

Empowering you to view and understand product data across your entire organization

# CHALLENGES IN PRODUCT DATA MANAGEMENT

As we work in an increasingly digital world, employees across departments and geographies must collaborate more than ever. Challenges arise from the huge volume of data being generated in disconnected systems for the disparate needs of various roles throughout an organization.

Data is frequently stored across a multitude of systems and portals creating bottlenecks. Different roles have different levels of access, visibility and data combinations. It can be hard to synthesize data in a way that can be understood and used across enterprise systems to promote collaboration.

Data access throughout an enterprise becomes an exercise in hopping between systems, ultimately slowing progress and preventing collaboration.

## RISING TO THE CHALLENGE WITH EAC PRODUCTIVITY APPS

EAC Productivity Apps have a direct connection to Windchill and other enterprise systems. Their easy-to-use interface requires almost no training and supports role specific views. They deliver only the information needed to roles across an organization through simple tailoring.

Administrators can easily configure role specific access, visibility and behavior within applications. Groups of functionality are packaged into basic tiles for a simple and logical step-wise flow to product data management.

Key functionality like product and part information search, change request creation and management, task management, reporting and tracking information all flow seamlessly between apps.

#### ▶ THINGWORX NAVIGATE

A single view to Windchill data, giving both the expert and the occasional user access to the latest, most accurate product information when they need it and in the context most related to their day-to-day responsibilities.

#### **► EAC PRODUCTIVITY APPS**

Expanded applications and functionality built on ThingWorx Navigate to cover additional needs. Our EAC Apps offer simple, role-based access to Windchill data and other enterprise systems that make it easier to view and understand product data.

### **SUBSCRIPTION PRICING**

EDITION	VIEW TIER	AUTHOR TIER
<b>GROUP</b> 1-25 Users	\$2,000	\$4,000
<b>TEAM</b> 26-50 Users	\$3,000	\$6,000
<b>ENTERPRISE</b> 51-100 Users	\$4,000	\$8,000
ENTERPRISE + 101+ Users	\$5,000	\$10,000

All EAC Productivity Apps subscriptions/subscribers must also satisfy applicable PTC Windchill, ThingWorx Navigate, and connected PLM licensing and permission prerequisites. Subscribers must license and install PTC Windchill, ThingWorx Navigate, and other foundational technologies prior to the implementation of EAC Productivity Apps for Windchill. The subscribing company is responsible for any additional licensing and hardware expenses, above and beyond the annual EAC Productivity App subscription fees, required to meet the minimum requirements for a successful EAC Productivity App implementation.

\*\*The preceding content is a guideline and should not be considered a quote, official pricing, or packaging requirements. Due to the way the software licensing and packages changes over time, the minimum requirements at time of sale will apply to all EAC Productivity Apps sales and implementations.

#### ALL AVAILABLE EAC APPS

















#### COMPARISON CHART:

## **EAC PRODUCTIVITY APPS**& THINGWORX NAVIGATE

& THINGWORX NAVIGATE	NAVIGATE 9.3	EAC APPS
QUICK SEARCH		
Search on Name and/or Number	<b>~</b>	<b>~</b>
Search on Other/Custom Attributes		<b>~</b>
Search using saved searched	<b>~</b>	
Search on parts and documents together		<b>~</b>
State based filtering	<b>~</b>	<b>~</b>
App specific search tailoring		<b>~</b>
Product filtering		<b>~</b>
Direct access to End Items		<b>~</b>
PART APPS		
Search for and view attributes for Parts/Cads	<b>~</b>	<b>~</b>
Access to 3D models (open in creoview)	<b>\</b>	<b>~</b>
View part/CAD structure	<b>~</b>	<b>~</b>
View related objects	<b>✓</b>	<b>~</b>
View related change objects	<b>~</b>	<b>~</b>
OOTB hook for integrating SAP system	<b>~</b>	<b>~</b>
OOTB hook for integrating any outside system		<b>~</b>
OOTB hook for integrating custom mashups		<b>~</b>
Access to all related drawings		<b>~</b>
Access to markups		<b>~</b>
Dashboard view of parts lists		<b>~</b>
DOC APPS		
Search for and view attributes for Docs	<b>~</b>	<b>~</b>
Access to download primary content	<b>~</b>	<b>~</b>
Access to download secondary content		<b>~</b>
View Document structure	<b>✓</b>	
CHANGE PROCESS APPS		
Problem Report		
Create a Problem Report		<b>~</b>

**NAVIGATE 9.3 EAC APPS** COMPARISON CHART CONT. Problem Report (Continued) Dashboard overview of PRs Support for custom soft attributes in PR Support for custom soft type of PR OOTB hook for integrating custom mashups **Change Request** Create a Change Request Dashboard overview of CR Support for custom soft attributes in CR Support for custom soft type of CR OOTB hook for integrating custom mashups Change Notice Dashboard overview of CN Support for custom soft attributes in CN Support for custom soft type of CN OOTB hook for integrating custom mashups **Promotion Requests** Create a Promotion Request Information Page Dashboard overview of Promotion Requests Support for custom soft attributes in Promotion Requests Support for custom soft type of Promotion Requests View Change Object Information Page TASK MANAGEMENT View and complete all Change Object tasks View and complete new "Online Change Review Board" task Support for custom PR Tasks Support for custom CR Tasks Support for custom CN Tasks

## EAC PRODUCTIVITY APPS COMPARISON CHART CONT

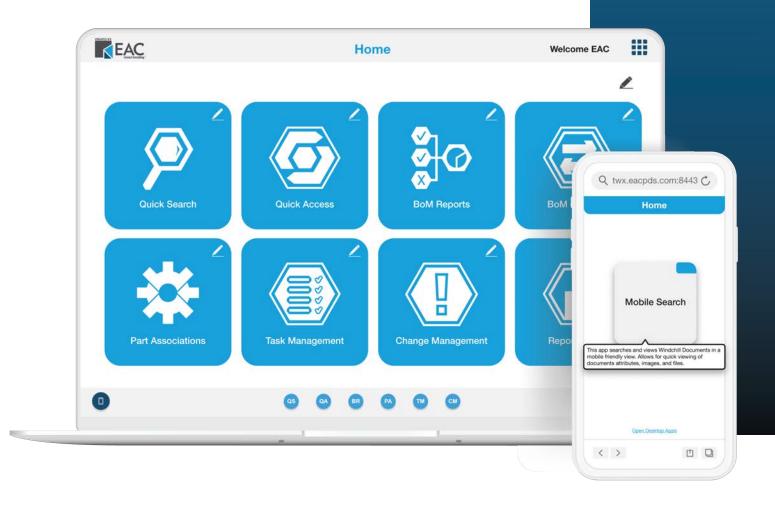
NAVIGATE 9.3 EAC APPS

COMPARISON CHART CONT.	NAVIGATE 9.3	EAC APPS
TASK MANAGEMENT (CONTINUED)		
Support for custom soft attributes		<b>~</b>
OOTB hook for integrating custom mashups		<b>~</b>
Ability to add attachments to change object		<b>~</b>
NEW APPLICATIONS		
BoM Compare Tool (beta)		
Ability to pull up & compare BoM's inside Windchill to differentiate BoM versions		<b>~</b>
Helps customers ensure correct parts are sent to service field		<b>\</b>
Assists project management to distinguish between assembly builds		<b>~</b>
Allows purchasing to identify efficiencies between assembly builds		<b>~</b>
Report Viewer (beta)		
Ability to run any type of Windchill report		<b>~</b>
Intuitive interface to help non-engineers find critical information faster		<b>~</b>
TASK MANAGEMENT		
Change Object Roll-Up Component		
Checks through all parts of an assembly table for associated change objects		<b>~</b>
Allows manufacturing teams to see how products are made and submit change orders		<b>~</b>
Component Tailoring		
Add additional functionality to Apps		<b>\</b>
Enables users to understand the bigger picture, rather than clicking between Apps		<b>~</b>



## EVERY SUBSCRIPTION INCLUDES FREE ACCESS TO

## EAC PRODUCTIVITY HOME



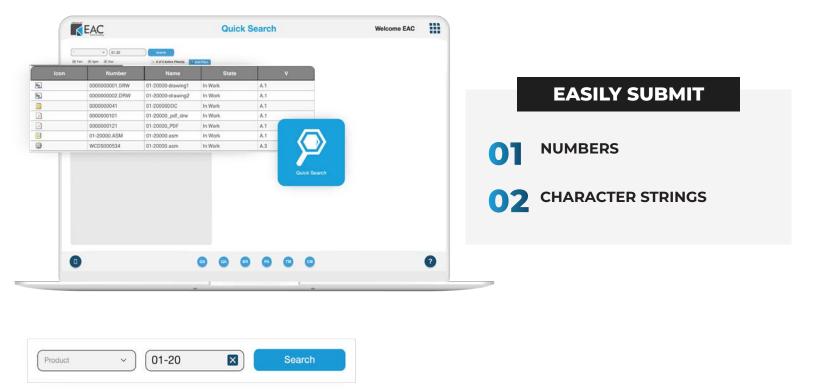
EAC Productivity Home is a proprietary framework, or launcher for ThingWorx Navigate applications. It sits on top of Windchill and Navigate to provide a fully configurable and responsive interface.

EAC Productivity Home simplifies user interaction and helps administrators maintain the user portal after upgrading to new releases of ThingWorx Navigate.

## **QUICK SEARCH**

This app allows users to easily find items in Windchill. Object oriented technologies like Windchill often require users to specify object types before executing a content search. This requires users to have an understanding of how Windchill objects are related. Quick Search navigates myriad relationships automatically!

Increase user adoption, satisfaction, and PLM system usage.



#### FINDING ITEMS IN WINDCHILL COULDN'T BE EASIER

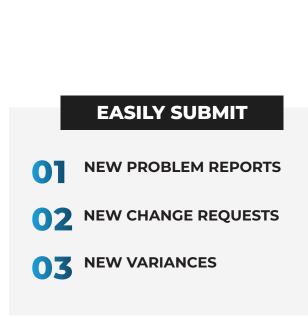
Quick Search provides a simple way for users to find content in Windchill. It removes the need for users to apply an understanding of how Windchill objects are related in order to find the information needed to do their job.

This EAC Productivity App allows users to simplify their interaction with an object oriented PLM system. Simply search using a number or attribute and return relevant results from across your PLM environment.

## **QUICK ACCESS**

PLM and PDM tools have complex user interfaces and many relational paths. This can inhibit upstream and downstream user adoption. Quick Access helps improve user adoption of critical PLM and PDM systems.

Quick Access helps organizations improve the return of their Windchill investment by improving user experience and increasing upstream and downstream adoption.







#### **HOW CAN QUICK ACCESS HELP YOU?**

Quick Access was created to provide an improved user experience by streamlining access to critical and select data sets to ultimately enhance productivity for shop floor personnel.

With minimal effort, this EAC Productivity App allows downstream users to feed critical quality information back to the engineering department. The simplified interface and consolidated task workflows help users easily submit new problem reports, new change requests, and new variances.

## **BOM REPORTS**

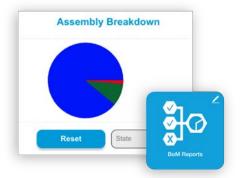
This app allows users to see the progress of a Bill of Materials, and applies filters so you can focus on parts that are not yet released. It is also useful for viewing all of the "make" parts or "buy" parts in a given BoM, or all parts created/modified by a particular user.

The export functionality allows users to execute a specific report on a frequent basis and compare the results to previous exports to check progress over time.



#### **EASILY SUBMIT**

- PROCESS OF A BOM
- **02** LISTS OF UNRELEASED PARTS
- PARTS OF CREATED (OR MODIFIED) BY CERTAIN USERS



#### WHY WOULD YOU NEED BOM REPORTS?

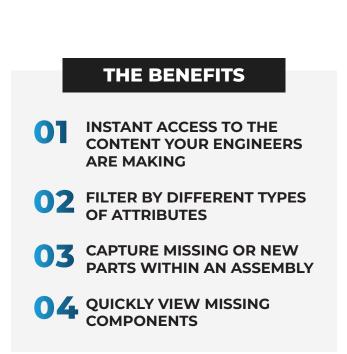
The BoM Report App provides users with a visual representation and detailed listing of the current status of an end item or product. This app displays information about each part contained in the Bill of Materials and groups them in a chart for simple viewing.

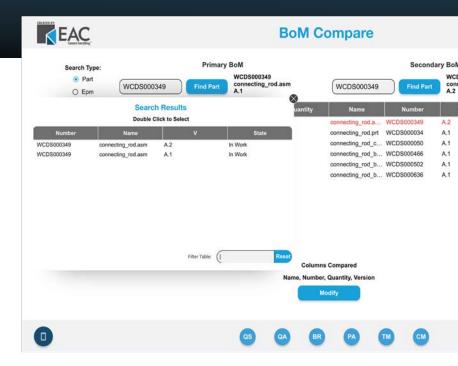
This EAC Productivity App allows users to quickly assess a Bill of Material and ensures projects stay on-time and on-track. The simplified view helps to ensure products are built with the appropriate design iterations.

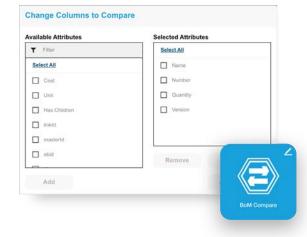
## **BOM COMPARE**

This app provides a side-by-side comparison of two Windchill bill of materials. As companies around the world are using PLM tools, like Windchill, to boost their efficiency and product quality, simplifying their workflow is at the utmost importance. Many engineers don't even realize Windchill comparisons exist. Our BoM Compare application is here to change that.

Now, your teams are able to compare the differences between BoMs of specific parts with the click of a button – taking the manual work out of this detailed task.







## SIDE-BY-SIDE COMPARISONS NOW AVAILABLE

BoM Compare is not only a useful tool for your engineers, it can also be utilized across different departments. Purchasing teams can now guarantee they are ordering the correct parts needed to complete a project while supervisors can easily learn what has changed in an assembly. In order for your projects to be successful, consistent and accurate communication is imperative. This application can help you achieve that.

## PART ASSOCIATIONS

This app improves efficiency for users by giving them direct access to drawings and related CAD data without the overhead of PLM & PDM system user interfaces.

The simplified user interface improves adoption and usage. Quickly link directly to files within Windchill. Reduce time spent searching and browsing through the PLM and PDM system.

#### **EASILY SUBMIT**

- **ASSOCIATED CAD FILES**
- ASSOCIATED PART DATA
- **03** ASSOCIATED DRAWINGS





## IMPROVE YOUR OVERALL EFFICIENCY WITH PART ASSOCIATIONS

Part Associations provides a "shortcut" for non-mainstream Windchill users and shop floor personnel to access critical CAD files and documentation associated with part data.

This EAC Productivity App allows users to quickly access all drawings, parts, assemblies, and other documents associated with CAD files and part data. It simplifies searching for content and consolidates results into a single screen.

## TASK MANAGEMENT

This app improves efficiency for users by giving them direct access to drawings and related CAD data without the overhead of PLM & PDM system user interfaces.

The simplified user interface improves adoption and usage. Quickly link directly to files within Windchill. Reduce time spent searching and browsing through the PLM and PDM system.







## WHY WOULD YOU NEED TASK MANAGEMENT?

Task Management helps you complete multiple tasks within one window. This app shows all open tasks, almost like a to-do list, and provides the ability to filter tasks assigned to everyone on your team.

This EAC Productivity App allows users to streamline their interaction with a task list. It allows Windchill users to view and manage all tasks on a single screen without needing to create a custom report or advanced search within Windchill.

## CHANGE MANAGEMENT

Our Change Management app was built to deliver a graphical view of problem reports, change requests, change reports, change variances, and promotion requests managed within Windchill. This suite of EAC Productivity Apps allows for easy viewing and filtering based on type, ownership, status, and other helpful metrics – all without needing to build complex Windchill reports and searches.

Each app includes a customizable space for the addition and development of role-based reports. This helps managers and end-users throughout an organization see only the most relevant and critical information.



Problem Report

Change Request

Change Notice

Variance

Promotion Requests

Change Management

Change Management can allow you to filter based on a variety of common attributes (priority, category, state, product category process type, data range, etc.)

Increase efficiency, user adoption, and user satisfaction! Create customizable reports for specific users.

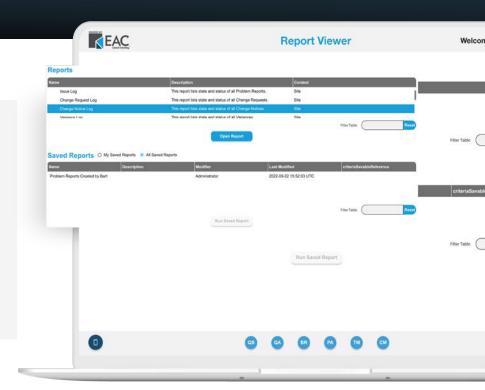
## REPORT VIEWER

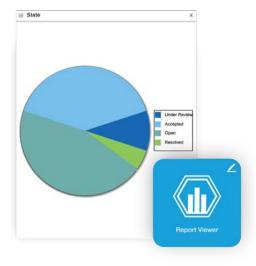
This application provides a shortcut view into pre-configured reports that are made in windchill – giving individuals outside of engineering the ability to view and run those records. This is especially helpful for those who aren't necessarily familiar with running reports within Windchill, but still want to drive home the idea of change management.

Our Report Viewer application allows users to create pre-configured reports, save new reports, and access pre-built dashboards for reports that leverage the Windchill search engine. Essentially, if it's a report in Windchill, you can run it with this application.

#### THE BENEFITS

- OT CREATE PRE-CONFIGURED REPORTS
- **02** VIEW & RUN REPORTS OUTSIDE OF ENGINEERING
- 103 LEVERAGE BUSINESS INTELLIGENCE





## AN EASIER WAY TO VIEW WINDCHILL REPORTS

We understand the roadblocks that can happen with Windchill reporting. That's why, we're bridging the gaps between hammering out reports and leveraging business intelligence. With this application, you can identify trends, summarize information about particular objects, identify objects in certain states, and much more!

#### **VERSION UPDATES & REVISIONS**

VERSION OF BANES OF REVIS	10110
VERSION 1.1.4	
General Functionality Updates	
Quick Access	Part Associations
<ul><li>Custom IBMA values display in BoM table</li><li>Drawings markups</li></ul>	Added reference documents
VERSION 2.0	
New Applications	
Task Management	Problem Report
<ul><li>View Windchill tasks</li><li>Review and complete tasks</li><li>Graphical reporting based on configurable attributes</li></ul>	<ul> <li>Report based on open/closed dates</li> <li>Graphical reporting based on configurable attributes</li> </ul>
Change Report	Change Notice
<ul><li>Report based on open/closed dates</li><li>Graphical reporting based on configurable attributes</li></ul>	<ul><li>Report based on open/closed dates</li><li>Graphical reporting based on configurable attributes</li></ul>
VERSION 2.1.0	
Application Updates	
Quick Access	
<ul> <li>Bug Fixes</li> <li>Enabled the tree grid to fetch child nodes on demand instead of preloading the entire structure</li> <li>Ability to add attachments to change objects after creation</li> </ul>	<ul> <li>Added a refresh button to update services that run after the tree grid selection</li> <li>Added ability to initiate a search with the "Enter" key</li> </ul>
VERSION 2.2.0	
General Functionality Updates	
Added tailoring to customize the main logo on a	applications
New Upgrade Tool for EAC Apps	
<ul> <li>Saves all tailoring and exports all custom entities</li> </ul>	<ul> <li>Redeploys all tailoring and imports all custom entities</li> </ul>
Application Enhancements	
Quick Access	Task Management
<ul> <li>Added tailoring to create change objects without an affected object</li> </ul>	Resized table and pie for a cleaner look
Change Request	Change Notice

Resized table and pie for a cleaner look
 Resized table and pie for a cleaner look

#### **New Application**

#### Change Variances

- · Reporting based on open/closed dates
- Graphical reporting based on configurable attributes

#### **VERSION 2.2.1**

#### General Functionality Updates

· Fixed issue with upgrade tool where task details tailoring was not saved

#### Application Updates

#### Quick Access

 Improved document content opening (fix for chrome cross-download issue)

#### Task Management

Fixed issue with getting affected objects for variances

#### **VERSION 2.3.0**

#### **Application Updates**

#### **Quick Access**

- · Bug Fixes
- Enabled the tree grid to fetch child nodes on demand instead of preloading the entire structure
- Ability to add attachments to change objects after creation
- Added a refresh button to update services that run after the tree grid selection
- Added ability to initiate a search with the "Enter" key

#### **VERSION 2.4.0**

#### General Functionality Updates

· Added EAC connector covering 80% of app services

#### **Application Enhancements**

- Saves all tailoring and exports all custom entities
- Redeploys all tailoring and imports all custom entities

#### Application Enhancements

#### **Quick Access**

 Added shortcut to change object information page on PR, CR, CN, and variance tabs

#### Part Associations

New view for documents that includes tailoring for attributes

#### Task Management

- · Added shortcut to change object information
- Added ability to add attachments to change object

#### Problem Report

- Added shortcut to change object information
- Added tailoring for change object information page

#### Change Request

- · Added shortcut to change object information
- Added tailoring for change object information page

#### Change Notice

- · Added shortcut to change object information
- Added tailoring for change object information page

#### Change Variances

- · Added shortcut to change object information
- Added tailoring for change object information page

#### **Application Updates**

#### Promotion Requests

- · Reporting based on open/closed dates
- · Change object information page

Graphical reporting based on configurable attributes

#### **VERSION 2.5.0**

#### **Application Updates**

#### **Quick Access**

- · Bug Fixes
- Enabled the tree grid to fetch child nodes on demand instead of preloading the entire structure
- Ability to add attachments to change objects after creation
- Added a refresh button to update services that run after the tree grid selection
- Added ability to initiate a search with the "Enter" key

#### **VERSION 2.6.0**

#### General Functionality Updates

- · All services now use the EAC connector
- · All reports replaced with tasks

#### Application Updates

#### Quick Search

· Fixed a bug with result sorting

#### **Quick Access**

Added attribute tailoring for PR, CR, CN, and variances tabs

#### **VERSION 2.7.0**

#### General Functionality Updates

- New homepage for Mobile apps has been added
- New EAC Apps URL redirects users to the desktop apps homepage or mobile apps homepage (depending on device)

#### **New Application**

#### Mobile Search

- · Ability to search for parts, epms, docs
- · View object information
- Download part & epm additional files
- See and download doc primary content and attachments
- · View part & epm representation thumbnail
- Share direct Windchill link to searched parts via email, text, etc.
- Share direct Mobile application link to searched part via email, text, etc.

#### **VERSION 3.0**

#### Application Enhancements

- New ThingWorx compatibility. The minimal version requirement is version 9.2 of ThingWorx for EAC Apps to properly function
- · Ability to rename applications

- All Export features introduce the ability to choose which attributes to export
- Only attributes shown in the table are visible in the filter

Application Undates	
Application Updates	LIV Character
<ul> <li>Style refresh feature a more intuitive and dynamic feel</li> <li>More real estate visible on the screen</li> <li>Quick link to applications directly from the footer</li> </ul>	<ul> <li>UX Changes</li> <li>UX interoperability makes it easier to find things compared to earlier versions</li> <li>Question mark has been added to the footer to help users know exactly who to reach out to if they happen to experience any issues</li> </ul>
New Applications & Updates	
Change Management	Task Management
<ul> <li>Problem reports, change requests, change notices, promotion requests, and variances have all been consolidated to reside under the Change Management title</li> </ul>	<ul> <li>Task completion is only displayed for the user's tasks and not anyone else's</li> <li>Task Details view has been added with a quick link to the "Change Objects Details" view</li> </ul>
Quick Search	Quick Access
· Grid filter can be turned on by the admin	<ul> <li>Users have the ability to add as many custom tabs as they would like</li> <li>Users can hide/show image and drawing views</li> </ul>
VERSION 3.1.0	
General Functionality Updates	
<ul> <li>Added app information for each tile on the homepage when a user hovers on title</li> <li>Added 'Info Icons' to admin tailoring pages to detail the tailoring options and what they control on the app</li> <li>Added ability to display a custom splash screen for every new user session</li> <li>Added free multi-valued attributes configuration in the Change Object Resource Configuration page</li> <li>Added sorting and filtering in the Change Object Resource Configuration page</li> </ul>	<ul> <li>Added sorting and filtering in the Datashape Configuration page for admins</li> <li>Added change object types to the quick selection menu in the Datashape Configuration page for admins</li> <li>Enhanced upgrade tool to save main tailoring configurations and custom app names</li> <li>Added an error message to be displayed to users when they are not part of a navigate group</li> <li>Added User Management tool</li> </ul>
Application Enhancements	
Mobile Search	Quick Search
<ul> <li>Collapsing of search filter area if no filters are displayed</li> </ul>	<ul> <li>Added ability to set a default value to type filters</li> </ul>
Quick Access	BoM Reports
<ul> <li>Added default tab selection for 'Image' and 'Drawing' tabs</li> <li>Added export functionality to export intended structure</li> <li>Added sorting to Change Object tabs</li> </ul>	Added product and type filter controls to match Quick Access controls
Part Associations	Task Management
Added link type to bottom right corner of card	<ul> <li>Separated tailoring for 'My Tasks' and 'Open Tasks' so they can be controlled individually</li> </ul>

#### Change Management

- Ability to rename 'Change Object' types in the app
- Export functionality for the Change Object details page tasks, affected objects, and related change objects

#### **VERSION 3.2.0**

#### General Functionality Updates

- · License enforcement
- Easily open the current object in another app or email a direct link to it
- · Saving and redeployment of custom attributes
- · Shortcut between applications
- Introduction of components: reusable pieces of functionality that are tailored once and can be added to different apps

#### User Management Tool

- Added Licensing Group Management
- · User creation for Windchill users

- Conflict resolution
- · Pre-configured roles for easy deployment

#### Application Enhancements

#### Quick Search Quick Access

- · Custom mashup for each object type
- · Auto select single result

· Option to override OOTB 'infoEngine' tasks

#### Part Associations

· Auto select single result

#### Task Management

· Export button added

#### Change Management

· Consolidation of all Change Object applications into a single application

#### Components

- · Change Objects
- · Problem Reports for Object
- · Change Requests for Object
- Change Notices for Object

- Variances for Object
- Markups
- · Related documents

#### **New Applications**

#### BoM Compare (beta)

- Compare two Windchill BoMs
- · Select what attributes to use for comparisons

#### Report Viewer (beta)

- · Run Windchill reports
- · Run saved Windchill reports

### **COMPATIBILITY MATRIX**

EAC APP VERSION	NAVIGATE VERSION	THINGWORX VERSION
2.0	1.4 to 1.7.2	
2.1 / 2.2 / 2.3 / 2.4	1.7.2 to 8.5.3	
2.5 / 2.6.0	1.7.2 to 8.5.3 AND 9.1.0	
2.6.1	9.2 ONLY	
2.7	9.2.0	9.2.1* **
3.0	9.2.0	9.2.1** / 9.2.3** / 9.2.4**
3.1.0	9.2.0 to 9.3.0	9.2.1** / 9.2.3** / 9.2.4** / 9.3.0**
3.1.1	9.3.0	9.3.2
3.2.0	9.2.0 / 9.3.0	9.2.8 / 9.3.2

<sup>\*</sup>Starting with TWX 9.2, PTC is making Navigate compatible with multiple ThingWorx versions. We only test the minor versions stated in this matrix.