

Regulatory compliance documentation

Automatically generates, reviews, and submits regulatory compliance documentation packages for aerospace components and systems to meet FAA, EASA, and other aviation authority requirements.

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Get Your Blueprint

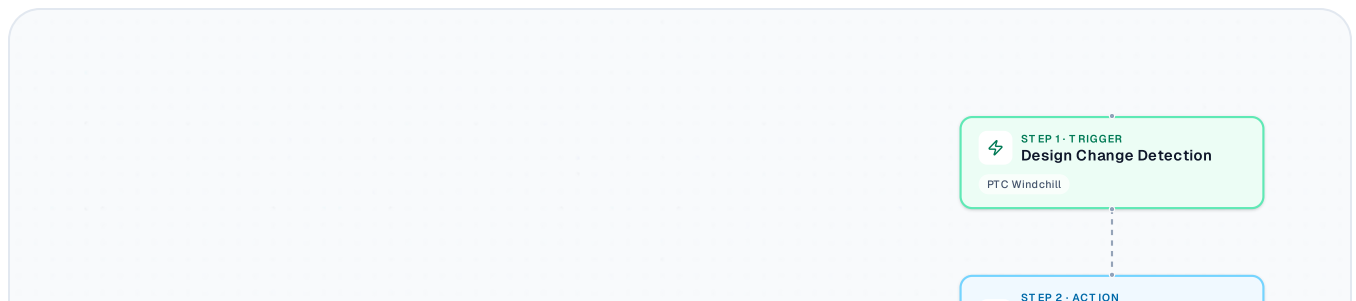


WORKFLOW TRIGGER

Design change request or new component certification requirement is submitted in PLM system

Visual Flow

Each node represents an automated step. Connections show how data and decisions move through the workflow.





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Step-by-Step Breakdown

Detailed explanation of each automated stage in the workflow.

1

⚡ TRIGGER

Design Change Detection

PLM system detects new component design or modification requiring regulatory compliance documentation. Workflow automatically initiates compliance documentation generation process.

2

 ACTION

Extract Technical Specifications

System automatically extracts CAD models, engineering drawings, and technical specifications from design databases. Material properties, dimensional tolerances, and performance parameters are compiled.

CATIA

Siemens NX

PTC Windchill

3

 ACTION

Generate Compliance Analysis

ANSYS simulation data is processed to validate component performance against regulatory standards. Stress analysis, fatigue testing results, and safety factor calculations are automatically compiled.

ANSYS

SAP for Aerospace & Defense

4

 DECISION

Validate Compliance Requirements

System checks if component meets all applicable airworthiness standards and regulatory requirements. Routes to manual review if critical safety parameters are outside acceptable ranges.

SAP for Aerospace & Defense

5

 ACTION

Compile Documentation Package

Automatically assembles technical data sheets, test reports, compliance matrices, and certification forms into standardized regulatory submission format. Digital signatures and approval workflows are initiated.

SAP for Aerospace & Defense

PTC Windchill

6

 ACTION

Submit to Regulatory Authority

Completed documentation package is electronically submitted to appropriate aviation authorities through secure portals. Tracking numbers and submission confirmations are recorded.

SAP for Aerospace & Defense

7

 OUTPUT

Generate Compliance Certificate

System produces final compliance certificate and updates component certification status in enterprise systems. Audit trail and document versioning are maintained for future reference.

SAP for Aerospace & Defense

PTC Windchill



Outputs

- Regulatory submission package

- Compliance certificate

AI Business OS

- Updated certification database records



Key Metrics

- Documentation preparation time
- First-submission approval rate
- Regulatory response time



Tools & Integrations

- PTC Windchill
- CATIA
- Siemens NX
- ANSYS
- SAP for Aerospace & Defense

AI Business OS

Actionable AI implementation strategies for business leaders ready to transform their operations.

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