COMPANY PROFILE · USE STORY

Find us at A&T · Vicenza

27-29 OCTOBER 2026 · FIERA DI VICENZA

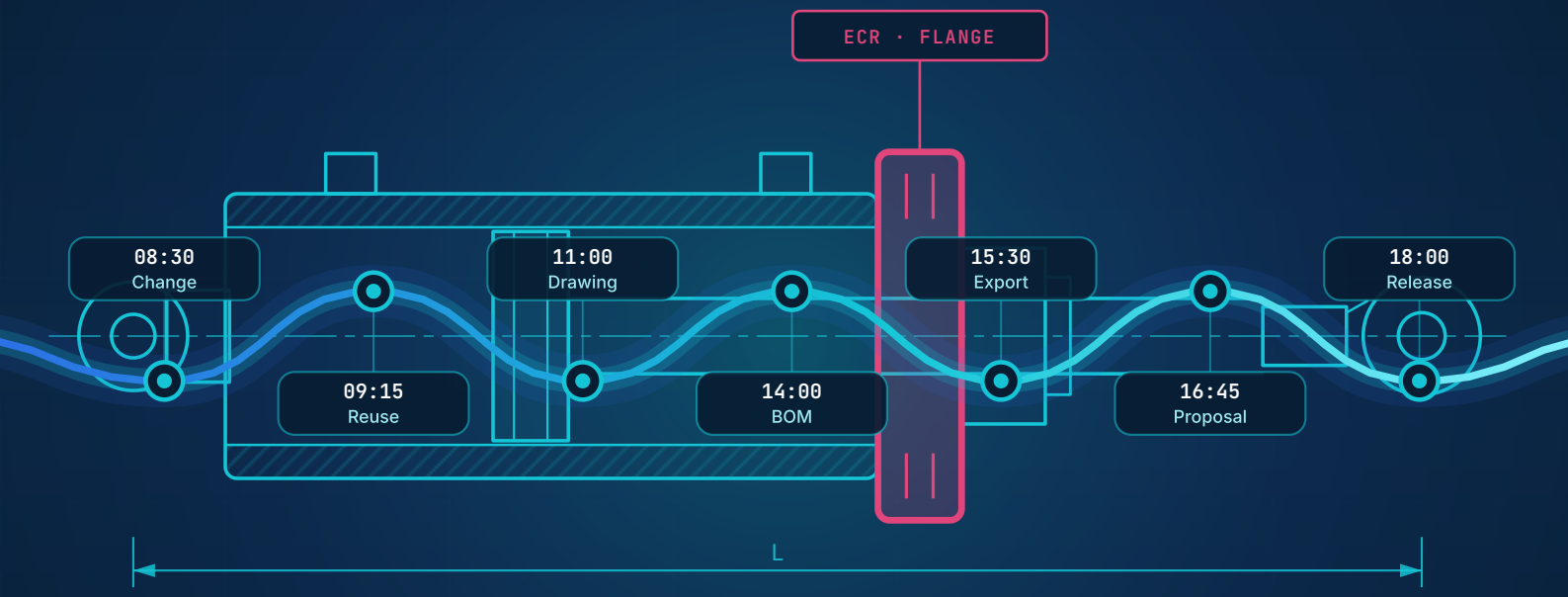
ONE DAY

08:30 → 18:00

A WORKING DAY · TIER-1 COMPANY

A day with AIENG.

One design change, six checks, a single digital thread. A day in the life of an R&D engineer, from the opening of the request to release.





THE COMMON THREAD

Elena has to release a change on the ACT-4587 actuator. During the day the change goes through six checks that, in a traditional flow, require many tools and many manual hand-offs. We walk through them with AIENG, without leaving the same view.

1 design change
The common thread of the day.

6 tasks from the real workflow
From reuse to the draft proposal.

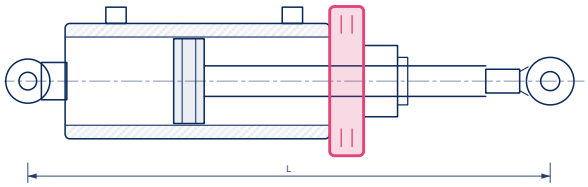
0 systems replaced
CAD, PLM and ERP stay where they are.

THE CHARACTER AND THE COMMON THREAD

One design change. Six checks. One single day.

Every day, in a Tier-1 company, dozens of design changes go through the same steps: checking the context, searching for what already exists, releasing the drawing, updating the BOM, checking export and compliance, answering the sales team. Each step lives in a different system. The change we follow today is just one, but it is representative of all of them.

ECR · ENGINEERING CHANGE REQUEST — OPEN



Component	Actuator flange ACT-4587-F
Reason	New material and revised fit tolerance
To check	Drawing · BOM · export control · compliance · cost
Goal	Release by end of day



Elena

Senior R&D engineer
Tier-1 supplier of actuation systems

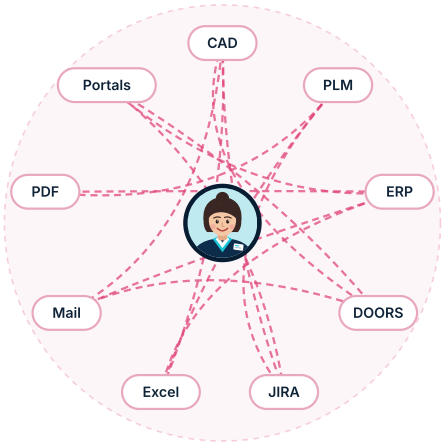
She doesn't have a tool problem. She has a hand-off problem. CAD, PLM, ERP and requirements management do their job. Time is lost between them, where Elena acts as the human interface: she copies a code, exports a sheet, checks a standard, writes an email.

WHAT SHE OPENS EVERY DAY

Siemens NX · Teamcenter · SAP · DOORS · JIRA · Excel · Mail · PDF archives

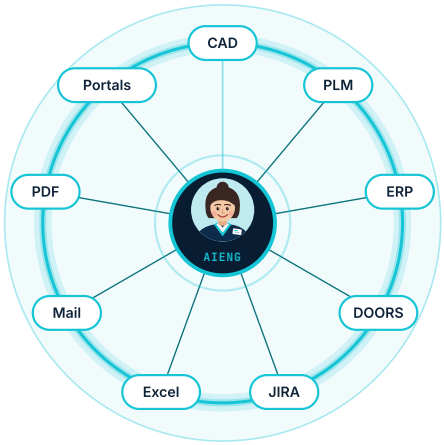
The same work, two ways of doing it

WITHOUT AIENG



Elena is the link between systems: every check is a round trip across applications, sheets and portals, with data copied by hand.

WITH AIENG



A digital thread runs through the same systems. Elena works in one view; the data stays where it is.

Elena is an illustrative character. The use cases, connectors and results cited in this document are those of the AIENG platform.

THE DAY ON ONE PAGE

Seven moments, one thread.

Each row is a task in the flow of a change. In the columns: the task, the tools usually opened to do it, the AIENG use case that solves it, and what Elena holds in her hands at the end.

	I NEED TO…	I USUALLY OPEN	WITH AIENG	AT THE END I HAVE
08:30	**Understand what the change touches**	CAD · PLM · ERP · DOORS · mail	**Digital thread** A single view of the component	Full context, no exports
09:15	**Not redesign what already exists**	PLM · drawing archive · colleagues	**Reusable design** Already validated components	Components to reuse or adapt
11:00	**Release a drawing without errors**	CAD · PDF · checklist · welding standards	**Drawing Intelligence** With CADBOX welding checks	Anomalies flagged before release
14:00	**Update the BOM and hand it to production**	PLM · Excel · ERP	**BOM classification and mapping** e-BOM → m-BOM	Classified and mapped BOM
15:30	**Check export control and compliance**	Customs portals · Excel · compliance office	**Export Control · Product Compliance** Dual use, regulations, materials	Traceable report before release
16:45	**Answer the proposals office**	Proposal archive · mail · past projects	**Intelligent Proposal Engine** Technical draft from company history	Draft to review, not to write
18:00	**Close the change**	All of the above	**Release package** Traced in the digital thread	Knowledge ready for the next change

08:30 Change · 09:15 Reuse · 11:00 Drawing · 14:00 BOM · 15:30 Export · 16:45 Proposal · 18:00 Release

08:30

TASK 1 OF 6

DIGITAL THREAD

The change arrives. The context is already all there.

Elena opens the morning queue. The change concerns the ACT-4587 actuator flange: new material and a fit tolerance to revise. Usually the first stretch of the day goes into rebuilding the context: what state the model is in, which revisions exist, which requirements the component touches, what cost and supplier it has.

WITHOUT AIENG: CAD → PLM → ERP → DOORS / JIRA → Mail



"Before I touch the model I need to understand what the change touches."

ELENA DECIDES

Elena chooses where to start. No exports, no sheet to reassemble.

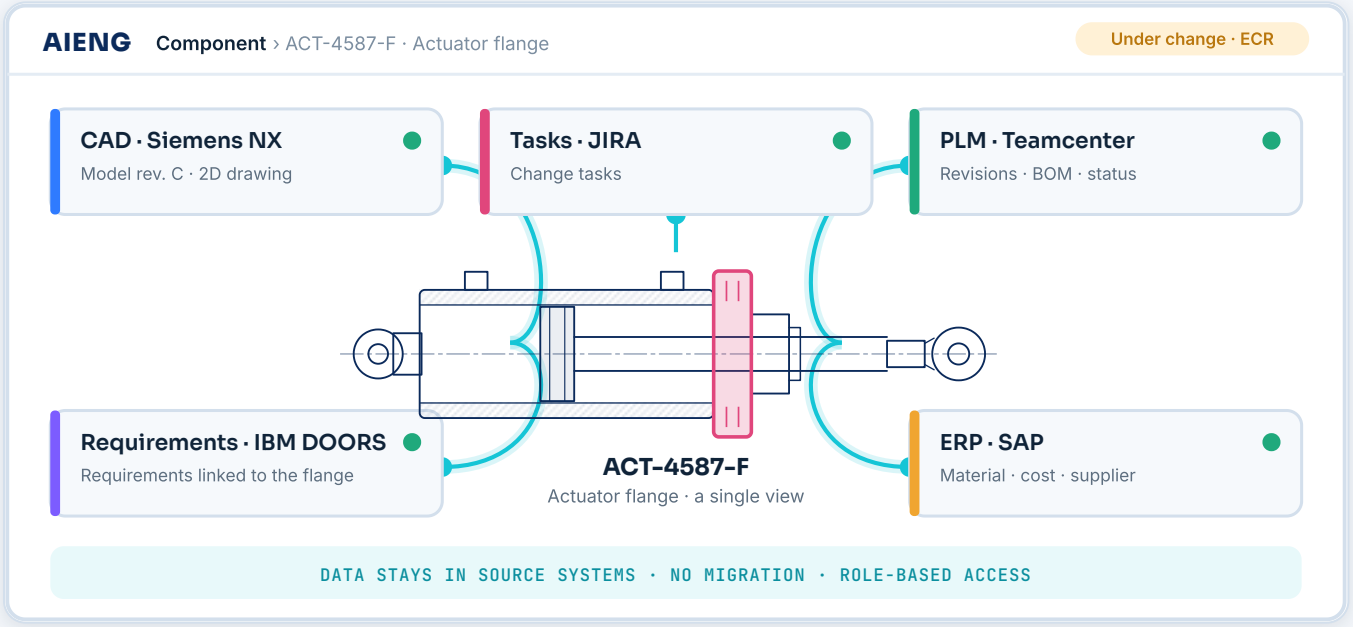


ILLUSTRATION · COMPONENT VIEW IN THE DIGITAL THREAD

WITH AIENG

1 Reads

Native connectors read geometry, revisions, BOM, requirements and ERP data from the source systems, in real time.

2 Connects

Every piece of data is attached to the component. The change opens with the context already assembled.

3 Leaves data where it is

No migration and no duplicates. Elena keeps working in her own CAD.

WHAT DOES NOT CHANGE

- CAD, PLM and ERP stay the same
- Data stays in the source systems
- Access stays role-based

08:30 Change · **09:15 Reuse** · 11:00 Drawing · 14:00 BOM · 15:30 Export · 16:45 Proposal · 18:00 Release

09:15

TASK 2 OF 6

REUSABLE DESIGN

Before drawing, search. And find.

The reflex is to open the model and redraw the flange. Elena knows something similar exists in the company, but finding it means querying the PLM by code, browsing drawing archives, asking a colleague at another site. When searching costs more than redrawing, you redraw, and variants of what already exists multiply.

WITHOUT AIENG · PLM by code → Drawing archive → File server → Colleague at another site



"I know we've already made a flange like this. The point is finding it."

ELENA DECIDES

Elena chooses: reuse, adapt or redraw. The suggestion does not decide for her.

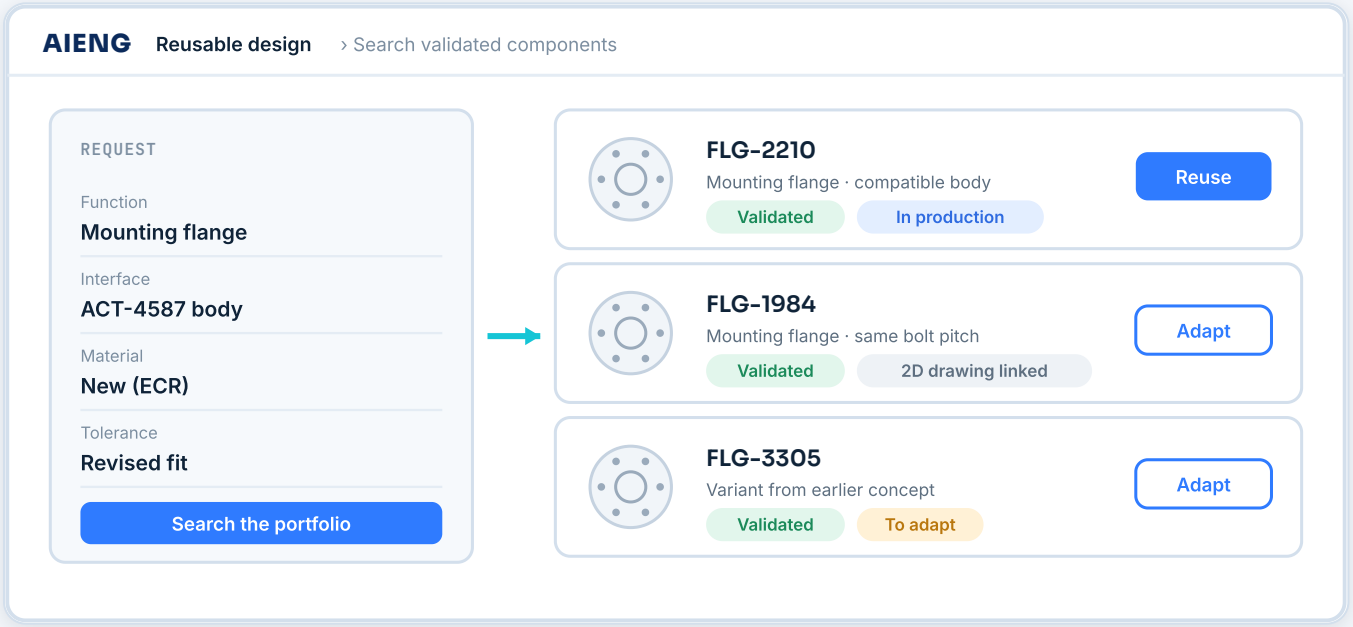


ILLUSTRATION · SEARCH FOR ALREADY VALIDATED COMPONENTS

WITH AIENG

1 Interprets

Starts from the request: function, interface, material of the component to change.

2 Searches

Queries the design portfolio: components already validated and already in production.

3 Proposes

Shows candidates with status and provenance. Avoids rework where the work has already been done.

OBSERVED

35%

reduction in design time through reuse

Observed: measured in a specific application case. Declared: target published by AIENG on aieng.ai. Results vary with data, process and configuration.

08:30 Change · 09:15 Reuse · **11:00 Drawing** · 14:00 BOM · 15:30 Export · 16:45 Proposal · 18:00 Release

11:00

TASK 3 OF 6

DRAWING INTELLIGENCE

The drawing is checked before it is released.

Elena has updated the 3D model and the 2D drawing. Release goes through a check that today is largely manual: dimensions, tolerances, notes, roughness, symbols, title block, welds, consistency with the model and with PLM data. A missing dimension found at inspection costs an entire revision cycle.

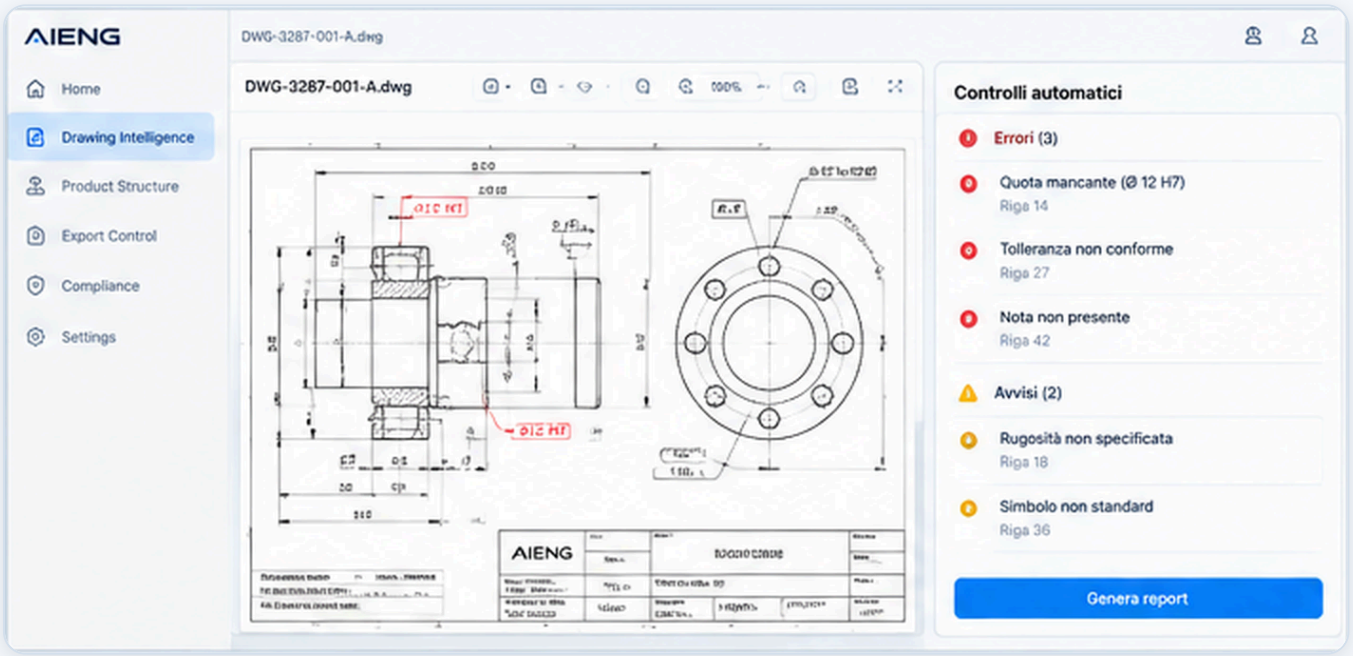
WITHOUT AIENG: CAD → Drawing PDF → Checklist → Welding standards → Reviewer colleague



“If inspection finds a missing dimension, I lose a revision cycle.”

ELENA DECIDES

Elena validates. Every flag can be verified on the drawing, line by line, and can generate the check report.



PRODUCT SCREENSHOT · DRAWING INTELLIGENCE · DRAWING DWG-3287-001-A

WITH AIENG

1 Extracts
Reads the 2D drawing as data: dimensions, tolerances, notes and title block become structured information.

2 Compares
Checks the drawing against the 3D model and PLM data, with CADBOX checks for welds.

3 Flags
Errors and warnings with a line reference: missing dimension, non-conforming tolerance, missing note.

OBSERVED

85 h/month
time saved on CADBOX welding checks

DECLARED

up to 70%
faster data extraction from drawings

Observed: measured in a specific application case. Declared: target published by AIENG on aieng.ai. Results vary with data, process and configuration.

08:30 Change · 09:15 Reuse · 11:00 Drawing · **14:00 BOM** · 15:30 Export · 16:45 Proposal · 18:00 Release

14:00

TASK 4 OF 6

PRODUCT STRUCTURE

The BOM comes back right first time.

After lunch the change reaches the BOM: new codes, a standard component replaced, the structure to carry from e-BOM to m-BOM for production. With fragmented PLM and ERP this means classifying components by hand, comparing structures in Excel, chasing inconsistencies. It is repetitive work that takes time away from design.

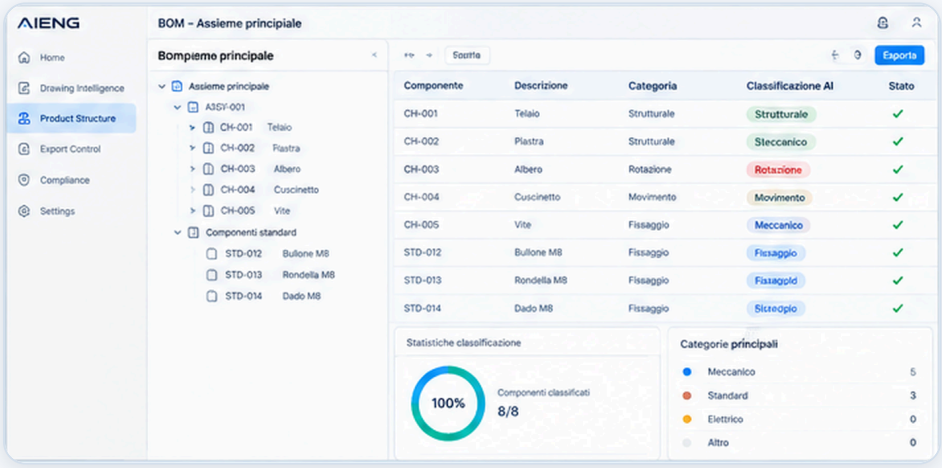
WITHOUT AIENG: PLM → Excel → ERP → Email to production



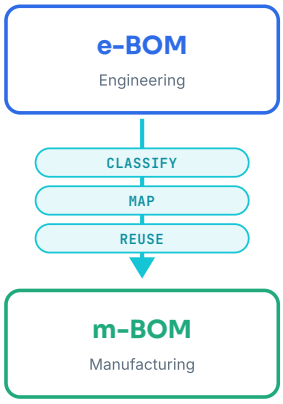
"The BOM has to come back right first time, or production stops."

ELENA DECIDES

Exceptions reach Elena. What is consistent goes through without intervention.



PRODUCT SCREENSHOT · PRODUCT STRUCTURE AND AI CLASSIFICATION



WITH AIENG

1 Classifies

Assigns a category to every component. Rules can also be defined in natural language.

2 Compares and maps

Compares the structure before and after the change and maps the e-BOM onto the m-BOM.

3 Identifies

Flags reusable items. Material cost comes from the ERP, in the same view.

OBSERVED

~90%

e-BOM → m-BOM automation

OBSERVED

< 1 min

for about 3,000 BOM lines

Observed: measured in a specific application case. Declared: target published by AIENG on aieng.ai. Results vary with data, process and configuration.

08:30 Change · 09:15 Reuse · 11:00 Drawing · 14:00 BOM · **15:30 Export** · 16:45 Proposal · 18:00 Release

15:30

TASK 5 OF 6

EXPORT CONTROL · PRODUCT COMPLIANCE

Export and compliance, before the release and not after.

Does the new material change the classification? For an actuator component the dual-use question is not incidental. It usually comes later, as a request from the compliance office: an Excel sheet, searches on customs portals, and if the answer is yes you go back to a change that is already done.

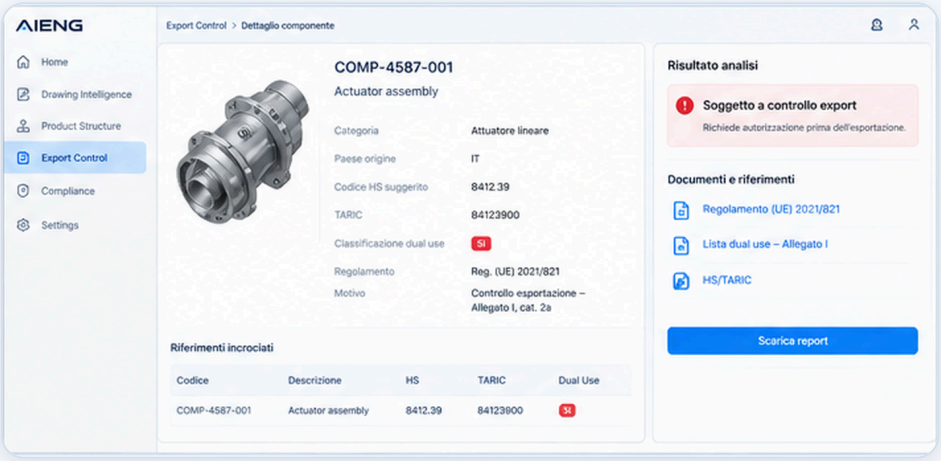
WITHOUT AIENG PLM → Excel → Customs portals → Compliance office → Email

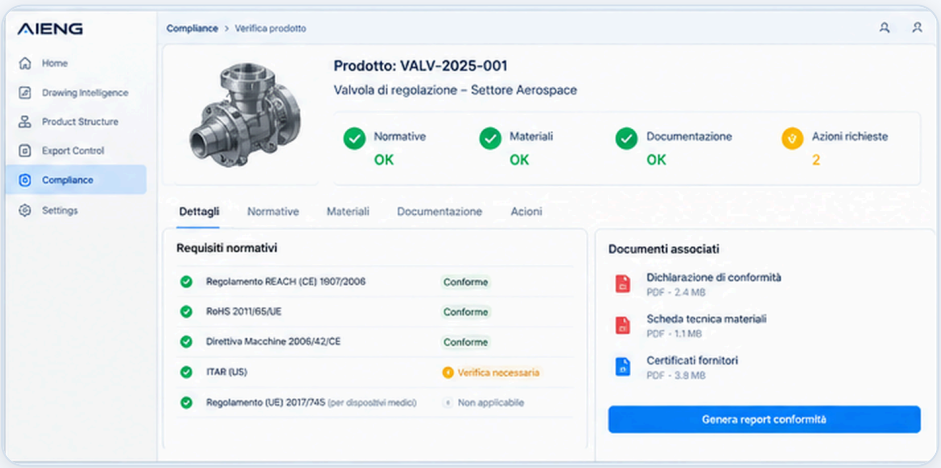


"I always find out about dual use too late."

ELENA DECIDES

Qualified staff supervise and sign off. The outcome stays traceable and reviewable.





PRODUCT SCREENSHOTS · EXPORT CONTROL · PRODUCT COMPLIANCE

Export Control / Dual Use

Suggested HS and TARIC codes, dual-use classification and reference regulation (Reg. (EU) 2021/821), with linked documents.

Product Compliance

Regulations, materials, documentation and required actions in a single view, with associated documents ready for the compliance report.

WITH AIENG

1 Classifies

Starts from PLM data and customs codes to propose classification and HS / TARIC codes.

2 Verifies

Indicates whether the component is subject to export control and under which regulation.

3 Documents

Produces a traceable, reviewable record, ready for the compliance officer.

OBSERVED

€750 → €45

cost per SKU in the Export Control process

Observed: measured in a specific application case. Declared: target published by AIENG on aieng.ai. Results vary with data, process and configuration.

08:30 Change · 09:15 Reuse · 11:00 Drawing · 14:00 BOM · 15:30 Export · **16:45 Proposal** · 18:00 Release

16:45

TASK 6 OF 6

INTELLIGENT PROPOSAL ENGINE

The proposals office calls. The answers already exist.

At the end of the day comes the request every engineer knows: an RFP for an actuator of the same family, technical section due tomorrow. The answers exist, scattered across old proposals, specifications and test reports. Finding and rewriting them takes hours away from design and from proposal strategy.

WITHOUT AIENG — Proposal archive → Past projects → Test reports → Email



"I need the technical section. The answers are there, but they are everywhere."

ELENA DECIDES

Elena reviews and corrects. The draft is a starting point, not a text to send.

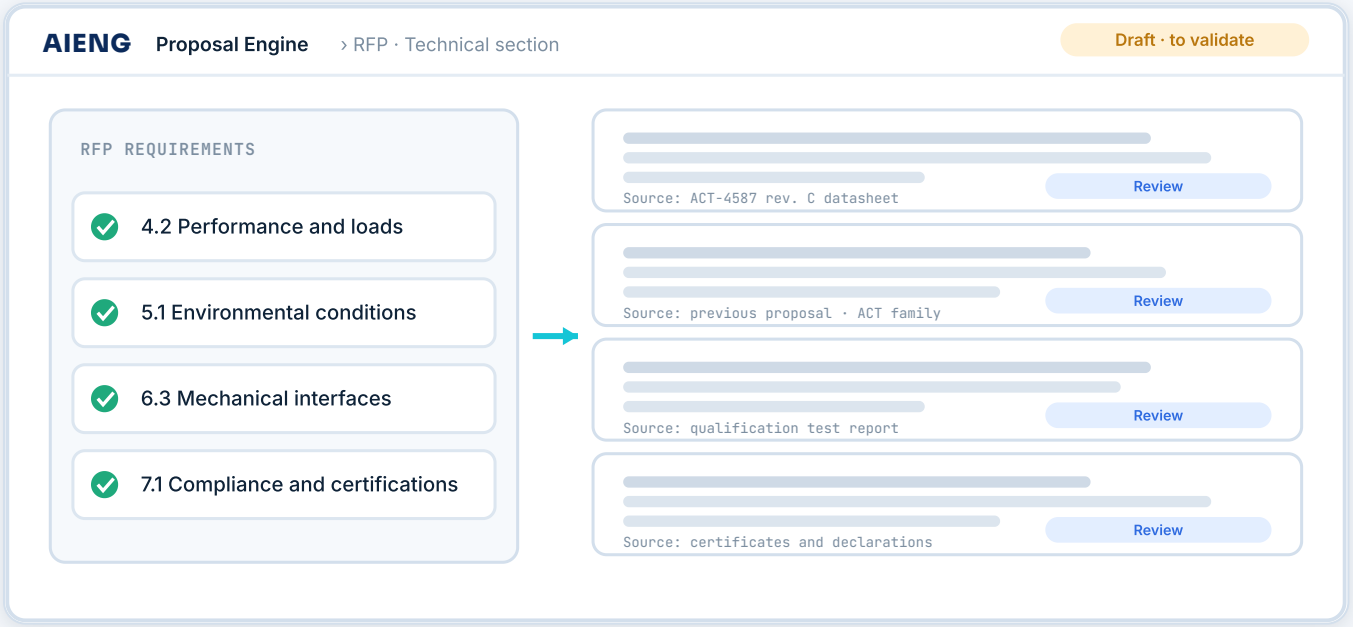


ILLUSTRATION · TECHNICAL RFP DRAFT FROM COMPANY HISTORY

WITH AIENG

1 Gathers
Starts from history: proposals, specifications, datasheets and test reports.

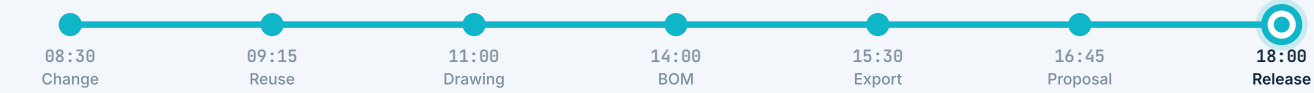
2 Drafts
Prepares a technical draft for every RFP requirement, starting from historical documents.

3 Leaves the strategy
Time shifts from writing to reviewing and optimising the proposal.

DECLARED
80%
faster proposals thanks to content reuse

DECLARED
30–50%
reduction in drafting hours

Observed: measured in a specific application case. Declared: target published by AIENG on aieng.ai. Results vary with data, process and configuration.



END OF DAY

18:00

The change is closed. And the thread is richer than this morning.

Elena releases the change package: checked drawing, classified and mapped BOM, export classification, compliance report, draft proposal. Everything is attached to the component, in the digital thread. Tomorrow anyone looking for ACT-4587 (a colleague, the quality office, an auditor) will find the complete story in the same place. The knowledge did not stay in Elena's head: it became a reusable asset.



THE NUMBERS OF THE DAY

TASK	INDICATOR	VALUE	TYPE	SOURCE
Component reuse	Design time	**−35%**	OBSERVED	Application case: reuse of validated components
Welding checks	Time saved (CADBOX welding)	**85 h/month**	OBSERVED	Application case: automatic drawing checks
Data extraction from drawings	Extraction speed	**up to 70%**	DECLARED	Target published on aieng.ai
e-BOM → m-BOM	Mapping automation	**~90%**	OBSERVED	Application case: BOM mapping
Large BOMs	Time for about 3,000 BOM lines	**< 1 min**	OBSERVED	Application case: BOM processing
Export Control	Cost per SKU	**€750 → €45**	OBSERVED	Application case: classification and verification
Proposals (RFP)	Speed · drafting hours	**80% · 30–50%**	DECLARED	Target published on aieng.ai

Observed: measured in a specific application case. Declared: performance target published by AIENG on aieng.ai. Results vary with data, process and configuration. The time sequence of the day is illustrative and does not represent a measurement.

BEHIND ELENA'S DAY

The questions an engineer would ask.

A day like this only works if the rest of the infrastructure holds. These are the answers to the most frequent objections from those who design and those who run the systems.

Do I have to change my CAD, PLM or ERP?	No. AIENG connects to existing systems with native connectors and does not replace them. Data stays in the source systems.
Where do my data and know-how end up?	They stay in your environment. The AI runs on-premise or in a private cloud and no data is sent to external AI services.
Can I trust the results?	Every outcome is explainable and traceable and goes through human validation (human in the loop), in line with the human oversight required by the AI Act. The engineer always decides.
Which AI model do you use?	The architecture is model agnostic: the model is chosen by use case, from proprietary algorithms to open-source models.
What if my case is not among these?	Modules combine like building blocks. A custom use case can be built with the self-service builder, without advanced AI skills.
How do we start?	From one high-impact use case, configured on your data, your rules and your workflows. Then we extend.

NATIVE CONNECTORS

CAD
Siemens NX · Dassault CATIA V5/V6 · PTC Creo · Autodesk Inventor

PLM / PDM
Siemens Teamcenter · PTC Windchill · Dassault ENOVIA

ERP
SAP, with read access to the PP and CO modules for costs and cost centres

Requirements and tasks
IBM DOORS (via OSLC) · Atlassian JIRA

HOW TO START

01
We choose the case
Bring a real change, a drawing, a BOM: the use case closest to your daily pain.

02
We configure it on your data
Connection to systems, customer rules and flows. Private AI and AI Act compliant, in your environment.

03
We measure and extend
Results are measured on your case. Then new modules are added on the same thread.

> **One use case at a time, on the same digital thread. Every module added reuses connectors, data and rules already configured.**

THE NEXT STEP

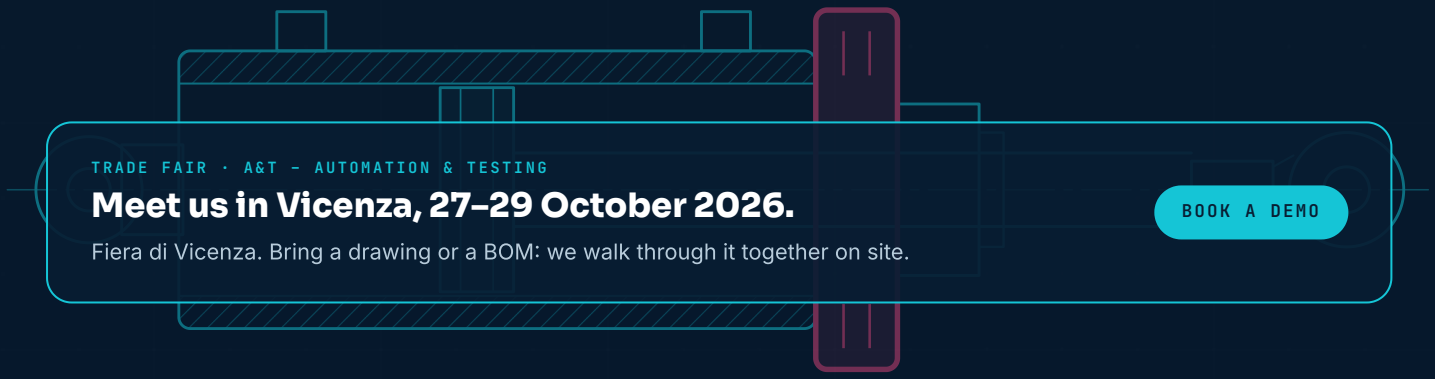
Bring us your day.

Pick a real design change: a drawing to release, a BOM to map, a component to classify for export. We walk through it together on your data and measure the result on your case.

Bring us a real ECR.

A demo on your drawings, BOMs and product data.

AIENG.AI



TRADE FAIR · A&T – AUTOMATION & TESTING

Meet us in Vicenza, 27–29 October 2026.

Fiera di Vicenza. Bring a drawing or a BOM: we walk through it together on site.

BOOK A DEMO

REGISTERED OFFICE

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00183 Rome (RM)

OPERATIONS OFFICE

Naples

Via Giovanni Porzio 4, Centro Direzionale Isola C2
80143 Naples (NA)

OPENING SOON
Turin

OPENING SOON
Rende (Cosenza)

ISO 9001

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