



KEY UPDATES TO PTC'S PRODUCT PORTFOLIO: A FIRST TIME LOOK AT QUALITY, SUPPLY CHAIN & SAAS ENHANCEMENTS

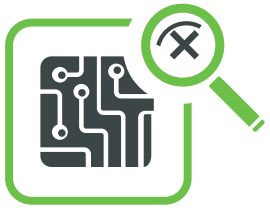


JOHN HALLER

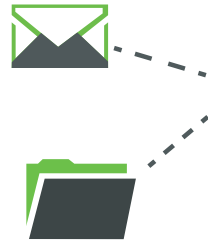
DVP & GM, PLM



THESE GAPS LIMIT ENTERPRISE STRATEGIC SUCCESS



Fragmented Data



Weak Traceability



**Manual Compliance
Processes**



**Limited cross-
functional Visibility**

TRANSFORMING THE ENTERPRISE WITH THE INTELLIGENT PRODUCT LIFECYCLE

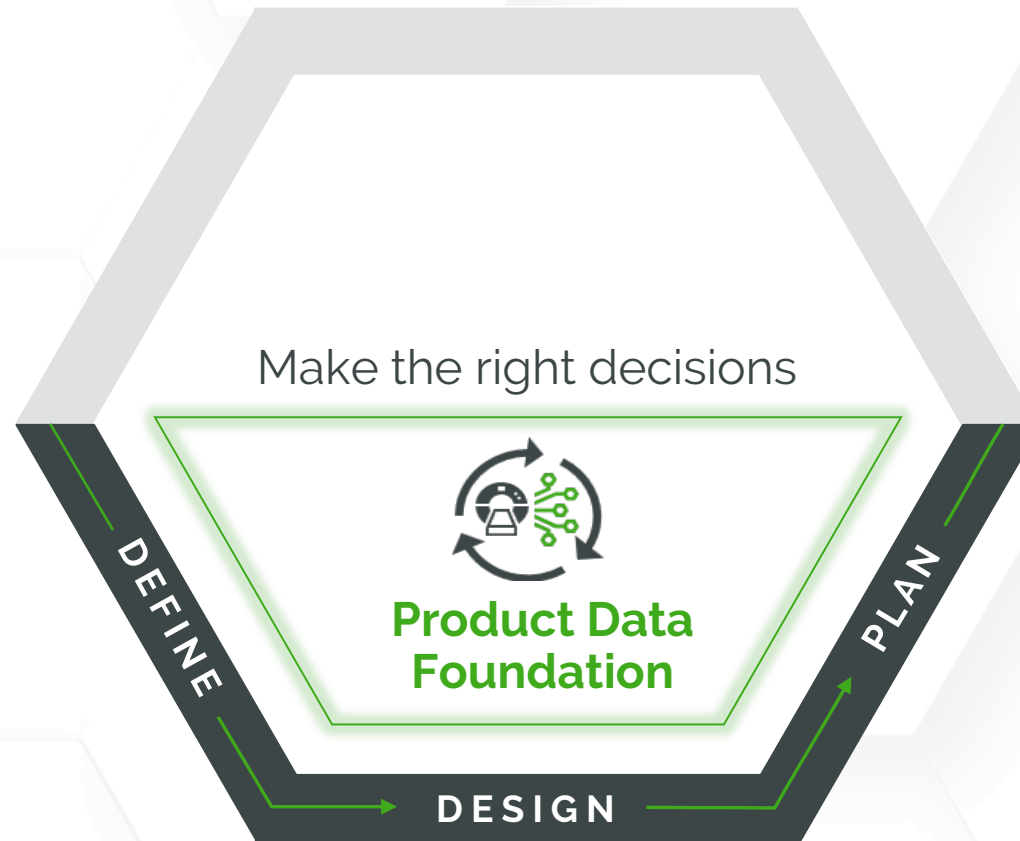
Orchestration

Build the right product

Collaboration

Build the product right

FOCUS ON
INTEGRATED
PRODUCT
ENGINEERING 





Building Quality Into Products

The FDA promotes embedding quality early in product development rather than relying on post-production inspection.

Data-Centric PLM Strategy

Windchill's approach operationalizes quality, regulatory, and risk management within the product lifecycle management.

Strategic Enabler for MedTech

Adopting a **data-centric** PLM supports safer devices, faster innovation, and better regulatory outcomes in healthcare.

Industry-Validated Approach

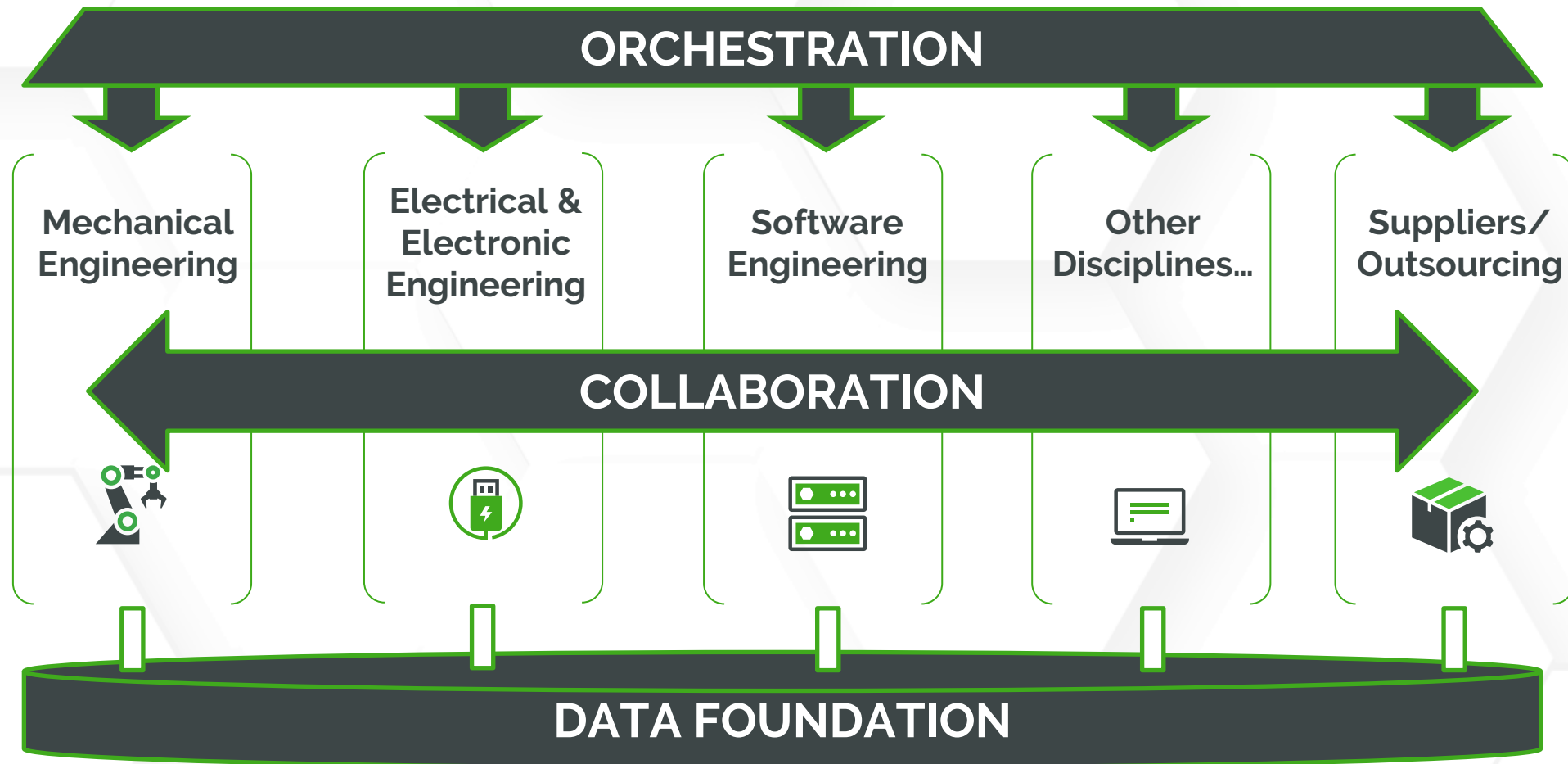
MDIC's "Facilitating a Culture of Quality" report confirms that leading MedTech organizations are shifting from reactive compliance to proactive, patient-centric quality cultures.

WHY THE ALIGNMENT MATTERS



INTEGRATED PRODUCT ENGINEERING (IPE)

PTC'S SOLUTION FOR INTEGRATED PRODUCT ENGINEERING



New Releases!

Digital Product Traceability



DPT

Linking & Tracing between Windchill, PAT, Codebeamer, PTC Modeler, PTC RV&S & 3rd party OSLC compliant tools

New Capability!

PTC Relationship Explorer



PRE

Link Viewing across Windchill, Codebeamer, PAT, PTC Modeler, PTC RV&S & 3rd party OSLC compliant tools

Core Data
Requirements
SE/MBSE
BoM
Test

Link Viewing
Viewing
Reporting

New Capability!

Task & Change Collaboration



TCC

Starting, Linking & Collaboration on Tasks & Changes across Windchill and Codebeamer

New Product!

Product Architecture



PA

Product Architecture definition to simplify Systems Engineering
Orchestrate PLM & ALM

Task & Change
Linked Change
Enterprise Change

PTC Ignition

```
0001D67C: F8 83 4C 07 07 bne D019A8; Manipulation (S044)
0001D681: A5 FF ldr RPU2000value, [RPU2000value, #0]
0001D683: 09 04 ora #584
0001D685: 85 FF str RPU2000value, [RPU2000value, #0]
```

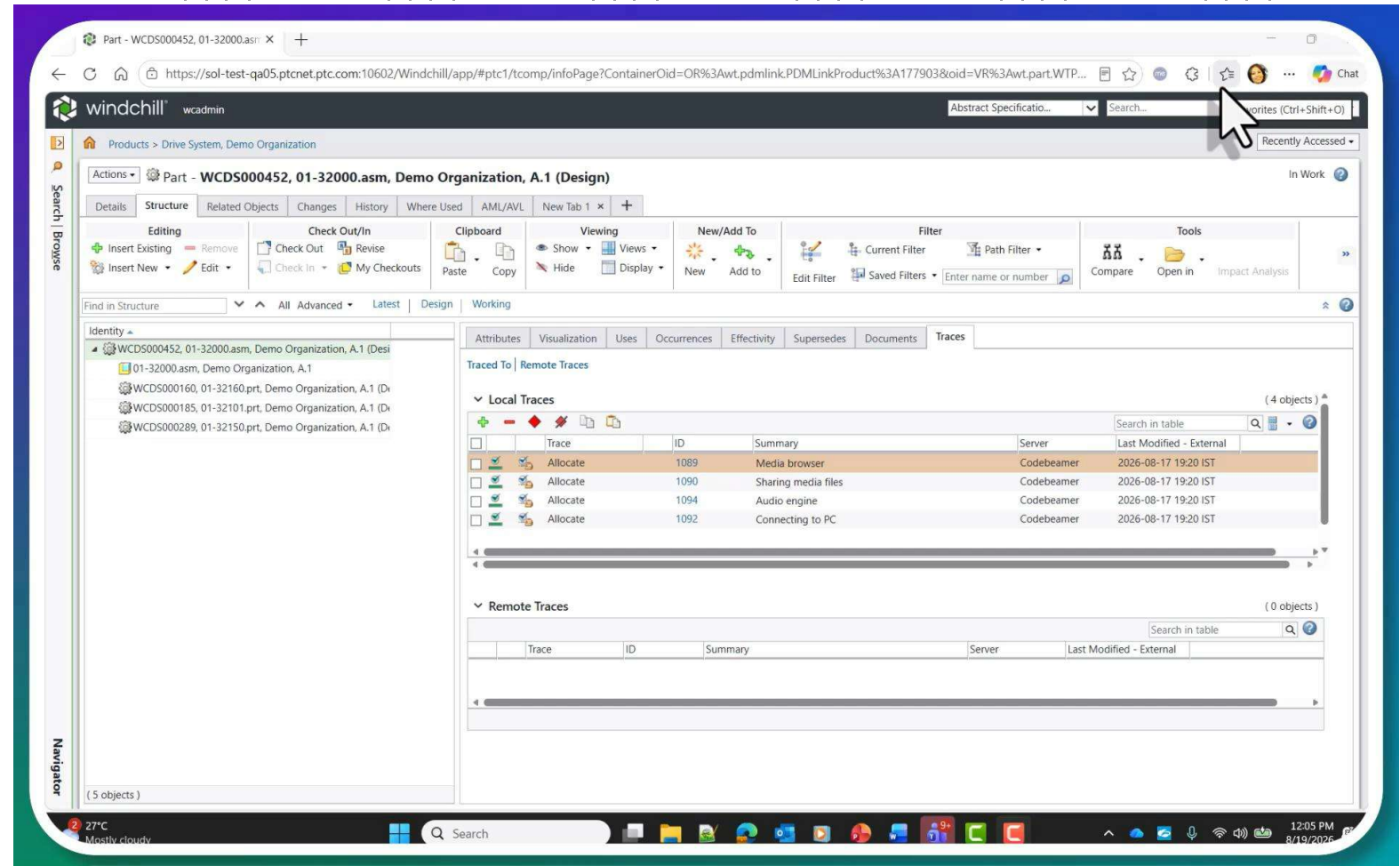
INTEGRATED PRODUCT ENGINEERING

PTC RELATIONSHIP EXPLORER (PRE)

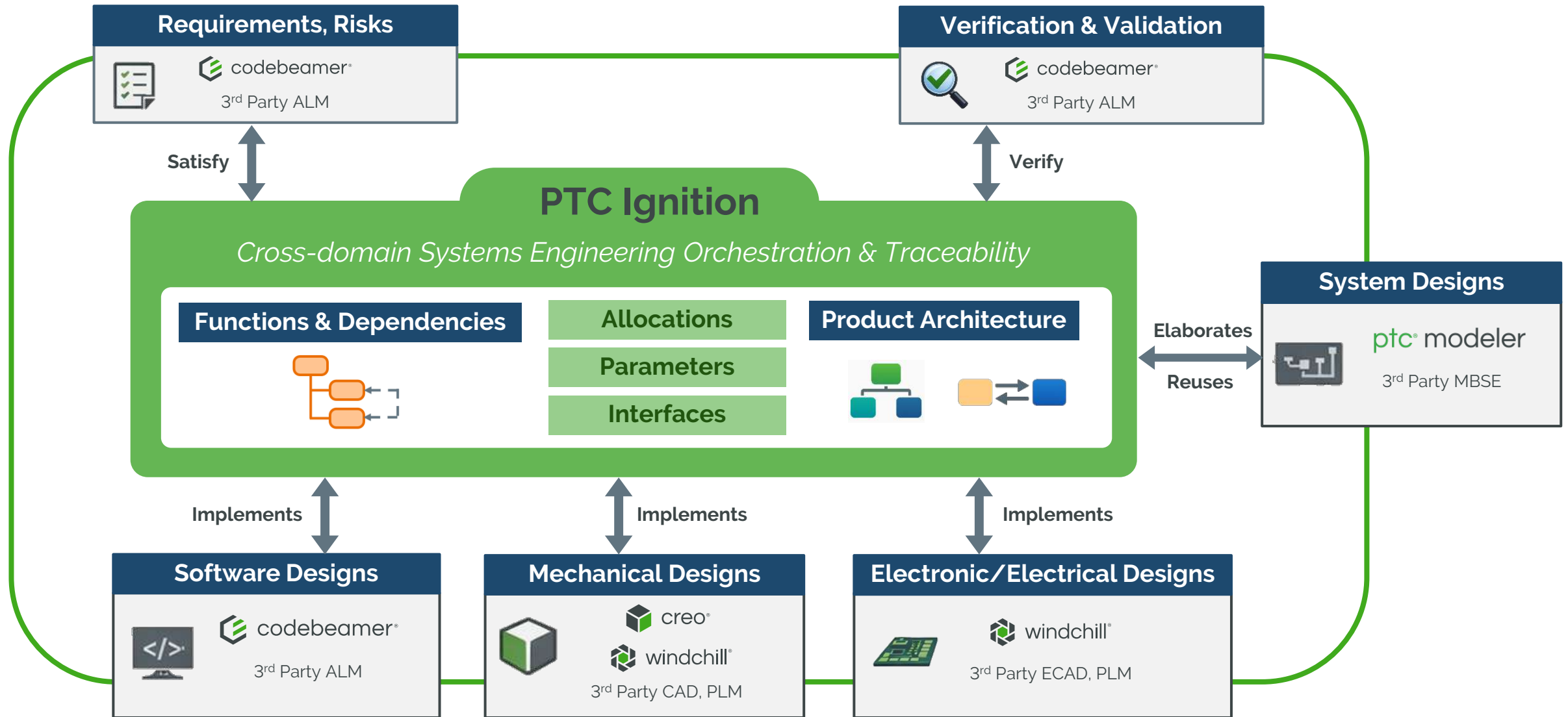
Aggregate and display data and relationships across Windchill, Codebeamer & more...

GA: Nov 2026 (Windchill 2027.)

- Launched from Windchill, Codebeamer or standalone
- Link graph with Data Items and their Relationships
- Data Items have an icon that identifies their type
- Relationships have labels that identify the link type
- Relationship Properties, explaining link meaning
- Flexible Layout
- Link-based Filtering
- Optional Swim Lanes



PTC IGNITION – PRODUCT ARCHITECTURE

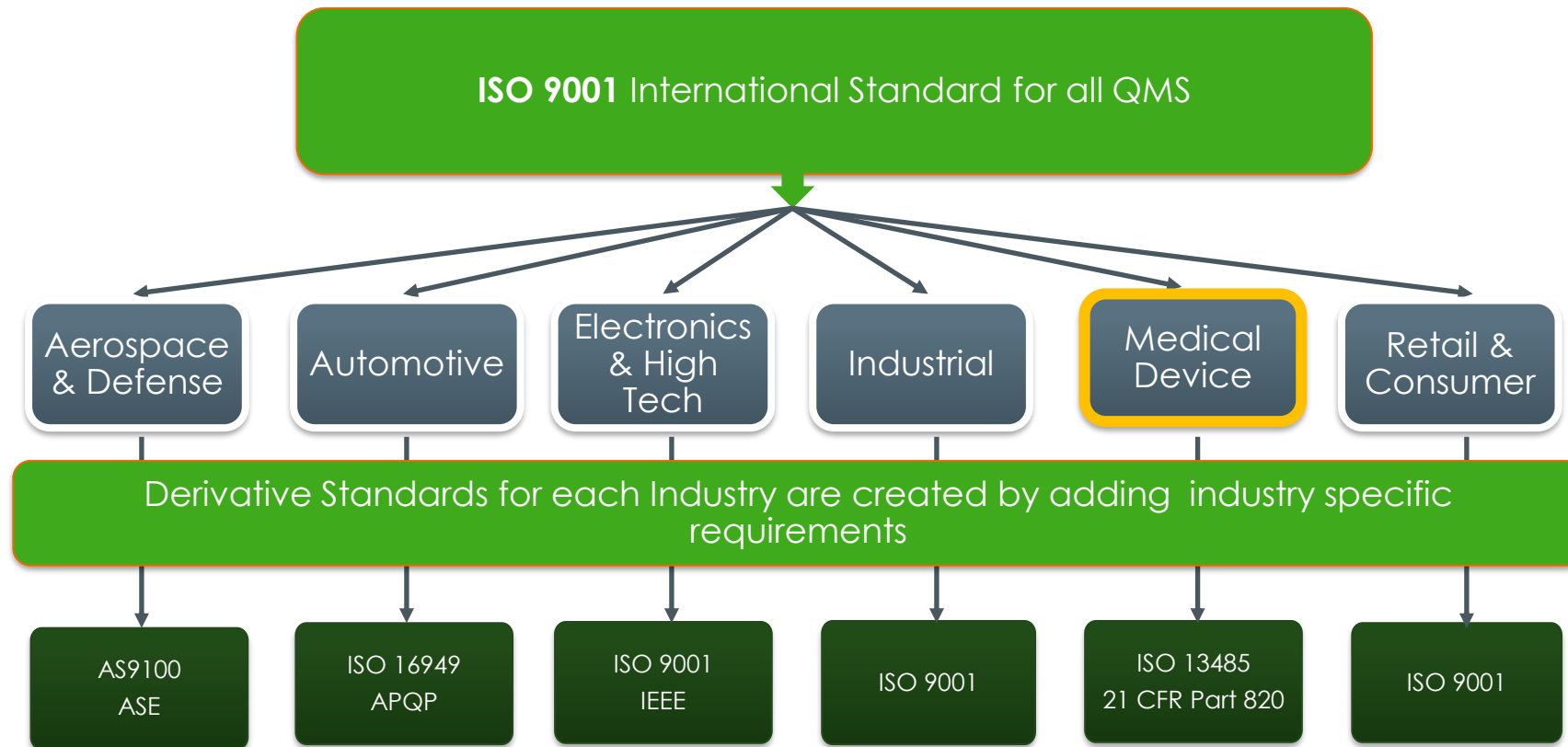




QUALITY

WINDCHILL QMS

Architect a QMS solution to support a fully configurable cross-industry application, empowering every industry to tailor the system to meet the distinct derivative standards of each industry.

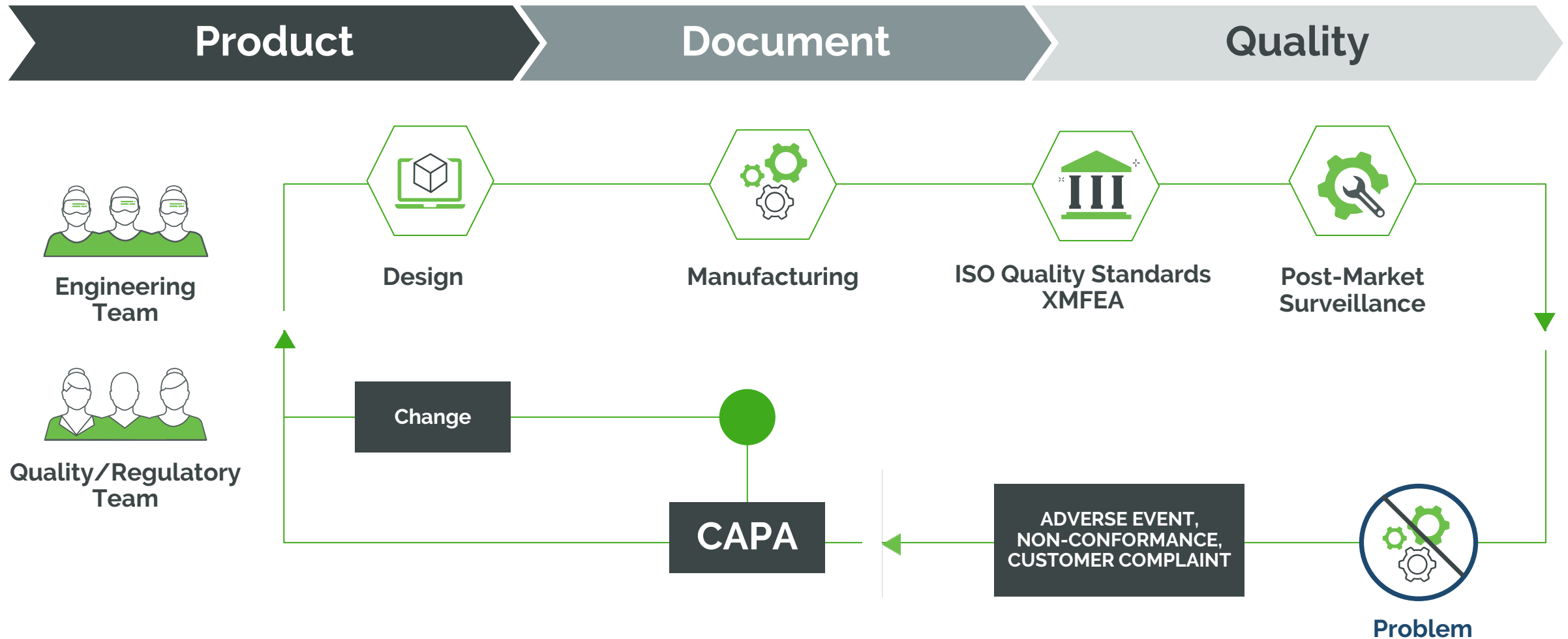


"ISO 9001 is the international standard that specifies requirements for a quality management system (QMS) Organizations use the standard to demonstrate the ability to consistently provide products and services that meet customer and regulatory requirements. It PROVIDES A FRAMEWORK FOR ORGANIZATIONS TO Define a Whole-Lifecycle Approach to Product Design, Manufacture & Service"

CLOSED-LOOP QUALITY ARCHITECTURE

PTC enables end-to-end traceability across Engineering, Manufacturing, and Quality, forming a true digital thread from requirements through validation and production.

Tight integration ensures quality data flows seamlessly—without exporting, re-mapping, or reconnecting data across external tools.



INTRODUCING WINDCHILL FMEA

■ Value of Native FMEA in Windchill:

- Stakeholders have a clear FMEA connected to the end item, allowing for informed future decisions in all review and change processes.
- FMEA is in one system where users can review, approve and access the digital thread without traversing multiple systems.

■ Primary Focus:

□ DFMEA:

- Generate a design FMEA inside the Windchill Interface with direct association to the WT Part end item(s) and design verification/validation objects.
- The DFMEA Object follows the Life Cycle of a Part and is included in Change Control Pathways.

□ PFMEA:

- Generate a process FMEA inside the Windchill Interface with direct association to the Windchill Process Plans and Manufacturing Validation and Part Objects.
- The PFMEA Object follows the Life Cycle of a Manufacturing Objects and is included in Change Control Pathways.

- Manage & Maintain **Library Suggested Failures/Effects** & Rating Scales while allowing for free-form entry.

INTRODUCING NATIVE FMEA INTO WINDCHILL QMS



Strengthen Closed-Loop Quality Through the Digital Thread

- Stakeholders have a clear FMEA connected to Parts
 - Informs Future Decisions in Review and Change Processes
 - Quality Escapes digitally threaded back into the DFMEA
- Capabilities:
 - ✓ Support dynamic subject linking between XFMEA and design & process artifacts.
 - ✓ Enable import from spreadsheet to allow for a smooth customer transition from Spreadsheets to Integrated FMEA.
- PFMEA support planned for Windchill 2028.0.0

Products > Drive System, Demo Organization

DESIGN FMEA 00041, DEMO DRIVE SHAFT, Demo Organization, A.4 Released

Details
Attributes
Subjects
FMEA Line Items
History
Maturity History
Version History

FMEA Line Items

Subjects: WCD5000001, 01-10000.asm, Demo Organization, A.1 (Design)

Identity

- WCD5000001, 01-10000.asm, Demo Organization, A.1 (Design)
- WCD5000098, 01-33110.prt, Demo Organization, A.1 (Design)
- WCD5000124, 01-40000.asm, Demo Organization, A.1 (Design)
- WCD5000316, 01-70000.asm, Demo Organization, A.1 (Design)
- WCD5000334, 01-33100.prt, Demo Organization, A.1 (Design)
- WCD5000465, 01-50000.asm, Demo Organization, A.1 (Design)
- WCD5000534, 01-20000.asm, Demo Organization, A.1 (Design)
- WCD5000542, 01-31000.asm, Demo Organization, A.1 (Design)

Connected Part ID & Version

Drag & Drop Part to Failure At

FMEA Line Items

*MyTableView

	Failure At	Failure Mode	Harm Hazard	Failure Effect	Severity	Occur...
100	WCD5000022, oilpump_coverplate.prt, D...	cover plate cracking	Loss of Oil pressure leading to engine damage, en...	Oil Leakage, lowoil pressure	9	2
100	WCD5000022, oilpump_coverplate.prt, D...	cover plate warpage	Loss of Oil pressure leading to engine damage, en...	Reduced oil pressure, accelerated engine w	9	3
200	WCD5000760, oil_pan.prt, Demo Organiz...	oil pan leakage	Oil starvation resulting in engine seizure, vehicle d...	Oil loss, engine damage	9	3
501	WCD5000384, v8_timing_chain.prt, Dem...	Chain Elongation	Engine performance degradation, loss of power, in...	Degraded engine timing, performance los	8	5
502	WCD5000384, v8_timing_chain.prt, Dem...	Chain breakage	Catastrophic engine failure, sudden loss of propuls...	Catastrophic engine failure, valve-to-pist	10	2
503	WCD5000384, v8_timing_chain.prt, Dem...	Excessive chain slack	Engine stall, loss of propulsion, possible loss of ve...	Timing variation, noise, possible timing jur	9	4
700	WCD5000298, 01-2_front_oil_seal.prt, De...	Seal Leakage	Oil starvation resulting in engine seizure, vehicle di...	Lubricant loss, premature wear	8	3
900	WCD5000451, water_pump_housing.prt...	Housing Break	Engine overheating, engine damage, potential vehi...	Contamination Ingress		
900	WCD5000451, water_pump_housing.prt...	Housing Crack	Engine overheating, engine damage, potential vehi...	Contamination Ingress	7	3

Edit In-Line

Link to Quality Records

Design FMEA Line Items

Details

Attributes

General

Function: Failure Mode: Failure Effect: Cause: Prevention: Design Controls: Severity: Actions: Occurrence: Detection: Risk Priority Number:

System

Created On: 2026-04-17 10:19 MDT
Last Modified: 2026-04-17 10:19 MDT

Related Objects

Document Number	Name	Type	Version	State	Last Modified
TRM-OC-2026-001	Gulf Cart Safety Test Method	Test Method	1.0	Approved	2026-04-12 13:25 MDT
DVR-OC-2026-005	Design Verification Report - DFMEA	Design Verification Report	2.1	In Review	2026-04-20 16:40 MDT

Recorded by: CAPA/NCR

Connected CAPA Records

ID	Title	Status	Date Opened	Assigned To
CAPA-2026-001	Corrective Action - Brake Assembly	In Progress	2026-03-15	John Smith
CAPA-2026-002	Preventive Action - Motor Controller	Closed	2026-02-28	Sarah Johnson

Connected NCR Records

ID	Title	Status	Date Opened	Assigned To
NCR-2026-045	Non-conformance - Battery Pack	Open	2026-04-10	Mike Davis
NCR-2026-046	Non-conformance - Steering Column	Under Review	2026-04-18	Emily Chen



This slide contains forward looking information that is subject to change at any time at PTC's sole discretion and without notice.

AI IN XFMEA

■ FUTURE: AI XFMEA Integration

- AI Tool turns internal and external quality escape intelligence into user approved auto-generated FMEA Content.
- AI-driven FMEA recommendations accelerate risk analysis by surfacing escape-based insights or current similar product/process requirements the user can instantly accept into FMEAs.
- User is asked whether to include the AI results, and it is auto populated upon approval by the XFMEA owner. This allows for confirmation of data prior to population.

QUALITY MODULE OVERHAUL – WC2028

- Clean up the Quality object model to better align with core Windchill objects of parts, change, etc
- Complete update of the User Experience utilizing NextGenUI
- Elimination of popups, identification of where you are in the process, bring all the right data to you
- Support for process and manufacturing objects to allow non-conformance against a process step/operation
- Improvements in large volume complaint record support
- Enhanced support for attachments and responsibility assignments



USER EXPERIENCE AND PRODUCTIVITY

WINDCHILL NEXTGEN USER EXPERIENCE (UX) STRATEGY

Workflow-First



Experiences aligned with **best practice** driven workflows, with **less friction** for **faster execution**

Modern UX



Usable, scalable experience that supports both **expert authors** and **enterprise users**

AI Embedded



Less time searching & interpreting data, **more decision support** where work happens

NextGen modernizes Windchill by putting product workflows first – driven by best practices, enhanced by AI and delivered progressively for the enterprise

WINDCHILL UX MODERNIZATION ROADMAP

WINDCHILL 13.1.2 (Today)

BOM Reports

New UI for accessing BOM reports

Home Page Preview

Folder, Product, Library, & Project

Browsers



WINDCHILL 2027 (Nov '26)

BOM Reports

Home Page

Profile-based home pages for user roles

CAD Workspace

Server-managed, structured, visual workspace

Change Management

View, edit, & create Problem Reports & Change Requests

Document Management

View, edit, & create documents

Quality Management

Design FMEA

WINDCHILL 2028 (Oct '27)

Home Page

CAD Workspace

Change Management

Document Management

BOM Management

Quality Management

Windchill Extension Framework

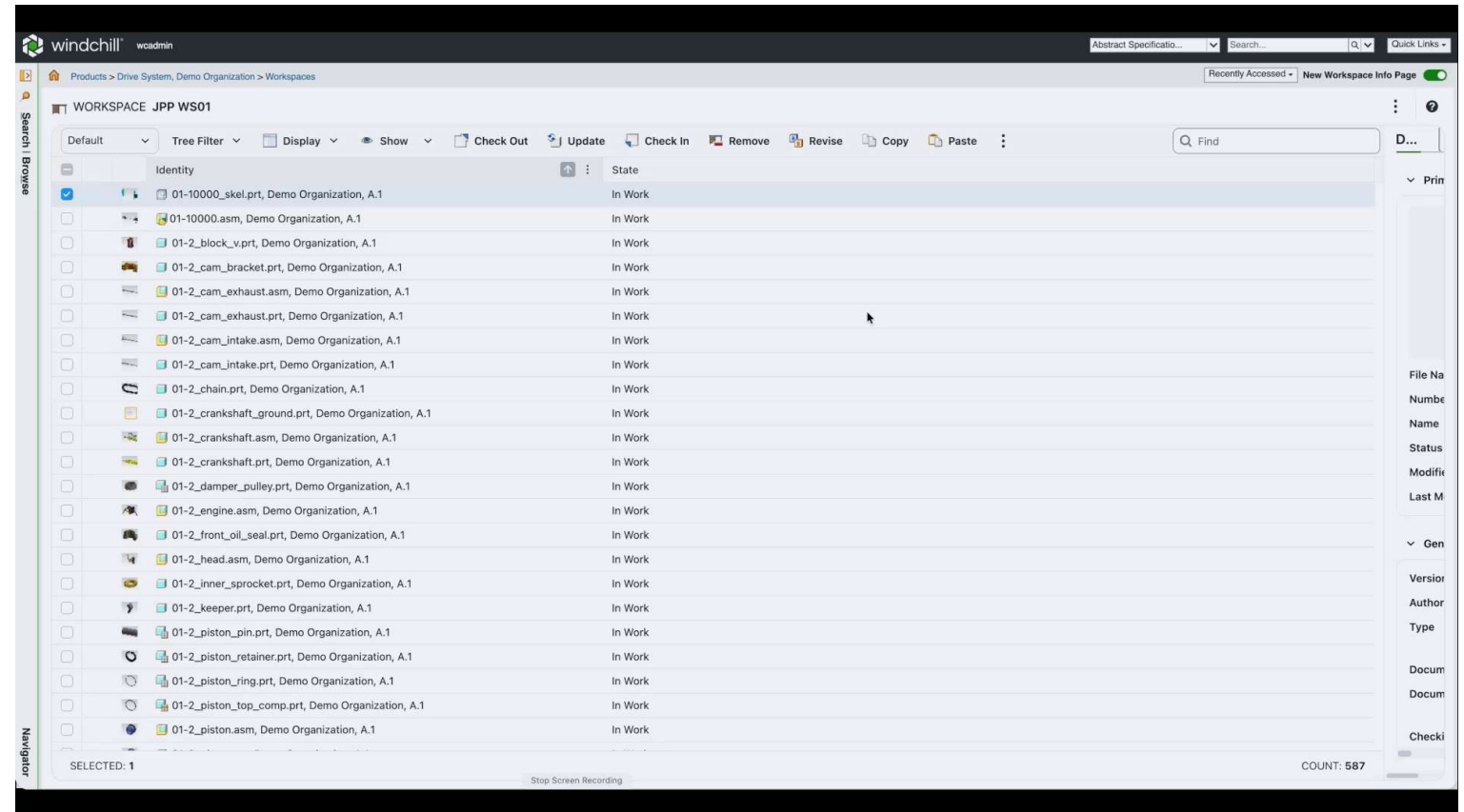
User Awareness & Collaboration Tools

Administration Tools & Guidance

CAD DATA MANAGEMENT – MODERNIZED WORKSPACE EXPERIENCE

GA: Oct 2026 (Windchill 2027.)

- Enable users to work in context
 - Streamline access of information
- Flexibly work on structure or list by user preference
- Improve stability and performance



Seamless
Collaboration

Enabled
Personalized
Workflows

Faster Decision-
Making

Scalable
Performance

Benefits:

WINDCHILL CHANGE MANAGEMENT – WHAT’S COMING

NGUI - 2027.0.0

■ Next Gen Info Pages:

- Problem Report
- Change Request
- Change Notice
- Change Task
- Variances
- Promotion Request
- Design Review

■ Edit:

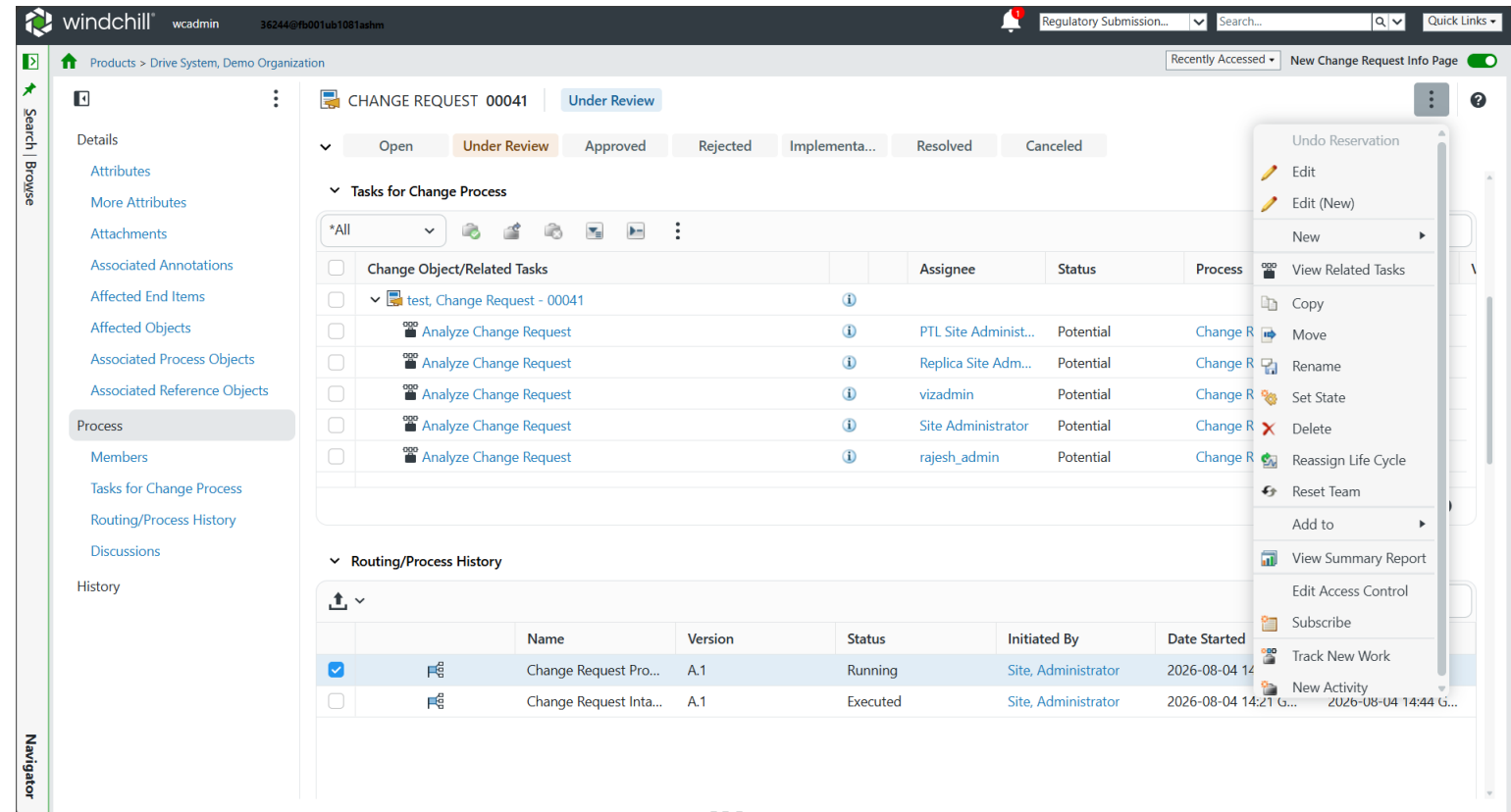
- Change Request
- Problem Report

■ Create New:

- Change Request
- Problem Report

■ State/Status Diagram

■ Submission Enhancements



BOM Redline - 2027.0.0

- Improvements to Synchronization & Suspect Handling of Released Changes with Open BOM Redlines
- AML Table Enhancements
 - Find Picker for Sourcing Context (search)
 - Tool tip for Manufacturer Part

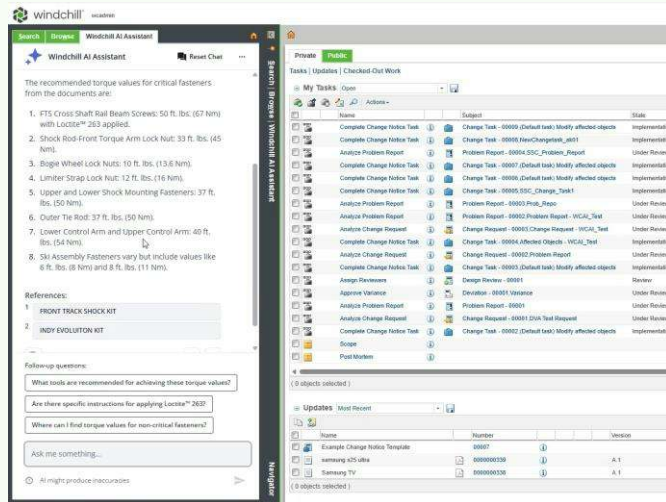


WINDCHILL AI

WINDCHILL AI

AI Assistants

Released April 10th, 2026

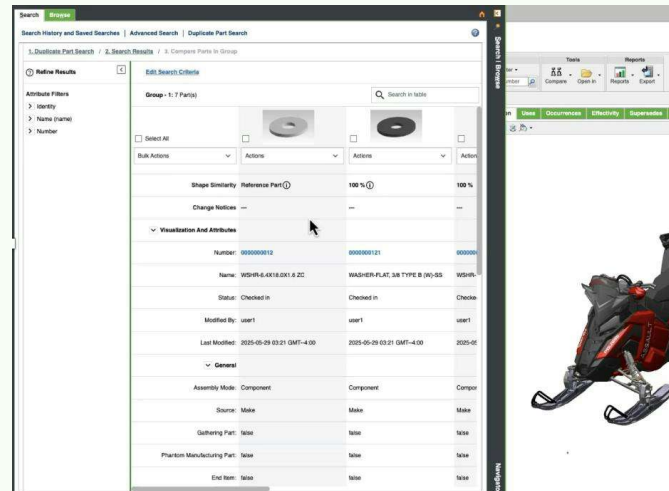


LLMs + RAG data delivering contextual chat and search

- AI Chat w/ Document Data
- File summary
- eSupport Agent
- MCP for Document Vault

AI Part Rationalization

Released January 17th, 2026

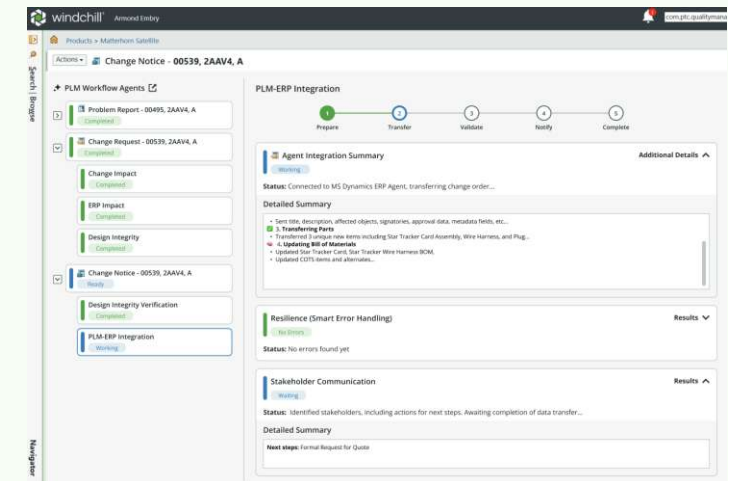


Computer vision enabling part search and similarity detection

- Single Part Reuse
- Indexing Performance
- Multi-classification Support & UI Improvement

Agentic Digital Thread

Releasing Early 2027



Agentic AI driving digital thread use cases

- Problem Report Creation Agent
- Problem Report Triaging Agent

Problem Report This was generated with AI suggestions so it may be incomplete or incorrect

Attributes

Name *
[Plant] [Object] Rear Suspension Arm Joint Play (RH)

Requester
tedison@cooperlighting.com

Priority
High

Number
(Generated)

Description

Issue Overview
During a normal line check of the rear suspension, abnormal movement was observe

Observed Condition

- The joint shifts when hand pressure is applied during inspection.
- The fastener appears properly seated.
- Fastener torque was verified; joint movement remains present.
- Visible wear marks are present around the joint interface (as shown in the attach

Detection Context

- Identified during a routine line inspection.
- Condition confirmed through manual hand check.
- The same condition has been observed on more than one unit.

Location
(Generated)

Cancel Save Draft Submit

Missing 2 key details Updated: Today, 2:32 PM

60% 3 of 5 complete

- ✓ Description present →
- ✓ Affected object identified →
- ✓ Evidence attached (1) →
- ⚠ Operating conditions not specified ✎
- ⚠ First observed date / mileage ✎

Suggested Objects 3 items

-  **SUB RR WHEEL ASSY LH** Assembly • Snowmobile • 04-30-25 Add
-  **SUB RR WHEEL LH** CAD Part • Snowmobile • 04-30-25 Add
-  **SUB RR WHEEL LH** Drawing • Snowmobile • 04-30-25 Add

[Browse in Collect](#)

AGENTIC AI IN CHANGE MANAGEMENT

Problem

- Change Management sits at the intersection of engineering, manufacturing, and supply chain.
- A wrong decision here doesn't stay in Windchill — it reaches the shop floor, the supplier, and the customer.

Solution

- Unlike open-ended work, CM follows defined workflows, required fields, and codified approval gates.
- That structure is exactly what makes it valuable for AI assistance.

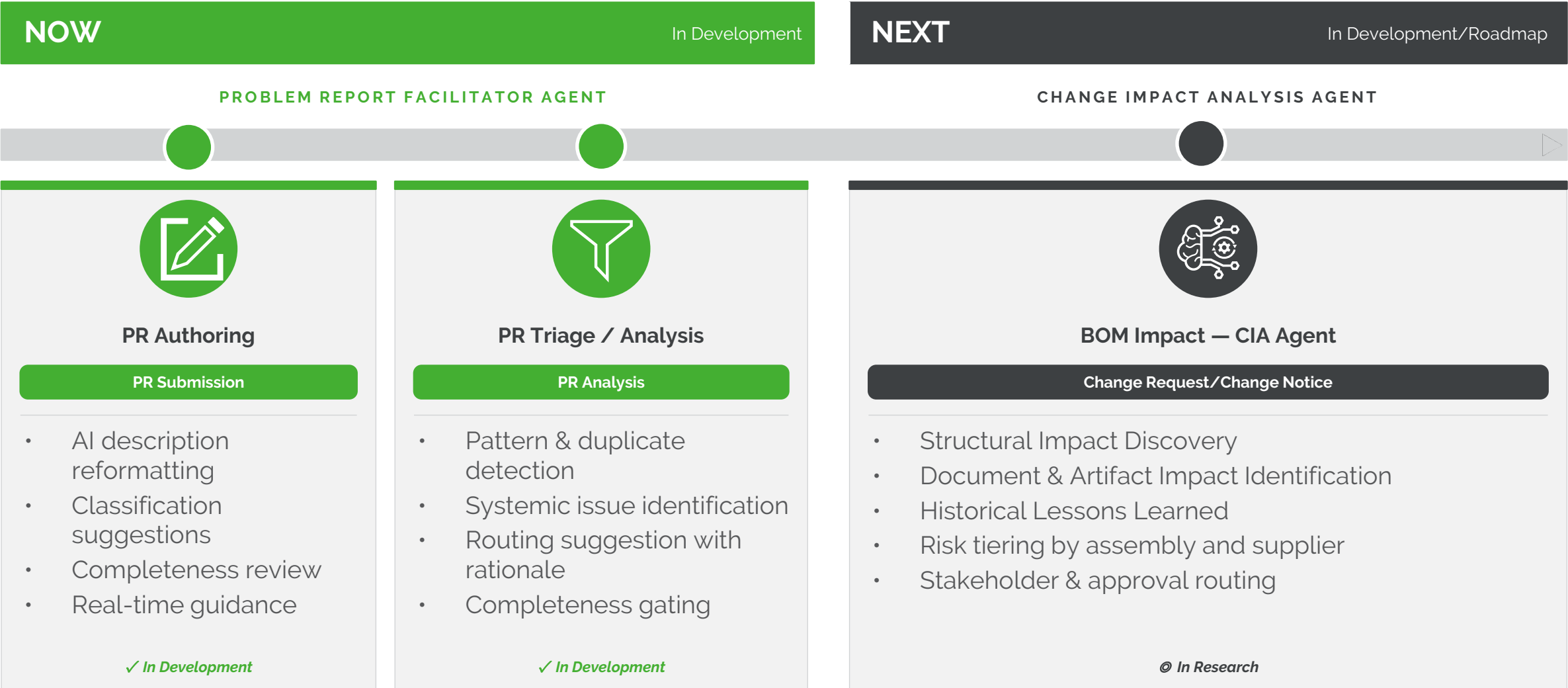
Benefit

- Enterprise organizations can process hundreds of change objects weekly.
- The classification, duplicate checking, and routing work is repetitive enough that agents can operate reliably — and valuable enough that the time savings compound fast.

AI and Analytics:
Large Language Models

CHANGE MANAGEMENT AGENT ROADMAP

From Problem Report quality to full Engineering Change workflow — delivered in phases



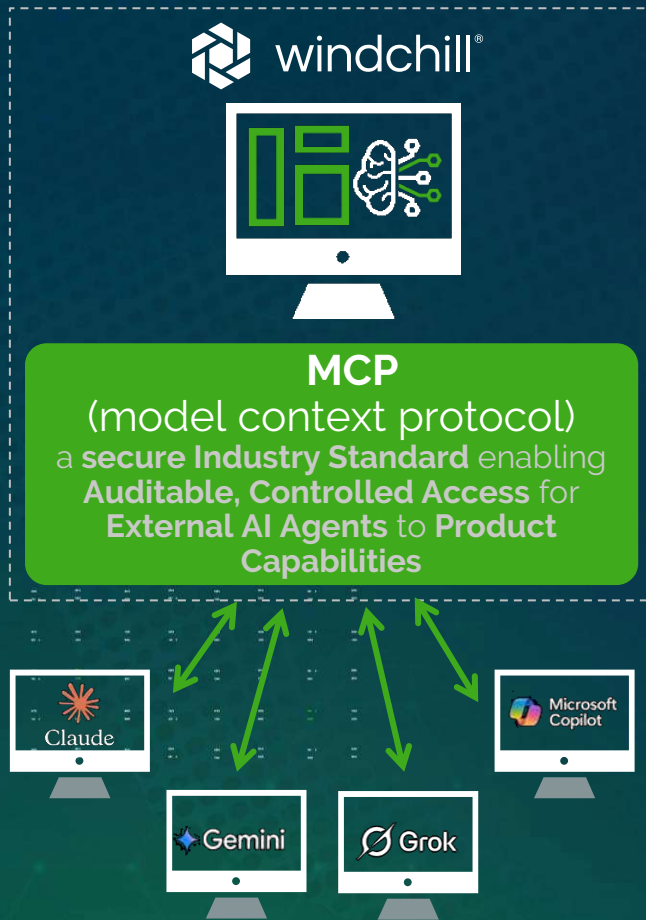
HOW THIS MANIFESTS IN WINDCHILL

Three infrastructure patterns that underpin every agent in the portfolio

01	AI-AUTHORED DATA IS FLAGGED AND TRACEABLE Every object touched by an agent carries a machine-readable flag — AI-generated, AI-suggested & accepted. This is stored at the object level, and visible when reviewing the record.	During the Intake AI-filled fields show a subtle indicator icon	IN THE RECORD VIEW "AI Generated" tag visible per object on UI
02	HUMAN VALIDATION WITH AUDITABLE APPROVAL No AI suggestion writes to a Windchill record without an explicit human acceptance action. That acceptance — who approved it, when, and on which field — is stamped to the object and stored alongside the record.	ACCEPT ACTION User explicitly accepts AI suggestion — logs user + timestamp	APPROVAL CHAIN AI involvement visible in downstream CR/ECO approval history
03	ACTIONS GUIDED WITHIN EXISTING WINDCHILL WORKFLOWS Agents surface inside the workflows engineers and CM teams already use — not in a separate tool or portal. Guidance appears inline embedded in human process flow, in the triage queue, and in the record review screen. No context switching.	CREATE Coach surfaces inline — same screen, no new tab	RECORD REVIEW Briefing Analyst summary shown at top of PR detail view

Flagged data → validated by a human → that validation is auditable → all within the workflow your team already uses

WINDCHILL MCP SUPPORT



- **Document Assistant Agent accessible via MCP**
Targeted for July 2026
 - Windchill AI-based semantic search in Vault Documents
- **Windchill Services accessible via MCP**
Targeted for late 2026
 - Initial focus on read and controlled write operations
 - Document Management – Query Document data and related objects
 - Part Management - Product & Part Query Services, Structure & relationship (BOM, versions, config)
 - Change Management - Change and problem report
- Additional domain tools and agents added incrementally
 - E.g., Problem Report Agent, CAD Data Management, MPM, QMS

CODEBEAMER AI – RECENT UPDATES

Codebeamer 1.2 Release

GENERAL AVAILABILITY • AUGUST 5, 2026

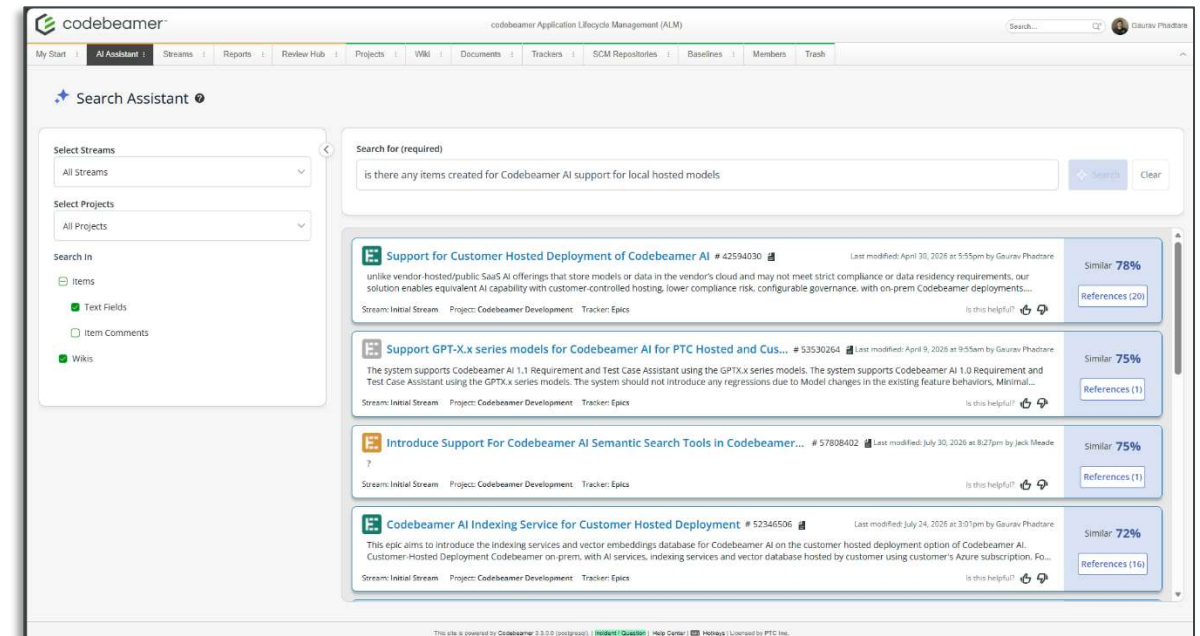
Technology Foundation

- Indexing Service
- GPT-5.4 support

Knowledge Assistant

Semantic Search

- **Problem:** Inconsistent terminology hides related information
- **Capability:** Understands intent, not keywords. Ranked results across trackers, wikis & reviews
- **Value:** Faster decisions with full traceability



Semantic Search in action

CODEBEAMER AI TODAY

A strong foundation, already in your customers' hands

- Requirements Assistant
 - INCOSE-aligned authoring guidance
 - Requirement quality analysis
 - AI-powered rewrite & improvement
 - Configurable compliance rules
- Test Case Assistant
 - ISTQB-based test generation
 - AI context from configured fields
 - Human refinements preserved
 - Enhanced usability & transparency
- Semantic Search
 - Intent-aware semantic discovery
 - Tracks, Wiki & Review coverage
 - Relevance scoring & previews
 - Faster information discovery for large repositories

CB AI 1.3 opens the door for customers to utilize their own agents along with any LLM / MCP client (Claude, Copilot, Gemini, and beyond).

CODEBEAMER AI – NEAR TERM ROADMAP

1

Now

CB AI 1.3 | Target GA: Nov 2026

MCP Server

- Query projects, trackers, items, traceability links, and user context
- Create, update, and enrich work items with human-in-the-loop “pre-approval”
- Full bidirectional traceability traversal — upstream & downstream
- **CB Purpose-built MCP server provides efficient & correct results 93.9% of the time vs. 66.2% for a generic MCP API wrapper when tested against the same 70 use cases**

2

Next

CB AI 1.4 | Target GA: Early 2027

Ingest Assistant

- Converts unstructured docs (PDF/Word/Excel) into structured, classified CB items
- Flags duplicates & contradictions before finalization
- Enforces org guidelines automatically
- Cuts onboarding time, cost & rework

3

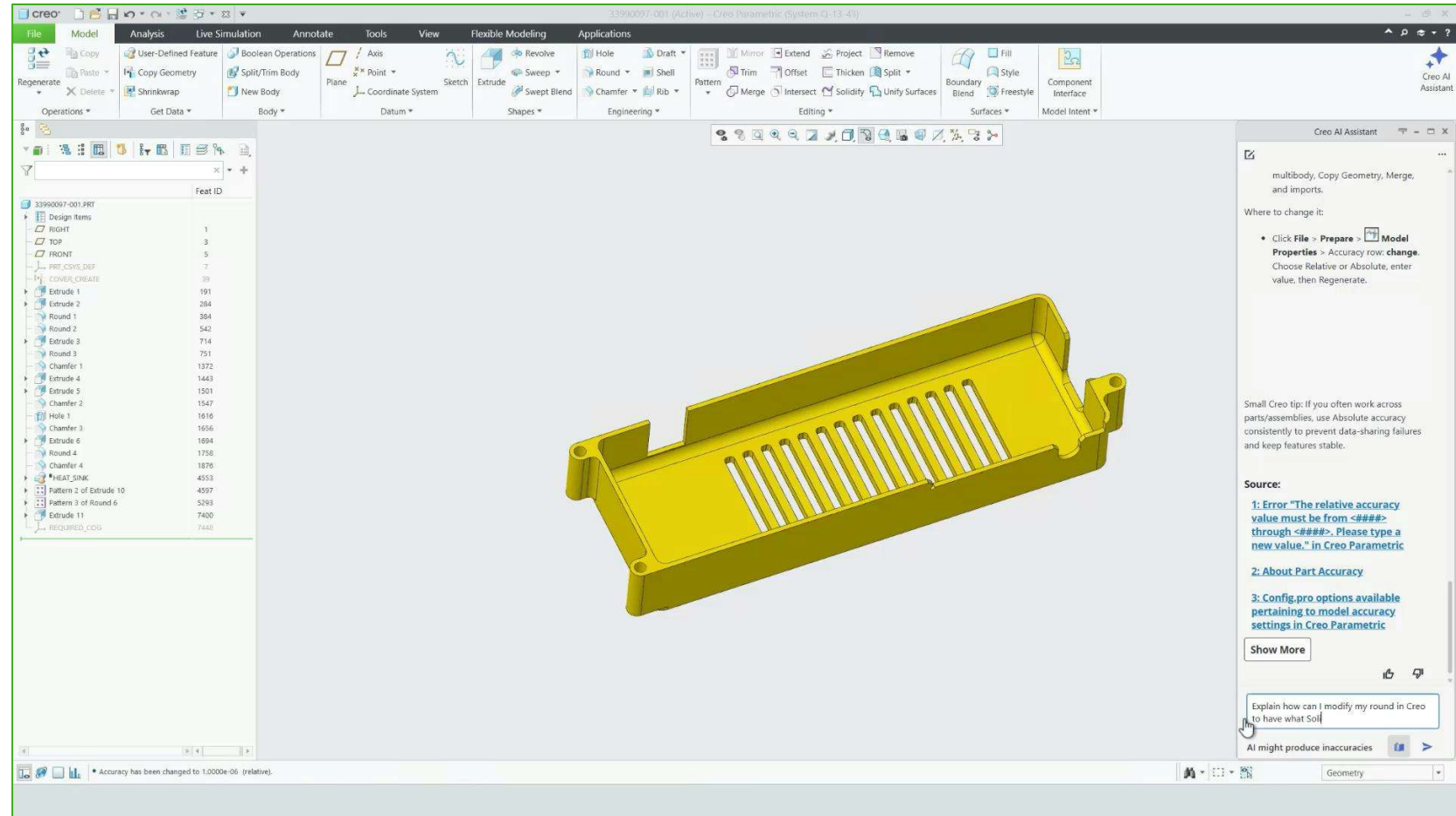
Later

CB 2027.0 & Beyond

- **Consistency & Contradiction Analysis**
- **Similarity & Duplicate detection**
- **Batch Analysis**
- **Agentic AI: Req & Test Case, impact analysis, configuration management, standards compliance agents**
- **Foreign Language LLM support**
- **Agent Orchestration (including RFP/RFI response agent)**

CREO AI ASSISTANT

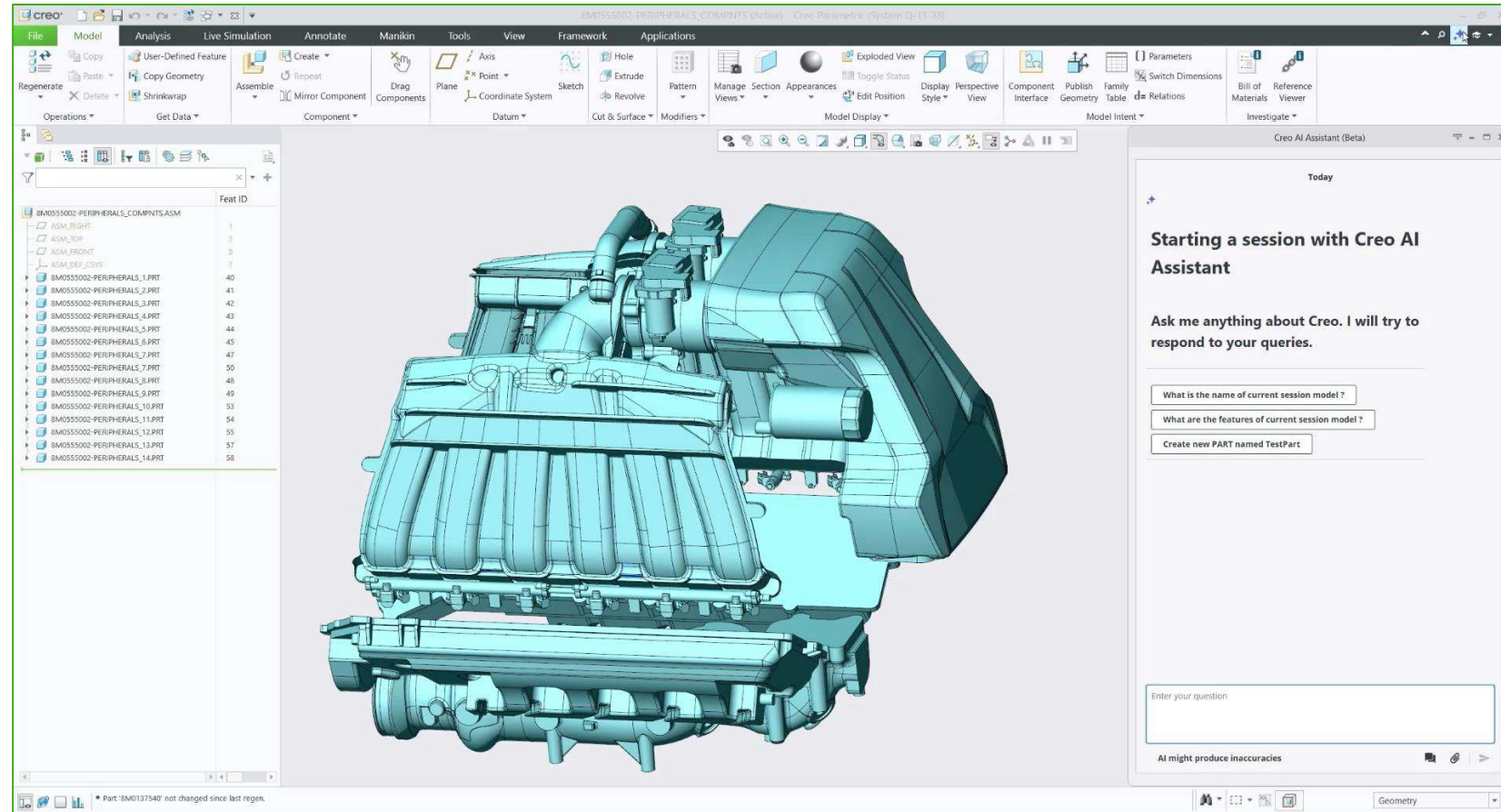
- Advise users by answering questions, summarizing content, retrieving information
- Efficiency - Reduce time spent searching fragmented data while increasing access to domain knowledge across teams. Unlock the value of organizational knowledge to inform decisions earlier and more accurately.



ASSIST – GUIDANCE & SUPPORT

CREO AI ASSISTANT

- **Assist** users by interrogate model, extract insights, and provide design-aware user guidance & support.
- **Model Validation** guiding users to improve the quality and consistency of outputs.



ASSIST – EXTRACT MODEL INSIGHTS



ptc[®] jetstream[™]

Coming October 2026

ptc® jetstream™

a cloud-native collaboration environment for fast, secure, and traceable collaboration on product data — alongside formal product development processes.

Intuitive, fast, web-based experience, for spinning up rapid collaboration

Built-in visualization, commenting, and AI tools for improved alignment and decision making

Bi-directional integration with Windchill and Creo captures intent for accurate execution and traceability

KEY CAPABILITIES FOR EXCEPTIONAL COLLABORATION



Secure Sharing



Multi-tenant SaaS



Efficient, Traceable Communication



Advanced AI Capabilities



Formal Collaborative Workflows



Bi-directional System Integrations

ptc[®] jetstream[™]

WINDCHILL JETSTREAM INTEGRATION

windchill Scott pp-2607301438f9 All Types Search... Quick Links

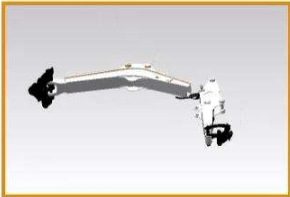
Products > Mini Excavator > Design > BOM Data > 07 - Arm ASM

Released

Actions Mechanical Part - 7293708, E17Z ARM ASM HYD TEST, A.4 (Design)

Details Structure Related Objects Changes History Where Used AML/AVL Regulatory Effectivity Visualization FMEA +

Visualization and Attributes More Attributes



Visualization and Attributes

Name: E17Z ARM ASM HYD TEST
Number: 7293708
Status: Checked in
Modified By: Pat Product Manager
Last Modified: 2026-08-30 18:43 UTC
Translation Name: E17Z ARM ASM HYD TEST
Quick View Representation:

General

Assembly Mode: Separable End Item: No Configurable Module: No
Source: Make Default Unit: each
Gathering Part: No Default Trace Code: Untraced
Service Kit: No Default Serviceable: Yes
Phantom Manufacturing Part: No Stop Effectivity Propagation: Yes
Authoring Language: English (United States)

Manufacturing Attributes

Equivalence Network:
Enterprise Version: A.4 (Design)
Related Process Plan:

Environmental and Cost

Part Cost: \$ 0.00

System

State: Concept - Design - Prototype - WIP Change - **Released** - Obsolete - Under Review
Context: Mini Excavator Location: /Mini Excavator/Design/BOM Data/07 - Arm ASM
Life Cycle Template: One Phase Development Team Template:
Created By: Pat Product Manager Modified By: Pat Product Manager
Created On: 2026-08-04 14:50 UTC Last Modified: 2026-08-30 18:43 UTC

THE **STREAMLINED** COLLABORATION WORKFLOW

2 Invite internal and external collaborators

Gathering stakeholders in one environment

3 Expose feedback, discussion, and discourse

Communicating and problem solving as a team

4 Identify agreed upon Resolution

Avoiding last minute or after-the-fact objections

CONTEXT, ALIGNMENT, and INTENT
are maintained always

1 Select files and launch a Room

Started directly from your source of truth

5 Record decision intent and communicate next steps

Delivering the answers directly to the action owners

WHERE JETSTREAM SUPPORTS THE **MEDICAL DEVICE** LIFECYCLE

Connect cross-functional reviews to governed product information, while preserving context and decision rationale.

1

DESIGN & DEVELOPMENT REVIEWS

Review evolving design outputs with engineering, quality, regulatory, software, and systems teams.

2

REQUIREMENTS, RISK & V&V ALIGNMENT

Bring experts together to identify inconsistencies, document resolution rationale and gain market clearance

3

DESIGN TRANSFER READINESS

Coordinate engineering, manufacturing, quality, regulatory, operations, and contract manufacturers before transfer.

4

SUPPLIER & CONTRACT MANUFACTURER COLLABORATION

Share controlled product information without broad access to internal PLM systems.

5

CHANGE IMPACT ASSESSMENT

Review effects across product configuration, suppliers, manufacturing, service, and documentation.

6

PRODUCT & QUALITY READINESS

Capture review history and decision context to support governed quality and regulatory records.

JETSTREAM CONNECTS PEOPLE, PRODUCT CONTEXT, AND DECISION RATIONALE ACROSS CRITICAL MEDTECH REVIEWS

THE ENTERPRISE IMPACT OF EXCEPTIONAL COLLABORATION

Collaborating in PTC Jetstream across business initiatives unlocks strategic enterprise-scale benefits.



Faster development & submission readiness

Reduce review delays and improve the availability of complete, consistent product evidence

- ✓ Regulatory Management
- ✓ Design Reviews
- ✓ Supplier Co-Design
- ✓ Customer/Partner Co-Design



Reduced Cost of Poor Quality

Identify conflicting feedback and design issues earlier, before they create downstream rework

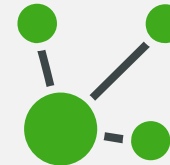
- ✓ Supplier Control
- ✓ Integral Manufacturing
- ✓ Requirements Validation
- ✓ Change Management



Improved Audit Readiness

Retain attributable review history, decision rationale, and links to governed product information

- ✓ Design Reviews
- ✓ Risk Management
- ✓ Change Management



Better cross-functional Alignment

Bring engineering, quality, regulatory, manufacturing, and suppliers into a shared review context

- ✓ Supplier Co-Design
- ✓ PPAP
- ✓ RFQ / Bidding
- ✓ Design Transfer



Stronger Supplier Collaboration

Enable secure, structured reviews with suppliers and contract manufacturers

- ✓ Supplier Qualification
- ✓ Requirements Validation
- ✓ Change Management



AI-Enhanced Review Productivity

Summarize discussions and proposed actions while maintaining source references and human oversight

- ✓ All Collaboration Workflows

STRATEGIC VALUE OF VALIDATION-READY MODULE APPROACH (EXCLUSIVE TO WINDCHILL+ MEDTECH)



ptc



USDM
Life Sciences

A partnership designed for medical device manufacturers to facilitate validation and validation maintenance through the operational life of their system.

Together, PTC and USDM, significantly reduce implementation and validation time, enabling PTC customers to meet the FDA's 21 CFR Part 11 and global computer system validation requirements.

After more than two decades focused exclusively on life sciences customers, USDM's unmatched regulatory and technology expertise saves you time, saves you money, and mitigates risk.

USDM's PTC compliance support includes:

Windchill and Windchill Med Dev SaaS (WC+) - initiated 2016

Codebeamer – Vendor Assurance Report available, June 2026



Q&A