



ptc

LIVEWORX

A NEW ERA IN PRODUCT LIFECYCLE INNOVATION

SESSION ID: PL1120B

PLM FOR THE DIGITAL THREAD: STRATEGY & ROADMAP

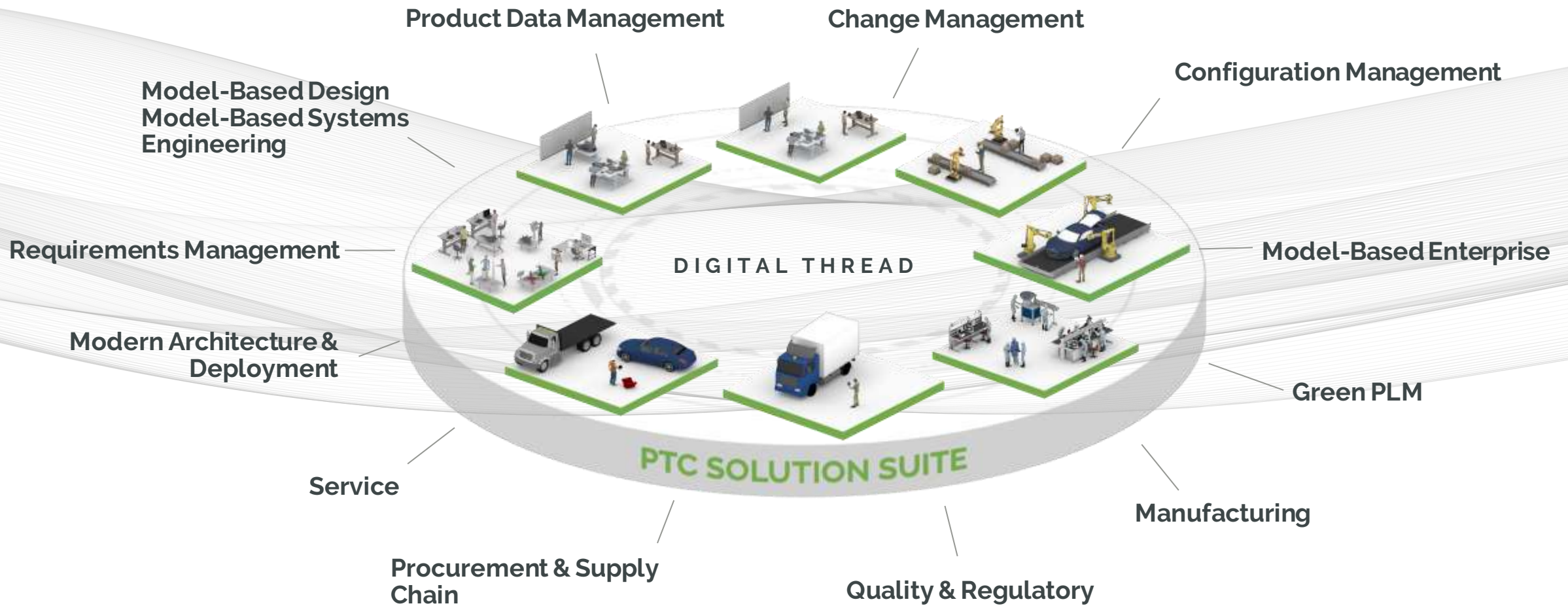
SPEAKER(s): **Robbie Morrison**
VP, PTC

Jeff Zemsky
VP, PTC

May 17th, 2023

LIVEWORX.COM | #LIVEWORX

THE PRODUCT DIGITAL THREAD IS MANAGED AND ORCHESTRATED BY PLM



WINDCHILL STRATEGY FOCUS

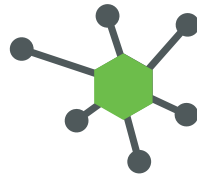
Key Focus Areas of Value for Customers with Windchill 12.x

Transition to SaaS



Helping our customers on their journey to SaaS

Powering the Digital Thread



Digital Product Traceability, Change Intent Planning and Navigate harness the power of enterprise collaboration

Accelerating Time to Market



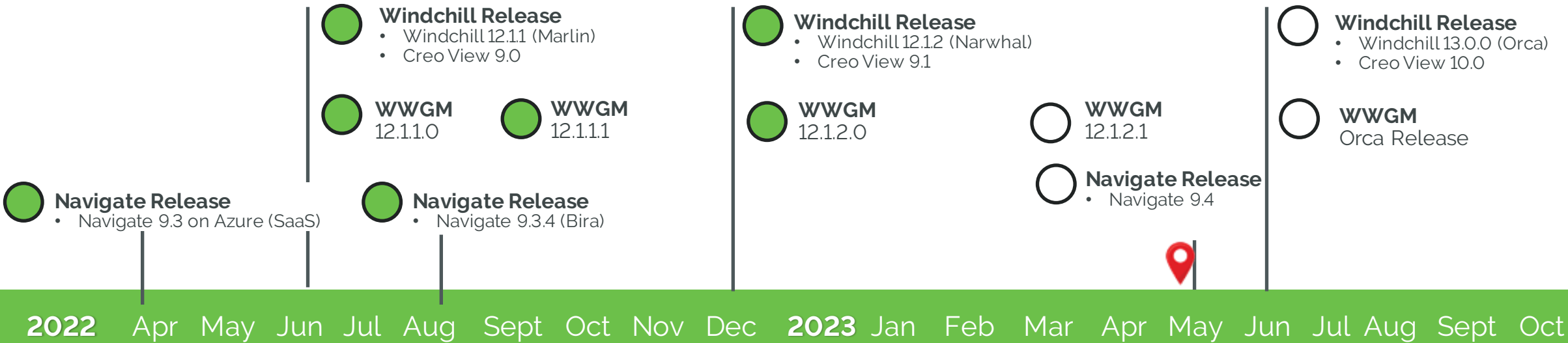
New capabilities in Semi-Finished Parts, Plant Data Management, BOM Transformation, and Flexible Modeling Visualization.

Powering Platform based Product development

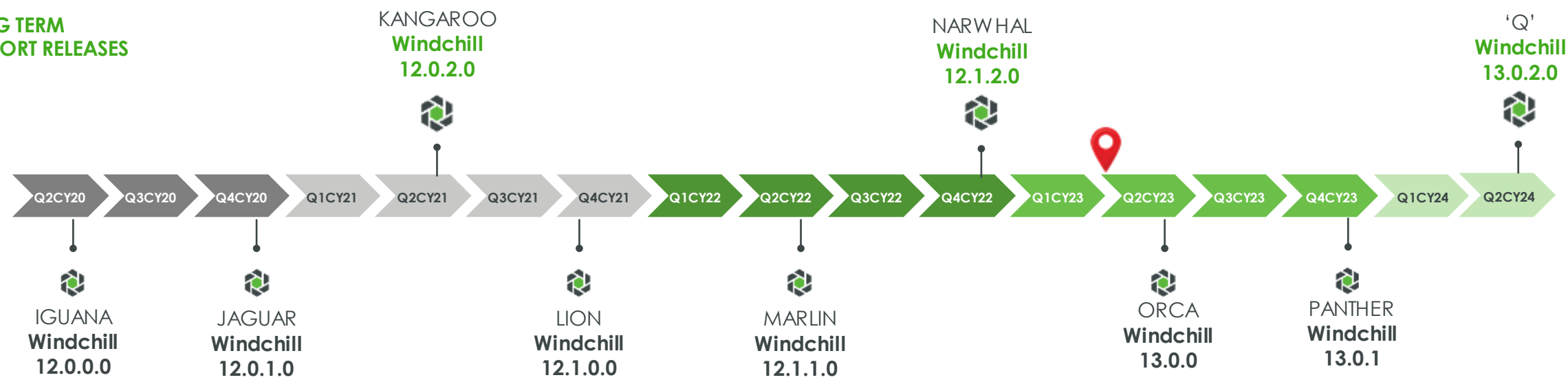


Expanding our best-in-class capabilities for managing platform-based product development strategies

PLM PRODUCT ROADMAP



LONG TERM SUPPORT RELEASES



INTEROPERABILITY UPDATES



CREO - WINDCHILL COMPATIBILITY ROADMAP

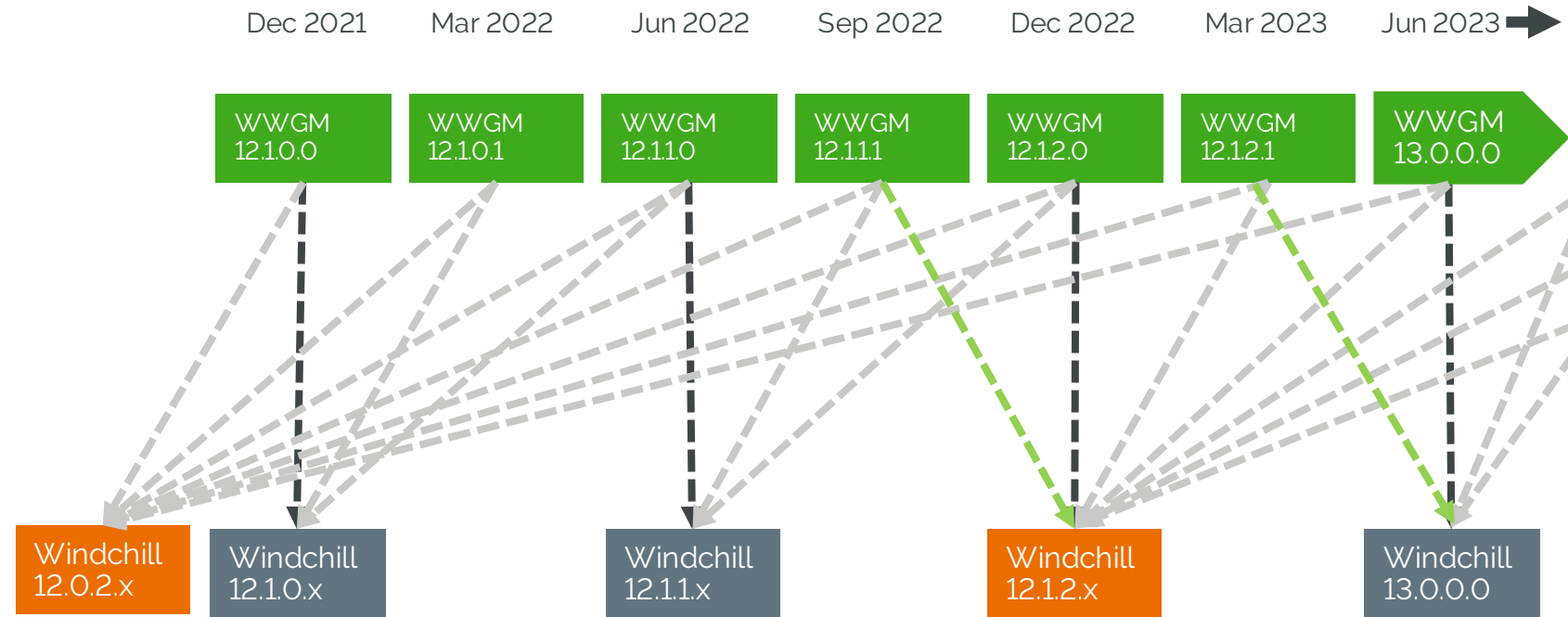
	Windchill 11.0 Click here for details	Windchill 11.1 Click here for details	Windchill 11.2 Click here for details	Windchill 12.0 Click here for details	Windchill 12.1 Click here for details	Windchill 13.0
Creo 4.0 ¹	Compatible with Creo 4.0 F000 & 11.0 M020	Compatible with Creo 4.0 M040 & 11.1 F000	Compatible with Creo 4.0 M100 & 11.2.0.0	Compatible with Creo 4.0 M130 & 12.0.0.0	Not Compatible	Not Compatible
Creo 5.0 ¹	Compatible with Creo 5.0.0.0 & 11.0 M030 CPS07	Compatible with Creo 5.0.1.0 & 11.1 M010	Not Compatible	Not Compatible	Not Compatible	Not Compatible
Creo 6.0 ¹	Compatible with Creo 6.0.0.0 & 11.0 M030 CPS14	Compatible with Creo 6.0.0.0 & 11.1 M020 CPS02	Compatible with Creo 6.0.1.0 & 11.2.0.0	Not Compatible	Not Compatible	Not Compatible
Creo 7.0 ¹	Not Compatible	Compatible with Creo 7.0.0.0 & 11.1 M020 CPS11	Compatible with Creo 7.0.0.0 & 11.2.1.2	Compatible with Creo 7.0.1.0 & 12.0.0.0	Compatible with Creo 7.0.6.0 & 12.1.0.0	Not Compatible
Creo 8.0 ¹	Not Compatible	Compatible with Creo 8.0.0.0 & 11.1 M020 CPS17	Compatible with Creo 8.0.0.0 & 11.2.1.7	Compatible with Creo 8.0.0.0 & 12.0.2.0	Compatible with Creo 8.0.2.0 & 12.1.0.0	Planned with Creo 8.0.x.0 & 12.2.0.0
Creo 9.0	Not Compatible	Not Compatible	Not Compatible	Compatible with Creo 9.0.0.0 & 12.0.2.5	Compatible with Creo 9.0.0.0 & 12.1.1.0	Planned with Creo 9.0.x.0 & 13.0.0.0
Creo 10.0	Not Compatible	Not Compatible	Not Compatible	Planned with Creo 10.0.0.0 & 12.0.2.11	Planned with Creo 10.0.0.0 & 12.1.2.1	Planned with Creo 10.0.x.0 & 13.0.0.0
Creo+	Not Compatible	Not Compatible	Not Compatible	Planned with Creo+ & 12.0.2.11	Planned with Creo+ & 12.1.2.1	Planned with Creo+ & 13.0.0.0

¹ For information related to specific Creo App support refer to page 2 in this document.

INTEROPERABILITY UPDATES

Independent Release Stream

- Single release stream supporting multiple releases of Windchill
- Backward compatible with earlier Windchill releases starting with 12.0.2.0
- Limited forward compatibility
- Delivering fixes, new CAD version support and new client features independent of Windchill server version
- Quarterly release cadence (next release in March 2022) replacing WWGM CPSEs



Benefits:

- **Independent client updates** – get the latest WWGM updates without updating Windchill
- **Streamlined upgrade process** – upgrade WWGM in advanced of planned server upgrades
- **Improved IT planning** – predictable quarterly release cycle to improve IT client deployment

What does it mean?

Atlas Services

- Unified Experience for Plus Portfolio
- Updated Publishing Architecture

Better Experience

- Dedicated Implementor Experience
- Simplified role focused user packages to accelerate value
- Frictionless expansion of capabilities

Faster Upgrades

- Streamlined Tailoring Experience for faster upgrades
- Improved Upgrade visibility

World Class Security

- Certifications, compliance, audit, pen testing, environment scanning

Seamless Transition

- Industrialized methodology to upgrade and de-customize

Exclusive Value-Added Services on Atlas



SaaS Application Experience



Optimized Tailoring & Upgrade Experience



Benefits:

- **Fast** time to value
- **Reduce** IT TCO
- **Reduce** Program and Support Risk

Tailoring Highlights

Configure Custom System Parameters

- Add Windchill attributes to CAD models as read only parameters or properties to drawings and models

Banner Messages

- Configure Banner messages to notify users of system events
 - Easily manage system messages with localization
 - Select Info, Warning or High Importance

Collector Customization Improvements

- Supported method for configuring available collector buttons



Benefits:

- Better visibility into harness structure
- Easier discoverability of harness elements
- Easier investigation and validation of the harness

DIGITAL PRODUCT TRACEABILITY

- Leverage OSLC for light weight linking across systems
- Create traces to Parts, Documents & Choices in Windchill from
 - Requirements
 - Functional Models
- Display information from Requirements, Models and Functions in the Traces table
 - View Suspect flags in Product Structure
 - Navigate to remote systems
- Perform Impact analysis linking remote data to Problem Reports, Variances & Change Requests in Windchill
- Link remote Changes to Issues & Changes in Windchill

The screenshot displays the Windchill interface with several key components:

- Traced To Table:** A table listing traces with columns for Trace ID, Number, Title, and Server. The entries include 'Allocate' (Subflows, Extension Points) and 'Implement' (Dependency, Catheter Y mil, 8 Inch Flat Panel, Fistula X mil) traces.
- Affected Objects Table:** A table showing objects affected by a change, with columns for Number, Version, Name, and State. It lists objects like '[safe]new version of L...', '1131 Medical_Active', '[SAFE]New Template ...', and 'WCDS000706 A.7 (Design) 01-2_block_v.prt In Work'.
- Release Details Panel:** A sidebar panel showing release information such as 'Submitted by: bond Yesterday 08:00', 'Modified by: bond Today 06:22', and 'Color: #b31317'.
- Callout Box:** A green box with a white arrow pointing to a specific trace entry, containing the text 'Remote trace link managed in Windchill'.
- Logos:** Logos for windchill, codebeamer, IBM Rational DOORS Next Generation, windchill rv&s, and windchill modeler are shown at the top right.

Benefits:

- Enable **cross-discipline Collaboration** across the Digital Thread
- **Ensure Regulatory needs** are met with improved visibility
- Improve Changes with **holistic Impact Analysis**

WINDCHILL SMART PLATFORMS

License update: Global Platforms → Smart Platforms

- Windchill can intelligently build and visualize new product variants directly **without the need to create manual copies in CAD** to manage variations in **position**



PLATFORM ARCHITECTURE

Capture design intent directly through new positioning architecture



CONTROLS

Use rules to control assembly logic including positioning



MODULES

Expose positioning intent directly from CAD construction geometry



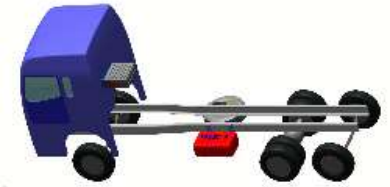
CONFIGURATIONS

Modules will be positioned dynamically based on architecture and logic resulting in visualization available in many locations - Visualization Tab, Creo View, or persisted into Design Context for Opening in CAD



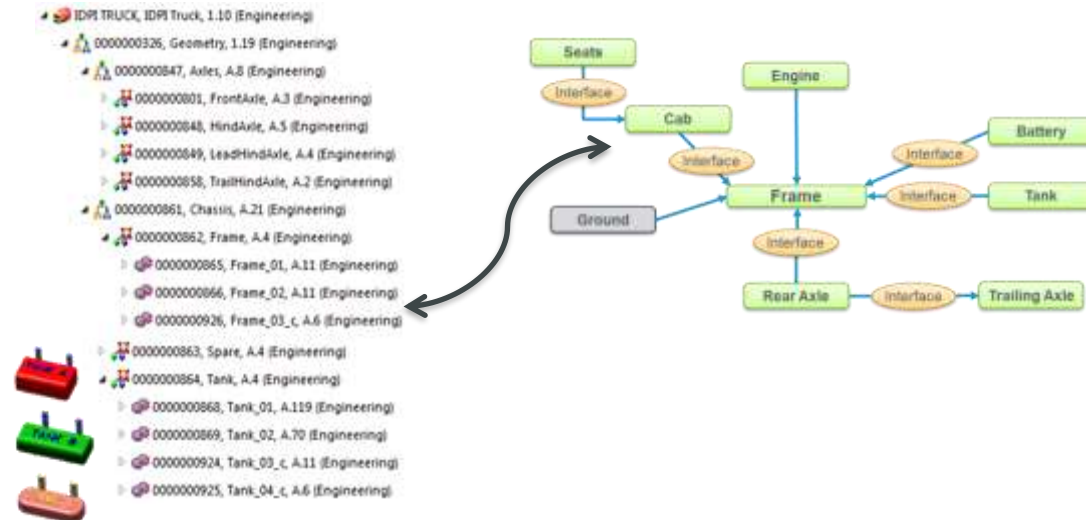
150% - GENERIC OVERLOADED BOM

WHAT



VIRTUAL PRODUCT ARCHITECTURE

HOW



Part - T0000001, ACME Truck, A.11 (Design) In Work

Details Structure Related Objects Changes History Where Used AML/AVL New Tab 1

Editing: Insert Existing, Remove, Insert New, Edit

Check Out/In: Check Out, Revise, Check In, My Checkouts

Clipboard: Paste, Copy

Viewing: Show, Views, Hide, Display

New/Add To: New, Add to

Filter: Current Filter, Path Filter, Saved Filters, Enter name or number

Tools: Compare, Open in

Reports: Reports, Export

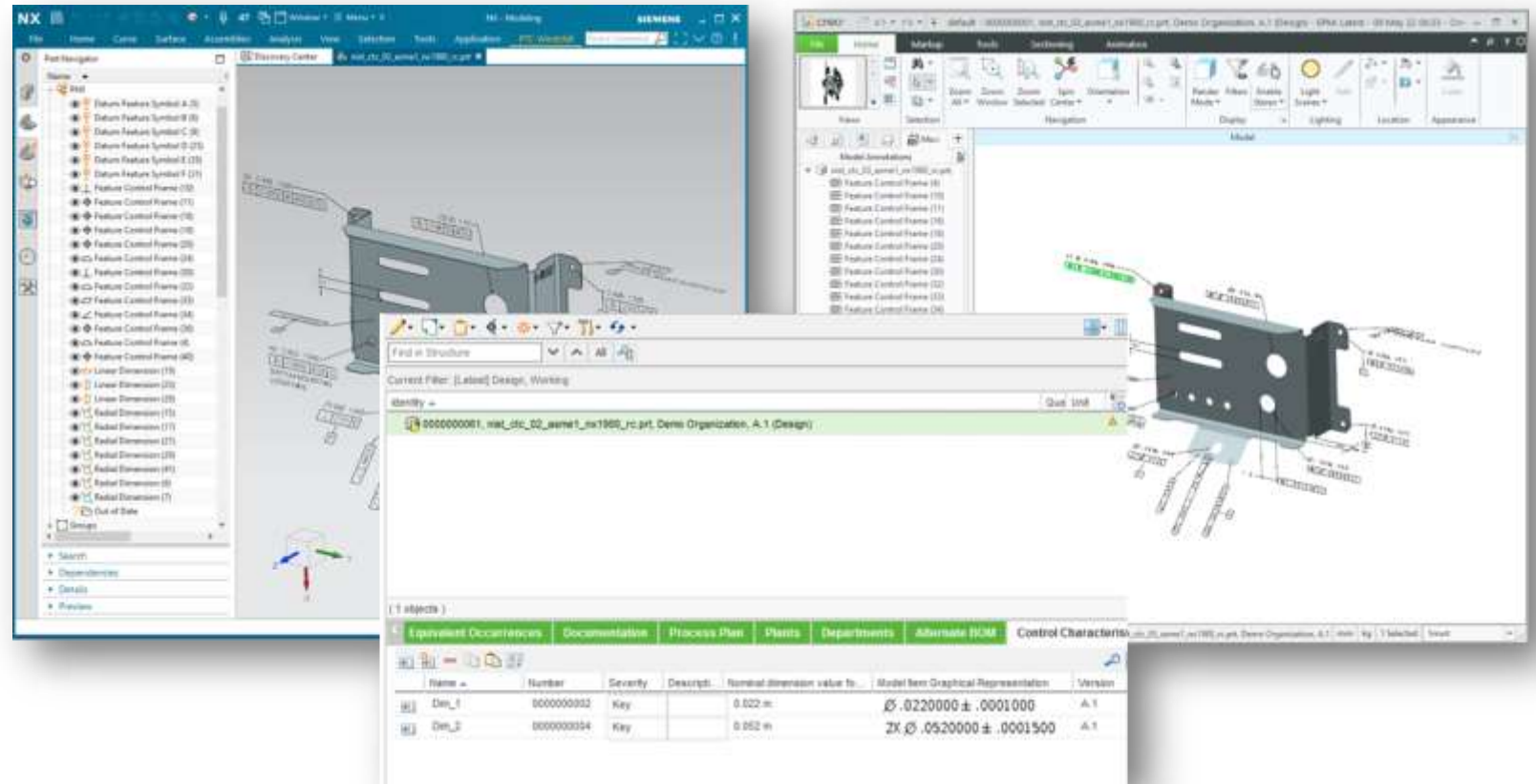
Find in Structure All Advanced Latest Design Working

- Identity
- T0000001, ACME Truck, A.11 (Design)
 - 0000000731, Cabin, A.4 (Design)
 - 0000000627, Standard Cabin, A.3 (Design)
 - 0000000732, Drive Train, A.3 (Design)
 - 0000000734, Engine Assembly, A.4 (Design)
 - 0000000735, Drive Shafts, A.4 (Design)
 - 0000000736, Axles, A.8 (Design)
 - 0000000733, Chassis, A.8 (Design)
 - 0000000740, Frame, A.7 (Design)
 - 0000000741, Fuel Tank, A.14 (Design)
 - 0000000742, Battery Box, A.4 (Design)
 - 0000000743, Spare Wheel, A.4 (Design)
- (12 objects)



12.1.x Improvements

- Continued MBD/MBE scope with NX & CATIA support, model item structure view, automatically creating control characteristics
- Solidworks enhancements for ease of use and top-down design
- Design in Context – additional 3rd party support
- Universal Upload - upload CAD Document even if CAD parameter or property is not allowed to be uploaded

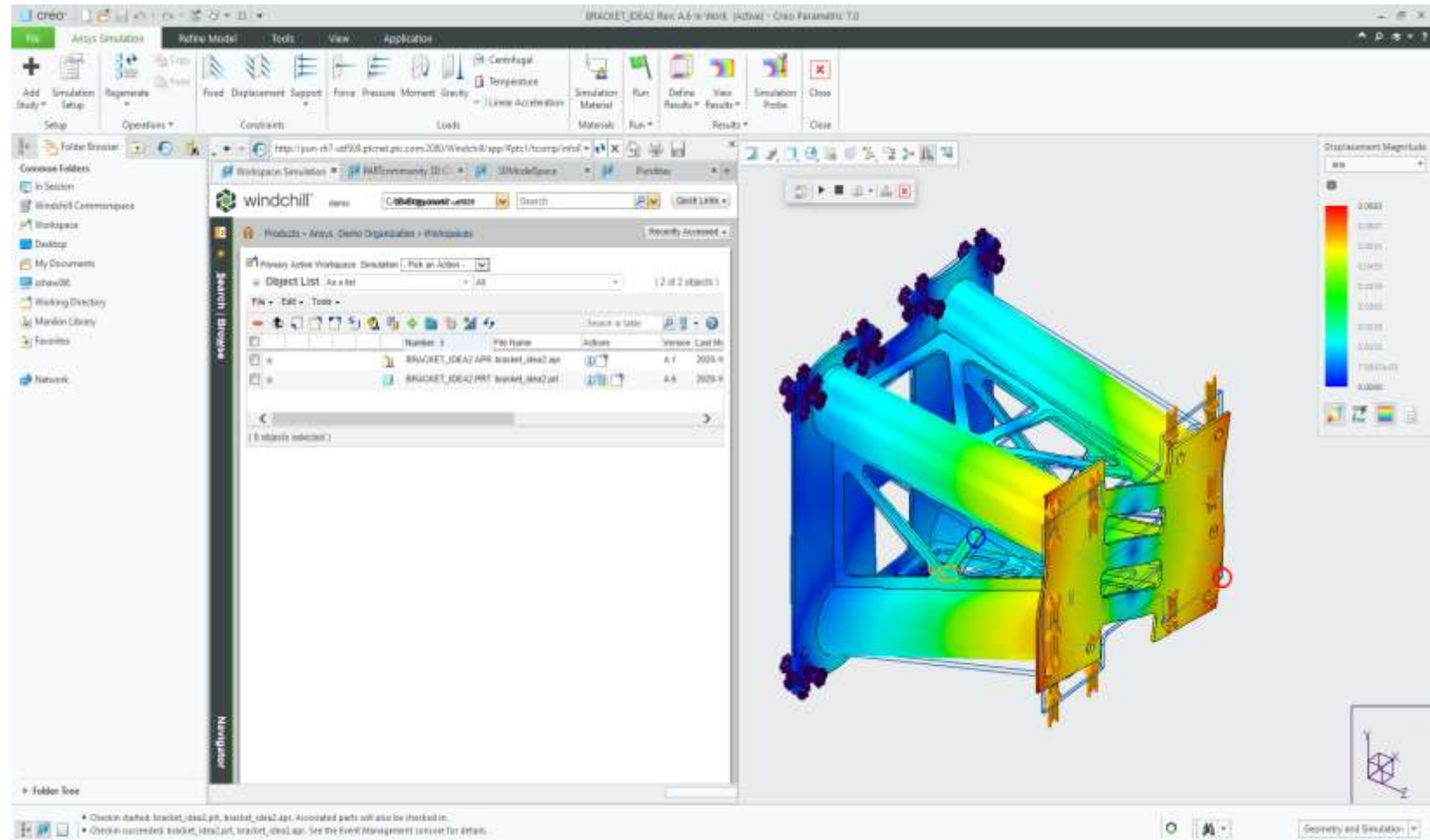


Benefits:

- **Simpler customer upgrades** to ensure smooth transition to new Windchill versions
- **User experience simplified** by configuring areas that previously required customization
- **Reduced time to value** with upgrade / install without clearing cache

Simulation

- Creo Ansys Simulation and Windchill integration
 - ▣ Archive Creo Ansys study projects in Windchill
 - ▣ Create and maintain relationships to originating Creo model
 - ▣ Available with Creo 7.0.2+ and Windchill 12.0.1+



Benefits:

- Enable enterprise access to simulation designs and results
- Tighter collaboration between designers and analysts
- Digital traceability between design and simulations models

CHANGE MANAGEMENT

Redlines

- Create and Plan Redlines on Change Notices
- Redline BOM and Part Changes
 - Add / Remove Parts
 - Insert New / Existing Parts
 - Replace New / Existing Parts
 - Substitutes – Add or Remove
 - Redline Part, BOM and Occurrence attributes
- Create Redlines via Mass Change – create / update many Redlines in a streamlined process
- Enhanced Change Notice Summary Report with graphical view of BOM changes

The screenshot shows the Windchill software interface. On the left is a BOM tree with a redline icon next to a capacitor part. On the right is a table with columns: Number, Name, End Item, Quantity, Unit, Reference Designator, and Find Number. The table shows several rows, with some quantities highlighted in red (e.g., 23, 24, 4) and some reference designators in red (e.g., C1, C3, C6, C10, C11, C13, C16, C25, C37, C38, C39, C13, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100). A green callout bubble points to the table with the text "Easily identify planned Changes".

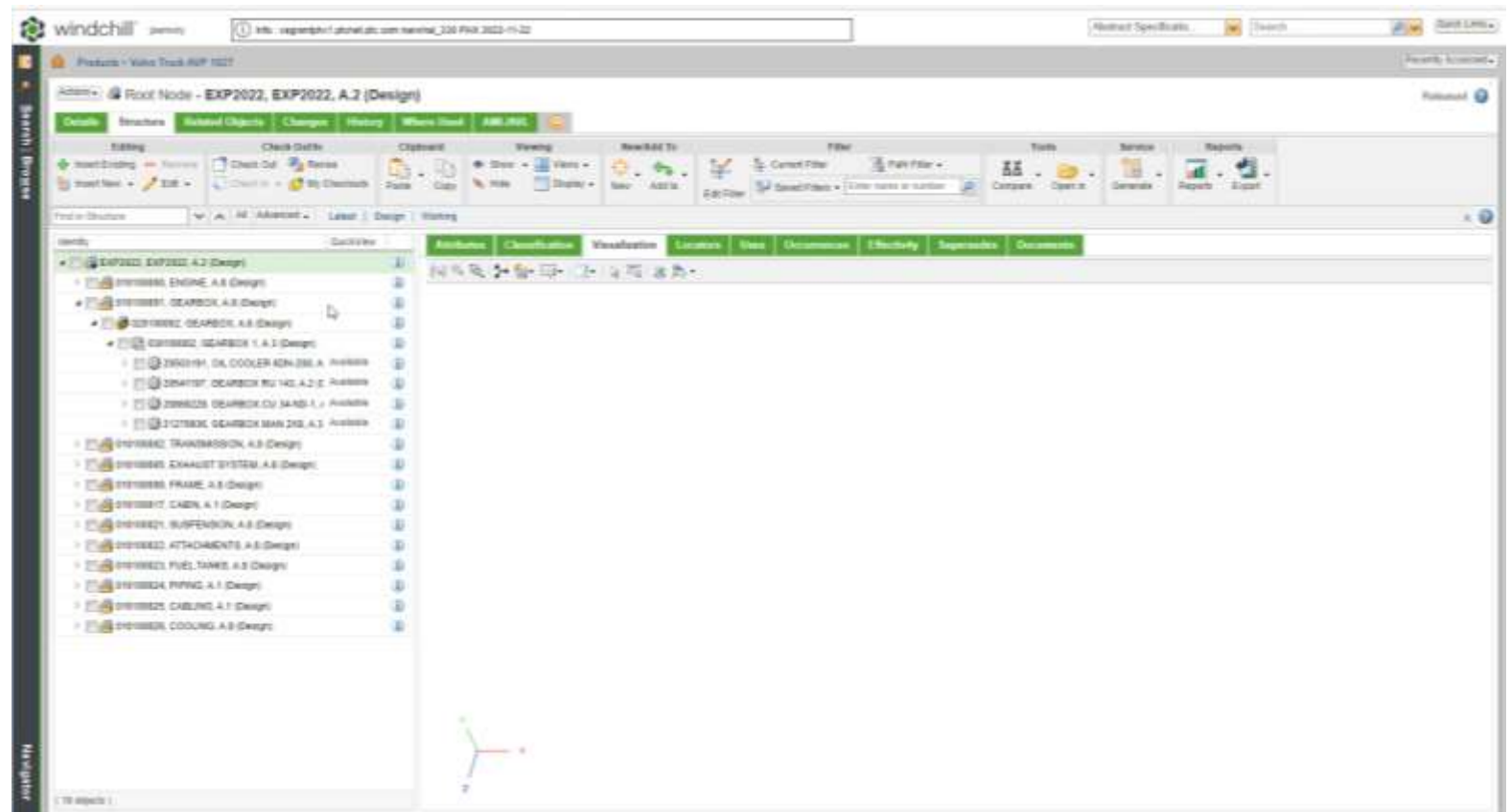
The screenshot shows the Windchill software interface. On the left is a table with columns: Attributes, Uses, Occurrences, and Documents. The table shows several rows, with some quantities highlighted in red (e.g., 23, 24, 4) and some reference designators in red (e.g., C1, C3, C6, C10, C11, C13, C16, C25, C37, C38, C39, C13, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100). A green callout bubble points to the summary report with the text "CN Summary Report easily shows differences".

Benefits:

- **Improve Impact Assessment** by easily reviewing planned Changes
- **Support out of order Change** and only execute the change at the right time
- **Ease understanding** of the Change with improved reporting

Quickview

- Focus on performance & scalability of large model visualization
- Use “QuickView” for improving performance of viewing large product structures
 - CAD agnostic (where Thumbnails are supported)
- Supported in many structure browser environments
 - Users can easily switch between Quickview and detailed viewable
 - PSB, CAD Structure, BOM Transformer



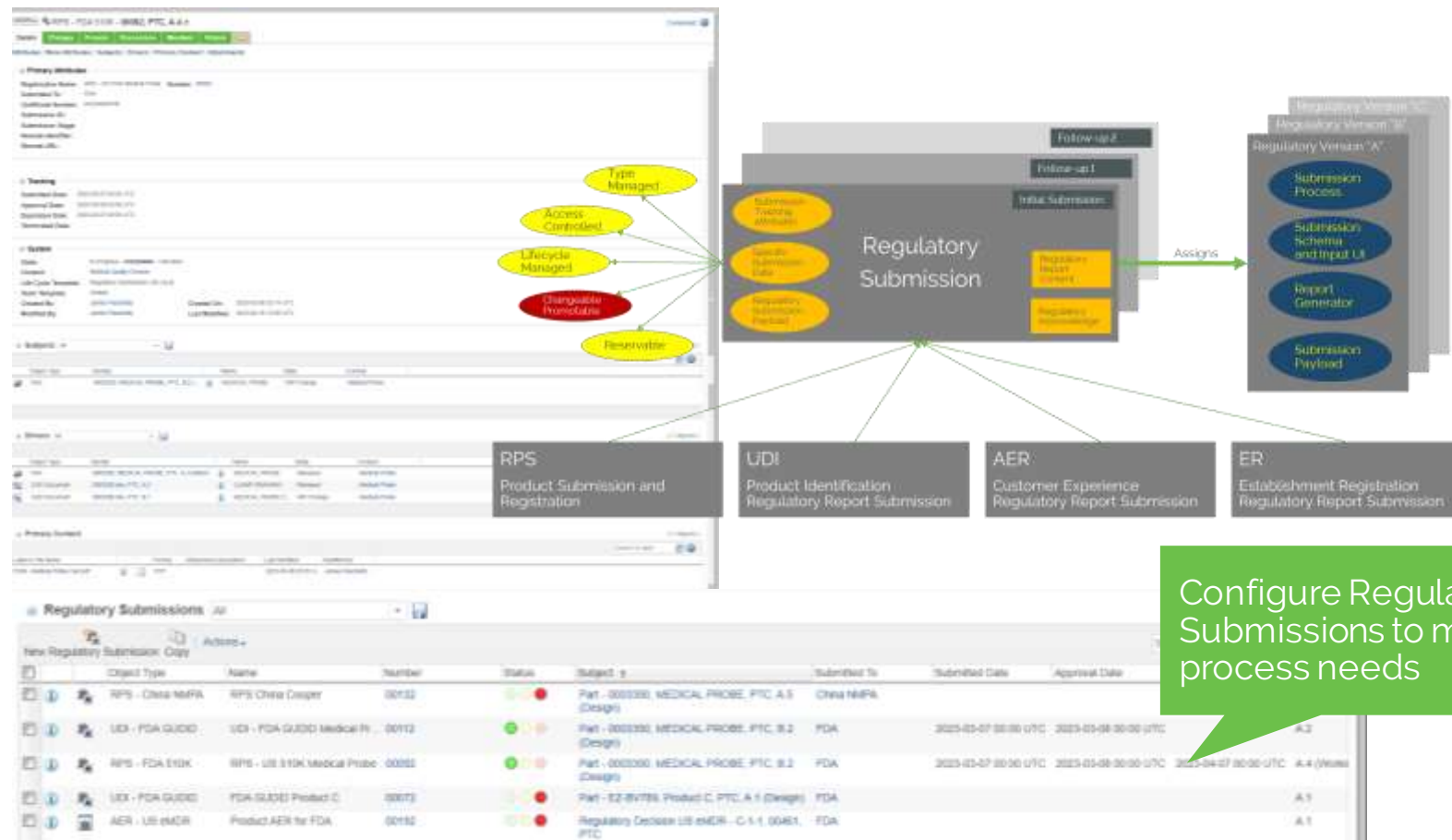
Improved user adoption and satisfaction when viewing large and complex representations through dramatically faster load times.

MED TECH REGULATORY PROCESS

Reg Hub & UDI

- Regulatory Hub updates -
 - ▣ Supports Revision Control allowing participating in Changes
 - ▣ Multiple Subject Links enables multiple product / product families
 - ▣ Add additional/supporting information with Supporting Links

- UDI
 - ▣ Supports Revision Control allowing participating in Changes
 - ▣ Increased REST (WRS) support
 - ▣ Improve experience with broader attributes support
 - Cascading Attribute
 - Tabular Attributes

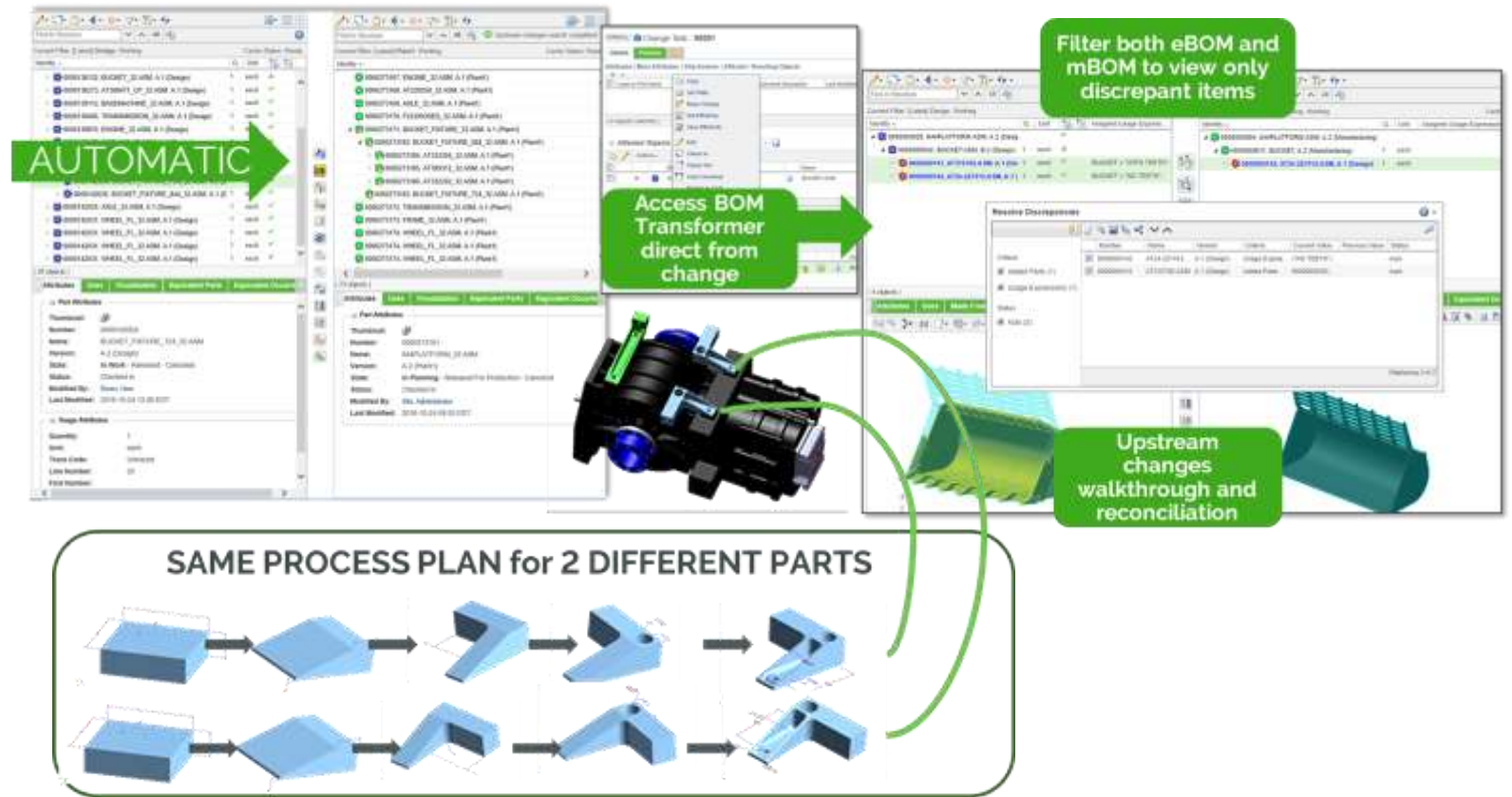


Benefits:

- **Enable Customers to track** Regulatory compliance and Registrations
- **Greatly simplified ability to configure** Regulatory and UDI process needs
- **Easily include** UDI in new product development

XBOM AND PROCESS PLANNING

- Automatic BOM Transformation based upon customer defined rules
- BOM Reconciliation to streamline understanding and incorporating changes
- Semi-finished management support across BOM transformation and process plans
- Digital Simulation and time optimization with partner solutions



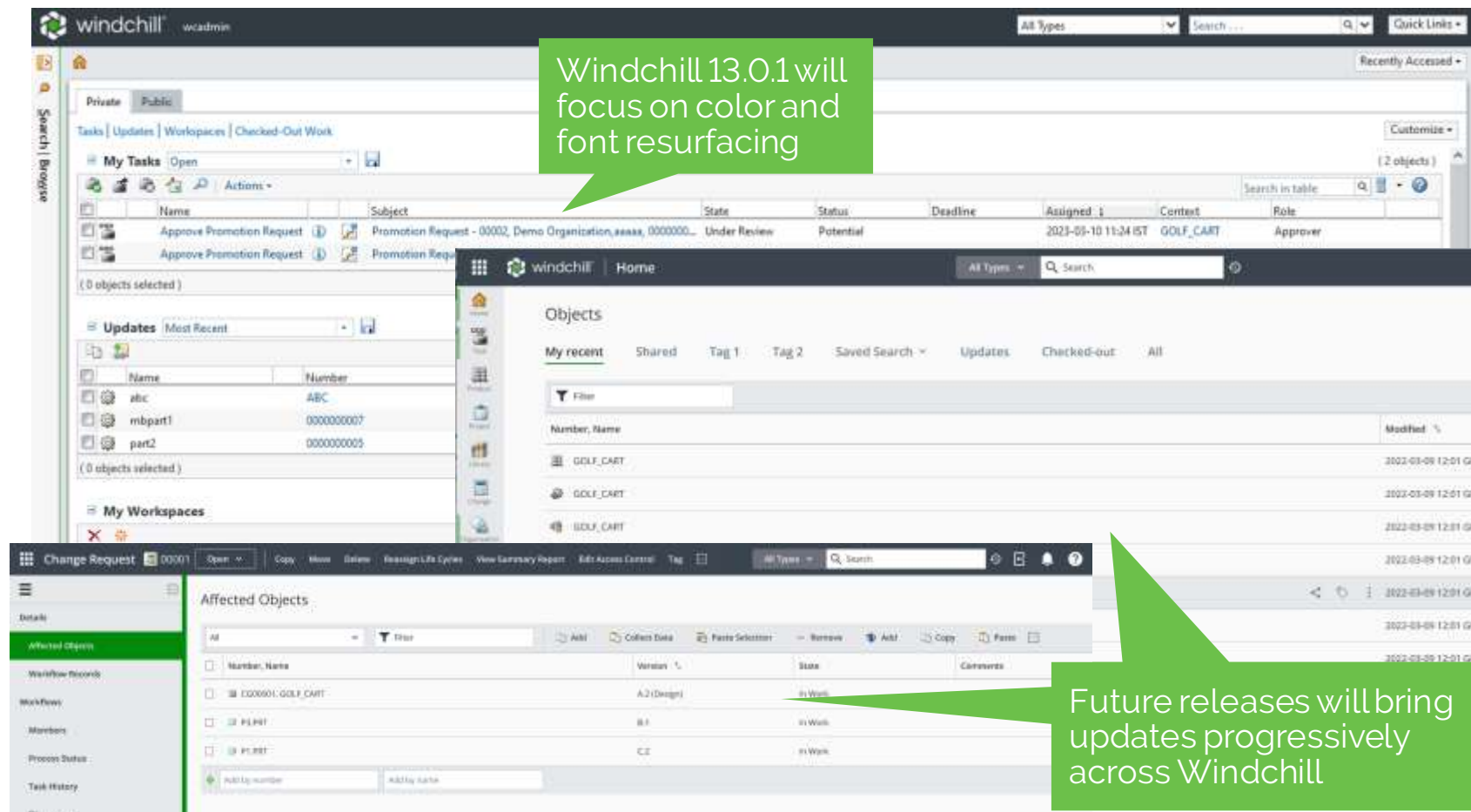
Benefits:

- Improve Manufacturing Planning Efficiency
- Improve Product Data quality
- Reduce NPI time with better configuration & change management

WINDCHILL NEXT GEN UI

Path to Next Gen

- Increase user satisfaction and adoption through role and task-based streamlining
- Incremental UI enhancement and change over time
- Simplify configurability & increase scalability
- Modern experiences improve user experience
 - Edit-in-place
 - Minimize wizards
 - Powerful table controls
- Adopts PTC's Convergence Design system



Windchill 13.0.1 will focus on color and font resurfacing

Future releases will bring updates progressively across Windchill

The image displays two screenshots of the Windchill user interface. The top screenshot shows a 'My Tasks' table with columns for Name, Subject, State, Status, Deadline, Assigned, Context, and Role. The bottom screenshot shows a 'Change Request' details page with an 'Affected Objects' table. A green callout box points to the top screenshot, and another green callout box points to the bottom screenshot.

Name	Subject	State	Status	Deadline	Assigned	Context	Role
Approve Promotion Request	Promotion Request - 00002, Demo Organization, aaaa, 00000000...	Under Review	Potential		2023-03-10 11:24 IST	GOLF_CART	Approver
Approve Promotion Request	Promotion Request						

Number, Name	Version	State	Comments
1200601-GOLF_CART	A2/Design	In Work	
P1.PRT	B.1	In Work	
P1.PRT	C.2	In Work	

Improved adoption and satisfaction with update user experience

WHAT'S NEW / WHERE WE ARE INVESTING



Modernized UI/UX

Concurrent Manufacturing

Smart Platforms

ALM/PLM Integration



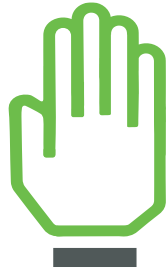
The same best-in-class PLM, delivered as SaaS

Role and task-based access across engineering and the enterprise

Ensuring seamless handoff between Engineering and Manufacturing

Simplifying the complexity in platform management

Traceability & compliance for safety critical and regulatory needs



QUESTIONS?

Thank you! You can find us at:



rmorrison@ptc.com

jzemsky@ptc.com



Please fill out the session survey.

Take your post-session survey(s) either in the event mobile app or via email post-event.

Your feedback provides us with valuable information on how to shape future content strategy for the event!

PROVIDE SESSION FEEDBACK



LIVEWORX

A NEW ERA IN PRODUCT LIFECYCLE INNOVATION

THANK YOU

LIVEWORX.COM | [#LIVEWORX](https://twitter.com/LIVEWORX)

ptc.com

