



# INTRODUCING PTC NAVIGATE

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PTC PLM Solutions Manager

June 8, 2016

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A decorative graphic in the top-left corner consisting of several overlapping, pointed shapes in shades of blue, yellow, and red.

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# AGENDA

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- Value of broad access to product information
- Challenges
- PTC Navigate App
- Custom App Example from New Vision Engineering
- Q&A

# ACHIEVING BETTER DECISIONS



Product data is a  
company's most valuable  
asset...

*It shouldn't be a secret*

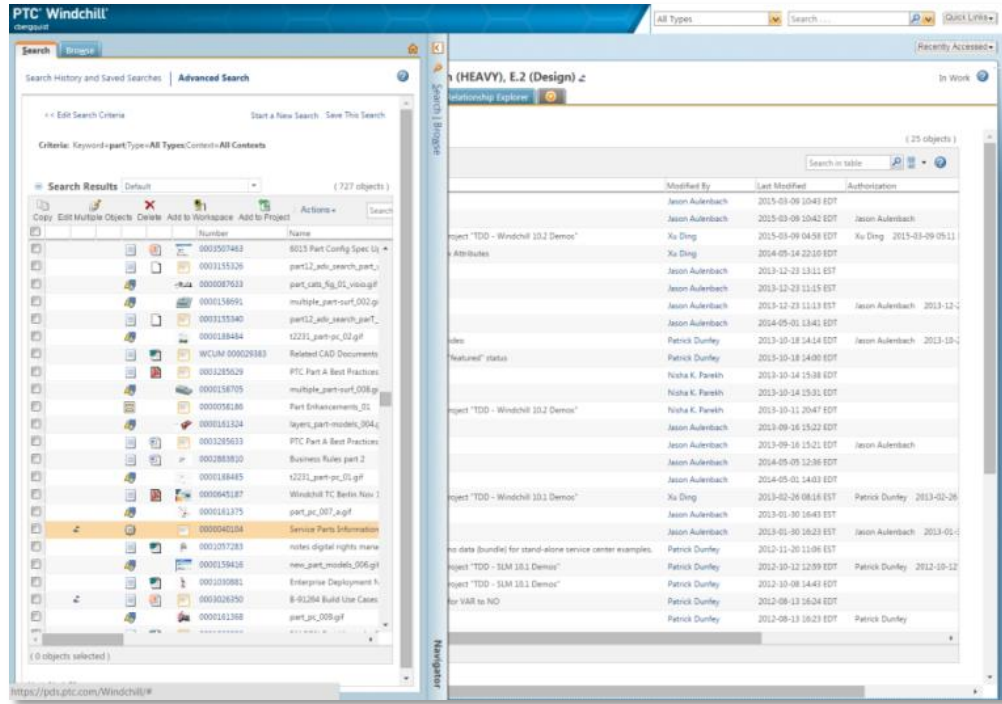
Only **0.5%** of the data we create is ever analyzed  
and used

~ IDC

By some estimates, just a **10%** increase in data  
accessibility will result in more than **\$65 million  
additional net income** for a typical Fortune 1000  
company.”

~ Bernard Marr, *Data Informed*

# TYPICAL CURRENT APPROACH & CHALLENGES



Designer/Engineer



Tooling Designer



Purchasing Agent



Quality Inspector



Process Planner

# PTC NAVIGATE

CONNECT TO YOUR  
ENTERPRISE DATA



EXPERIENCE YOUR DATA  
IN NEW WAYS



BUILD NEW CONNECTIONS  
AND NEW EXPERIENCES



# PTC NAVIGATE SOLUTION

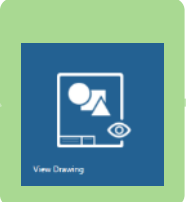


## PTC Navigate Role-based Apps

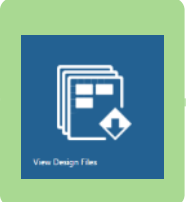


Designer Engineer

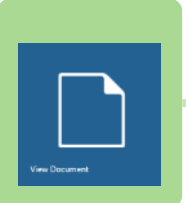
The image displays two software interfaces. The top interface is PTC Windchill, showing a search results table with columns for Name, Number, and Modified By. The bottom interface is SAP Scheduler, showing a configuration screen for an InfoPackage with fields for DataSource, Data Type, Source System, and Adapter.



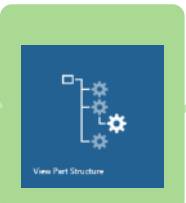
  
Tooling Designer



  
Purchasing Agent



  
Quality Inspector



  
Process Planner

## Benefits

- ✓ No Windchill upgrade
- ✓ Easy to deploy and adopt
- ✓ Ready out of the box
- ✓ Simple tailoring
- ✓ Reduce errors, increase efficiency, reduce costs

Purpose Built	Just the information needed	Easy to consume
<ul style="list-style-type: none"><li>✓ For a role...</li><li>✓ To complete a task</li></ul>	<ul style="list-style-type: none"><li>✓ From all the owning systems</li><li>✓ Aggregated together</li></ul>	<ul style="list-style-type: none"><li>✓ On the device that is convenient</li><li>✓ With no need for training</li></ul>



PTC Navigate View Parts List

Back To Search

**PART DETAILS**

	<b>Number</b> WCD5000288
	<b>Name</b> 01-72000.asm
	<b>Version</b> A.1 (Design)
	<b>State</b> In Work

**SELECTED PART**

	<b>Number</b> WCD300015
	<b>Name</b> 01-72510.prt
	<b>Version</b> A.1 (Design)
	<b>State</b> In Work

**PARTS LIST**

Number	Name	Version	State	Quantity	Unit	Last Modified By	Design Files	Last Modified
WCD5000260	01-72530.prt	A.1 (Design)	In Work	15.00	ea	Site, Administrator		July 30 2015
WCD5000138	01-72520.prt	A.1 (Design)	In Work	1.00	ea	Site, Administrator		July 30 2015
WCD5000191	01-72518.prt	A.1 (Design)	In Work	1.00	ea	Site, Administrator		July 30 2015
WCD5000475	01-72001.prt	A.1 (Design)	In Work	1.00	ea	Site, Administrator		July 30 2015

PTC Windchill

PTC Integrity

SAP

salesforce

## Capabilities

- View Document
- View Drawing
- View Part Properties
- View Component Part List
- View Part Structure
- View/Download design files
- View & measure in 3-D
- View Requirements

**PTC® Navigate**

The image shows a collection of task icons for the PTC Navigate application. At the top, there is a row of six icons: 'View Design Files' (stack of papers), 'View Drawing' (drawing with eye), 'View & Measure in 3D' (3D cube with eye), 'View Part Properties' (hand pointing to gear), 'View Parts List' (list with gear), and 'View Part Structure' (tree diagram with gears). Below this row, there are two more icons: 'View Document' (document with eye) and 'View Requirements' (document with checkmark). A blue line connects the 'View Part Properties' icon to the 'View Document' and 'View Requirements' icons, with the text 'Collection of Tasks for accessing part info' next to it.

View Design Files

View Drawing

View & Measure in 3D

View Part Properties

View Parts List

View Part Structure

View Document

View Requirements

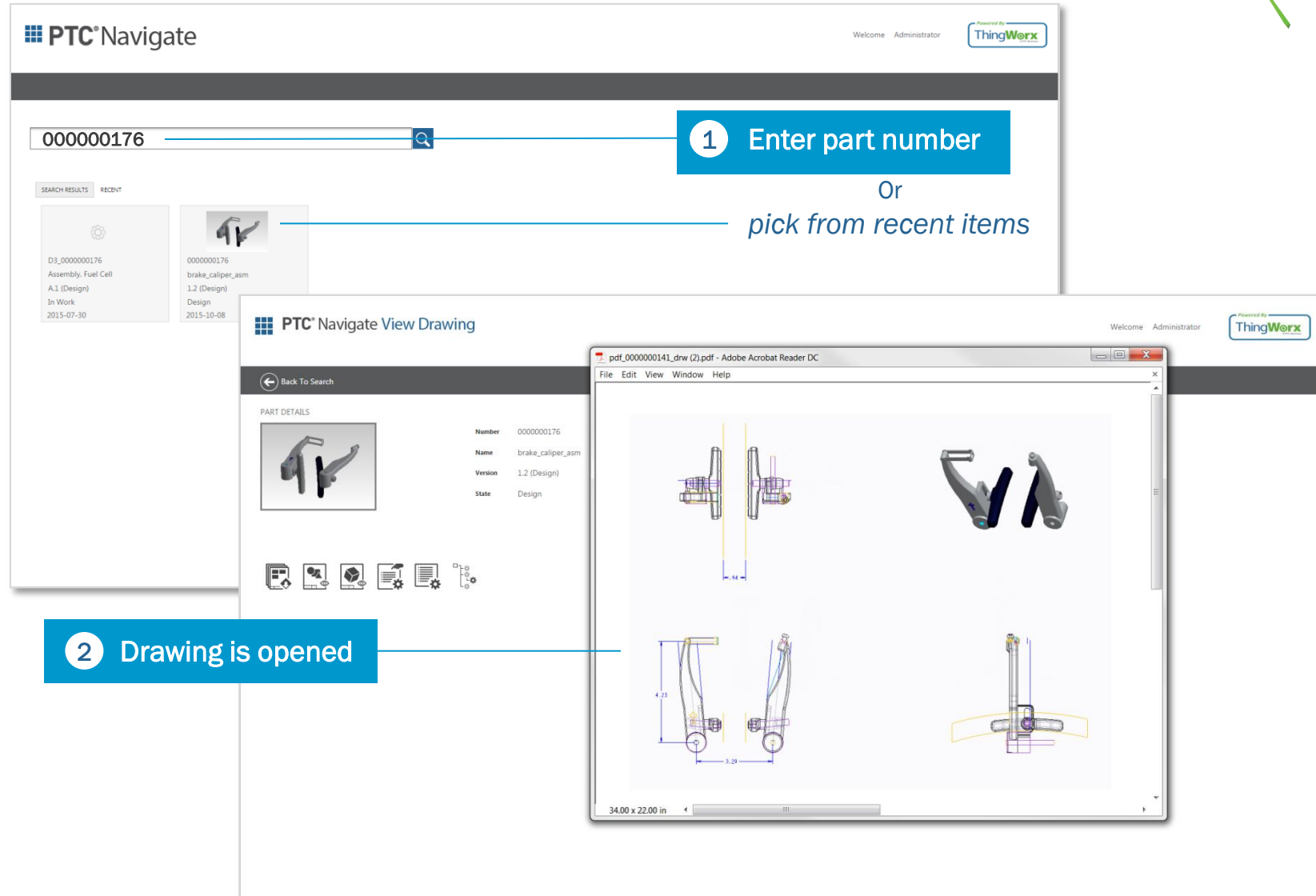
Collection of Tasks for accessing part info



# PTC NAVIGATE – VIEW DRAWING

## Benefits

- ✓ Simplified, focused app interface
- ✓ No training is required so interface can provide product information to customers and supply partners
- ✓ Fewest possible steps to reach information and fewer possibilities for errors or misunderstanding



The screenshot illustrates the PTC Navigate interface for viewing a drawing. It is divided into two main sections: the search interface and the drawing viewer.

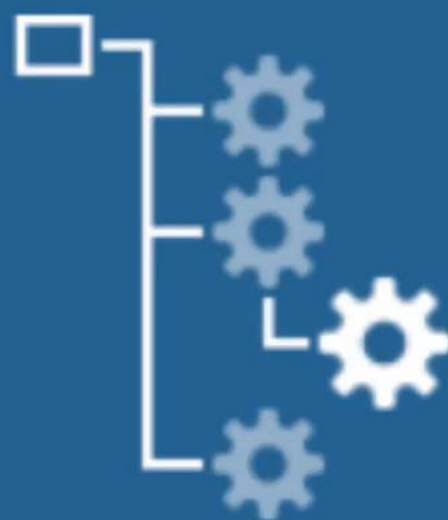
**Search Interface:** The top section shows a search bar with the part number "000000176" entered. A blue callout box labeled "1" points to the search bar with the text "Enter part number" and "Or pick from recent items". Below the search bar, there are two columns: "SEARCH RESULTS" and "RECENT". The "RECENT" column shows a list of items, including "000000176 brake\_caliper\_asm 1.2 (Design) Design 2015-10-08".

**Drawing Viewer:** The bottom section shows the "PTC Navigate View Drawing" interface. A blue callout box labeled "2" points to the drawing viewer with the text "Drawing is opened". The drawing viewer displays a PDF of the drawing, "pdf\_000000141\_drw (2).pdf", in an Adobe Acrobat Reader DC window. The drawing shows a 3D model of a brake caliper assembly with various views (isometric, top, and side) and dimensions. The dimensions shown are 4.23, 3.28, and 1.84. The drawing viewer also includes a "PART DETAILS" section with a 3D model and a table of properties:

Number	000000176
Name	brake_caliper_asm
Version	1.2 (Design)
State	Design



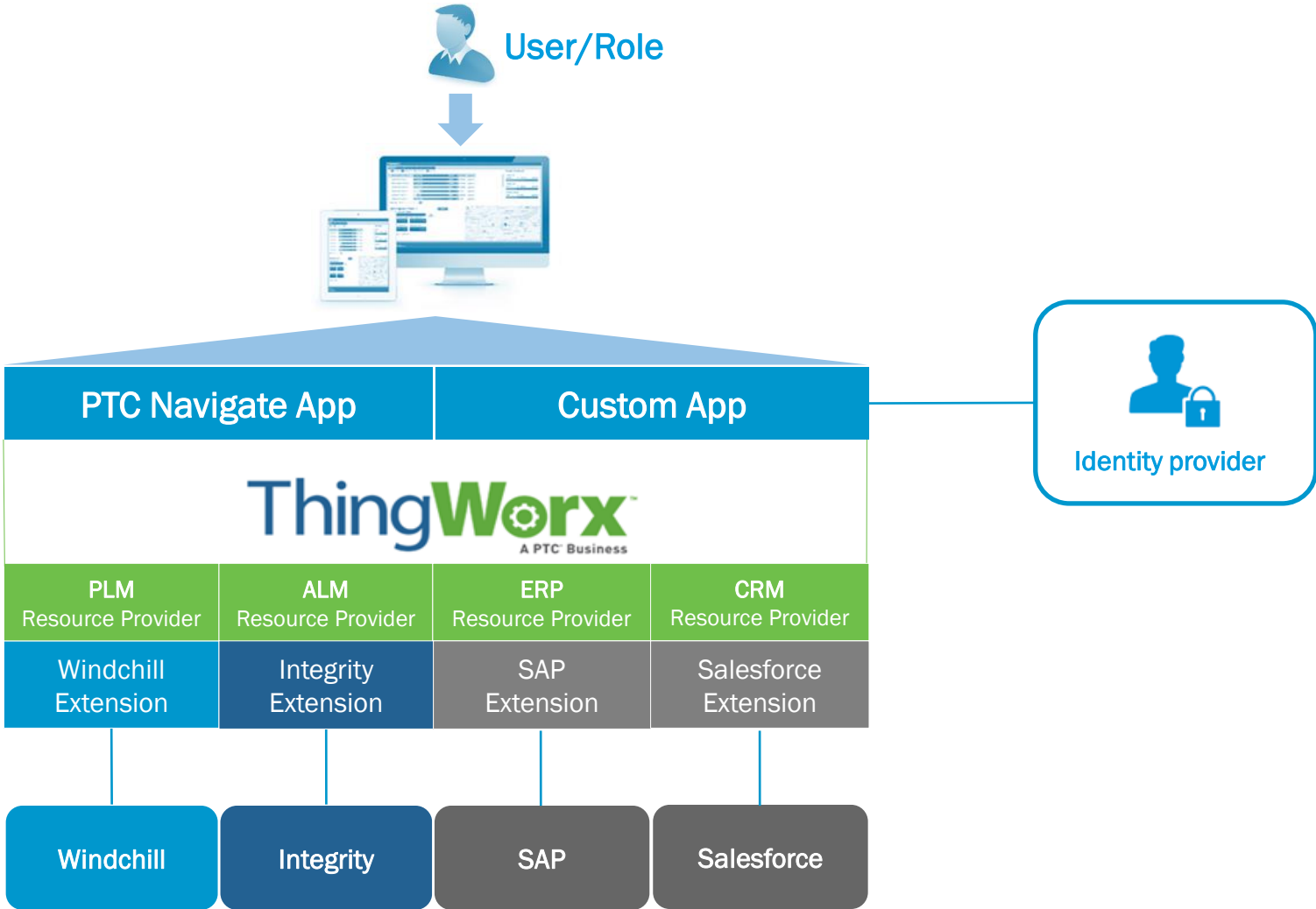
View Parts List



View Part Structure



# PTC NAVIGATE – ARCHITECTURE



# PTC NAVIGATE – ROLE-SPECIFIC BEHAVIOR

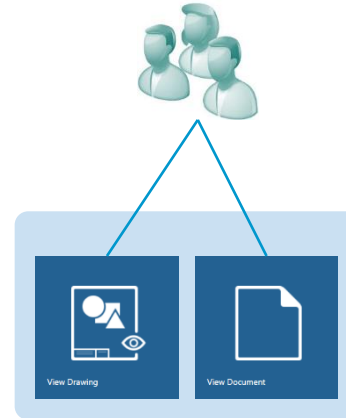


## Benefits

- ✓ Make available only those apps needed by user or group
- ✓ Pre-configure layout, types and attributes to ideally suit needs of user or group
- ✓ Minimize need for training
- ✓ Speed adoption, agility
- ✓ Increase efficiency
- ✓ Reduce errors and rework

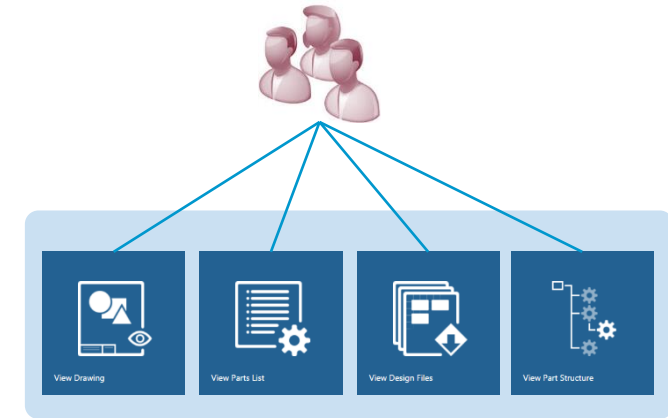
A role group can have access to a subset of the apps in a collection

### Production



- Pre-filtered part scope
- Released items only
- PDF drawing format only

### Procurement



- Make/buy column
- Preferred supplier
- Quantity in stock
- Quantity on order


# SIMPLE CUSTOMIZATION EXAMPLES



**PTC® Navigate View Parts List**

← Back To Search

**PART DETAILS**



Number 0000015064  
 Name Mixing Station  
 Version A.3 (Design)  
 State Released

**PARTS LIST**

Number	Name	Version	State	Unit	Last Modified By	Last Modified	Drawing	Notes	Stock
0000015062	la_mid_bott.prt	A.1 (Design)	Released	1.00 ea	Roy Clarke	January 31 2016	<a href="#">View</a>		103
0000015073	leg_angle.prt	A.1 (Design)	Released	4.00 ea	Roy Clarke	January 31 2016			938
0000015080	in_pipe_flange.prt	A.1 (Design)	Released	3.00 ea	Roy Clarke	January 31 2016			181
0000015052	feed_box.prt	A.1 (Design)	Released	20.00 ea	Roy Clarke	January 31 2016	<a href="#">View</a>		0
0000015046	cone.prt	B.1 (Design)	In Work	20.00 ea	Roy Clarke	May 5 2016	<a href="#">View</a>		454
0000015051	apex_liner.prt	A.1 (Design)	Released	20.00 ea	Roy Clarke	January 31 2016	<a href="#">View</a>		42
0000015047	nipple_cylc_in.prt	A.1 (Design)	Released	20.00 ea	Roy Clarke	January 31 2016			152
0000015075	valve.prt	A.1 (Design)	Released	20.00 ea	Roy Clarke	January 31 2016			802
0000015048	vic_clamp.prt	A.1 (Design)	Released	20.00 ea	Roy Clarke	January 31 2016			22
0000015079	cy_inlet_clamp.prt	A.1 (Design)	Released	20.00 ea	Roy Clarke	January 31 2016			108
0000015066	top_plate.prt	A.1 (Design)	Released	20.00 ea	Roy Clarke	January 31 2016	<a href="#">View</a>		756
0000015083	hose.prt	A.1 (Design)	Released	20.00 ea	Roy Clarke	January 31 2016		Demo Notes	189

*Color-code columns based on lifecycle state value*

*Include column with quantity of part in stock from ERP*

# CUSTOM APP POSSIBILITIES

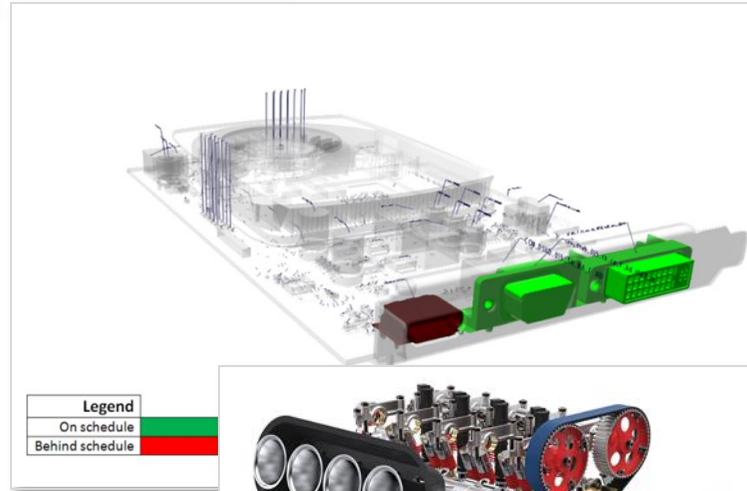
**PTC Products - Deliverable Dashboard**

PCB Antenna 1513259-1 → Control Board 4 1005831

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Basic Attributes	Requirements/Specs	CAD Models	Manufacturing	Material Compliance
✓	✓	-2	-3	-1

Deliverable Number	Description	Thumbnail	Owner	Date Due/Completed	Status	Action
1002036	Schematic Drawing		Doug Johnson	02/15/2015	No Capacity	Reassign
1034945	Part Drawing		Jeff Hewitt	02/15/2015	Late Start	
1002943	Drawing - PDF		Auto-generated	02/15/2015	Dependency	
1007853	Part - PDF		Auto-generated	02/15/2015		
1005831	Part - IGES		Auto-generated	02/10/2015		

Product Deliverables Dashboard



Product Item Highlighting

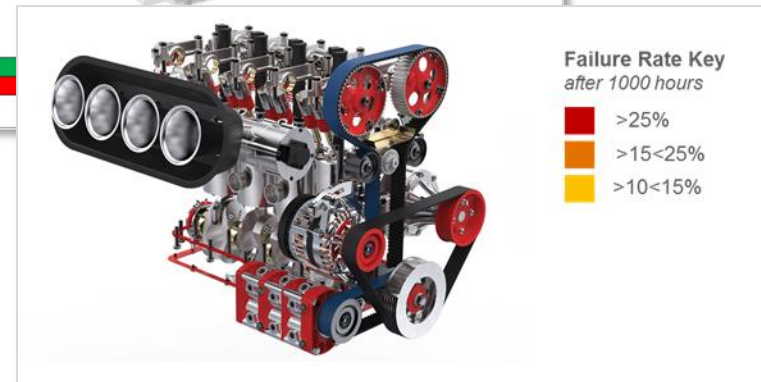
**PTC Products - Part Maturity Dashboard**

PCB Antenna 1513259-1

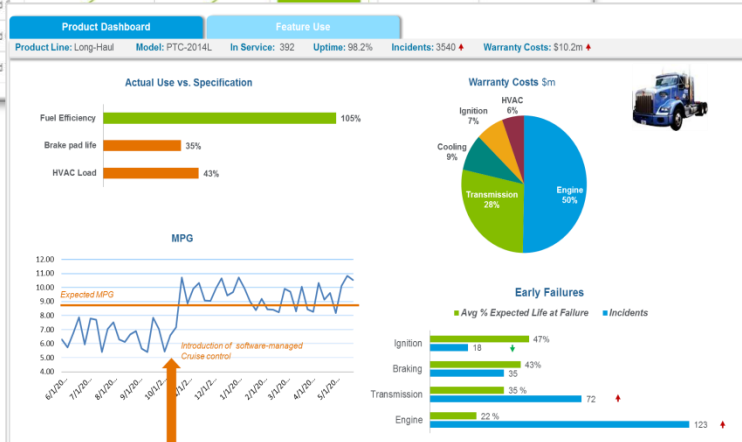
Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Basic Attributes	Requirements/Specs	CAD Models	Manufacturing	Material Compliance
5	12	2	15	3
7	11	9	5	11
9	11	9	5	1
25	42			

Part #	Description	Basic Attributes	Requirements Specs	CAD Models	Manufacturing	Material Compliance
1002036	Power module					
1034945	Control Board 1					
1002943	Control Board 2	✓	Not attainable			
1007853	Control Board 3	✓				
1005831	Control Board 4	✓	✓	No Resource		
1002067	Control Board					
1002048	Control Board					
1002051	Control Board					

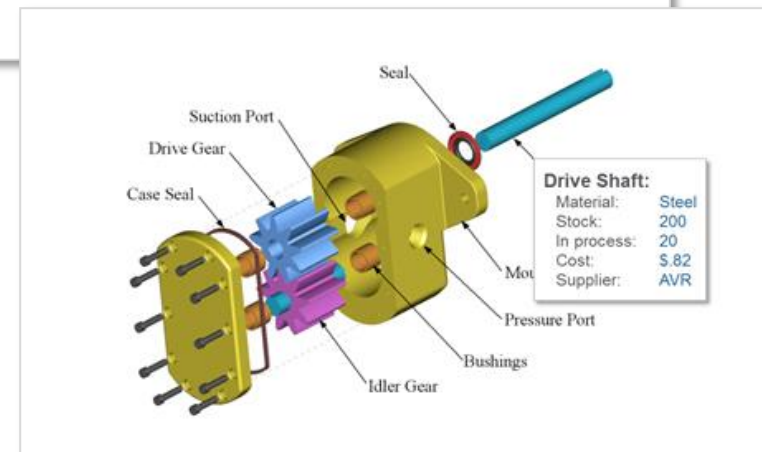
Product Maturity Dashboard



Product Component Heat map



Product Performance Dashboard

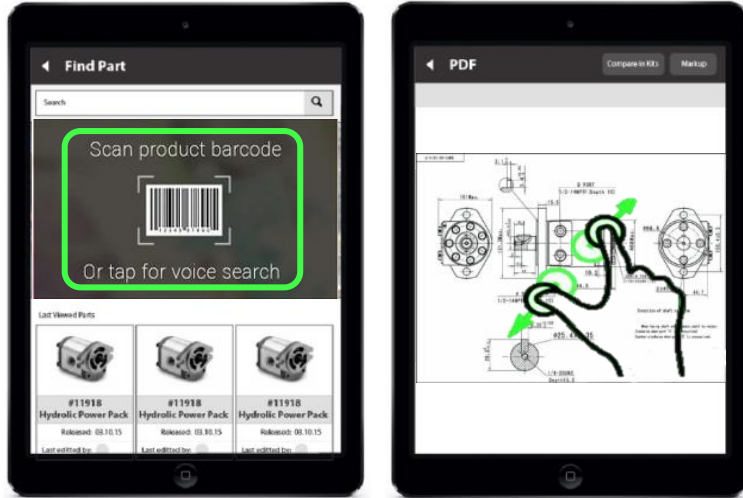


Augmented Item Info

# PTC NAVIGATE – ROADMAP

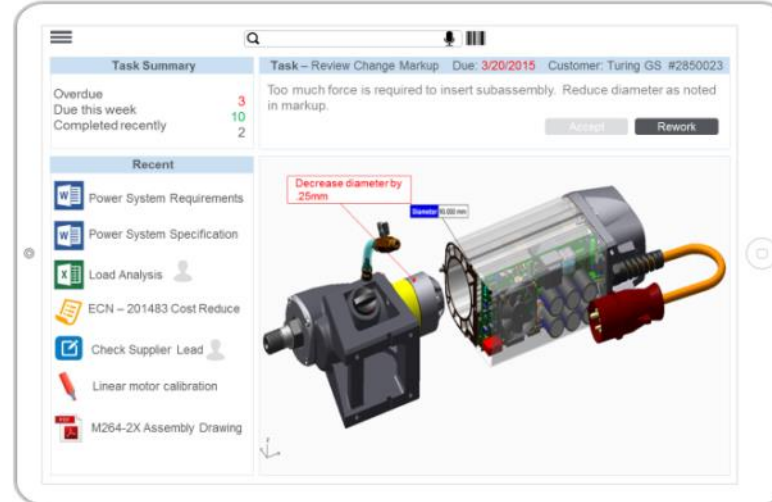


## View



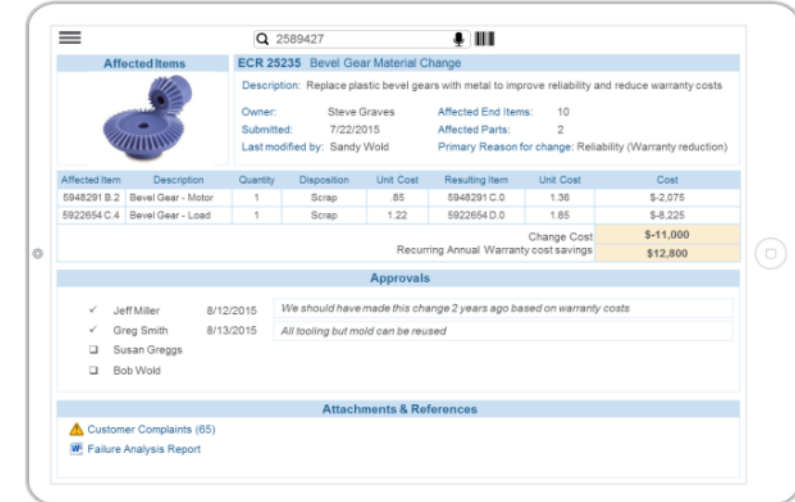
- ▶ Mobile device support
- ▶ View ECN
- ▶ View ECR

## Contribute



- ▶ Markup
- ▶ Review & approve
- ▶ Create problem report
- ▶ Create deviation/waiver

## Author



- ▶ Create/manage changes
- ▶ Create/manage documents
- ▶ Manage releases
- ▶ Create reports



# EXTENDING PTC NAVIGATE: CUSTOM APP EXAMPLE

Jeff Stebbins  
Business Development  
Bryan Ross  
Solution Architect



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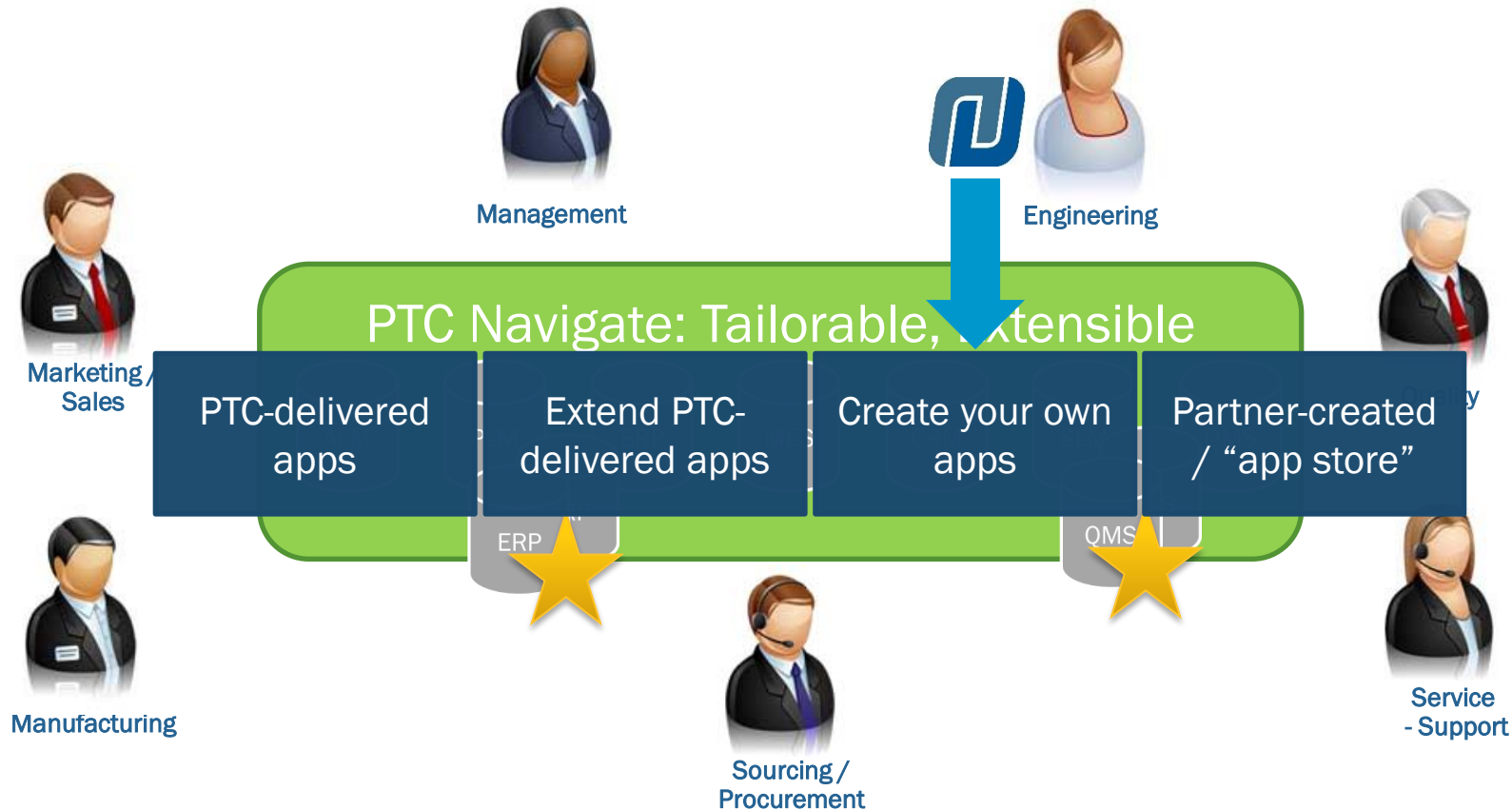
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# AGENDA

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- PTC Navigate Custom Apps
- Review Customer Business Case
- Realized Value from PTC Navigate Custom App
- Custom App Development – What Does it Do?
- Custom App Demonstration
- Q&A

# CREATE: NEW CONNECTIONS AND NEW APPS



HOW WOULD YOU **CREATE BETTER**  
BUSINESS INSIGHTS?

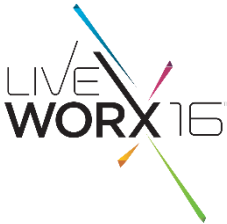
- **Extensible:** to new data sources, new systems
- **Agile:** deploying new UIs quickly, “try fast / fail fast”
- **Seamless:** data source changes do not impact UI
- **Flexible:** sources can be cloud, on premises, SAAS, mixed

**Customer Use Case:** Use PTC Navigate to Create a Role-Based Application for creating Engineering Authorizations / Changes (PTC Navigate Custom Partner App)

**Value:** Customer is able to reduce development time, training, validation, deployment and management overhead for their EA creation.



# PTC NAVIGATE CUSTOM APP



The screenshot shows a web browser window with the URL `http://nvwchdevovh01.nvgo.com:8080/Thingworx/Runtime/index.html#mashup=nv.En`. The browser tabs include 'ThingWorx Composer' and 'nv.MasterDOE'. The application header features the 'NEW VISION' logo on the left and the 'ptc navigate™' logo on the right. Below the header is a navigation bar with 'New' and 'Existing' tabs, and a main section titled 'Engineering Authorization'. A blue button labeled 'Create Engineering Authorization' is visible. The 'Lifecycle State' is displayed as 'None'. The form contains the following fields and values:

- Classification: UNCLASSIFIED
- Classification Category: None
- Category: Administrative Authorization
- Revision: new
- Code: IER
- Document Number: new
- Authorization Title: Information Engineering Release
- ICO: None

Below the form are two tables:

**Affected Programs:**

Program	Mod	Alt
W76	1	JTA2
B61	2	all

**Related Authorizations:**

L	Number	Code	Rev	Site	State	WindChill
🟡	201600401LA	IER	1	LA	INWORK	<a href="#">View</a>
🟡	201600423LA	IER	1	LA	INWORK	<a href="#">View</a>

**Distribution List:**

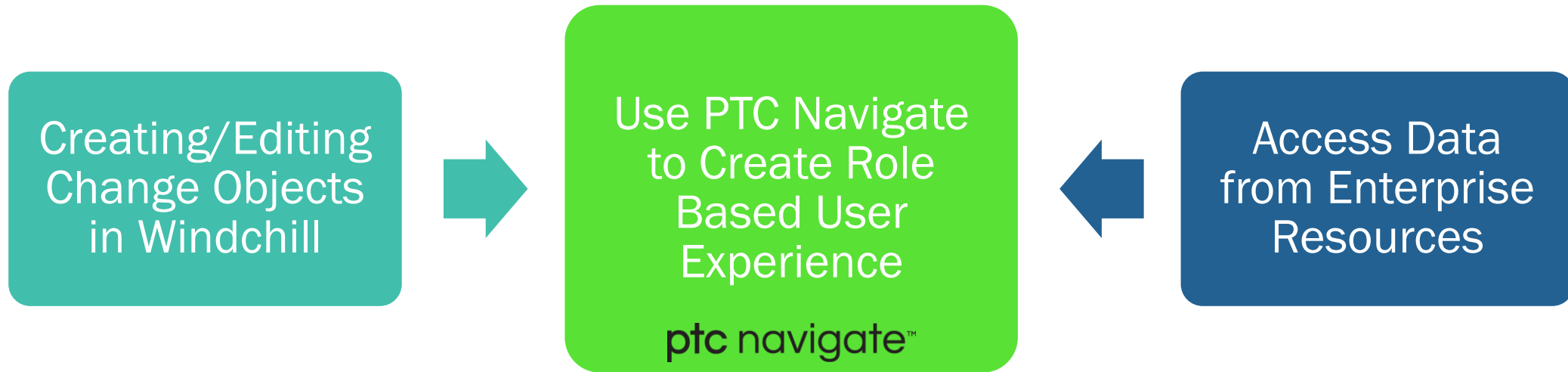
From	To	Copy-To	+	-		
Email	Name	Title	Organization	Site	Telephone	MailStop

# BUSINESS VALUE THROUGH PTC NAVIGATE CUSTOM APP



- **Improved User Experience**
  - Simplified UI and Focused Functionality
  - Ease of Use – Role Based & Guided User Experience
  - Context Sensitive Help/Information
  - Reduced Training and Human Error
- **Connected and Configured Business Systems**
  - Reducing Windchill/Other Business System Customizations
  - Business Rules and UI Validation Rules (Cascading Attributes)
  - Accessing data from other Directory Servers/Data Bases
- **Rapid Deployment / Rapid Adaptation to Business Changes**

# CUSTOM APP DEVELOPMENT – WHAT DOES IT DO?



- Creating/Editing Change Objects
- Creating/Editing Change Relationships (Affected Objects / Related Changes)
- Enforcing Business Rules in Populating Attributes (UI Validation)
- Providing Context Sensitive Help / Guided Experience
- Access Data from Enterprise Resources (Distribution Lists)

# PTC NAVIGATE CUSTOM APP DEMONSTRATION



New

Existing

Engineering Authorization

HTML Preview

Engineering Authorization Category

Administrative Authorization

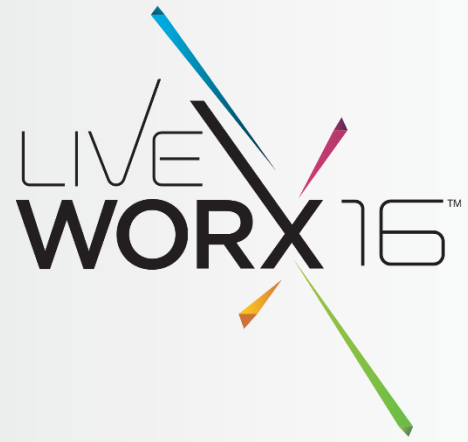
EA Code

EA Code

Choose IER, EER, or CER

BEGIN





# QUESTIONS?

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The image features several colorful geometric shapes, primarily triangles and lines, scattered across the white background. A large, multi-colored triangular shape is prominent on the right side, composed of various shades of blue, green, yellow, orange, pink, and purple. Several thin, colored lines (blue, pink, green, orange) radiate from the center towards the edges. The text 'LIVE WORX 16™' is centered in the upper half, with 'LIVE' in a thin, outlined font and 'WORX 16™' in a bold, solid black font.

# LIVE WORX 16™

TAKE A FRESH LOOK AT THINGS

[liveworx.com](http://liveworx.com)

## Release 1.2 (June 3, 2016)

### Server Platform Support

#### Windchill

- 10.2 M020 CPS 06 or later
- 10.2 M030 CPS 01 or later
- 11.0 F000

#### Integrity Lifecycle Manager

- 10.8 or later

#### ThingWorx

- ThingWorx server 7.1 (bundled with PostgreSQL 9.4.5)
- Converge Core Extension 7.1
- Windchill Extension 1.3

#### Server OS Support

- Windows Server 2012
- Windows Server 2008 R2 SP1
- Red Hat Enterprise Linux (RHEL) 7 Update 1
- Amazon EC2 Linux (64bit)
- Ubuntu 14.04 LTS

See the ThingWorx platform requirements for more details:

[http://support.ptc.com/WCMS/files/170232/en/ThingWorx\\_Platform\\_7.1\\_System\\_Requirements\\_1.0.pdf](http://support.ptc.com/WCMS/files/170232/en/ThingWorx_Platform_7.1_System_Requirements_1.0.pdf)

### Client Platform Support

OS	Browser	Version
PC	IE	11 and later
Mac/PC	Firefox	35 and later
Mac	Safari	6.1.6 and later
Mac/PC	Chrome	44
iOS 4	Mobile Safari	

#### Notes:

- 3-D Visualization is supported on Windows clients only with Firefox or IE browser (support for Chrome is planned by mid year 2016)
- Mobile devices can be used to access apps through a mobile browser but no 3-D visualization is supported on mobile devices. Native mobile support is expected by late 2016.