TRANSFORM YOUR ENTERPRISE WITH THE INTELLIGENT PRODUCT LIFECYCLE

PTC Keynote





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EVP, Products

ptc

WHAT WE ARE HEARING FROM YOUR PEERS

Increasingly complex SW + HW innovations
to support connected home diagnostics and digital health apps innovations

Extensive compliance documentation
with EU MDR compliance retrofitting and evolving FDA guidelines

AI Everywhere
to scale knowledge, drive efficiency, and automation within regulatory guidelines

Longer device life cycles
increasing complaint management

Greater cost pressure
across value chain and global competitors while maintaining quality standards

Cybersecurity vulnerabilities
targeting patient data as devices become more connected



Industry players are responding to the pressure while optimizing for speed and cost by asking us,

How do we build a scalable product lifecycle?

CHALLENGES IN A RAPIDLY EVOLVING LANDSCAPE

Regulatory Complexity and Quality



Since 2020, MedTech regulations have doubled, making compliance a strategic necessity with stricter FDA, EU MDR, and cybersecurity requirements.

Cost and Margin Pressure



Rising costs and margin pressure due to higher R&D expenses, stricter regulations, supply chain issues, and pricing constraints.

Pressure to Innovate



Relentless pressure to innovate from rising patient demands, rapid technological advancements, and intense market competition.

Speed / Time-to-market



Pressure to bring devices to market faster, with shorter release cycles, driven by evolving technologies, rising patient expectations, and intense competition.

PRODUCT DATA ACCESS IS CRITICAL TO BUSINESS SUCCESS

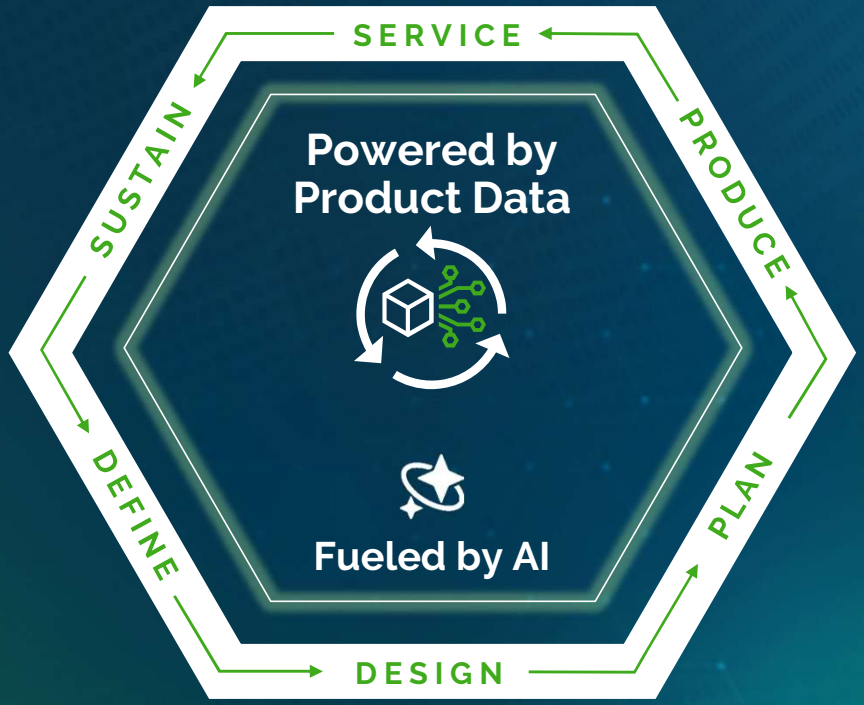
Executives of Manufacturing companies believe ***improving product data access across the product lifecycle*** impacts their top business priorities.



Source: IDC

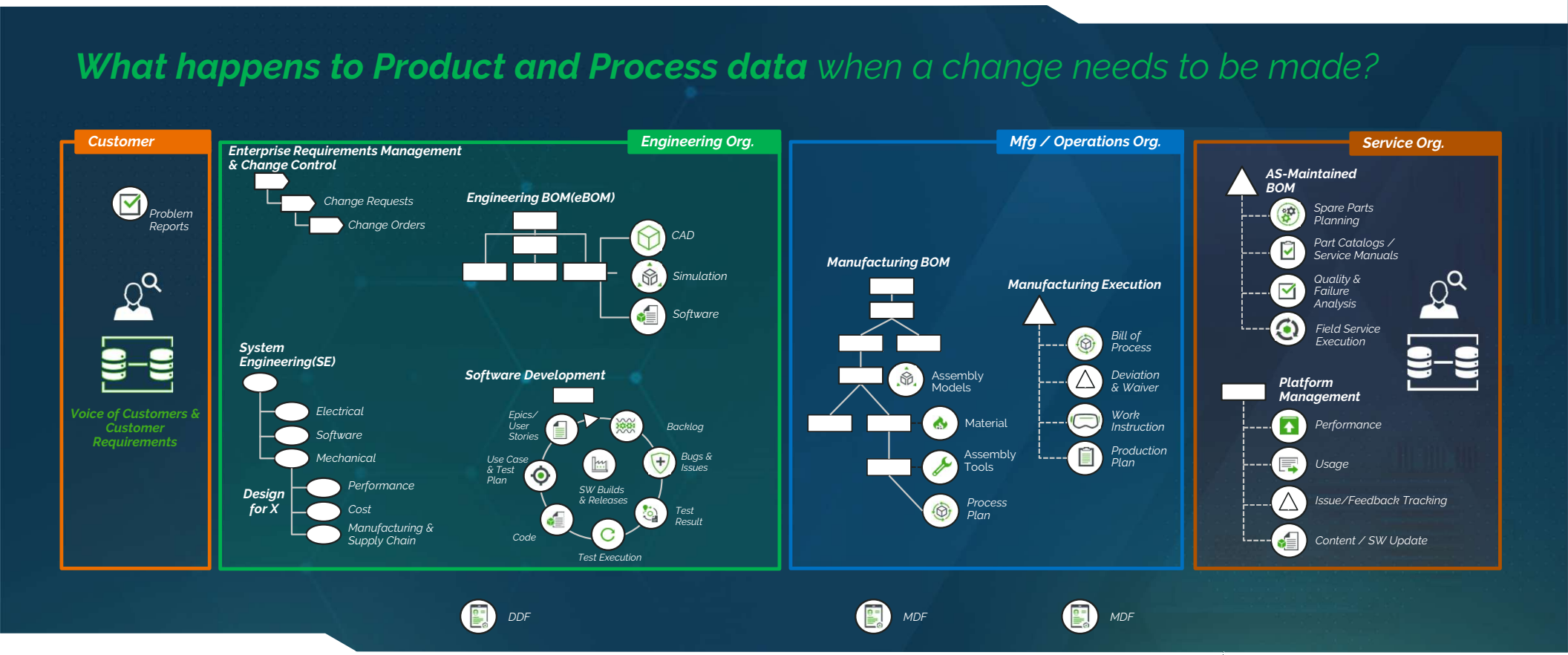
TRANSFORMING THE ENTERPRISE WITH THE INTELLIGENT PRODUCT LIFECYCLE

Connected
through Openness

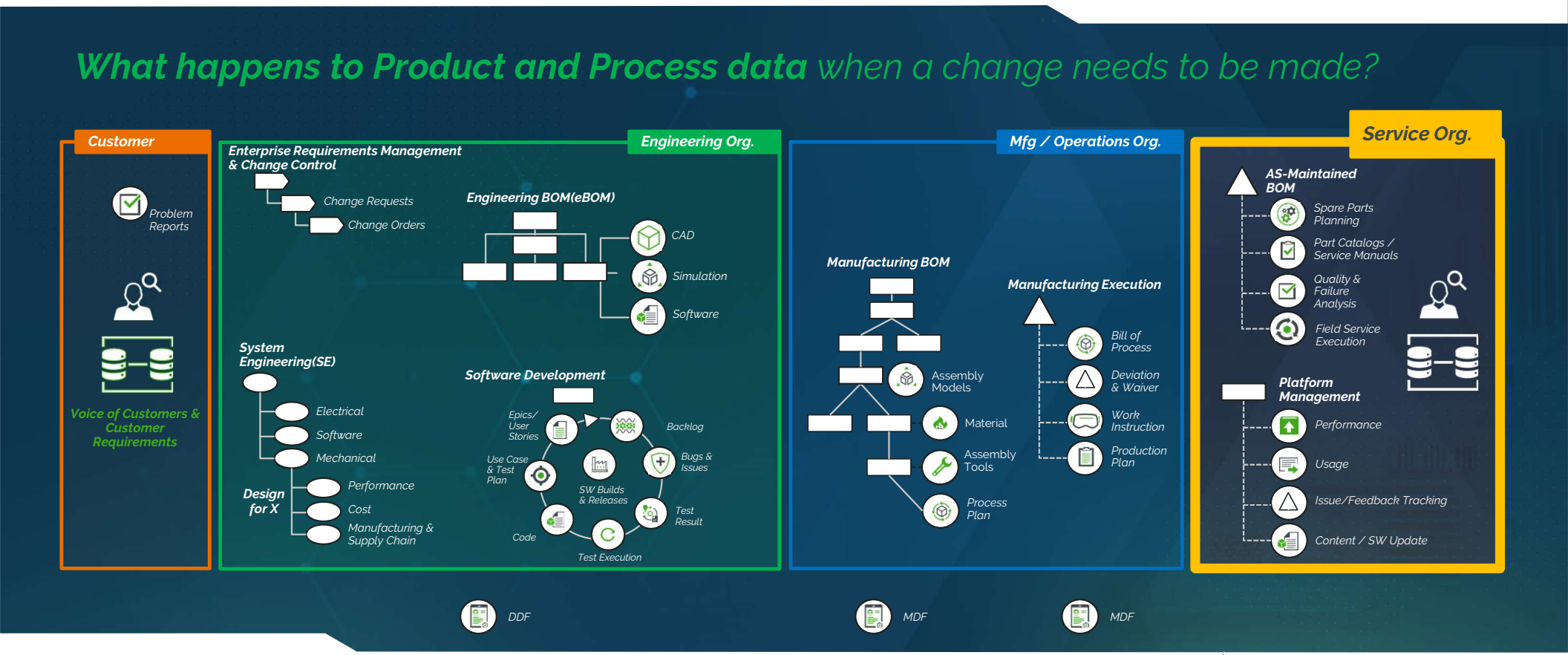


Accelerated
by SaaS

DATA FOUNDATION AND PROCESS ORCHESTRATION

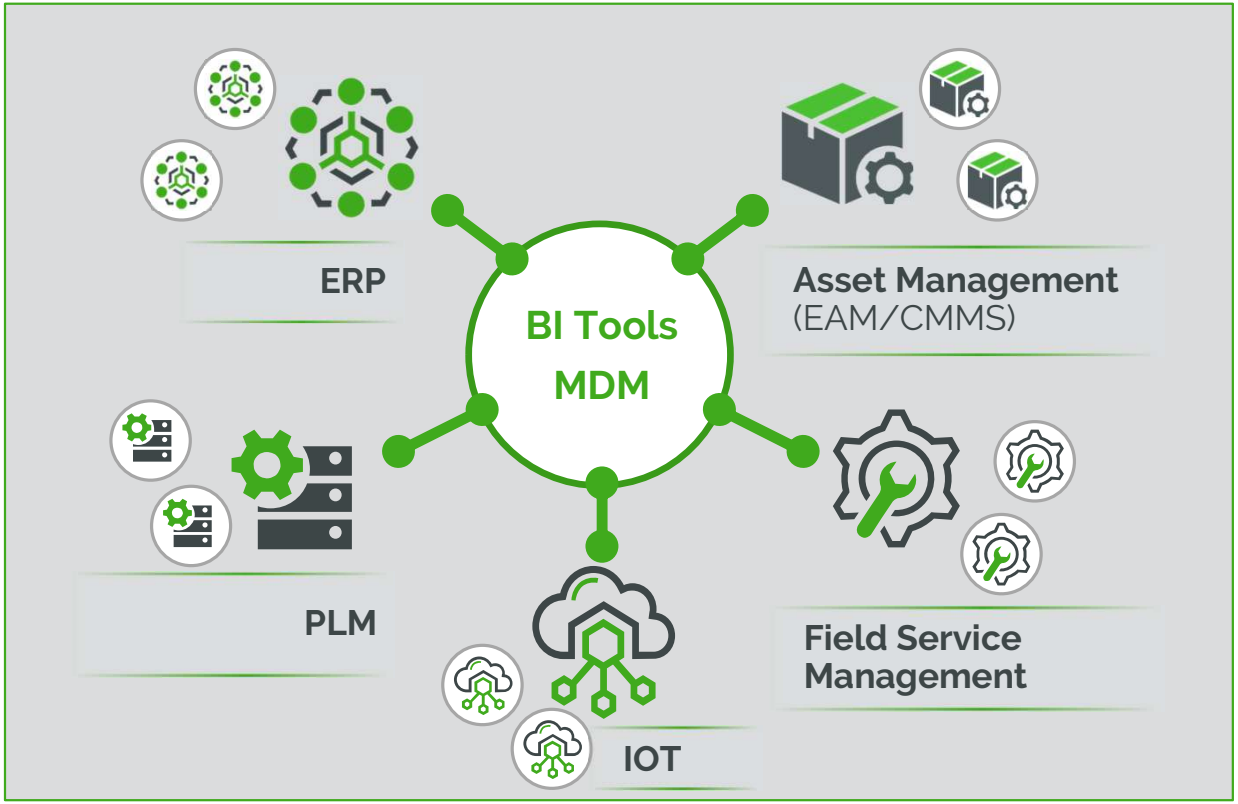


DATA FOUNDATION AND PROCESS ORCHESTRATION



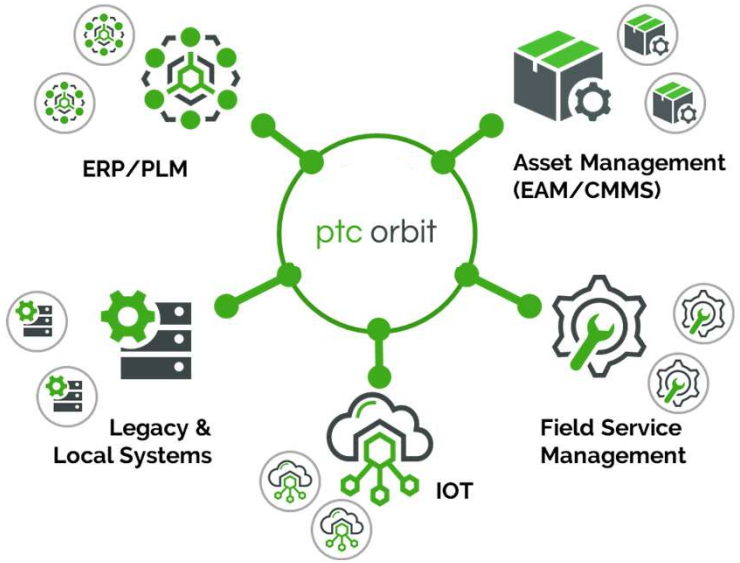
IDEAL STATE: CONNECTING DATA ACROSS THE PRODUCT LIFECYCLE

- ✓ Understand product design to inform maintenance planning
- ✓ Extend product engineering details for manufacturing and service performance
- ✓ Close the loop on asset performance for reliability and design review



WHAT DOES PTC ORBIT DO?

Data Sources



Asset Information

Engineering Information

Bill of Materials, Work Instructions, Technical Specifications and Documentation, Product Bulletins

Service & Customer Information

Work Orders, Asset Hierarchy, Service Activities, "As-Maintained" Configuration, Warranty and Entitlement, Maintenance Plans, Installation Date, Asset Location

Sales & Manufacturing Information

Account Ownership, "As-Shipped" Configuration, Serial Number, Shipment Date, Pricing and Cost

In-Field Equipment Data

Equipment status, Sensor/Machine Data, Performance, Location

Applications and Insights

- **SBOM & Parts Traceability**
- **Sales and Marketing Campaigns**
- **Design & Quality Engineering**
- **Predictive Maintenance**
- **Demand & Capacity Planning**
- **Asset Health Scoring**
- **Digital Product Passport and Asset Administration Shell**

1 Ingest and map asset data

from multiple data sources and systems.

2 Validate and cleanse data

using built-in tools for updates, corrections, and de-duplication.

3 Surface actionable insights

and foster collaboration with a unified asset profile.

QMSR is the FDA's new Quality Management System Regulation, effective February 2026, that harmonizes U.S. medical device quality requirements with ISO 13485 and increases the importance of digital traceability across the product lifecycle. "QMSR raises the bar on traceability, making connected requirements, risk, verification, and product data a regulatory necessity rather than a process optimization."

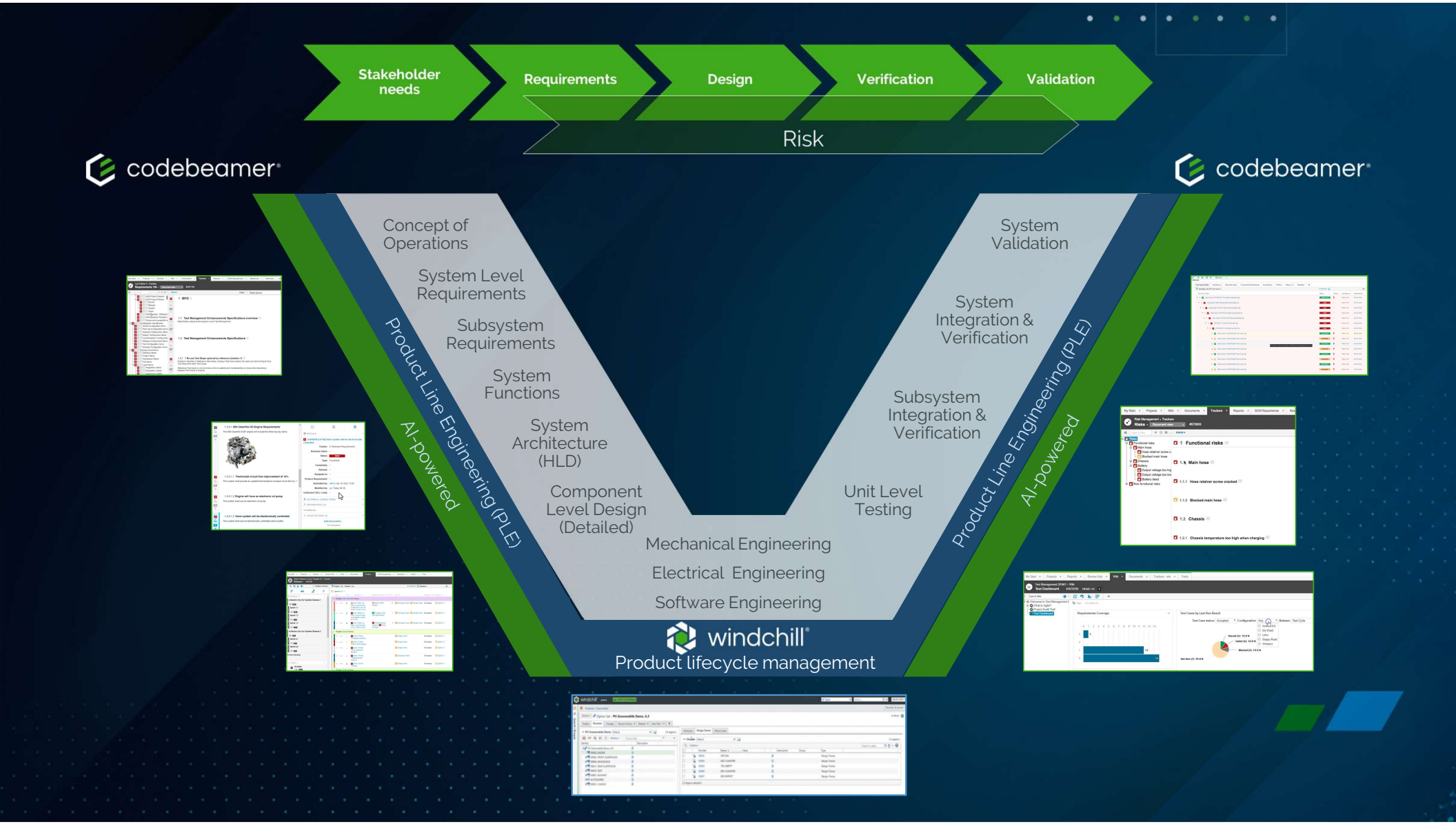
If digital engineering is the vision...

...Integrated Product Engineering is the operational model that makes it work

Creating the product data backbone

Connecting processes across domains

Aligning people, process, and data so decisions are visible and connected


Stakeholder needs
Requirements
Design
Verification
Validation
Risk
codebeamer
codebeamer
Concept of Operations
System Level Requirements
Subsystem Requirements
System Functions
System Architecture (HLD)
Component Level Design (Detailed)
Mechanical Engineering
Electrical Engineering
Software Engineering
Unit Level Testing
Subsystem Integration & Verification
System Integration & Verification
System Validation
Product Line Engineering (PLE)
AI-powered
Product Line Engineering (PLE)
AI-powered
windchill
Product lifecycle management

CAPABILITIES & MATURITY ROADMAP



PTC'S ROADMAP FOR INTEGRATED PRODUCT ENGINEERING

CAPABILITIES & MATURITY ROADMAP PROGRESS

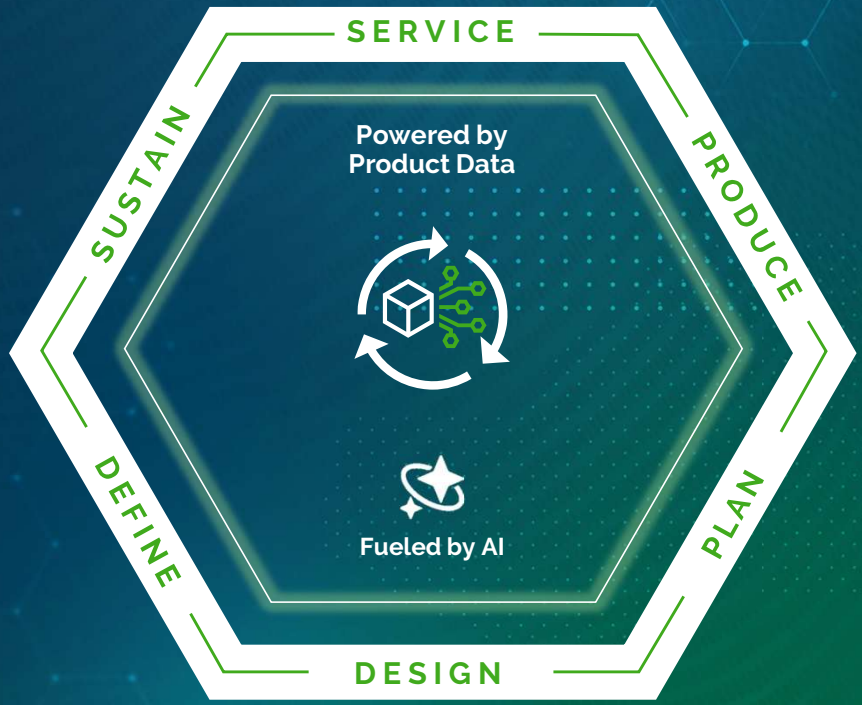


PTC'S ROADMAP FOR INTEGRATED PRODUCT ENGINEERING

PTC AI STRATEGY

AI built on a trusted product data foundation

- **Intelligent Solutions:** deliver value in tools customers use everyday
- **Intelligence Across the Lifecycle**: expand value across products & processes
- **Enterprise Intelligence**: scale value with trusted data, best-in-class technology, and an open ecosystem



AI STRATEGY

PRODUCT AI

Deliver embedded AI in products

AI built into the PTC products you already use. Specialized agents, purpose-built to work within the software's context and controls, help your teams move faster and produce higher-quality work.

ECOSYSTEM AI

Enable customer and partner AI

Your AI investments work with PTC. Through open standards, customer and partner AI can use PTC's data and agent layer to execute work in third party systems.

CROSS PRODUCT AI

Unlock AI across products

Your work processes traverse many systems. PTC's connected portfolio is where AI reasons across the digital thread and acts as a coworker that operates inside each system's governed workflows.

The information in these slides regarding possible future releases is not intended to be part of any commercial offer and is provided solely for informational purposes. Such information does not in any way constitute commitments, promises or legal obligations upon which customers may or should rely. The development, release and timing of any features or functionality described for PTC products remains subject to change at any time at PTC's sole discretion. In no event shall PTC be liable to customers for failure to adhere to any such roadmap and/or to produce or deliver any functionality described in these slides. A customer's decision to purchase any PTC software products must in all cases be based upon the current functionality of the relevant products and not upon any potential future functionality and/or features described in the product roadmap.

AI VISION FOR FUELING CUSTOMER OUTCOMES

Turbocharge Workers

- Scale access to knowledge
- Automate repetitive work
- Redefine roles with AI agents as teammates

- *Foundational models*
- *Agents*
- *Vector DB*

Raise Enterprise IQ

- Break down data silos
- Unlock insights and action across the digital thread
- Accelerate work between teams

- *MCP / API Integrations*
- *Agentic AI*
- *Semantic layer / knowledge graph*

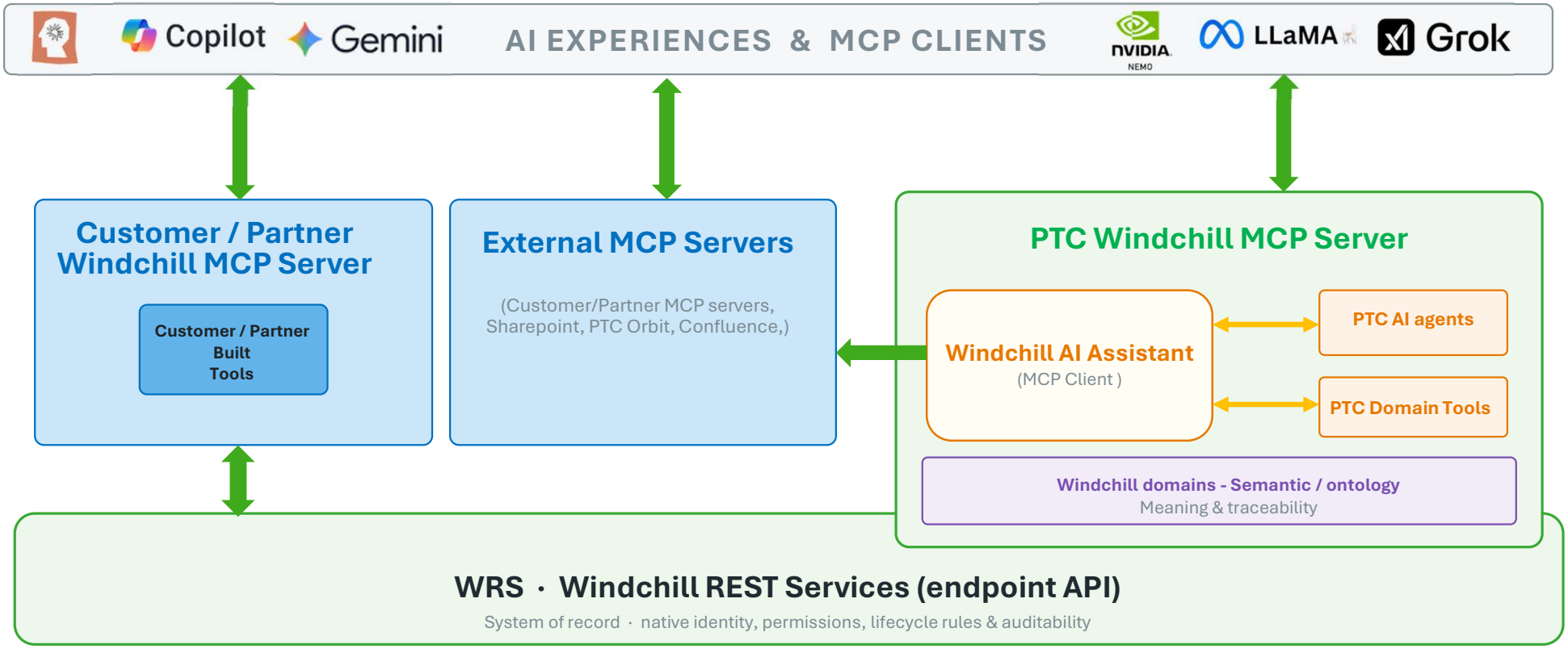
Next-Gen Product Lifecycles

- Reimagine product development
- Iterative lifecycles, collapsing execution times
- People working as coordinators of agentic systems

- *World foundation models*
- *Agentic networks*
- *Omniverse / Digital Twins*

ZOOM IN ON PTC MCP - WINDCHILL MCP

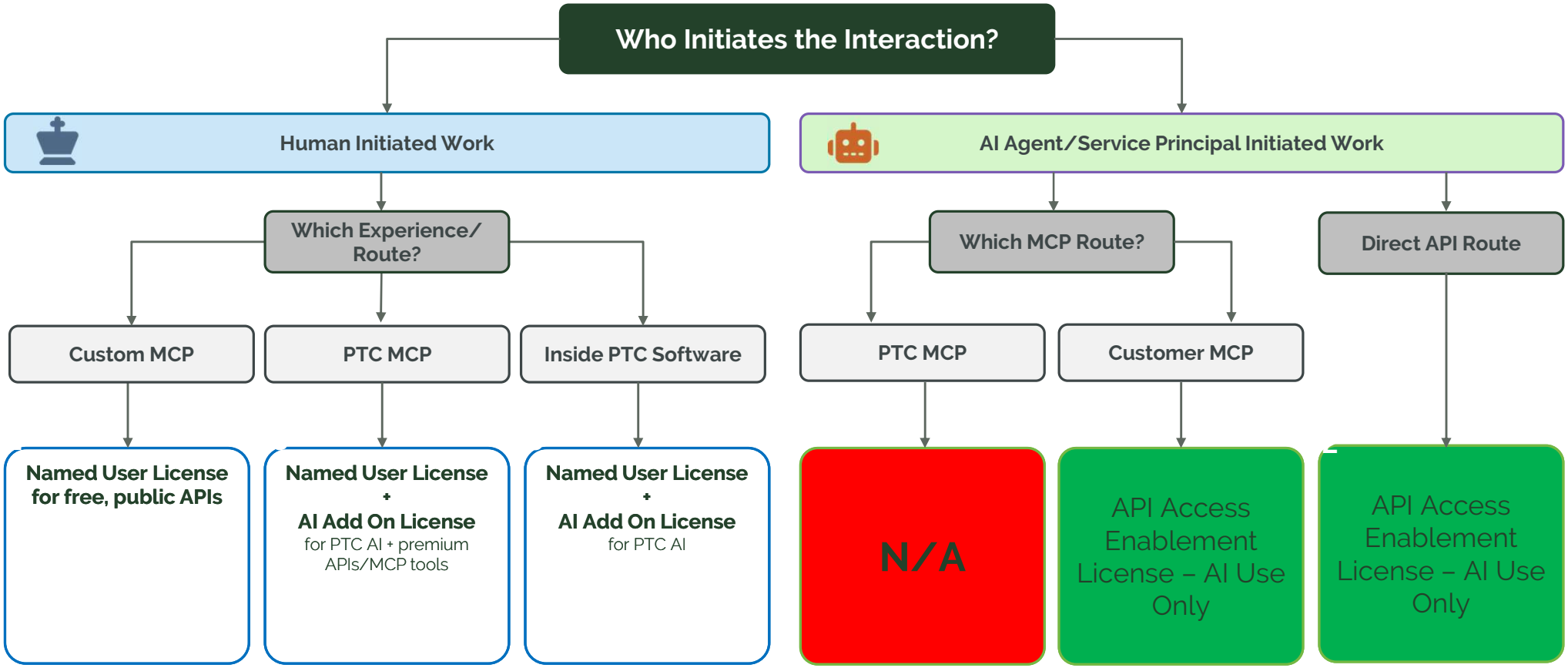
Customer MCP extends Windchill through WRS APIs.
PTC MCP delivers curated, intent-level business-capability tools and AI Agents.



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PTC AI PRICING SCENARIOS

The PTC MCP branch includes PTC AI and premium tools; the customer MCP branch connects directly to PTC APIs



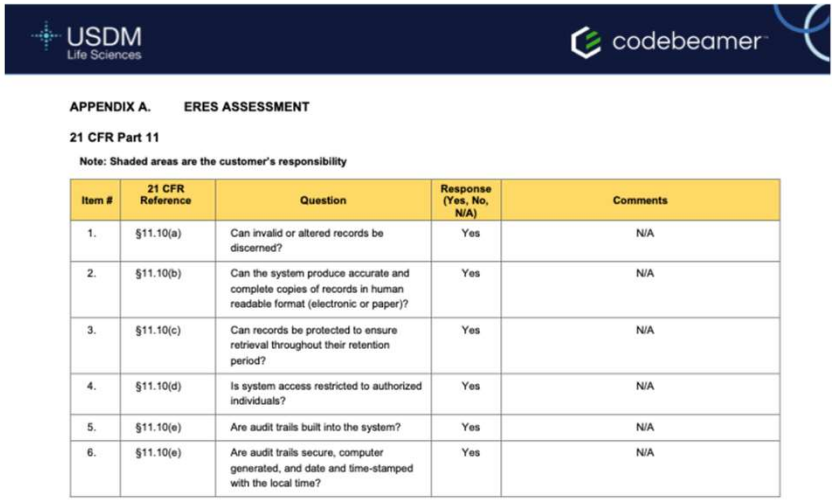
WINDCHILL+ MEDTECH ADDRESSING KEY DRIVERS

USDM Validation Accelerator Package	**USDM Validation Accelerator Package** reduces time spent on validation activities and supports CSA compliance
Performance, Scale and Stability	**Exclusive deployment architecture** ensures performance, scale, and stability
Security	**Best-in-class cybersecurity** always up to date, vulnerability detection/ incident response
Upgrades	**Completed every 12-24 months, on your timeline** Assisted via automation
Maintenance	**Semi-automated *scheduled*** CPS & OS, *minimal manual coordination*
Customizations | Integrations	**PTC prescribed methodologies** assure security and upgradability, *enforced by build deployment tools*
Experience and SaaS Exclusive Features	**"Optimization" for operations at scale** designed for Self Service
AI Advantage	**"Push Button" AI** One plugin, no upgrades = instant access to Windchill AI

Windchill+ MedTech Accelerates Speed to Adoption

CODEBEAMER+ FOR MEDTECH COMING SOON

- Codebeamer Vendor Assurance Report completed by USDM
  - Codebeamer SDLC, quality processes, and service operations are appropriately designed and functioning
  - These processes support compliance with regulatory expectations, including FDA 21 CFR Part 11 and broader GxP
- Medical Software Engineering Template
  - Available with all supported Codebeamer Versions
- Next steps
  - Update Solution Template (FY27)
  - Codebeamer+ Tool Qualification

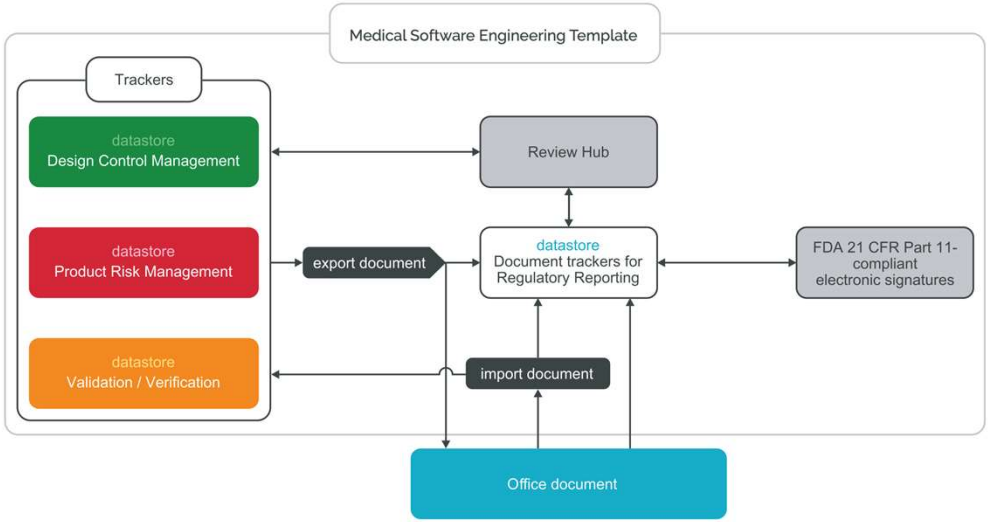


APPENDIX A. ERES ASSESSMENT

21 CFR Part 11

Note: Shaded areas are the customer's responsibility

Item #	21 CFR Reference	Question	Response (Yes, No, N/A)	Comments
1.	§11.10(a)	Can invalid or altered records be discerned?	Yes	N/A
2.	§11.10(b)	Can the system produce accurate and complete copies of records in human readable format (electronic or paper)?	Yes	N/A
3.	§11.10(c)	Can records be protected to ensure retrieval throughout their retention period?	Yes	N/A
4.	§11.10(d)	Is system access restricted to authorized individuals?	Yes	N/A
5.	§11.10(e)	Are audit trails built into the system?	Yes	N/A
6.	§11.10(e)	Are audit trails secure, computer generated, and date and time-stamped with the local time?	Yes	N/A





Q&A