

PLM FOR DIGITAL TRANSFORMATION STRATEGY & ROADMAP

Francois Lamy
VP PLM Solutions Management



ptc

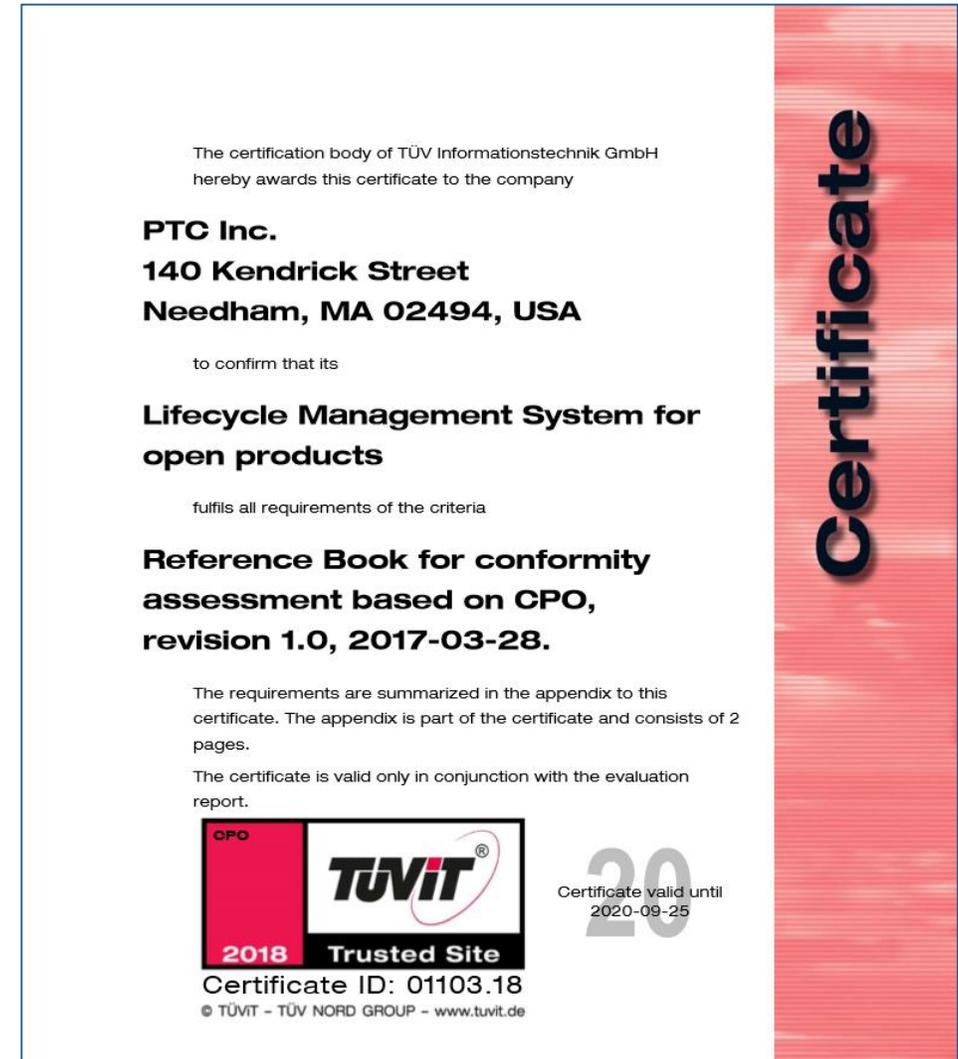
forum
europe

PTC AWARDED “CODE OF PLM OPENNESS” CERTIFICATE

- CPO Certification based on
 - Written response with supporting artifacts
 - 2 Days on site audit and interviews
- The Audit and certification criteria covered
 - Interoperability
 - Infrastructure
 - Extensibility
 - Interfaces
 - Standards
 - Architecture

“Openness is both in PTC strategy and people’s DNA”

The auditors from TÜV Informationstechnik GmbH





AGENDA

- Industry & PLM Trends
- PTC PLM Strategy
 - Windchill, Integrity & Navigate release schedule
- PLM Update
 - Windchill 11.1
 - Windchill Rest Services
 - Creo View 5.0
 - Windchill and the cloud
- Windchill – What's next in backlog
- PLM Projects

“Traditional product development processes will fail companies that seek to optimize product value and customer experiences through software enabled IoT products.”

– Nate Fleming,
Forrester



40%

of Top 100 discrete manufacturers plan to provide **Product as a Service** platforms

– IDC

51%

of research respondents who say IoT is critical to their **organization's future success**

– VDC Research

84%

of products (or more) from best-in-class manufacturers hit their revenue, cost, launch date, and quality targets using model based engineering

– Aberdeen

The Digital Thread

“Unleashing a seamless flow of data across the value chain that will link every phase of the product life cycle: from design, sourcing, testing, and production to distribution, point of sale, and use.”

– McKinsey

The Best-in-Class are extending and expanding their usage of PLM capabilities and moving to a single system at a faster pace than Laggards.

Best-in-Class organizations are outperforming their peers by a significant margin.

BEST-IN-CLASS companies enjoy:

4.2X

Greater 2-year product first-pass yield improvement rate, compared with the Industry Average.

2.4X

Greater YoY engineering productivity improvement rate, compared with the Industry Average.

58%

Higher rate than Industry Laggards of products hitting their product date targets.

22%

Higher rate than Laggards of products meeting their product development budgets.

21%

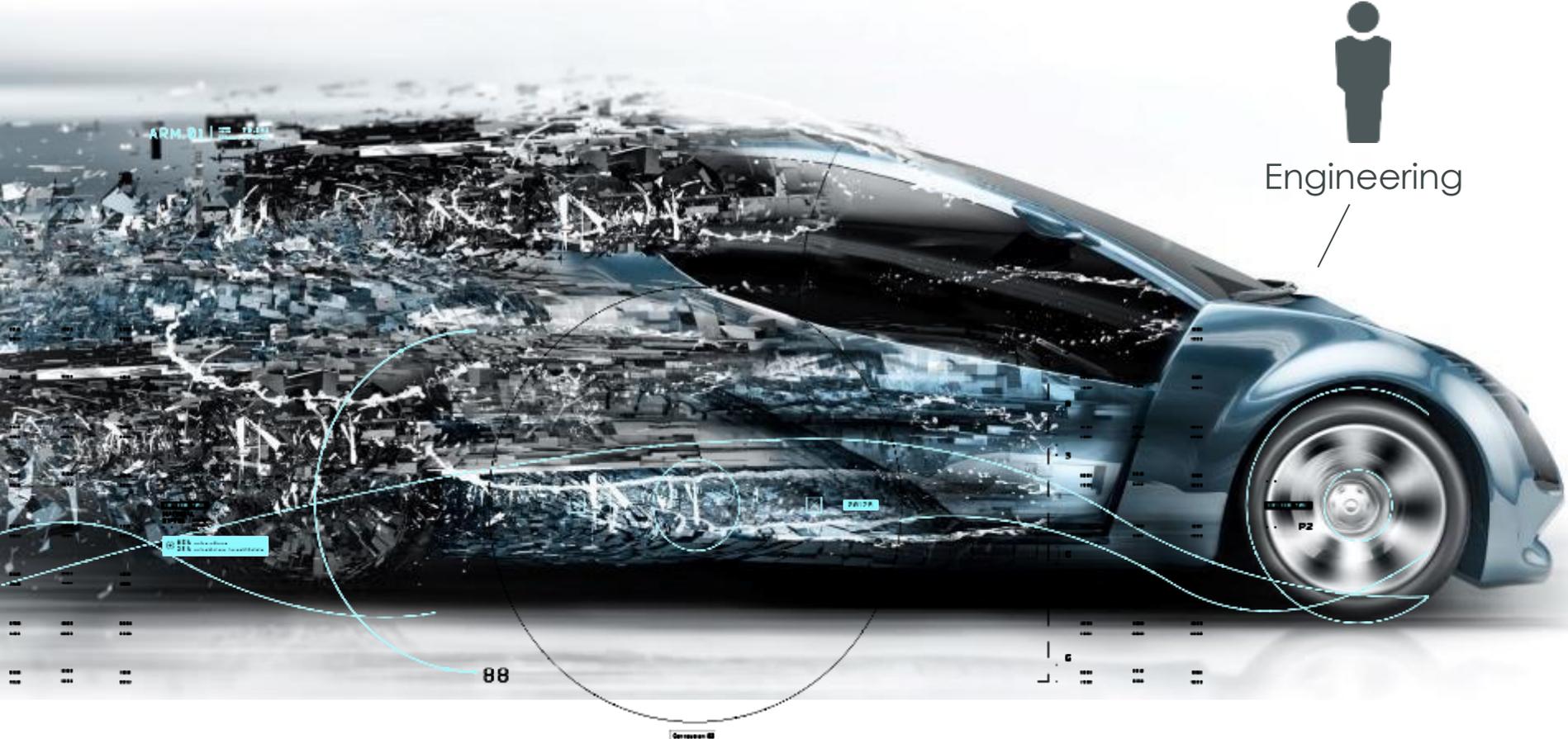
Higher rate than Laggards of products hitting quality targets at launch.

– Aberdeen Group, March 2018

PLM HAS BECOME STRATEGIC ENTERPRISE-WIDE SOFTWARE



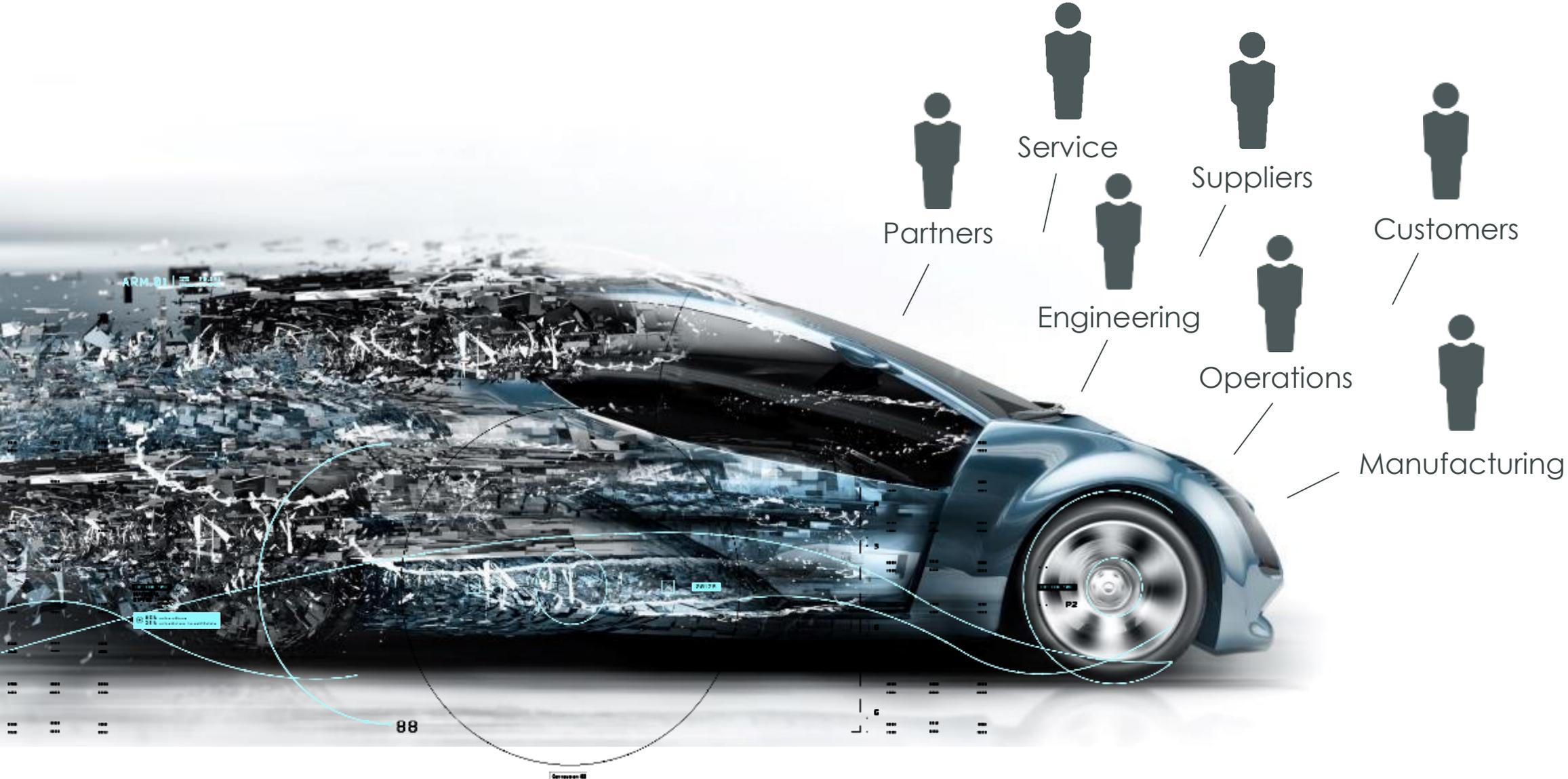
There is a growing need for the entire global enterprise to get involved with product development and in the context and domain they are accustomed.



PLM HAS BECOME STRATEGIC ENTERPRISE-WIDE SOFTWARE



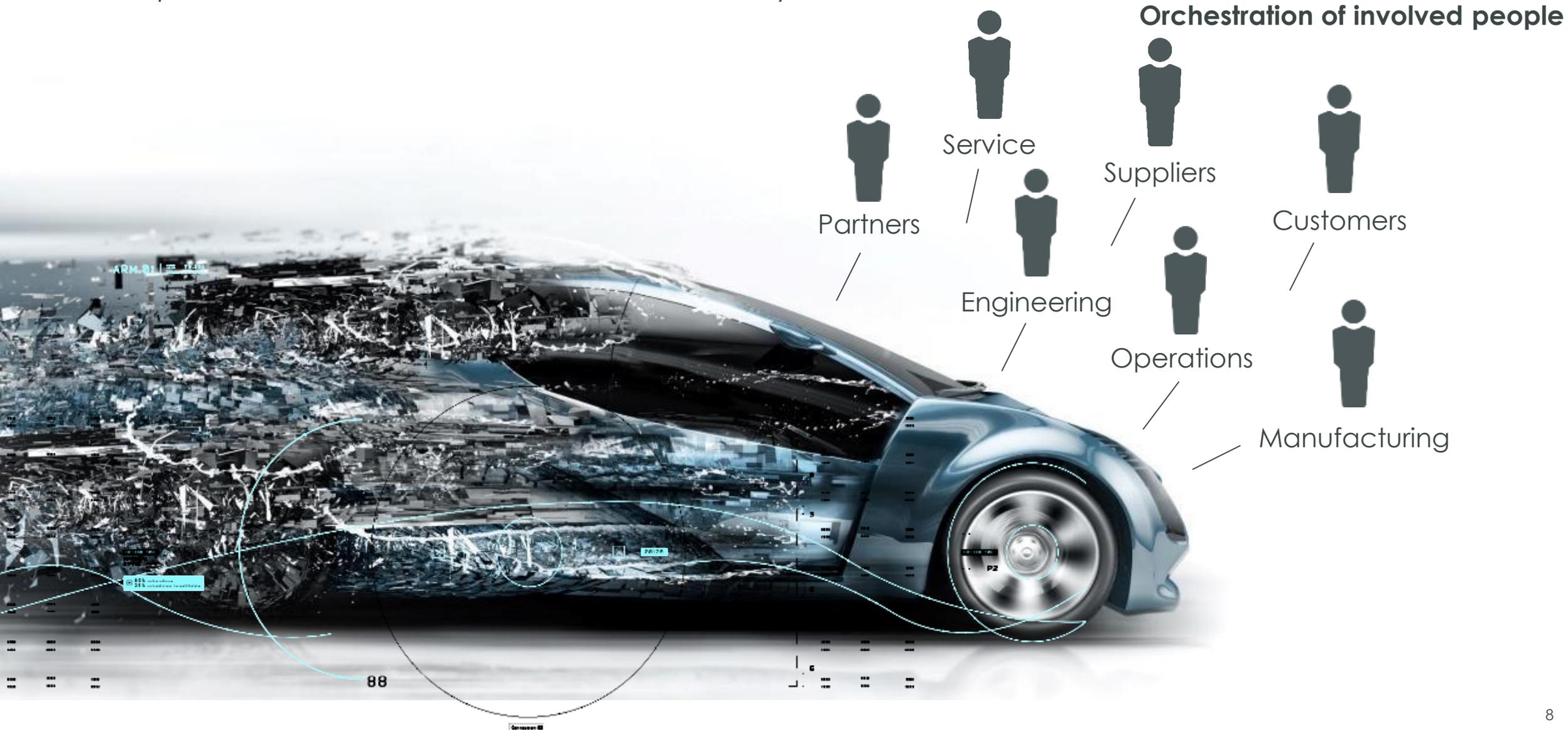
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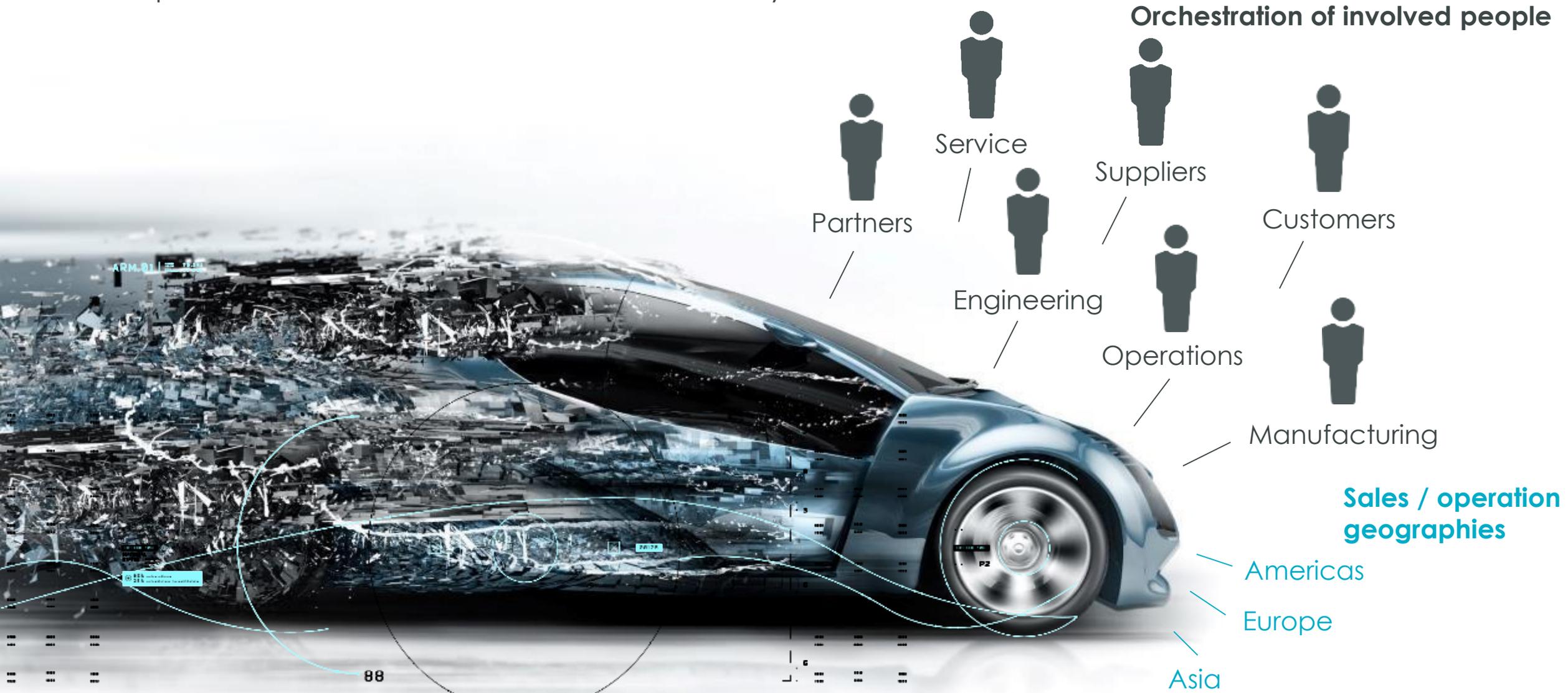
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PLM HAS BECOME STRATEGIC ENTERPRISE-WIDE SOFTWARE



There is a growing need for the entire global enterprise to get involved with product development and in the context and domain they are accustomed.

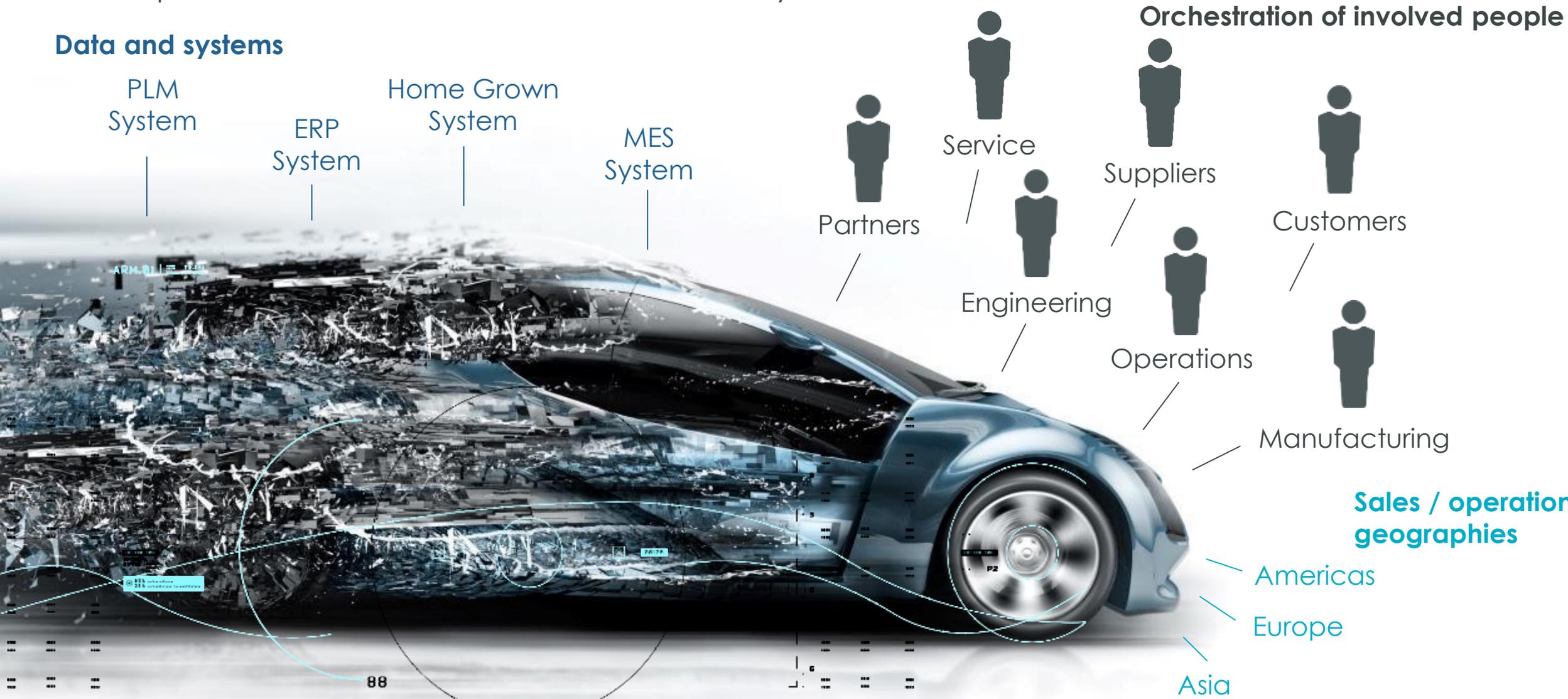


PLM HAS BECOME STRATEGIC ENTERPRISE-WIDE SOFTWARE



There is a growing need for the entire global enterprise to get involved with product development and in the context and domain they are accustomed.

Data and systems



Modern Architecture:

Strong, REST-based extendable OOTB enterprise domain applications and role-based apps

Visual Engagement:

Augmented Reality and 3D visualization offers a new way of engaging with PLM

Digital Thread:

Multi-system orchestration ensures continuity upstream engineering and downstream to manufacturing and service

Flexible Deployments:

In the PTC Cloud or On-Premise

Proven Performance and Scale:

Flexible data model allows for management of large data sets



ROLE & TASK BASED APPLICATIONS

Windchill Connected
(Navigate, Digital Twin, AR Design Review, Requirements)

Marketplace
(Partner/OEM)

PLATFORM

Extend PLM: Contextualize/Synthesize/Orchestration/Engage

Powered by:



ENTERPRISE DOMAIN APPLICATIONS

Windchill Core
(Lifecycle Management including CAD-Data, BOM, Change)



MES/SCM

ERP

MRO

CRM

DEVICE CLOUD

Source Data

CAD

BOM

SIMULATION

MBSE

REQ & TEST

MFG

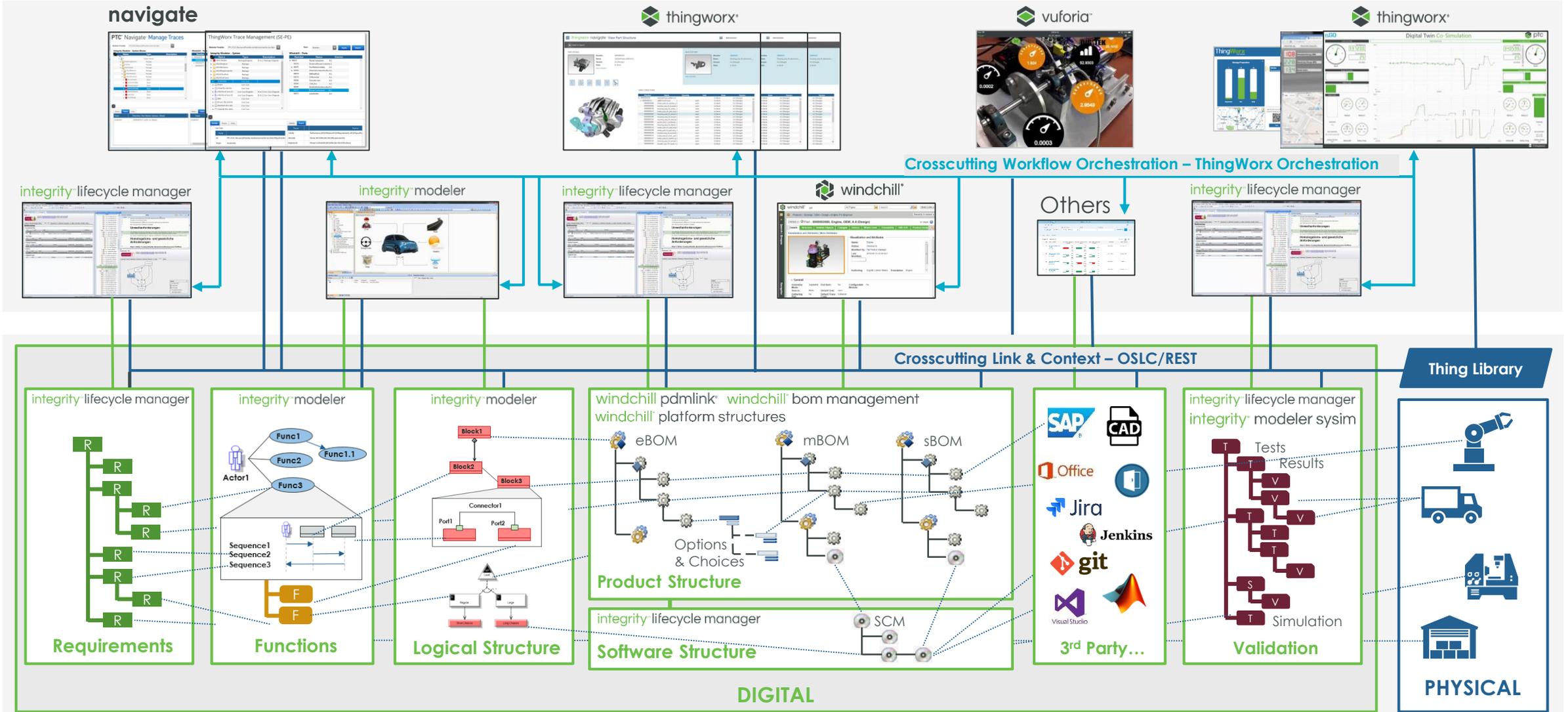
SUPPLIERS

CUSTOMERS

CONNECTED PRODUCTS & MACHINES

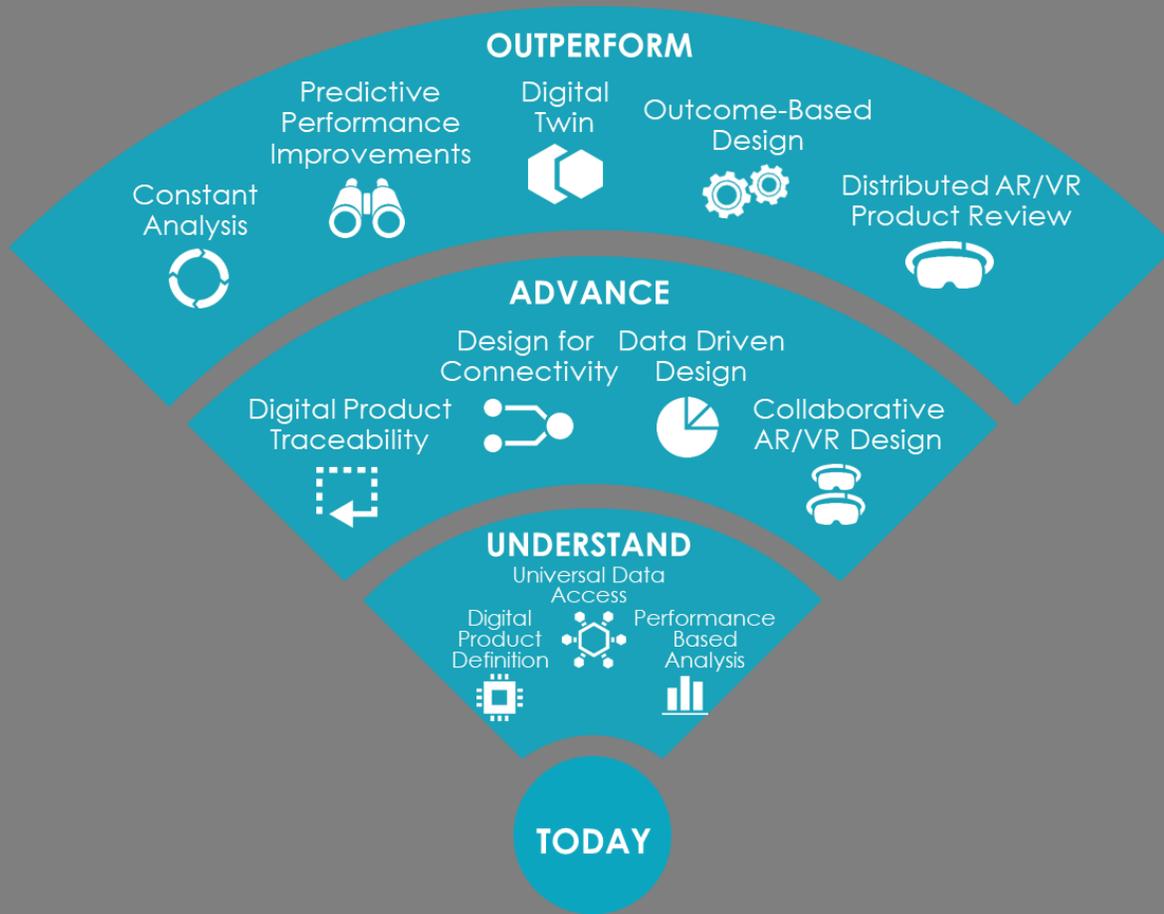
CLOUD | HYBRID | ON-PREM

Role Based Business & Engineering Apps Extending PLM



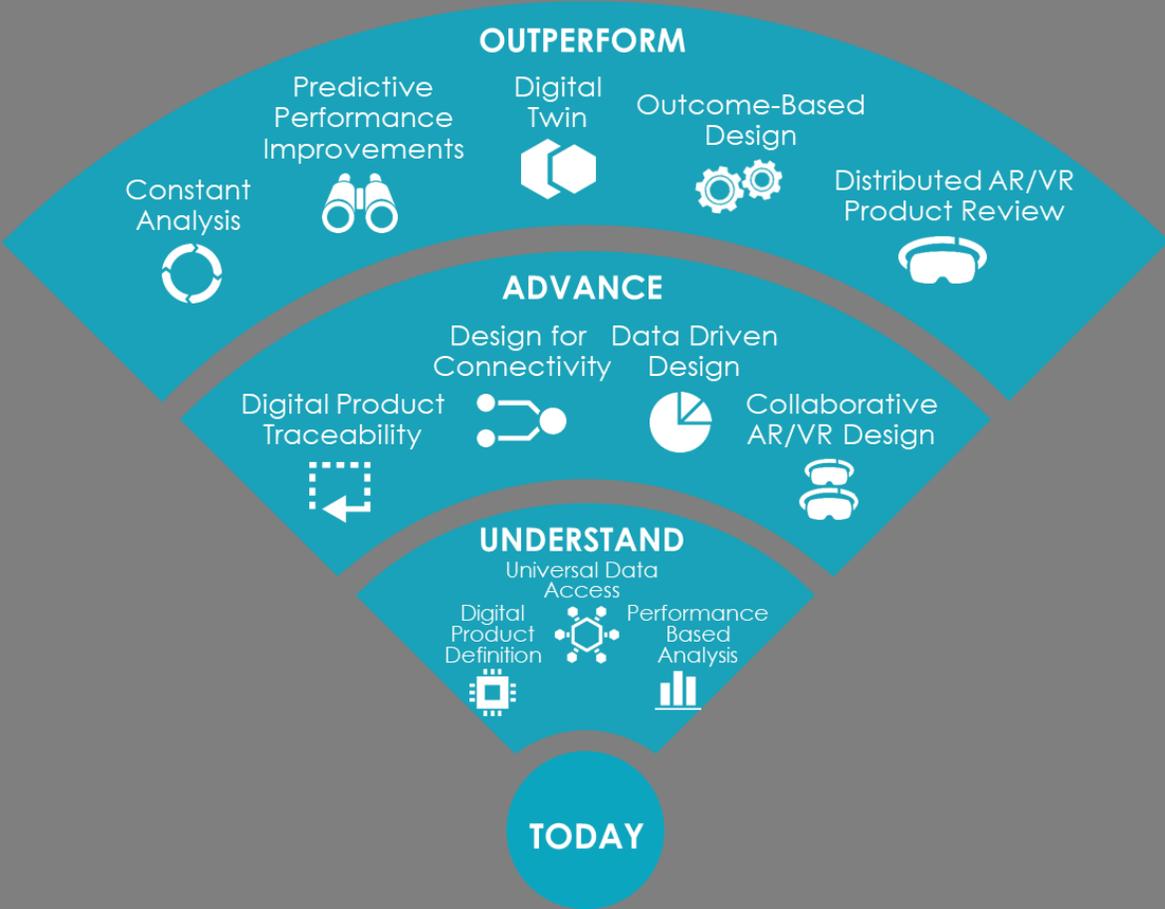
Domain Systems

PTC'S PLM BEST PRACTICES TO GUIDE YOUR DIGITAL TRANSFORMATION



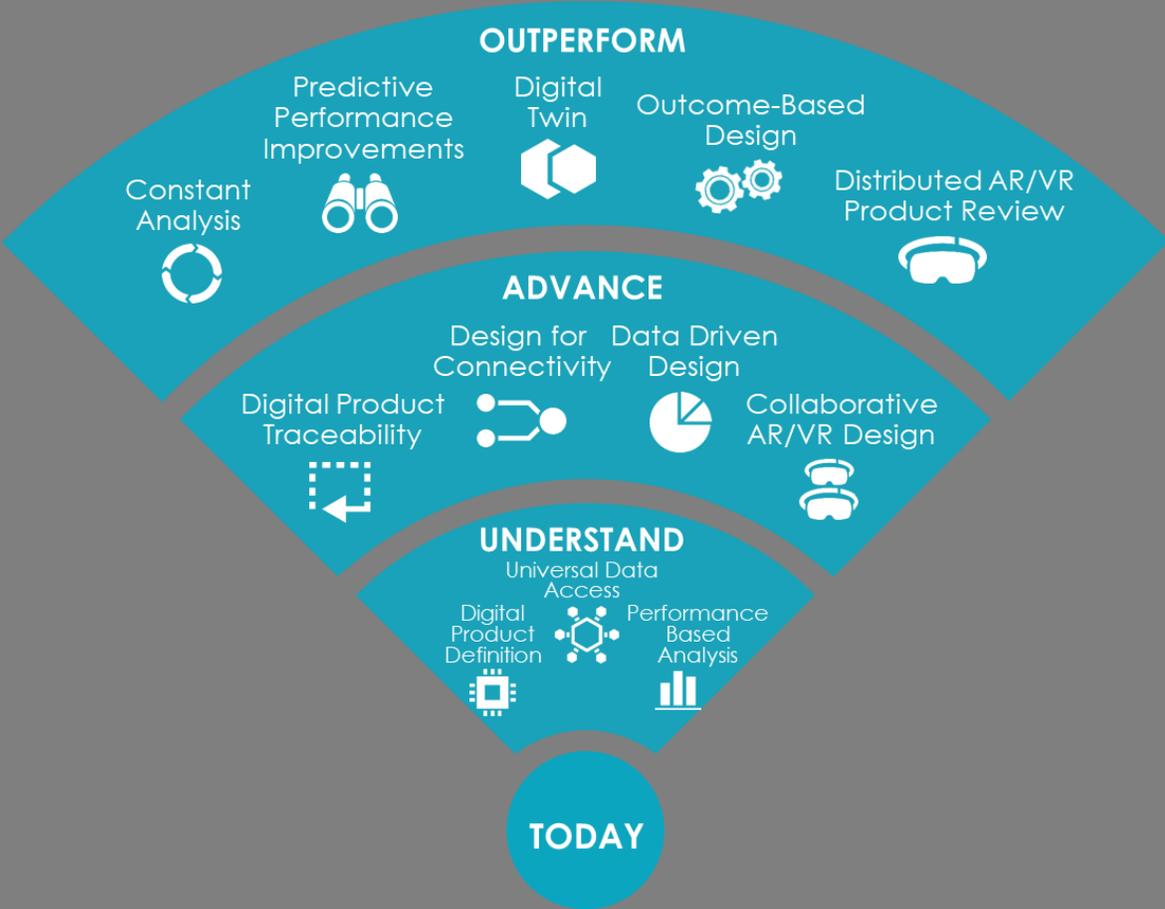
OUTCOMES TO CHALLENGES	NP	Cost	Quality
Digital Product Definition	●	●	●
Universal Data Access	●	●	●
Performance Based Analysis	●	●	●
Digital Product Traceability	●	●	●
Design for Connectivity	●	●	●
Data Driven Design	●	●	●
Collaborative AR Design	●	●	●
Constant Analysis			●
Predictive Perf Improvement	●	●	●
Digital Twin	●		●
Outcome Based Design	●	●	
Distributed AR VR Product Review	●		

PTC'S PLM BEST PRACTICES TO GUIDE YOUR DIGITAL TRANSFORMATION



OUTCOMES TO CHALLENGES		NPI	Cost	Quality
METRICS TO CHALLENGES		Efficiency 30-40% time	Cost of Sold 10% 5%	Quality Area Cost
New Product Introduction Rates		Orange	Grey	Grey
Non-Value Added Activities (Rework, Multiple systems, Manual activities)		Orange	Orange	Orange
Reuse (BOM, Parts, Requirements, Test procedures, Software)		Orange	Orange	Orange
NPD/NPI Cycle Time		Orange	Grey	Grey
CM Cycle (ECN, ECO, SVC)		Orange	Orange	Orange
Part/Component Rationalization		Orange	Orange	Orange
Scrap		Grey	Orange	Orange
Direct Material Spend I. NPD/NPI cost targets		Grey	Orange	Orange
First Pass Yield		Orange	Orange	Orange
Compliance Risk		Orange	Orange	Orange
Rework		Orange	Orange	Orange
Warranty Costs		Grey	Orange	Orange

PTC'S PLM BEST PRACTICES TO GUIDE YOUR DIGITAL TRANSFORMATION



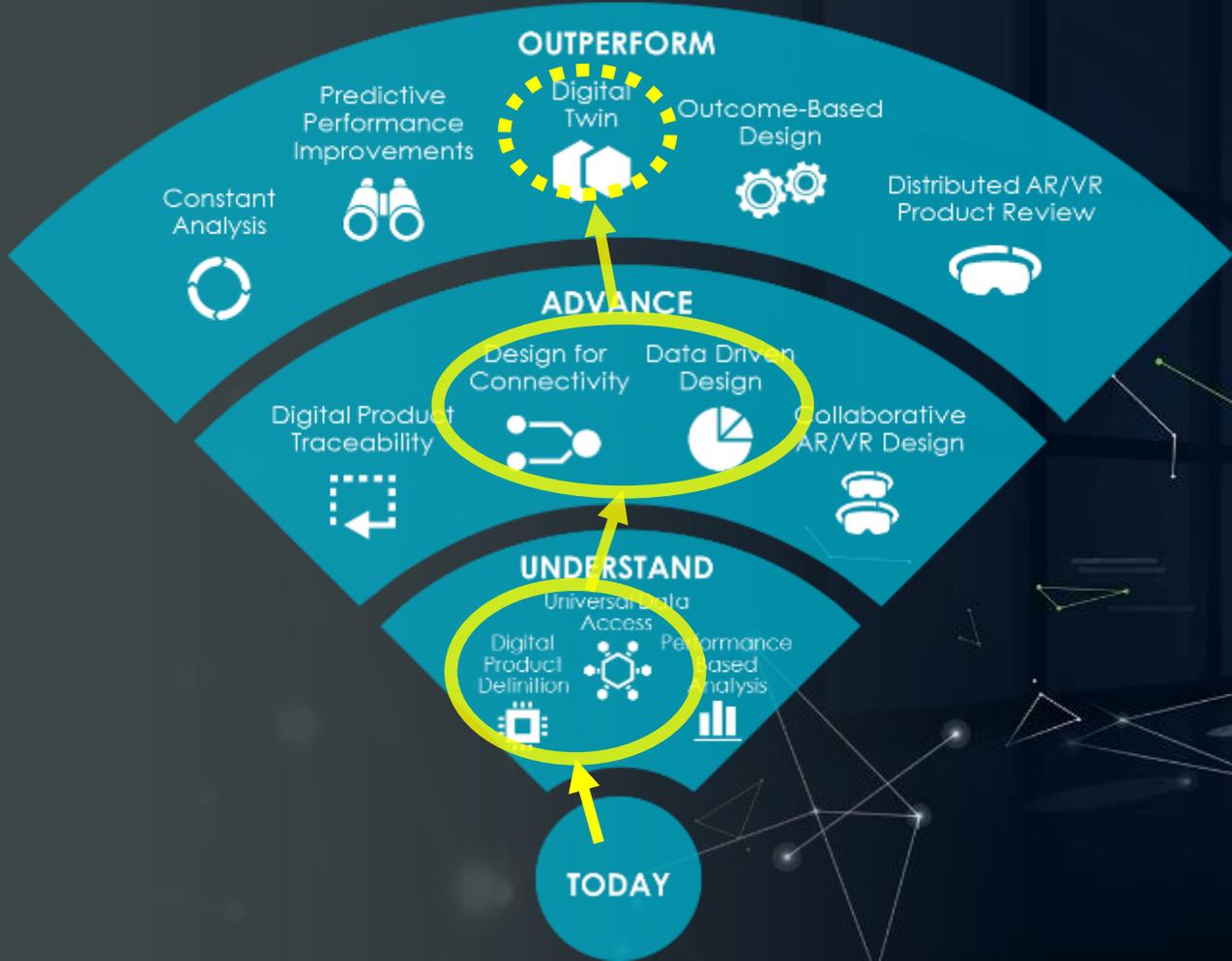
OUTCOMES TO CHALLENGES		NPI	Cost	Quality
METRICS TO CHALLENGES		Efficiency 30-40% Time	Cost of Goods Sold 10% Savings	Quality Avoid Cost
PROCESS TO CHALLENGES		NPI	Cost	Quality
Project Management	(BOM)	●	●	●
Change and Configuration Management		●	●	●
Quality and Reliability Management		●	●	●
Requirement and Validation Management		●	●	●
Concept Development		●	●	●
System Architecture Design		●	●	●
Platform Design and Variant Generation		●	●	●
Mechanical, Electrical and Software Development		●	●	●
Design and Manufacturing Outsourcing		●	●	●
Regulation and Material Compliance		●	●	●
Component and Supplier Management		●	●	●
Manufacturing Process Management		●	●	●

For the home of the future, that is focused around providing outstanding products that are smart and connected.

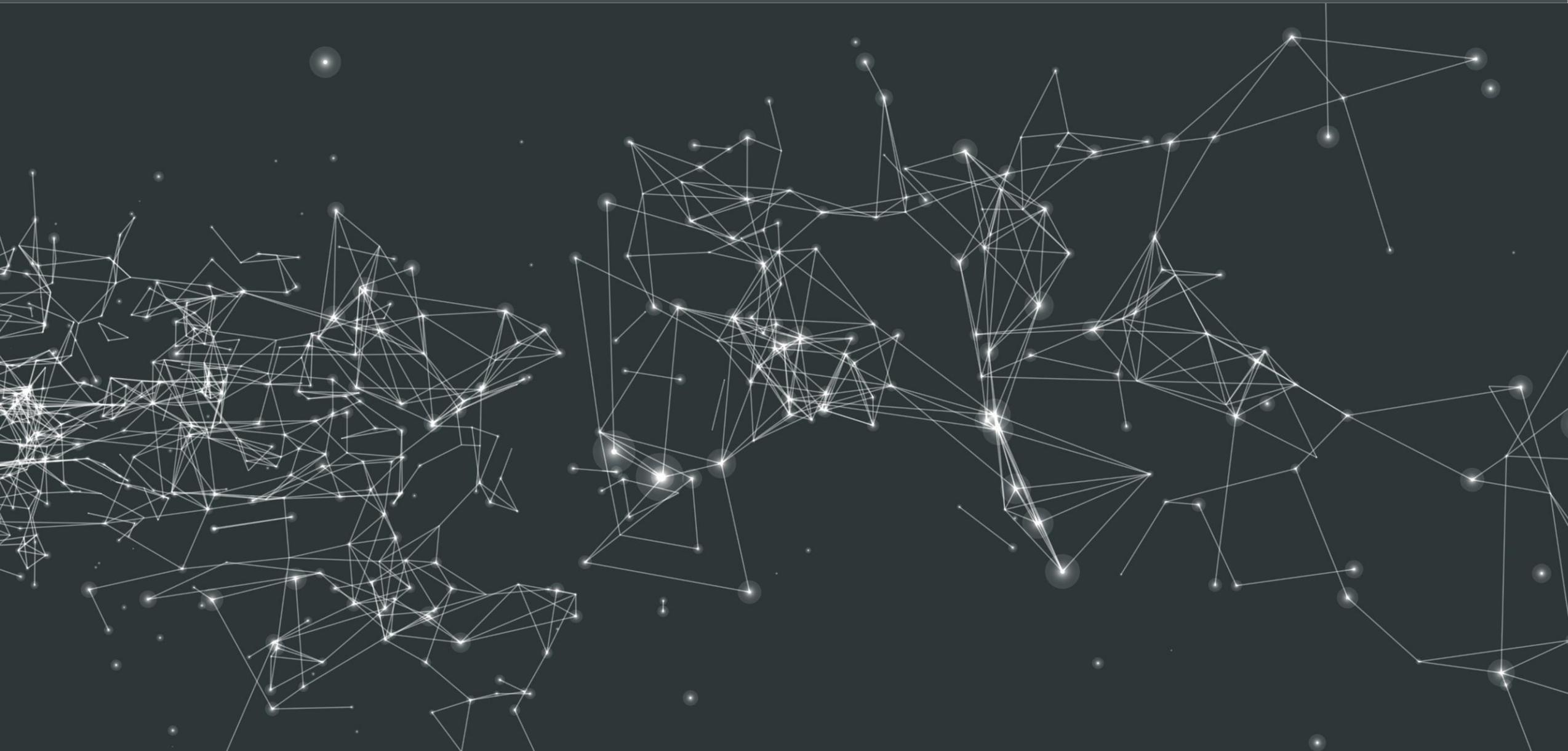
- Every tech innovation is inspired by the impact it will have on the consumer and their loved ones
- It's all about making products **easier, faster, and better** to improve the home experience for every consumer
- **PLM will reduce overall complexity and improve processes/ efficiencies, enabling tech innovation**



WHIRLPOOL CORP. TECH INNOVATION



WATCH: ENTERPRISE PLM & CONNECTED DEVICES AT WHIRLPOOL CORP.





Core

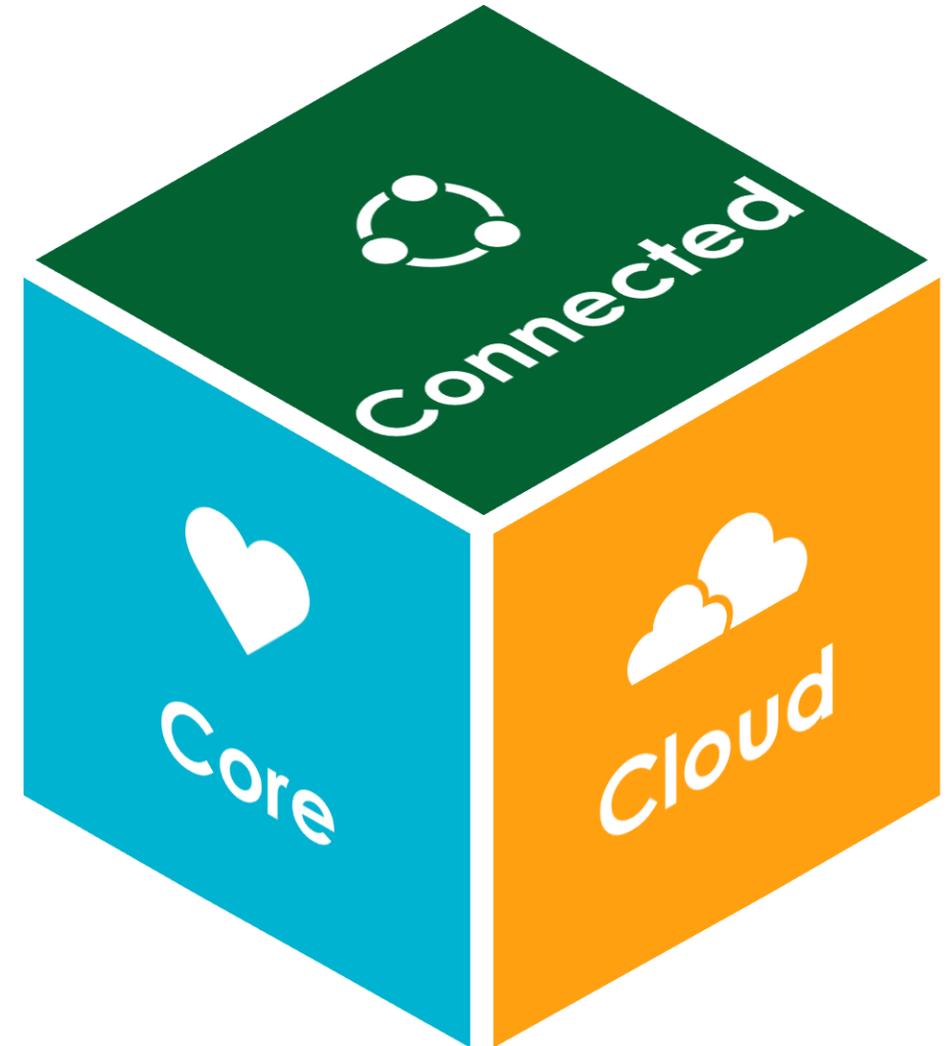
- Continued Strategic Platform
- Strengthened and modernized capabilities and openness
- Enterprise identity management modernization

Cloud

- Ready for cloud operation with PaaS components
- Storage
- Database
- Compute and Operating Systems
- Scalability and elasticity enhancements
- Opportunistic refactoring for micro-services

Connected

- Navigate View and Contribute
- REST web services
- Data orchestration
- AI / Analytics enablement
- Collaborative AR Design Review
- Performance advisor and support monitoring



PLM PRODUCT FAMILY - RELEASE SCHEDULE



PLM Product Family									
Windchill	11.1 F000	11.1 M010		11.1 M020			12.0.0.0		12.0.1.0
Windchill SIM/SP	11.1 F000	11.1 M010		11.1 M020			12.0.0.0		12.0.1.0
Creo View		5.0		5.1			6.0		6.1
ThingWorx Navigate	View 1.6	View 1.7		View 1.8			Navigate 2.0		Navigate 2.1
PTC Risk & Reliability							11.1 M010		
Windchill Performance Advisor	3.0 Continuous delivery		4.0		5.0 Continuous delivery		6.0		
integrity modeler		8.5a		9.0		9.1		9.2	9.3
Integrity lifecycle manager			12.0	12.1			12.2		12.3
2018	Q1	Q2	Q3	Q4	2019	Q1	Q2	Q3	Q4

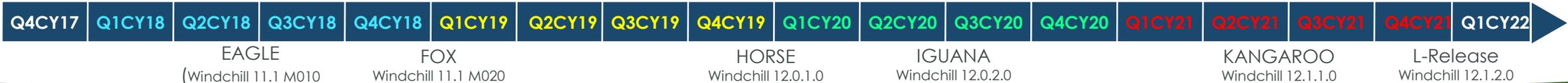
Dresden
Windchill 11.1 F000



Giraffe
Windchill 12.0.0.0



Jaguar
Windchill 12.1.0.0

integrity™ lifecycle manager - CORE PRODUCT ROADMAP



integrity lifecycle manager Releases	Themes
integrity lifecycle manager 12.0 – Aug 2018	Test Case & Result Versioning & Application Server Replacement with Tomcat 8.5
integrity lifecycle manager 12.1 – Dec 2018	ThingWorx Orchestration Adaptor, OSLC Server & Usability
integrity lifecycle manager 12.2 – June 2019	OSLC Client, Perspectives, Reference Links, Source & Usability
integrity lifecycle manager 12.3 – Dec 2019	Source Code Management, Reporting, Administration & Groups
integrity lifecycle manager 12.4 – June 2020	ThingWorx Orchestration for Source and 150% R&V
integrity lifecycle manager 13.0 – Dec 2020	Rich Client, Taxonomy Library, Active Reuse & Staging Rollback

integrity™ modeler - PRODUCT ROADMAP



integrity modeler	8.5a					9.0						9.1						9.2						9.3		
2018	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2019	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				

integrity modeler Releases	Themes
integrity modeler 8.5 – Jan 2018	OMG UAF, OSLC Suspecting, Variant Selector Additions & Fresh-look Diagrams
integrity modeler 9.0 – Sept 2018	Live Repository Technology Upgrade – Microsoft SQL Server & Co-Simulation
integrity modeler 9.1 – Jan 2019	OSLC for Integrity Lifecycle Manager, Performance & Simplification
integrity modeler 9.2 – June 2019	Windows UI Update, OSLC for Windchill
integrity modeler 9.3 – Dec 2019	Diagramming Productivity & SysML Focus

- **Platform**

- Applet removal & web GL visualization
- Licensing Compliance
- Windows Server 2016
- ESI Support for SAP S4 HANA
- DTI Support for Office 265 ProPlus

- **Usability**

- #1 Customer Enhancement request :
Cascading attributes
- Rich Text in Change Mngt

- **Core**

- CAD Data Management
- Usability improvements in PSB
- IP Protection
- Federation by replication (Package)

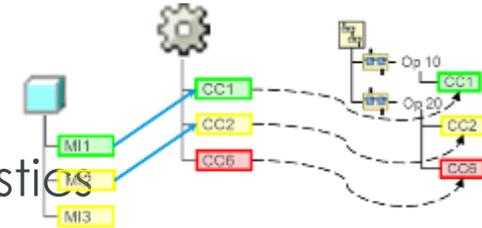
- **Multi-CAD AR Publishing**

- **Medical Device Configuration**

- Task table in CAPA, CEM, NC
- Support for eMDR HL7 Release 2

- **Windchill MPMLink**

- Digital Thread with
Control Characteristics



- **Project Execution**

- Deliverable based scheduling /
execution

- **Product Family Management**

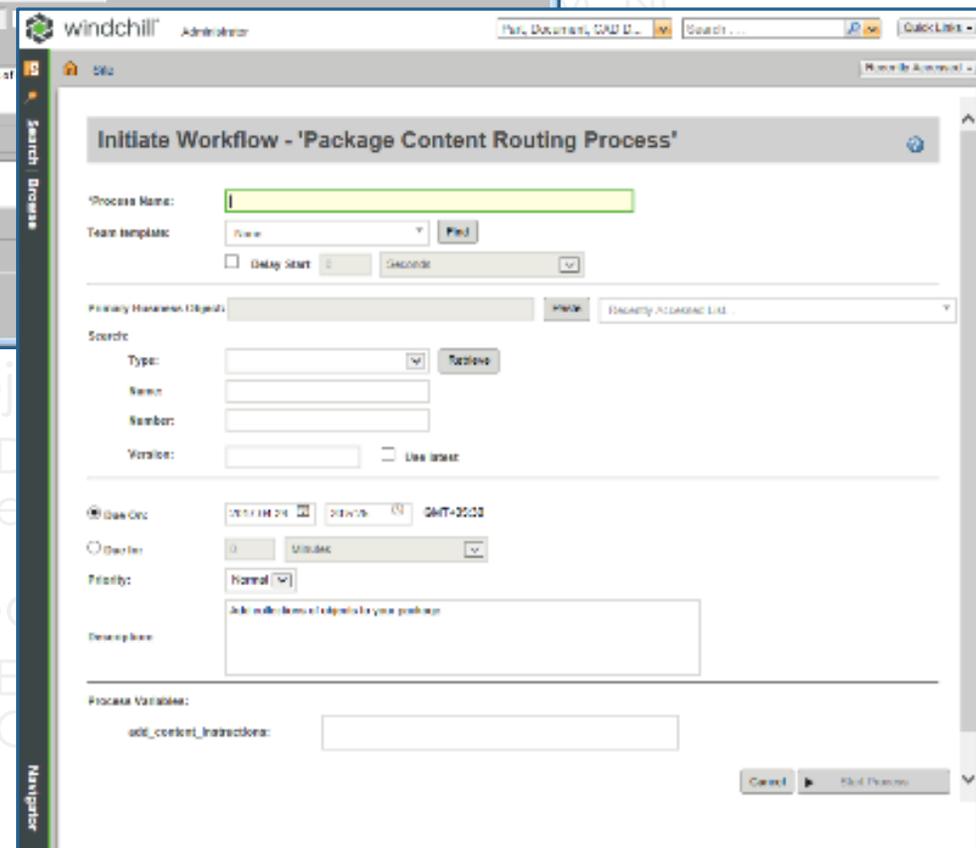
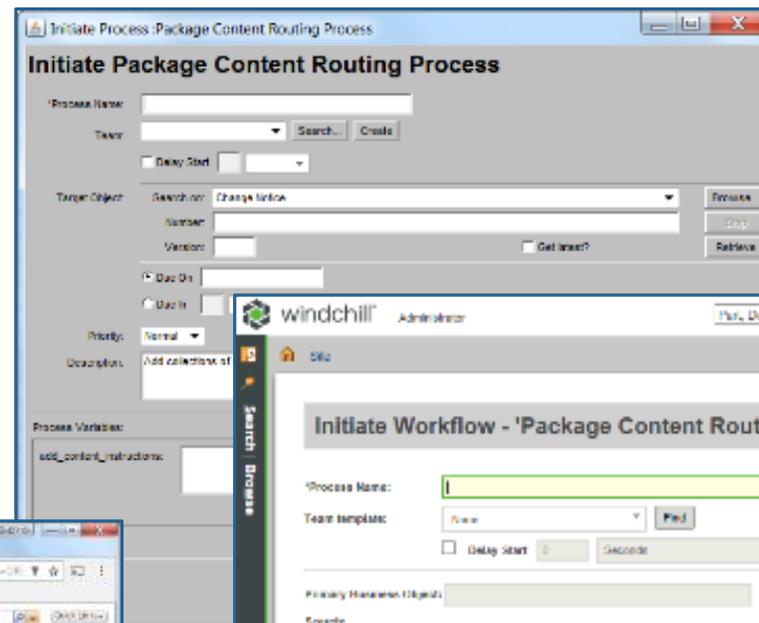
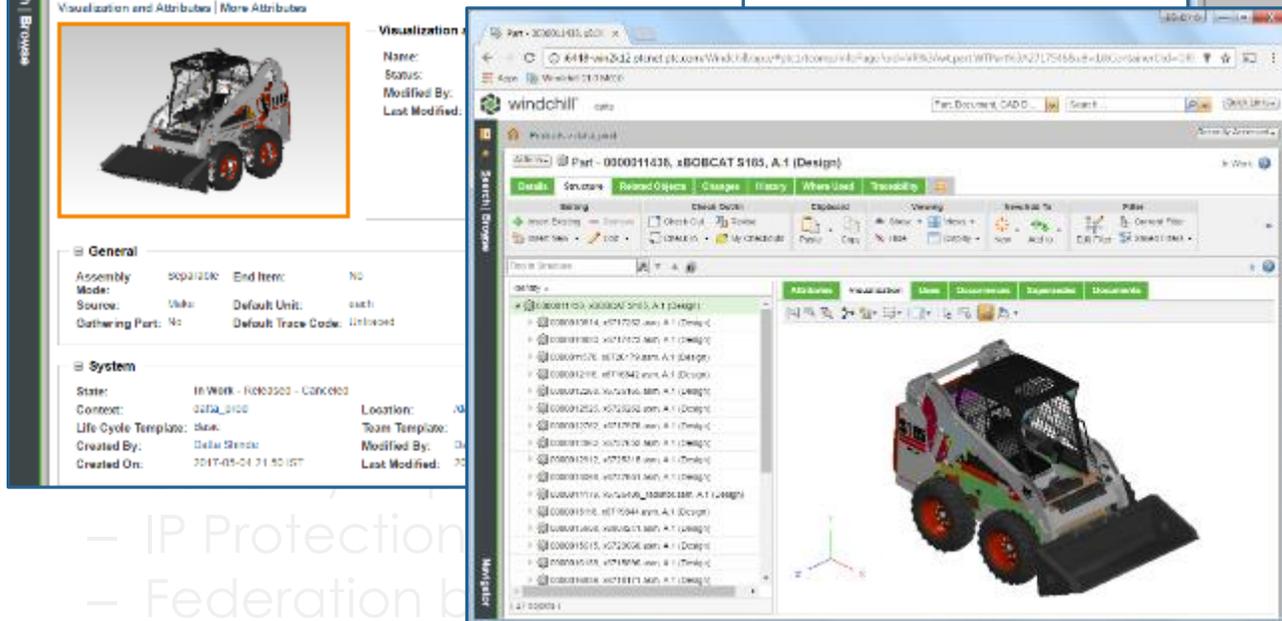
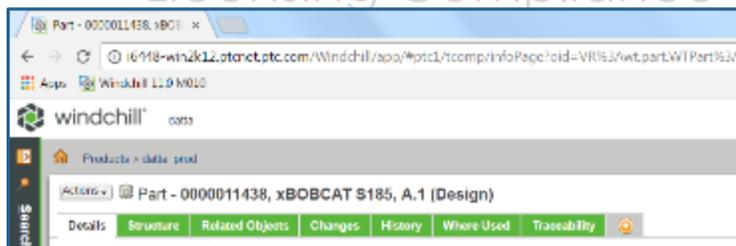
- Enable Product Family Definition for
the Configurable Platform

WINDCHILL 11.1 OVERVIEW



- Platform

- Applet removal & web GL visualization
- Licensing Compliance



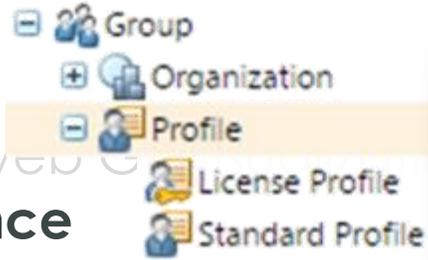
- IP Protection
- Federation

WINDCHILL 11.1 OVERVIEW



- Platform

- Applet removal & web client
- Licensing Compliance



License Management

Settings Feature Information

Feature Information

License Feature	Count	Available Count	Expiry Date
ptc_navigate_view_concurrent	100	100	Thu Oct 01 23:59:59 GMT 2020
ptc_mfg_named	100	100	Thu Oct 01 23:59:59 GMT 2020
ptc_ip_protection_named	100	100	Thu Oct 01 23:59:59 GMT 2020
ptc_mech_design_2_named	100	100	Thu Oct 01 23:59:59 GMT 2020
ptc_navigate_contribute_named	100	100	Thu Oct 01 23:59:59 GMT 2020
ptc_navigate_author_named	100	100	Thu Oct 01 23:59:59 GMT 2020
ptc_mech_design_1_named	100	100	Thu Oct 01 23:59:59 GMT 2020
ptc_navigate_contribute_conc	100	100	Thu Oct 01 23:59:59 GMT 2020
ptc_mpmink_license_named	100	100	Thu Oct 01 23:59:59 GMT 2020
ptc_navigate_view	100	100	Thu Oct 01 23:59:59 GMT 2020
ptc_design_ctrl_named	100	100	Thu Oct 01 23:59:59 GMT 2020

Overview

Registered Users: 2016, Active Users: 2008, Disconnected Users: 8, Unclassified Users: 0

License Usage

Weekly Trend Analysis

Week	PTC Windchill PDM Link	PTC Windchill ProjectLink	Unclassified	View and Print Only
2016-06-07	24	24	24	24
2016-06-14	25	25	25	25
2016-06-21	26	26	26	26
2016-06-28	27	27	27	27

License Management

Settings Feature Information

Import Windchill License

Retrieve license online
 Import license from a file

PTC Username*

PTC Password*

Activation ID/Entitlement ID*
ecb9-0be3-a1f6-45f7-9d6c-b500-3f23-4216

Retry Attempts*
5

Retry Interval (In minutes)*
5

Save Settings Get License

Last Updated Time : Sep.08.2017 14:03:44

License Management

Settings Feature Information

Import Windchill License

Retrieve license online
 Import license from a file

Choose this option to manually activate your license key through ptc.com License Management tool

1. Specify Activation ID

Activation ID*
93cd-476a-6506-46b0-ad51-6b97-4f24-5d52

Save Settings

2. Generate license activation request

Download license request :
Generate Capability Request

3. Import activated license

Select Capability Response : trainresponse(2).bin
Browse

Process Capability Response

Last Updated Time : Sep.08.2017 14:03:44

- IP Protection
- Federated

WINDCHILL 11.1 OVERVIEW

- **Platform**

- Applet removal & web GL visualization
- Licensing Compliance
- **Windows Server 2016**
- **ESI Support for SAP S4 HANA**
- **DTI Support for Office 265 ProPlus**

- Usability

- #1 Customer Enhancement request : Cascading Attributes
- Rich Text in Change Mngt

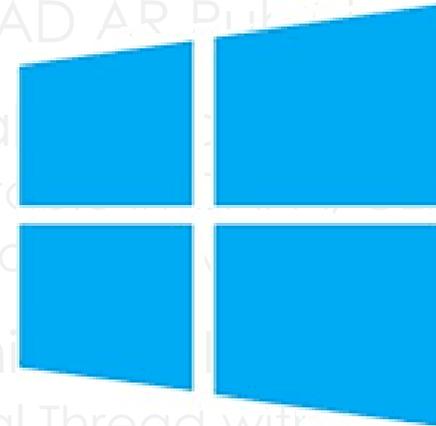


Office 365
ProPlus

- Core

- CAD Data Management
- Usability improvements in PSB
- IP Protection
- Federation by replication (Package)

- Multi-CAD AP Publishing
- Medical Configuration
 - Task to ... A, NC
 - Support ... release 2



Windows Server 2016

- Windchill
 - Digital Thread with ...
- Project Execution :
 - Deliverable based scheduling / execution



WINDCHILL 11.1 OVERVIEW

CA Group

Continent: North America

Country: U S A

State: Minnesota

City: Blaine

New Part

Set Attributes

Product: GOLF_CART

* Type: CA Part

* Create as End Item: No

Part Attributes

Number: (Generated)

* Name: Cascading Example

* Assembly Mode: Separable

* Source: Male

View: Design

* Default Trace Code: Ultraced

Default Unit: each

* Gathering Part: No

* Life Cycle Template: (Generated)

Team Template: (Generated)

* Location: AutoSelect Folder (GOLF_CART) Select Folder GOLF_CART

CA Group

Continent:

Country:

State:

City:

Create CAD Document

Keep checked out after checkin

* Indicates required fields.

Edit Rule

If Continent = Africa
Then Country = Nigeria, South Africa

* If: Continent

Enumeration: Continent

* Select Values: Africa, Antarctica, Asia, Australia, Europe, North America, South America

* Then: Country

Enumeration: Country

Select Values: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Japan, New Zealand, Nigeria, Russia, South Africa, U K, U S A

* Indicates required fields.

Attributes | Layouts | Ca

Attribute	Value
Continent	
If Continent	
Then Country	
If Continent	
Then Country	
If Continent	
Then Country	
If Continent	
Then Country	
If Continent	North America
Then Country	Canada, U S A
If Continent	South America
Then Country	Argentina, Brazil
Country	
If Country	Argentina
Then State	Buenos Aires, Santa Fe
If Country	Australia
Then State	Queensland, South Australia, Western Australia
If Country	Brazil
Then State	Amazonas, Rio De Janeiro

- **Usability**

- #1 Customer Enhancement request : **Cascading attributes**

- Rich Text in Change Mngt

- **Core:**

- CAD Management
 - Improvements in PSB
 - Application (Package)



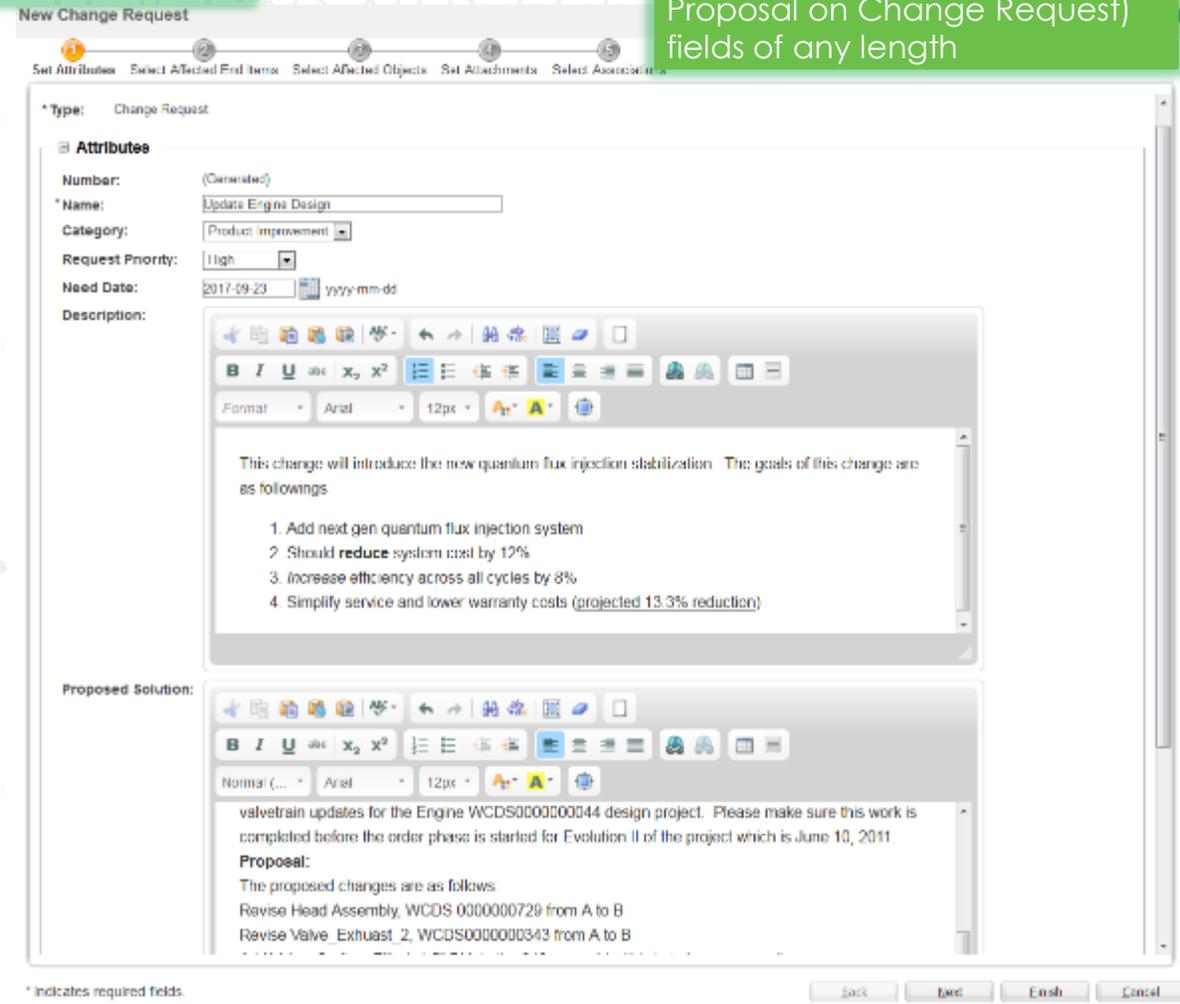
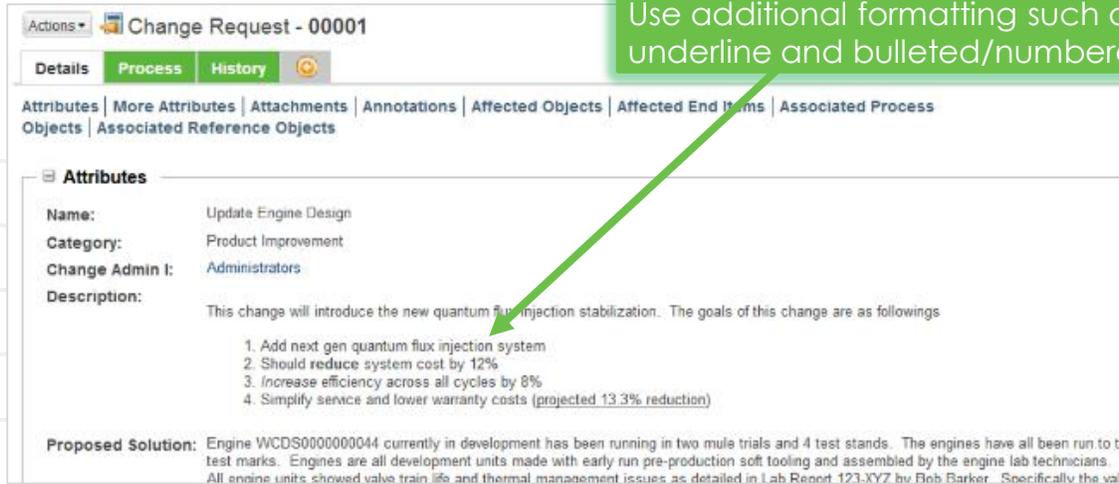
Easily define and manage type specific Cascading Attributes in Type Manager

WINDCHILL 11.1 OVERVIEW



Use additional formatting such as bold, italic, underline and bulleted/numbered lists

Support Description (and Proposal on Change Request) fields of any length



- Usability

- #1 Customer Enhancement request : Cascading attributes
- Rich Text in Change Mngt

- Core

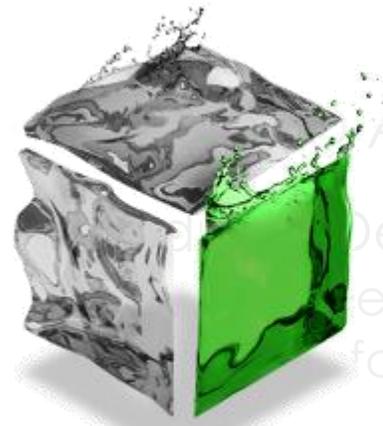
- CAD Data Management
- Usability improvements in PSB
- IP Protection
- Federation by replication (Package)

WINDCHILL 11.1 OVERVIEW

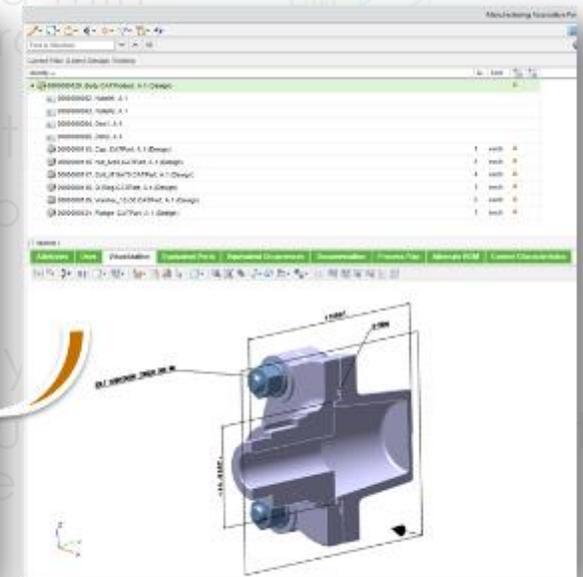
- NX 12
- SolidWorks 2018
- CEDM 20.1 M010 and 20.0 M040
- CEDD 20.1 M010 and 20.0 M040
- CATIA V5-6R2018
- Creo Illustrate 5.0
- IsoDraw 7.3 M090
- MathCAD 15.0 M050
- Zuken CR-5000 18/19/20
- Altium 18

- **Core**

- **CAD Data Management**
- Usability improvements in PSB
- IP Protection
- Federation by replication (Package)



possibilities 5.0



WINDCHILL 11.1 OVERVIEW

Rename

Current Settings: Required dependents, Latest : Production

Object List As a List

Number	New Number	New Name
000000001	(Generated)	<Same As Nu
000000002	(Generated)	<Same As Nu
000000003	(Generated)	<Same As Nu
TENSIONER_BRACK...	(Generated)	<Same As Nu
TENSIONER_GUIDE...	(Generated)	<Same As Nu
TENSIONER_R2.ASM	(Generated)	<Same As Nu

Admin set default value that cannot be changed by this user based on his profile.

Set New Name

New Number:

- Unchanged
- Autogenerate
- Generate document number based on related Part
- Change

New Name:

- Unchanged
- Same as number
- Change

New File Name:

- Unchanged
- Same as number
- Change

Profile Actions

Profile Action Name	Product	Library	Project
Set Identity New Number	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Set Identity New Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Set Identity New File Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Rename

Collector

Default setting for	File Name	Name	Number
Default setting for File Name	Same as number	Same as number	Autogenerate
Default setting for Name	Same as number	Same as number	Autogenerate
Default setting for Number	Autogenerate	Same as number	Autogenerate

Add to Workspace

*Workspace: New...

Basic Advanced

*Check Out: None

Current Settings: Required dependents, Latest : Production

Dependent: System Default, Latest Production-Prototype-Released-InWork

Collect Related ECAD Objects

Drawings: None

Family: None

Generate: None

Manage Filters

Easy to access to Saved Filters created in Add to Workspace

Edit Filter

Configuration Specification Attribute Filter

Choose a Type: Latest

Life Cycle State: None

Include Work In Progress

To Be Applied

Type	Details
1. Latest	Production
2. Latest	Prototype
3. Latest	Released
4. Latest	In Review

Apply to Initially Selected Objects

Apply latest for unresolved dependents

CAD Dynamic Documents:

None

Image: None

Source: None

Generated Content: None

- Core
 - CAD Data Management
 - Usability improvements in PSB
 - IP Protection
 - Federation by replication (Package)

windchill Administrator

Products > DeletedUserTesting, Rename Pref

My Workspaces

Name	Content	Actions
dsteel	DeletedUserTesting	[i] [x]
dell	DeletedUserTesting	[i] [x]
df	DeletedUserTesting	[i] [x]

(0 objects selected)

Other Users' Workspaces

Name	Content	Description
fat1_us	DeletedUserTesting	

(1 objects selected)

Pick a user from picker UI to browse a list of workspaces the user created

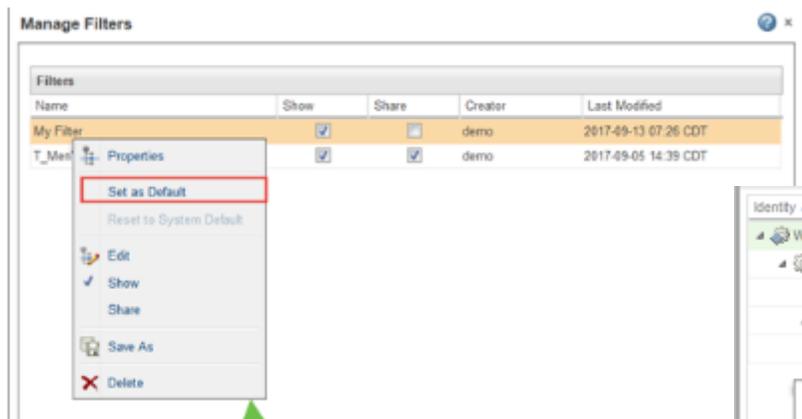
Delete user's workspace if the workspaces are not required

sky.ptcnet.ptc.com says:

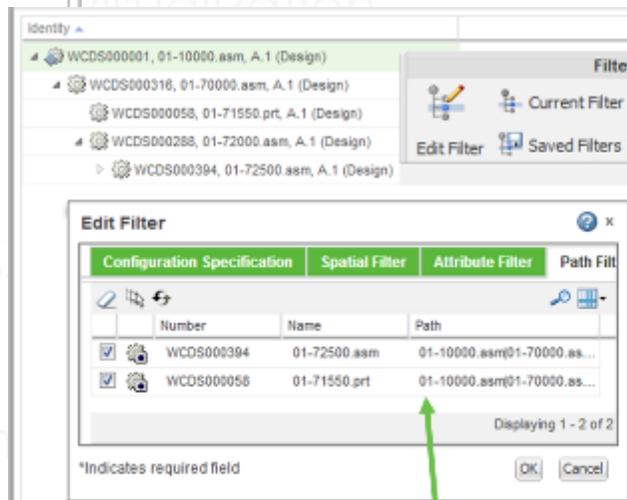
Are you sure you want to delete the selected workspaces? All the data which is not checked in to the server will be lost.

OK Cancel

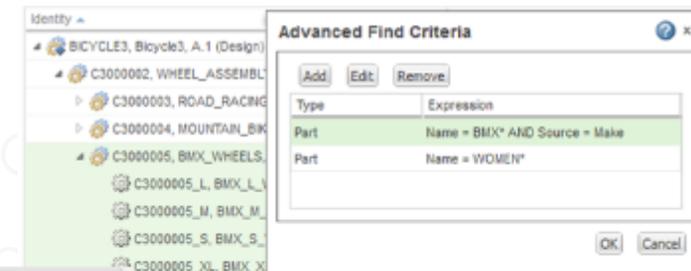
WINDCHILL 11.1 OVERVIEW



User can select a Saved Filter as their default for Part clients



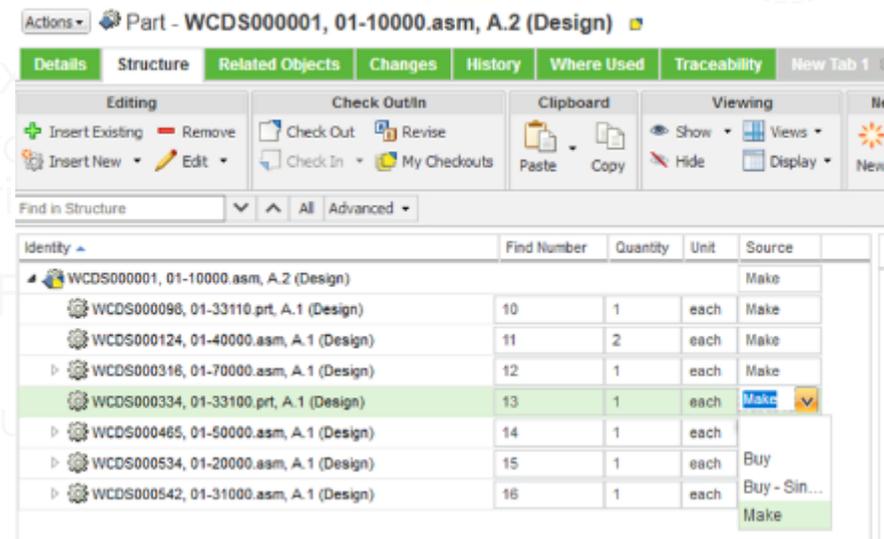
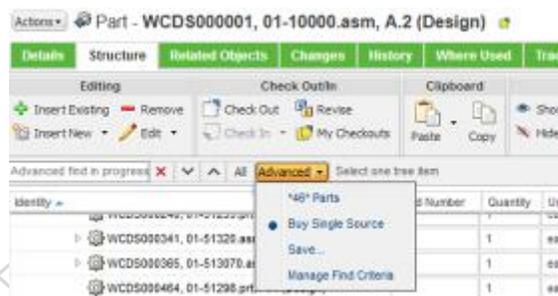
Speed up working with the BOM by only displaying Parts of interest



Create powerful searches to easily find Parts in your BOM

- **Core**

- CAD Data Management
- **Usability improvements in PSB**
- IP Protection
- Federation by replication (Pack



WINDCHILL 11.1 OVERVIEW

- Platform
 - Applet removal & web GL visualization
 - Licensing Compliance
 - Windows Server 2016
 - ESI Support for SAP S4 HANA
 - DTI Support for Office 265 ProPlus

- Usability
 - #1 Customer Enhancement
 - Cascading attributes
 - Rich Text in Change

- Core
 - CAD Data Management
 - Usability improvements
 - **IP Protection**
 - Federation by replication

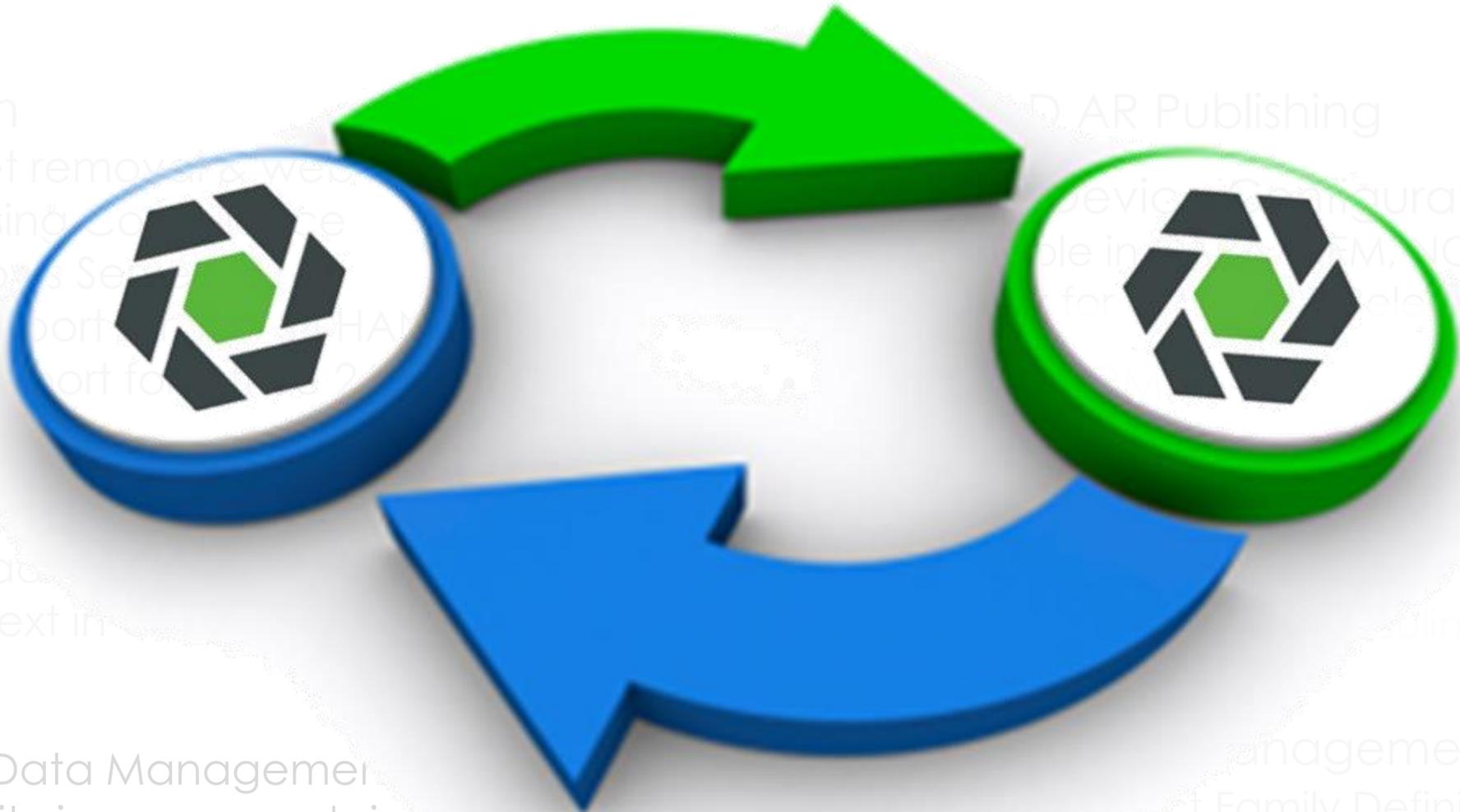
- Multi-CAD Support
- Medical Configuration CEM, NC L7 Release 2
- Windchill Digital Control Characteristics

The screenshot shows the Windchill interface for a part named 'Part - WCDS000226, 01-51282a.prt, A.1 (Design)'. A custom tab titled 'My Custom Security Tab' is active, displaying a 'Security Labels Change History' table. A 'Customize' menu is open, showing various history options, with 'Security Labels Change History' checked. A green box highlights the 'Security Labels Change History' option in the menu, with an arrow pointing to a callout box that says 'Add Security Label Change History to custom tab on information pages'. Another green box highlights the 'My Custom Security Tab' tab, with an arrow pointing to a callout box that says 'Create custom table views'. A third green box highlights the table headers, with an arrow pointing to a callout box that says 'Report "Modified By", "Modified On", and value changes'. The table contains two rows of data.

Modified By	Modified on	Legal Information	Need To Know	Export Control	Secrecy Label	Context Based Label	Third Party Proprietary
Site, Administrator	2017-08-24 12:37 UTC	Null		Null	Notsecret	Null	
Site, Administrator	2017-08-24 12:38 UTC	-	abc	-	-	-	-

WINDCHILL 11.1 OVERVIEW

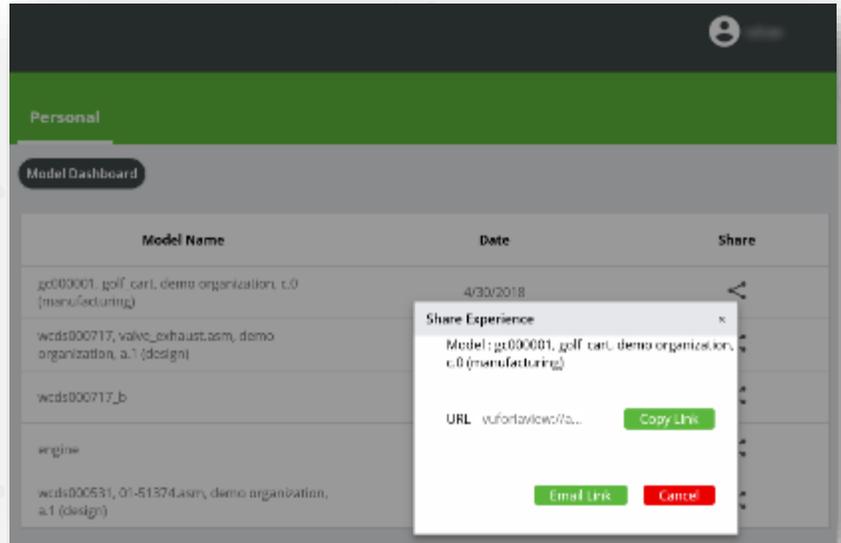
- Platform
 - Applet removal & web
 - Licensing Code
 - Windows Service
 - ESI Support for CHAM
 - DTI Support for 2
 - Usability
 - #1 Customer Satisfaction
 - Cascade
 - Rich Text in
 - **Core**
 - CAD Data Management
 - Usability improvements in
 - IP Protection
 - **Federation by replication (Package)**
- 3D AR Publishing
- Device Configuration
- able in FEM, IC
- for 2
- ing /
- management
- ct Family Definition for the
- able Platform



WINDCHILL 11.1 OVERVIEW

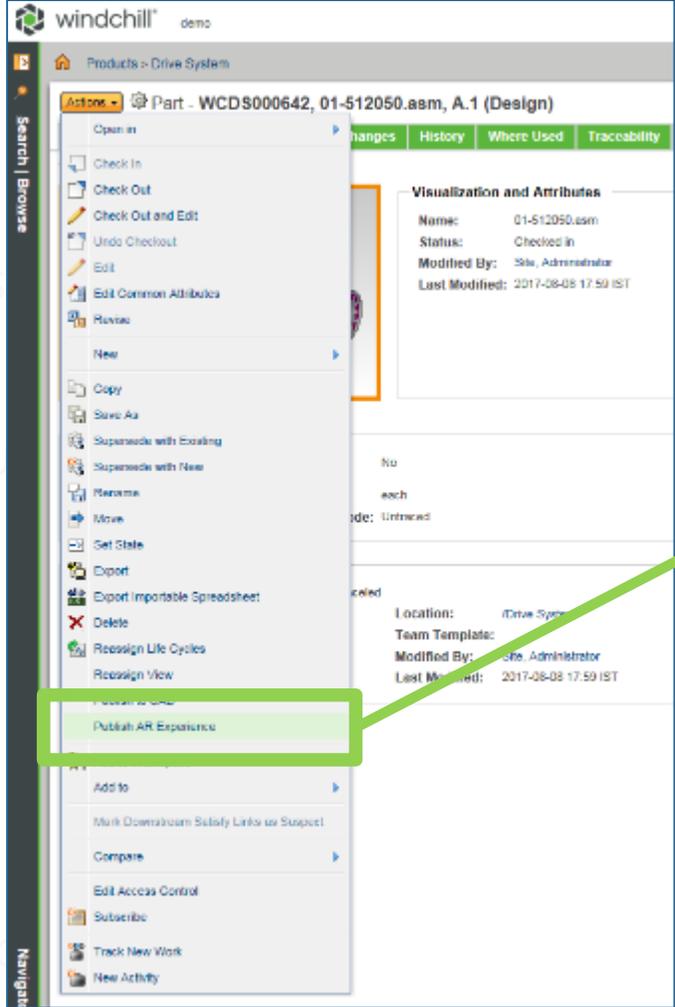
- Platform

- Applet remote
- WebGL visual
- Licensing
- Windows Server 2016



- Usability improvements in PSB
- IP Protection
- Federation by replication (Pack

- Multi-CAD AR Publishing



WINDCHILL 11.1 OVERVIEW



eMDR Report Acknowledgements (3 objects)

Number	Submission Status	Message Summary	Date Received	FDA M
1	SUCCESSFUL		2013-01-16 12:59 MST	
2	SUCCESSFUL		2013-01-16 12:59 MST	
3	FAILURE		2013-01-16 12:59 MST	

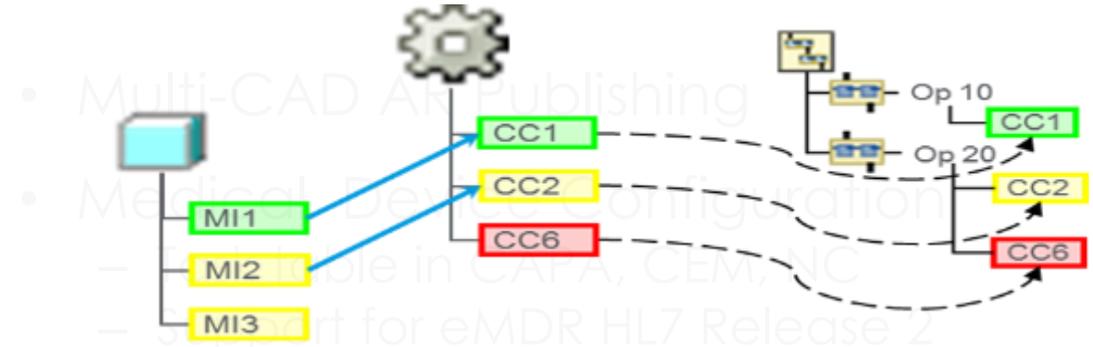
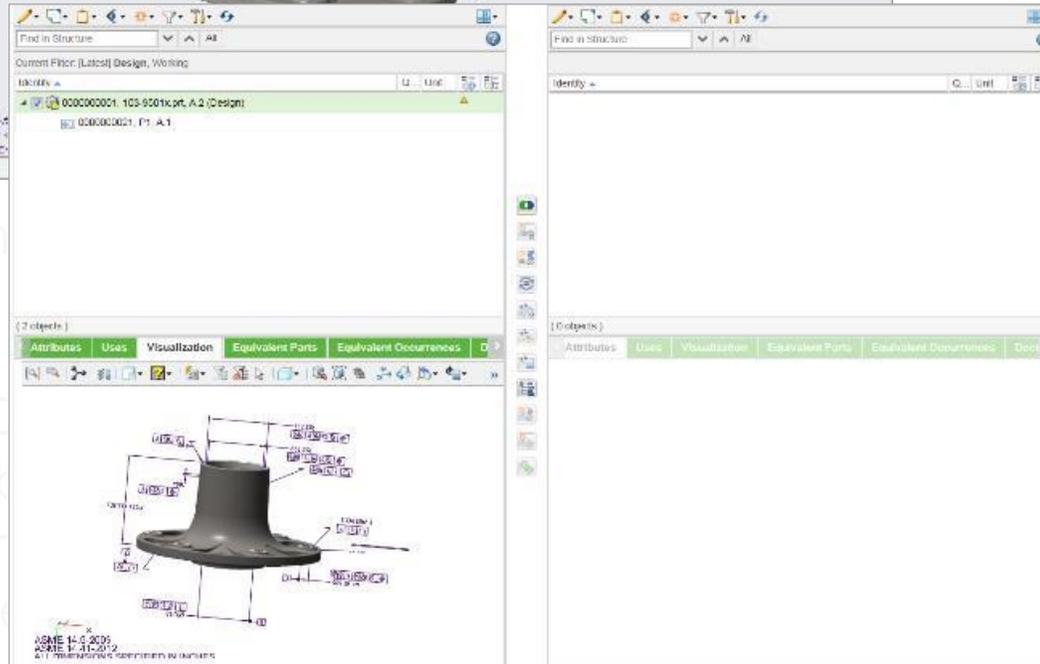
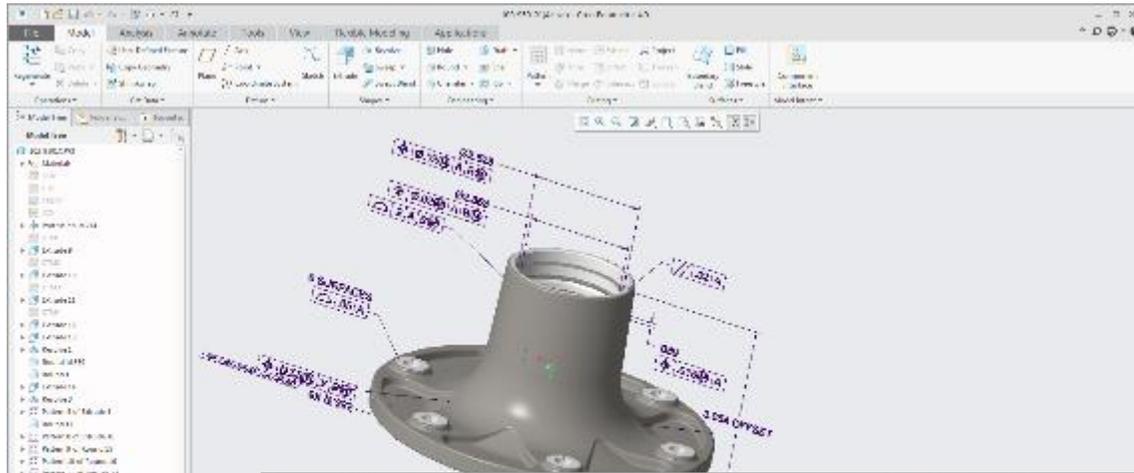
Acknowledgement 3 Errors (1 objects)

Section	Error Message	Message Value
E1	(5) characters are max.	293032

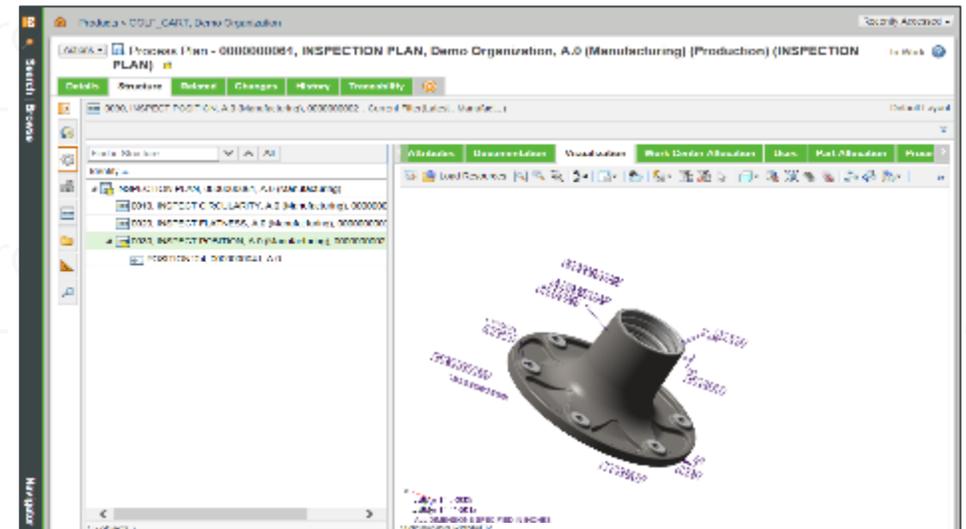
- Multi-CAD AR Publishing
- **Medical Device Configuration**
 - Task table in CAPA, CEM, NC
 - Support for eMDR HL7 Release 2
 - Audit Module

The image shows a task table with columns for 'Task ID', 'Task Name', 'Task Type', 'Task Status', 'Task Priority', 'Task Assignee', 'Task Due Date', 'Task Start Date', 'Task End Date', 'Task Description', 'Task Comments', and 'Task Actions'. Below the table, there is a 'Task Details' window with fields for 'Task ID', 'Task Name', 'Task Type', 'Task Status', 'Task Priority', 'Task Assignee', 'Task Due Date', 'Task Start Date', 'Task End Date', 'Task Description', 'Task Comments', and 'Task Actions'.

WINDCHILL 11.1 OVERVIEW



- Windchill MPMLink
 - Digital Thread with Control Characteristics



WINDCHILL 11.1 OVERVIEW

Activity - Deliverable Activity Example

Details Deliverables Baselines Related Objects

Associated Deliverables

Associated Deliverables Current Plan (5 objects)

Subject	Name	State	Context
Part - WCDS000321, 01-51283_outer_race.prt, A-1.1 (Design)	01-51283_outer_race.prt	In Work	Example Project
Part - WCDS000423, 01-512106c.prt, A.1 (Design)	01-512106c.prt	In Work	Drive System
Document - 0000000025, System Functions, A.1	System Functions	In Work	Example Project
Document - 0000000026, Tech Specs, A.1	Tech Specs	In Work	Example Project
Document - 0000000061, Problem Log, A.1	Problem Log	In Work	Example Project

(0 objects selected)

Track Multiple Deliverables

3		Review Contracts and Requirements		5 days
4		Deliverable Activity Example		1 day
5		Design Work		11 days

Define Plan Activity as a Deliverable

New Activity - Overview (View of Package provided by IT 06/15)

General

Activity Name: Design Example

Description:

Owner: Design User

Schedule

Resources

Start activity as deliverable

Mark activity as deliverable

Tracking policy: Fixed Revision

- Project Execution :
 - Deliverable based scheduling / execution

Mark activity as deliverable

Tracking policy

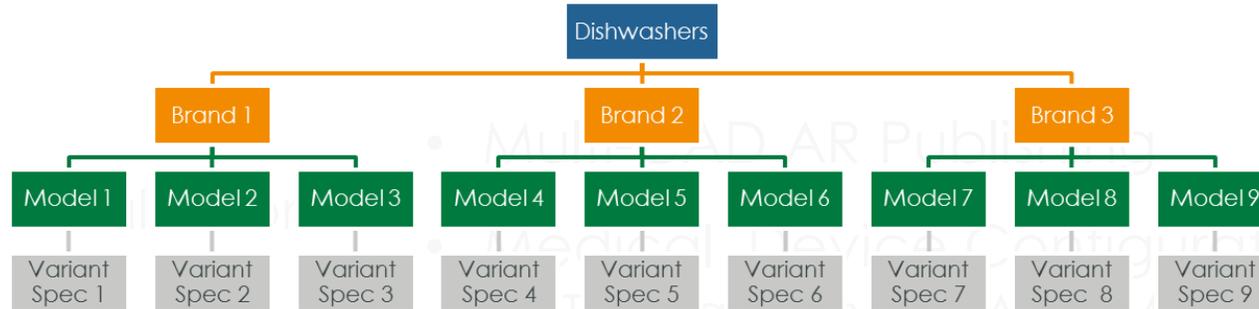
Fixed Revision

Latest Revision

WINDCHILL 11.1 OVERVIEW

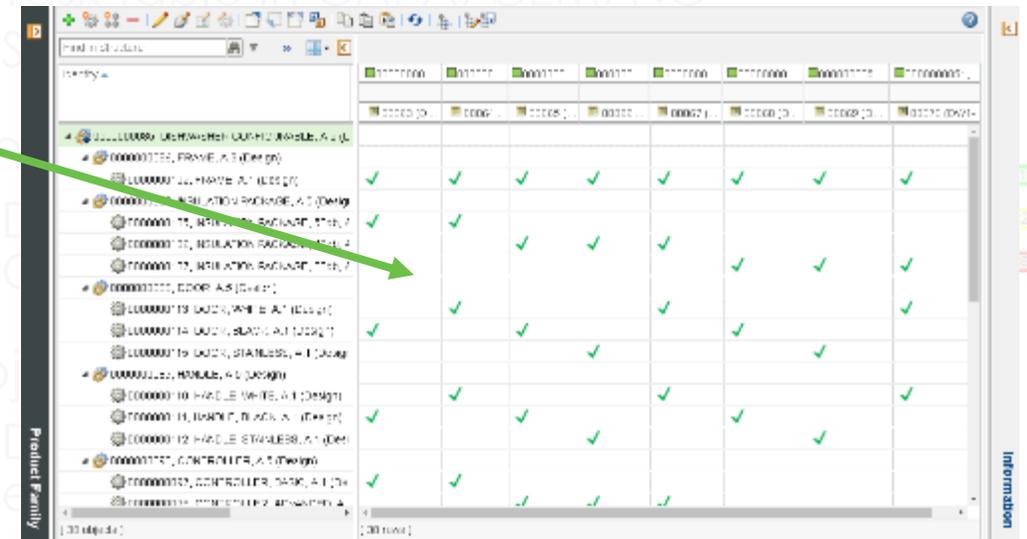
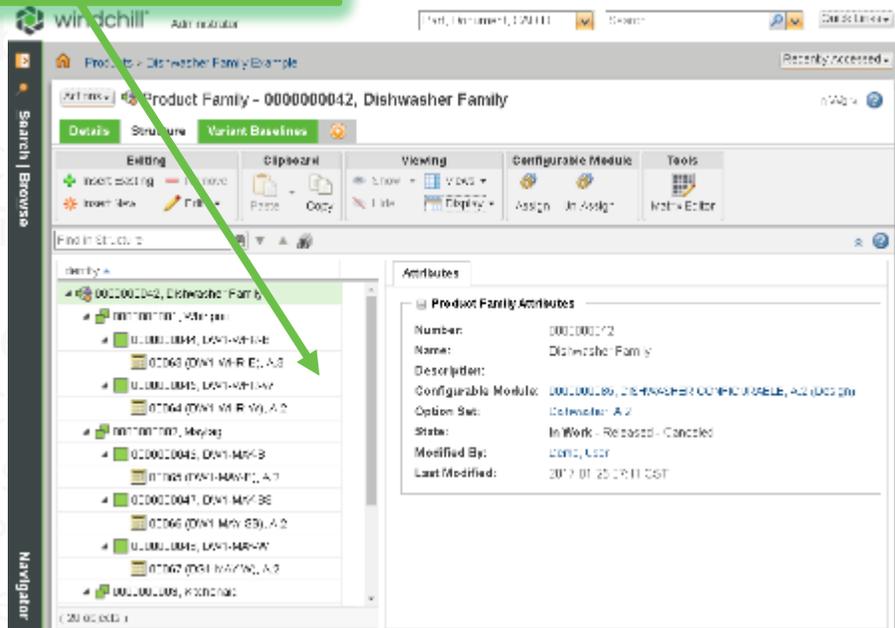
Part of Windchill Platform Structures Module

- Product Family
- Product Model Grouping
- Product Model
- Variant Specification

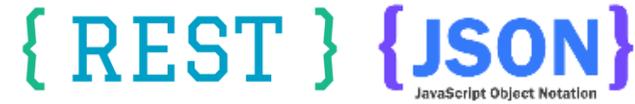


Develop a Product Family for a Configurable Product

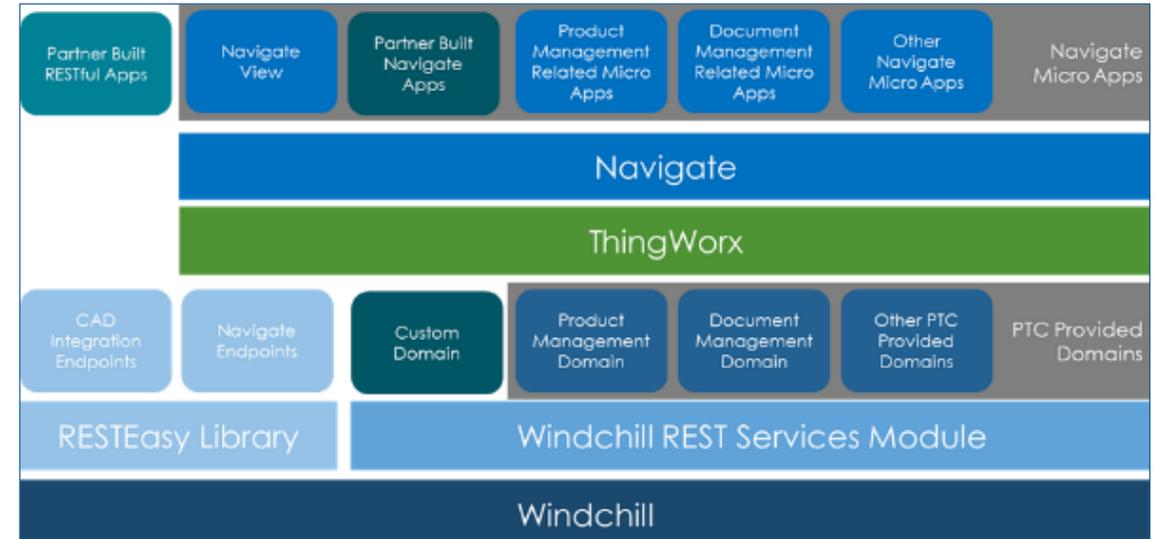
Easily see and manage the Product Family in a matrix view



- **Product Family Management**
 - Enable Product Family Definition for the Configurable Platform

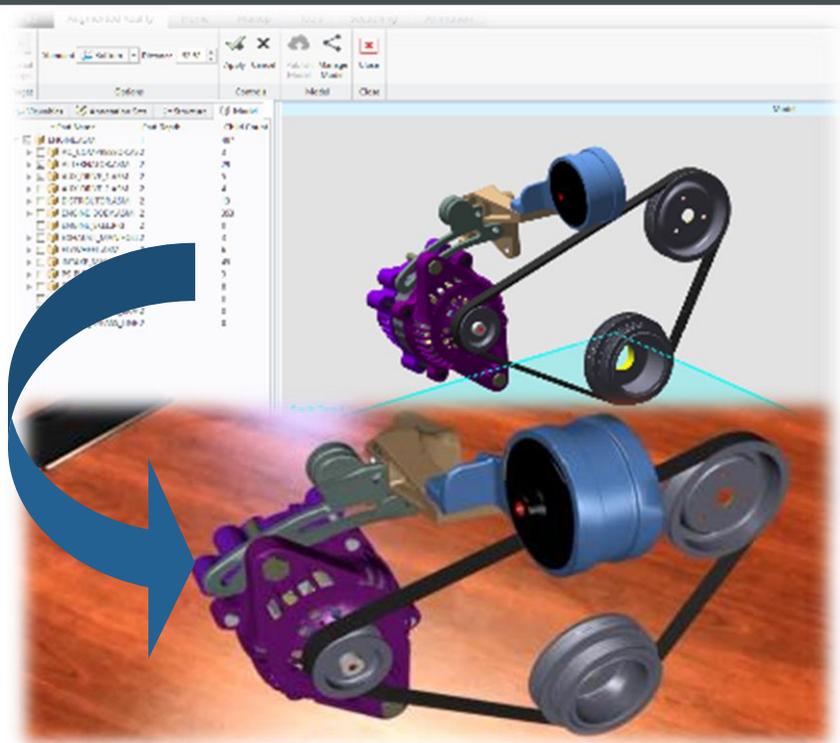


- A Windchill module that allows development of RESTful Windchill services
 - Exposes Windchill persistable objects as OData entities
- Includes PTC provided domains with endpoints for different functional areas of Windchill
 - Product Management
 - Document Management
 - Data Administration
 - Principal Management
 - Etc.
- Releases asynchronously from Windchill



- Goal is 3 month release cadence
- Windchill Rest Services 1.2
 - 11.0 M030 CPS11 - Aug 1st 2018
 - 11.1 F000 CPS07 - July 25th 2018
 - 11.1 M010 CPS02 - Aug 14th 2018

CREO VIEW 5.0 – HIGHLIGHTS



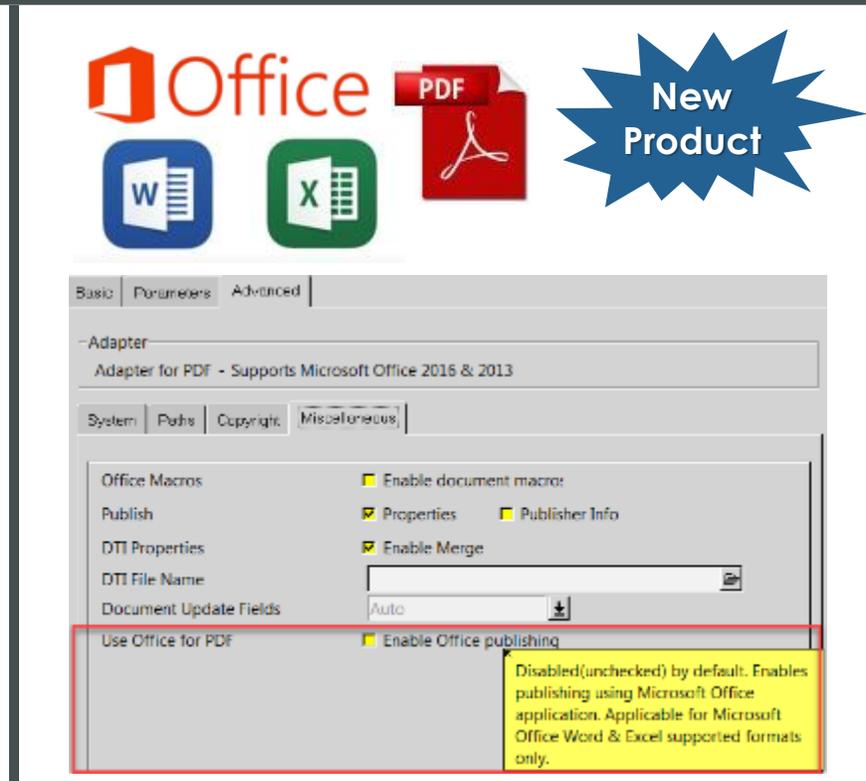
AR Publishing

Share 3D DMU with colleagues, partners, suppliers, customers in AR



Creo View 3D WebGL Viewer and Toolkit

Build custom applications leveraging Creo View data and native web technology



Office PDF Generator

No need for Adobe Experience Manager (AEM) for PDF generation



PTC CLOUD TO ELEVATE YOUR PLM VALUE



Fast Time to Value –
Quickly onboard and scale



Lower TCO –
Reduce IT spend



Latest Innovation –
Be first to get new solutions



World Class Security –
Safeguard IP & operations

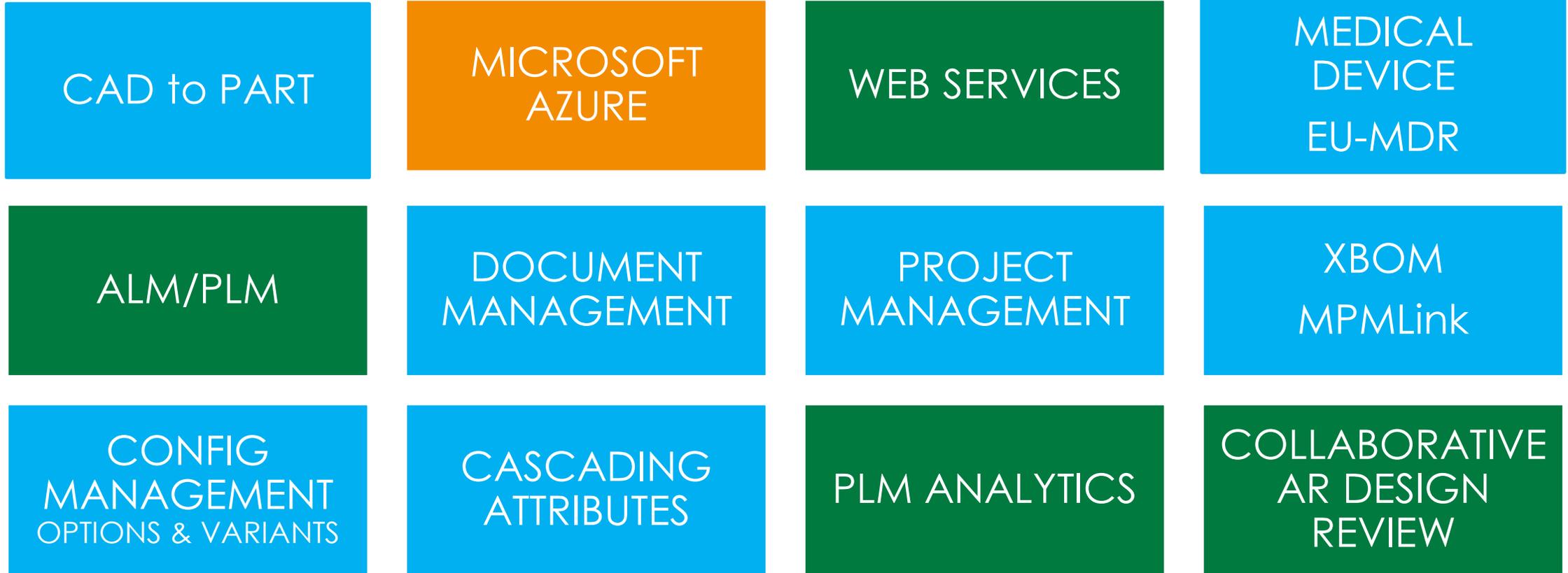
Benefits of PTC Cloud

Service Offerings



- Availability** – guaranteed uptime and support SLAs
- Security** – ISO Certified, SOC2 Compliant, FedRAMP Authorized
- Performance** – 24x7 monitoring, actively managed
- Support** – integrated across infrastructure and software
- Maintenance** – Upgrades, patches, 3rd party components

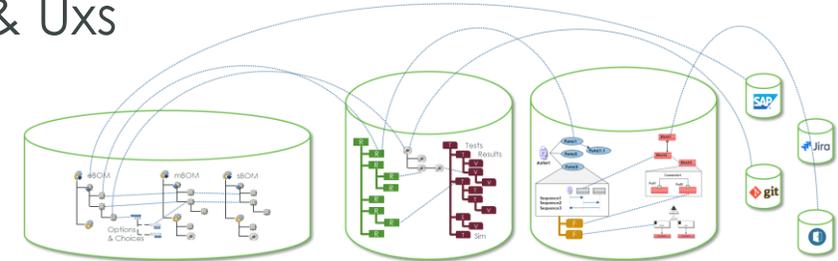
GIRAFFE RELEASES – HIGH LEVEL GOALS



TECHNOLOGY STACK – PERFORMANCE – SECURITY – PERFECTIVE MAINTENANCE

ALM / PLM INTEGRATION

- Toolchain integration across PTC Product family and 3rd party tools
 - Digital Thread for Design Abstraction, Compliance Traceability and Impact Analysis
 - Persistent Inter-System of Record Links using Product UIs & Uxs
 - Link-not-synch in context
 - OSLC on REST



- ThingWorx Orchestration – adds new Workflow Design & Execution, with Tool Tasks, Data Passing & Transformation opportunities, e.g. between tools



Integrity Modeler

Lifecycle Manager & Modeler

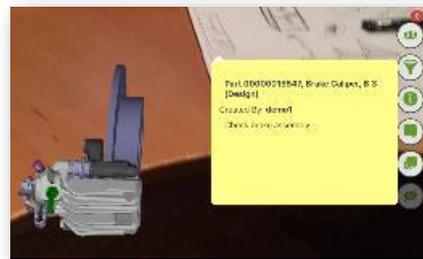
Lifecycle Manager/Modeler & Windchill

Windchill Parts



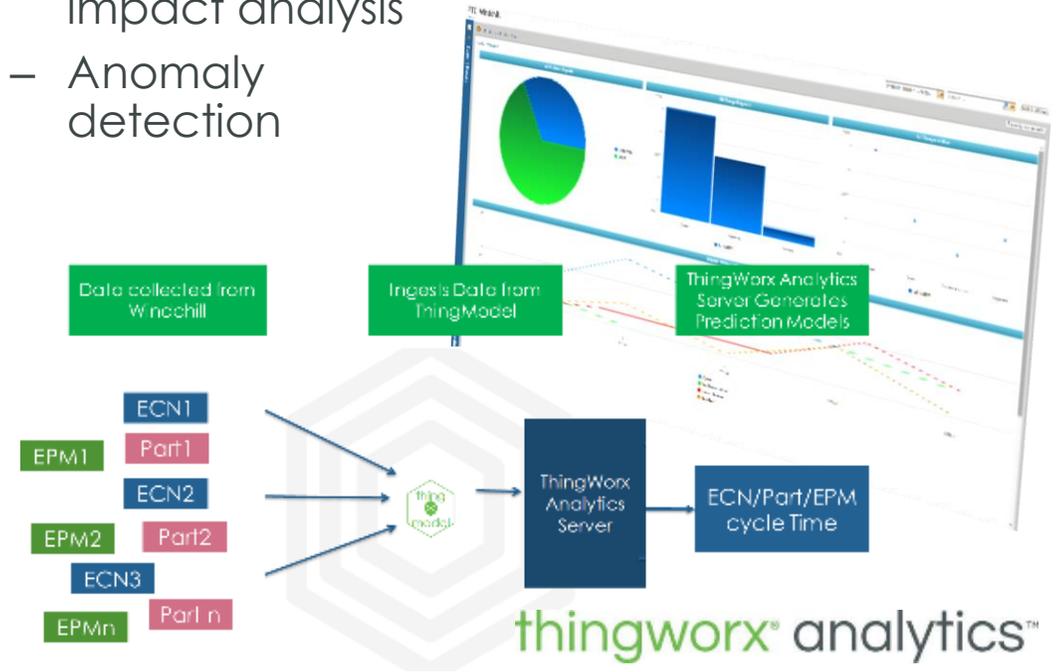
Collaborative AR Design Review

- Alpha Preview – Spring / Summer 2018
 - Real-time, Multi-user, remote collaboration powered by **ThingWorx Studio/View** (in future integrate Project Chalk)
 - Leverage **ThingWorx Navigate** to access context specific 2D, 3D product and supporting data
 - Capture and record notes/feedback directly within the app for future reference



PLM and Analytics

- Get insight in your current PLM data during product development process
- Interpret and Recommend actions
 - Predictive change impact analysis
 - Anomaly detection



QUESTIONS





ptc