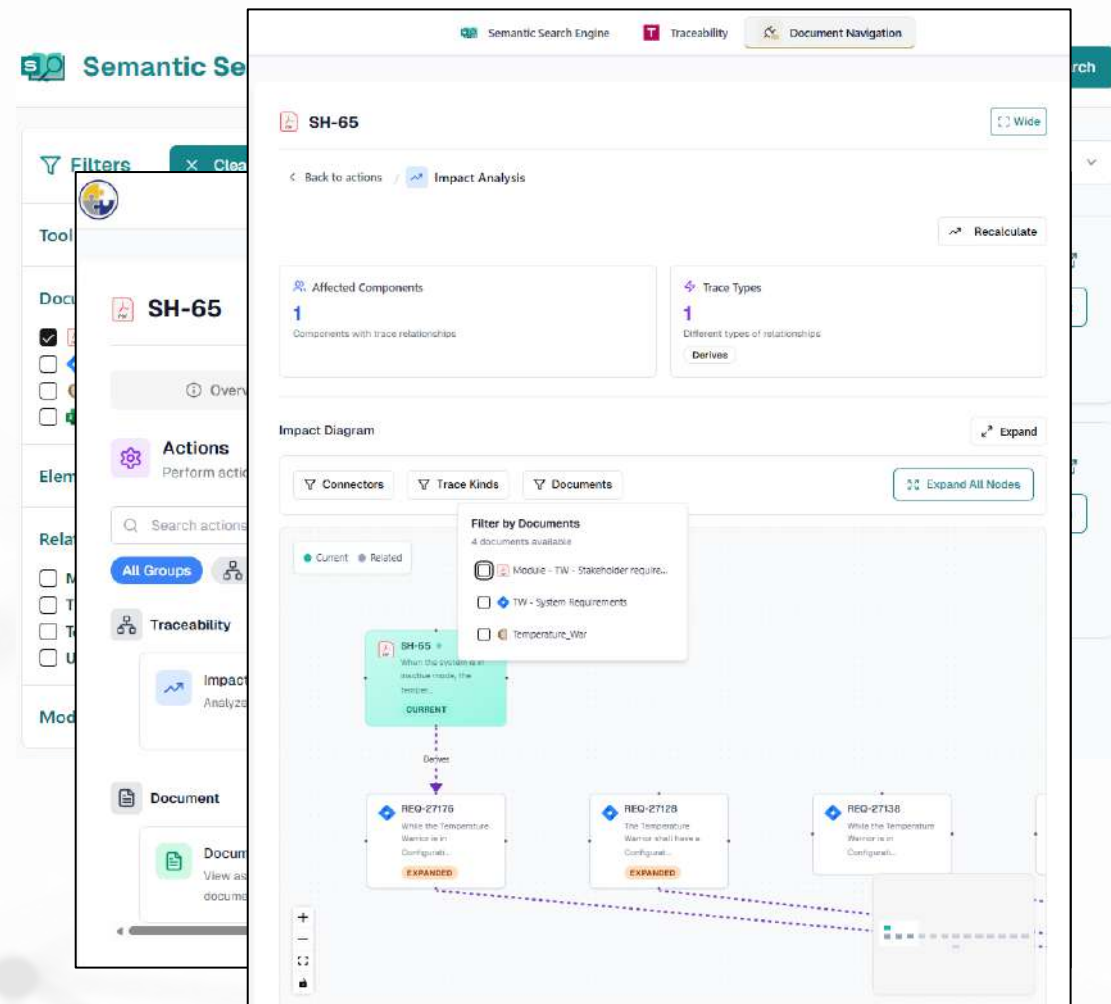
Traces:
Source: "System Requirements" - Target: "Control System"

Warning: The Source and Target are not open

Source Id	Target Id	Source	Target	State	Trace type	Rationale
SysR-4402	CS2-4774	When the Temperature Warrior is in the Combat Mode and (the combat round...	The Control System shall send electric signals to control the activity of the Te...	Consistent	«Derives»	Rationale
SysR-4382	CS2-4788	The competition of the Temperature Warrior shall take place in an physical en...	The competition of the Temperature Warrior shall be performed in an physical...	Consistent	«Flow-Down»	Trace suggested applying a threshold of 90% in the sema...
SysR-4390	CS2-4789	The Temperature warrior shall be compliant with The Electricity at Work Regu...	The Control System shall be compliant with The Electricity at Work Regula...	Consistent	«Flow-Down»	Trace suggested applying a threshold of 90% in the sema...

Semantic Search

- Designed to look for engineering items based on textual search enhanced with semantic capabilities to refine the selection.
- Facetted filtering based on the container document, type of the container, type of the element, related with, etc.
- Possibility to visualize the element, its container, its properties and perform different element-oriented actions, such as impact analysis.



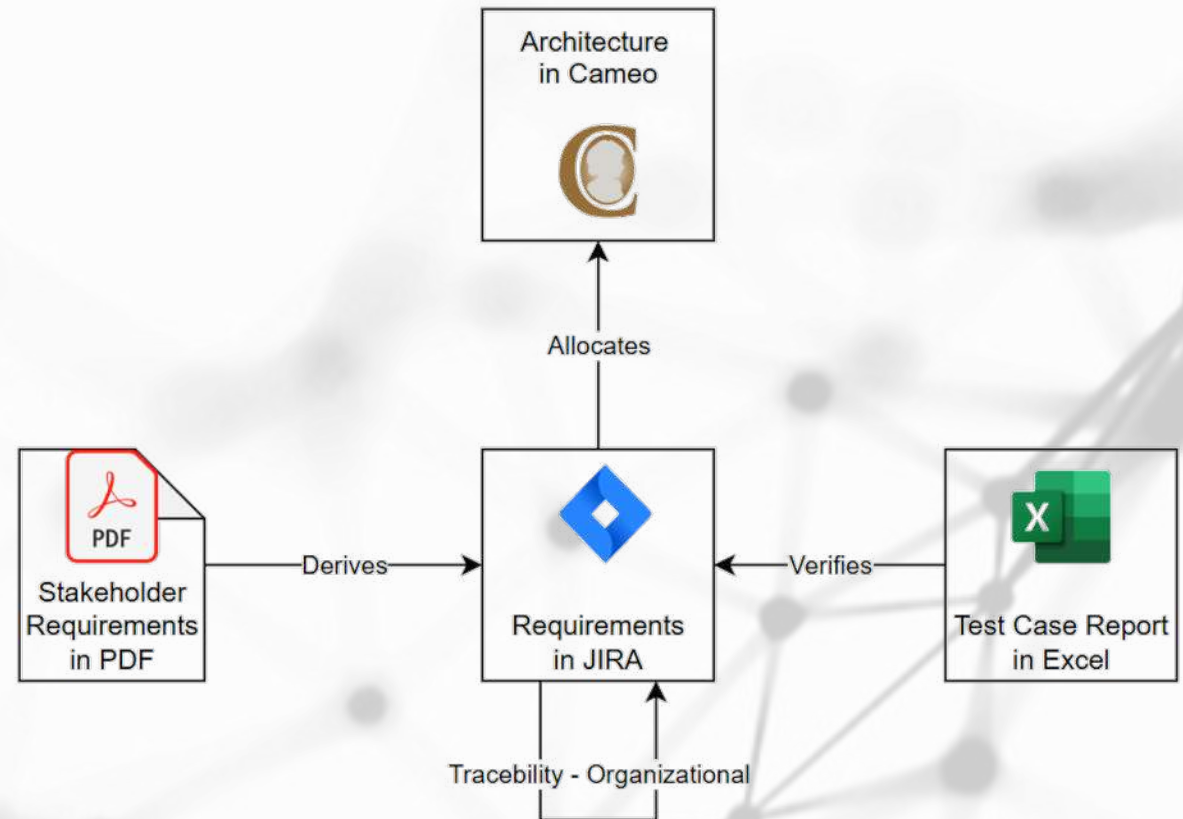


DEMOS

DEMO ECOSYSTEM

➤ Supposing being Tier 1

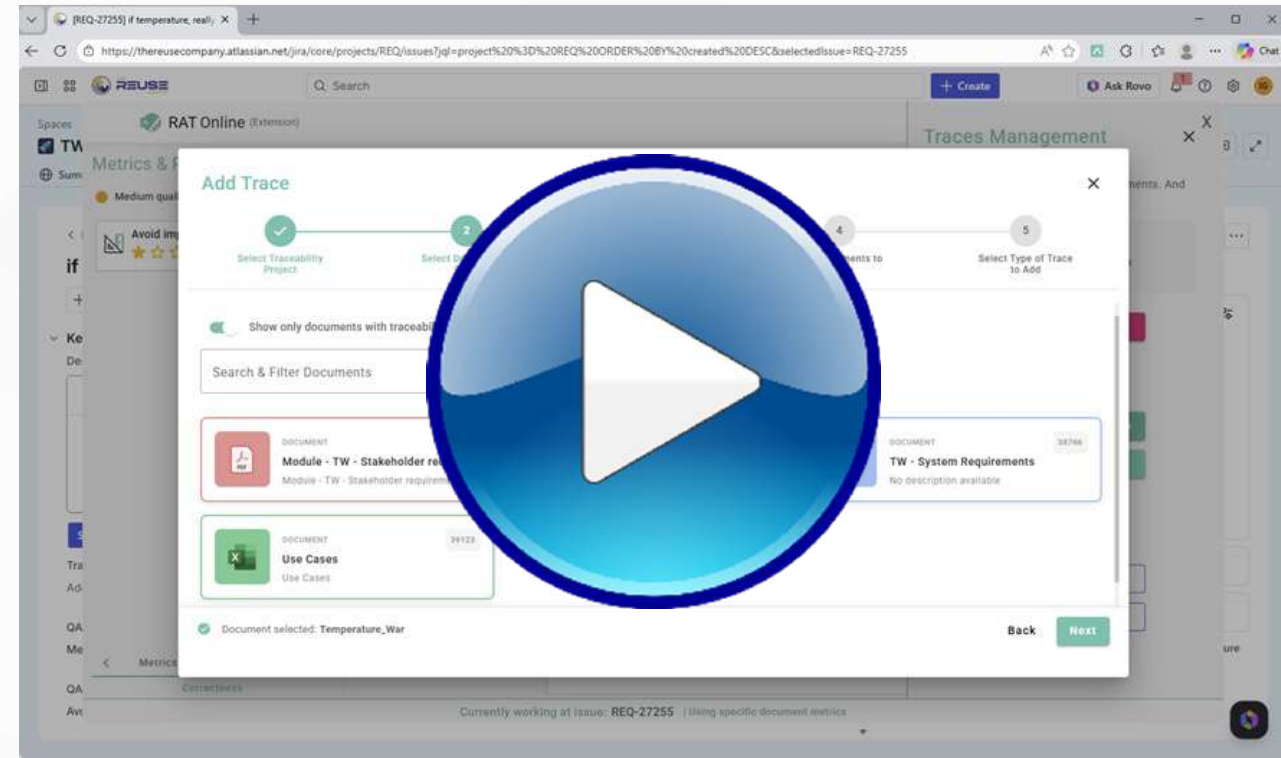
- Receives **Stakeholder requirements** for the component **from the OEM in PDF.**
- Developing **System Requirements in JIRA.**
- Developing the **System Architecture in Cameo.**
- Having the report of the **Test Cases in an Excel file.**
- Tracing:
 - Stakeholder requirements to System Requirements
 - Test Case Result Report to System Requirements
 - System Requirements to Functional Requirements
 - System Requirements to Architecture



DEMO: AUTHORIZING TRACEABILITY

Steps:

1. Create trace with architecture elements
2. Create trace with Stakeholder Requirement
3. Create trace with Use Case elements
4. Perform impact analysis
5. Report in Jira Issue



DEMO: GLOBAL IMPACT ANALYSIS

Steps:

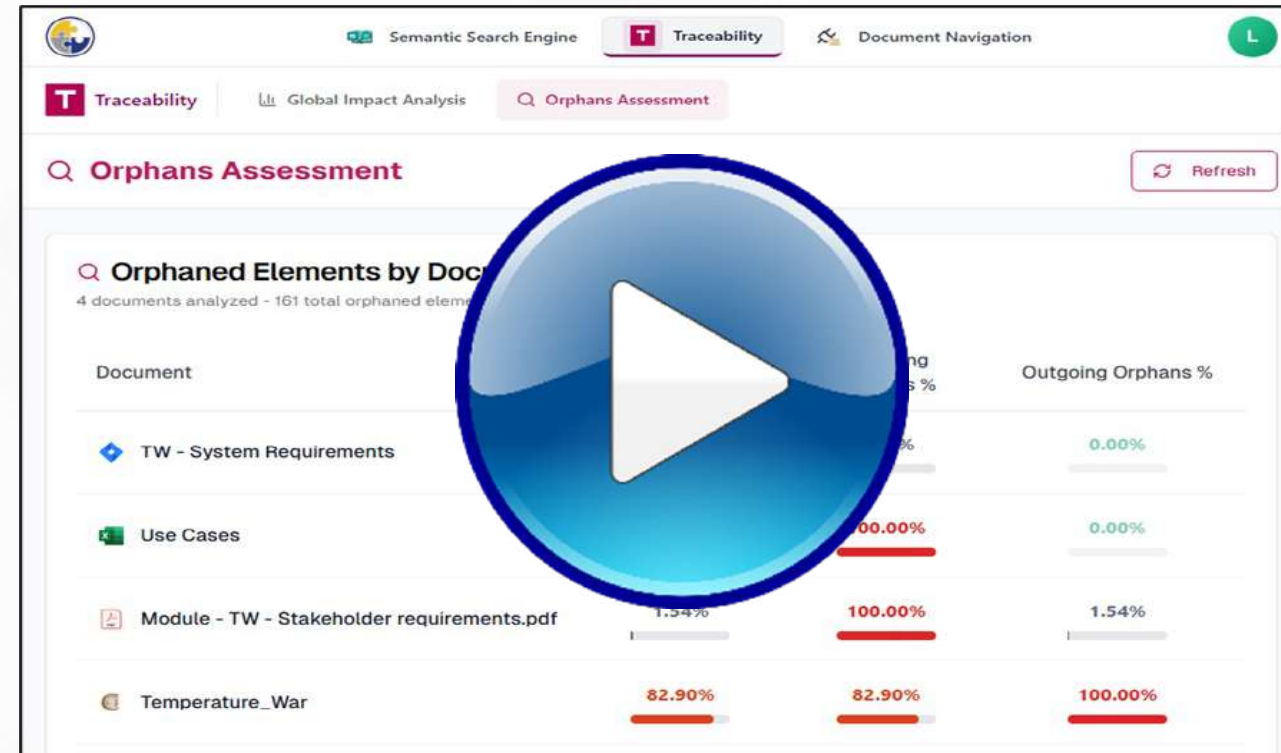
1. Global Impact Analysis tool
2. Traces architecture visualization
3. Using filters to analyze traceability



DEMO: ORPHAN ANALYSIS

Steps:

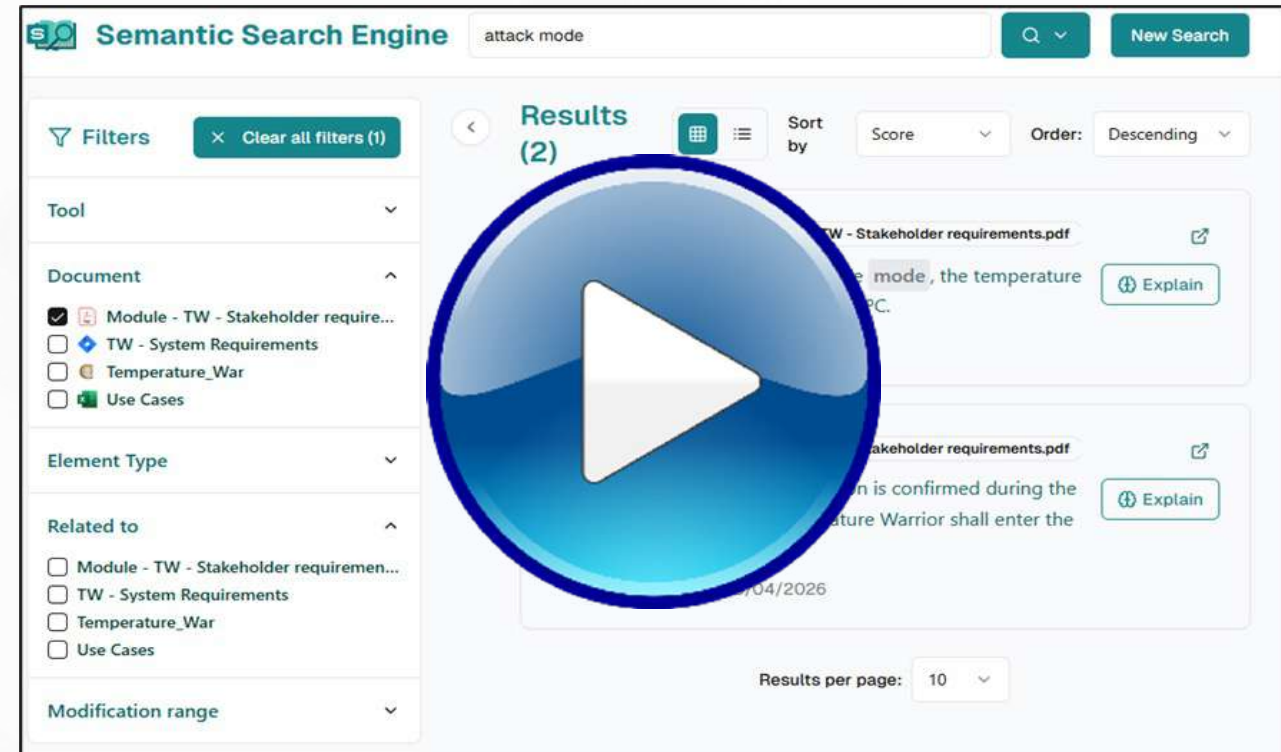
1. Open Orphan Analysis tool.
2. Examine the report for the set of documents.
3. Trace orphaned elements.
4. Examine the details of the traceability for a given document.
5. Change the need for a trace of a given element and assess again the document.



DEMO: SEMANTIC SEARCH AND IMPACT ANALYSIS

Steps:

1. Open Semantic Search tool
2. Look for elements that might trigger change requests.
3. Assess the details of the element
4. Perform Impact Analysis



The screenshot displays the Semantic Search Engine interface. The search bar contains the text "attack mode" and a "New Search" button. The results section shows two results, both titled "TW - Stakeholder requirements.pdf". The first result includes the text "In attack mode, the temperature" and has an "Explain" button. The second result includes the text "The temperature is confirmed during the" and "Temperature Warrior shall enter the" and also has an "Explain" button. A large blue play button is overlaid on the results. The left sidebar contains filters for "Tool", "Document", "Element Type", "Related to", and "Modification range". The "Document" filter is expanded, showing "Module - TW - Stakeholder require..." (checked), "TW - System Requirements", "Temperature_War", and "Use Cases". The "Results per page" dropdown is set to 10.

Q&A

➤ **Requirements Engineering in the Age of GenAI – Securing Your Workflows**

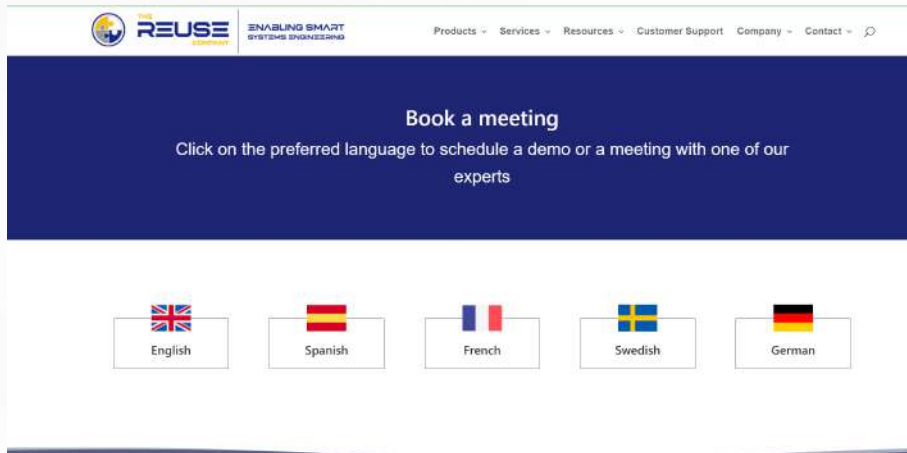
➤ **SAVE THE DATE: May 6, 2026**

Why you should join:

1. To check how we use deterministic semantic engines to establish a Synchronized Source of Truth (SSoT), ensuring that any requirement, whether human-written or AI-generated, meets rigorous ISO 15288 standards or guidelines such as those defined in the INCOSE Guide to Writing Requirements.
2. How to safely involve LLMs in the requirements elicitation process while using SES ENGINEERING Studio both as a writing assistant and ‘decision-enabler’ to verify the output.

Q & A

- **What would this save on your current project? Connect with us for more details!**
- **Book a meeting with a consultant**



- **Requirements Analysis Service** : <https://www.reusecompany.com/personalized-requirements-analysis>
- **Trial license request:** contact@reusecompany.com
- **Get further information...**




ENABLING SMART SYSTEMS ENGINEERING

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Software Tools for Digitizing the Systems Life Cycle Management

- Inter-connecting the complete Tools Ecosystem of your organization
- Enabling digital support to all the Technical Management processes (ISO 15288) for the engineering items of your tools ecosystem
- Integrating document centric (Documentation), knowledge driven (Reuse) and model-based (MBSE) approaches in one Hub

Systems Engineering Tools and Solutions for System Life cycle Management based on Connectivity, Interoperability and Reuse

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