

USG Engineering Digital Transformation

uAPPS (Print/Zip)

Agenda

USG Engineering Digital Transformation

ThingWorx Navigate – uAPPS (Print/Zip)

- Benefits
- History
- Live Demo
- Roadmap

Questions & Answers

USG Engineering Digital Transformation

New Reseller for Thingworx / Existing Service Partner for 10+ years
Project based

- Installation and configuration of Windchill servers and Creo Parametric clients
- Upgrading Windchill installations
- Data migrations from PTC and non-PTC databases
- Modelling business processes in Windchill
- Service Business Development (Roadmaps on PLM & **IoT**)
- Creating new solutions in PLM & CAD & **IoT**

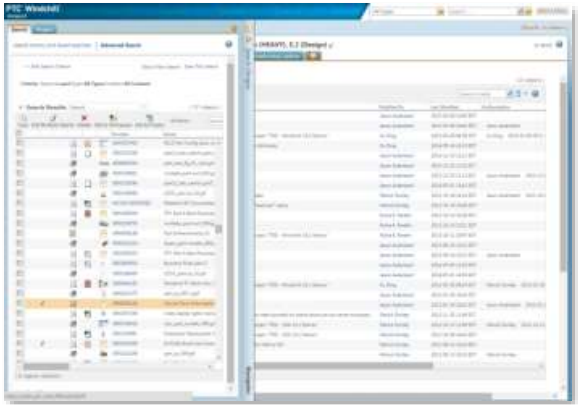
Training

- Standard or custom
- In our classroom or on site
- USG Training laptops

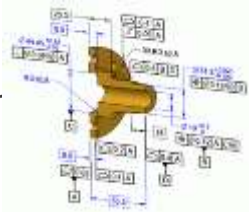
Thingworx Navigate

Current Situation & Customer Challenge

- Enterprise systems are **too complex for many roles** to get information themselves
- Even with in-depth training, infrequent **users forget how to get information**
- A single application **does not include all information needed** by role for a task



Tooling Designer



Purchasing Agent



Quality Inspector

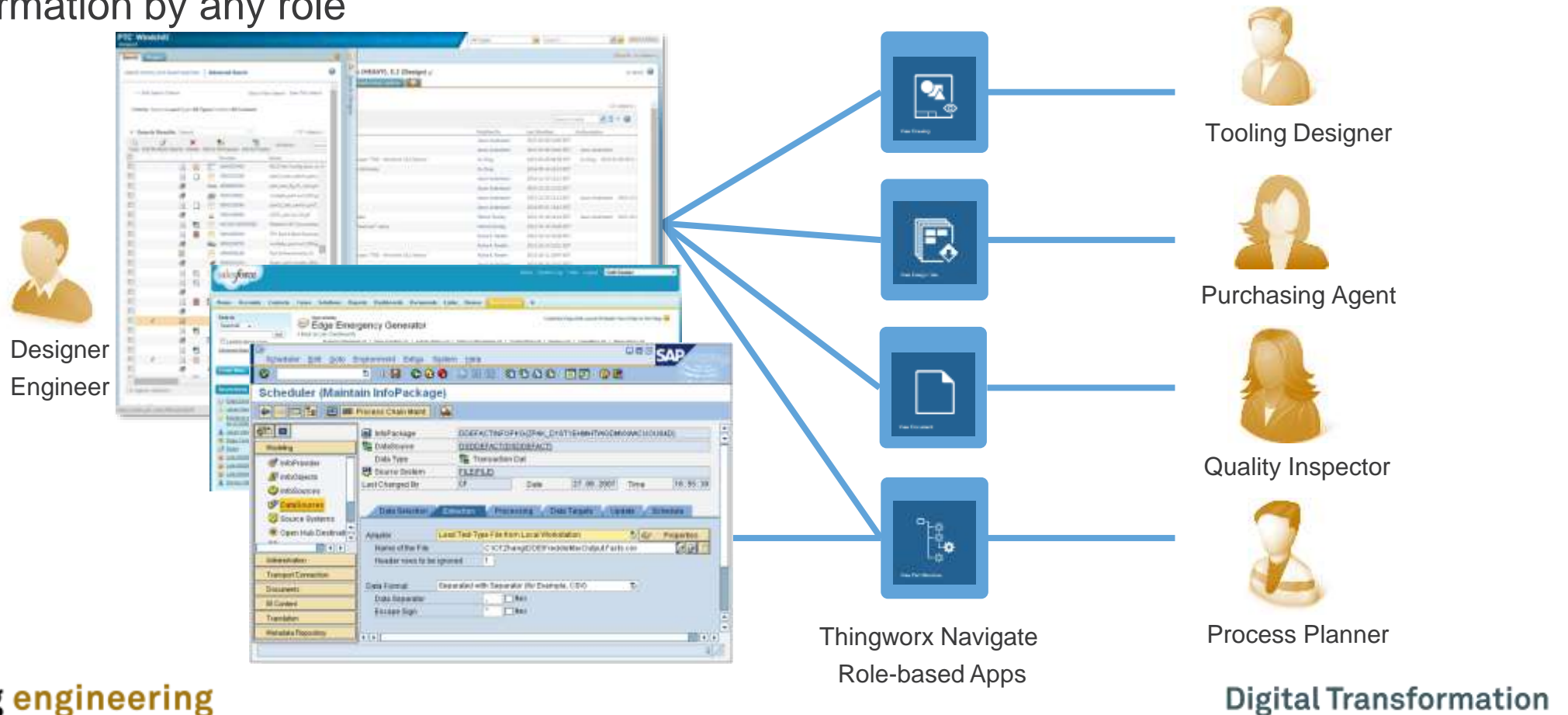


Process Planner

- Expert users become **bottleneck** for getting product information
- Expert users are **distracted and burdened by requests** from many roles
- Enterprise interfaces can be customized but it is **often costly to create and maintain these customizations**

Thingworx Navigate Opportunity & Solution

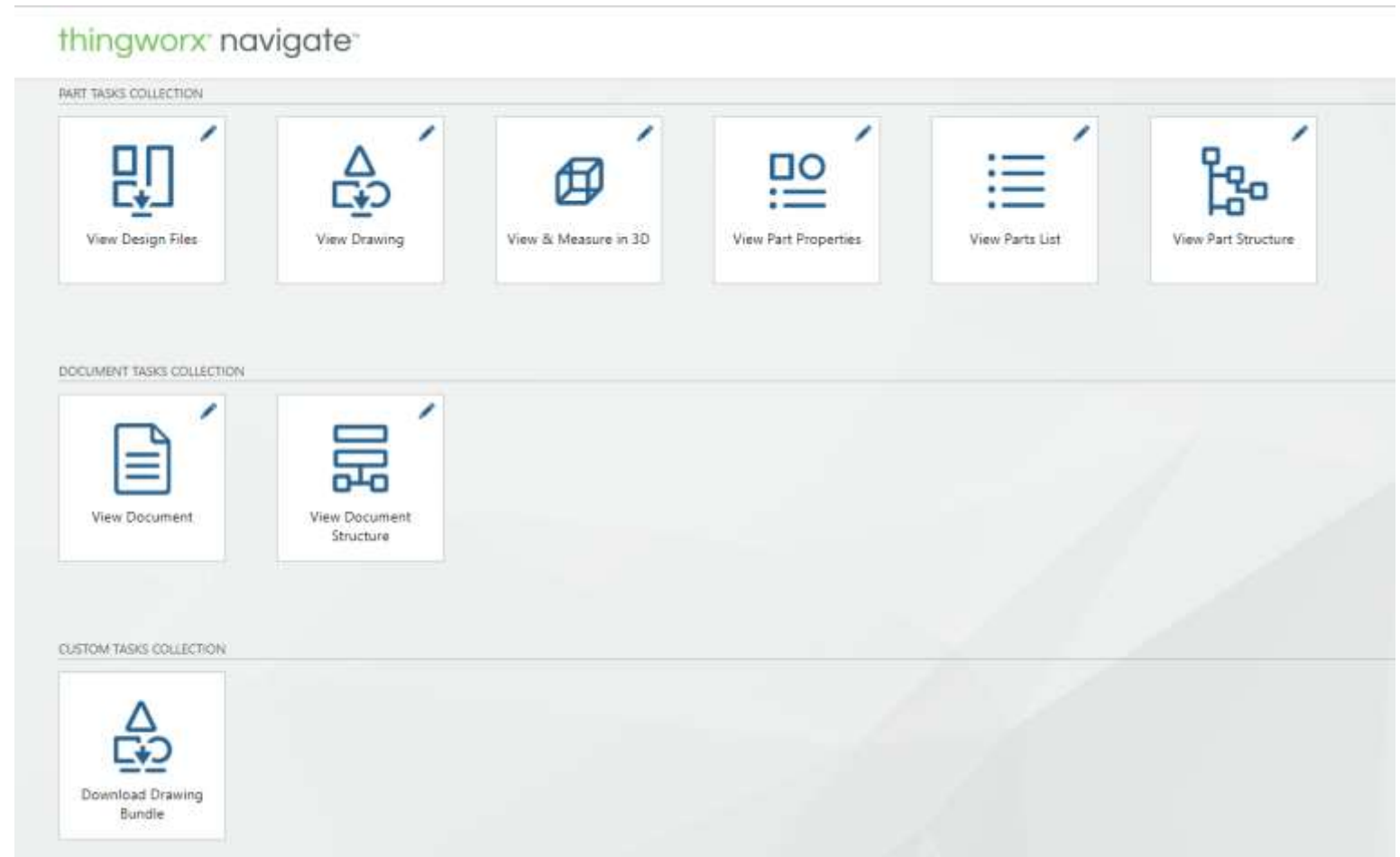
- Deliver just what is needed in role-based experience for self-serve access to product information by any role



ThingWorx Navigate View

Capabilities

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



View – 1.5 June 26, 2017



- ▶ ThingWorx 8.0 support
- ▶ License Management (Named User)
- ▶ 3-D WebGL Viewer
- ▶ Single signon (SSO)
- ▶ View/navigate document structures
- ▶ Download all drawings/files for assembly
- ▶ New integration framework & SAP connector

View – 1.6 January 2018

- ▶ Authentication options (SSO/non-SSO)
- ▶ Performance
- ▶ In-place upgrade
- ▶ Export to spreadsheet
- ▶ Usability and styling improvements
- ▶ ADU License management
- ▶ Support for MSSQL database

View – 1.7 April 2018

- ▶ ThingWorx Platform Update
 - ThingWorx 8.2

View – 1.8 Oct. 2018

- ▶ Focus on User Experience
 - Installability
 - Upgradability
 - Maintainability
 - Usability



View/Contribute – CQ2'19

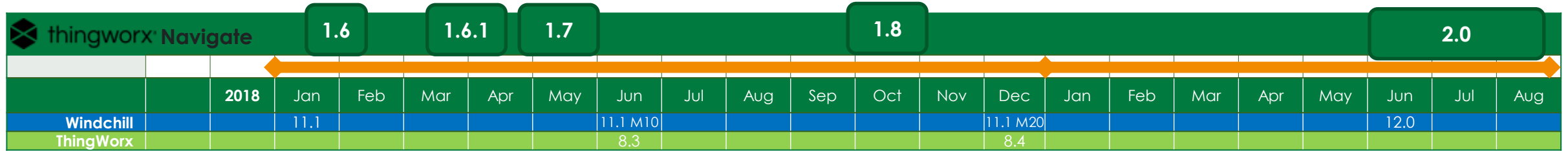
- ▶ Contribute App
 - Review & approve Change Request
- ▶ Continue User Experience
 - Upgradability
 - Usability



View/Contribute – 2019+

- ▶ Markup
- ▶ Attach/edit document
- ▶ Create problem Report
- ▶ Complete general task
- ▶ Create deviation/waiver/nonconformance
- ▶ Navigate Portal Service (SaaS)
- ▶ View Where Used
- ▶ Review & approve Promotion Request

THINGWORX NAVIGATE PRIORITIES & ROADMAP



2019 Priorities (Navigate 2.0)

Navigate Contribute

Enable the user to review and respond to assigned Change Request Review & Approval tasks

Navigate ADK

Introduce Rapid App Development through Component Based Construction

Navigate Installer

Enable upgrade of an existing Navigate installation

2019+

Navigate Apps

Additional Navigate Contribute Apps
(Problem Report/non-conformance, document Management)
Update to existing View Apps

Navigate ADK

Enhance Rapid App Development with introduction of additional components

Multi-System

Replace multi-system connectivity with ThingWorx orchestrate

Print/Zip Solution

Who benefits from Print/Zip solution?

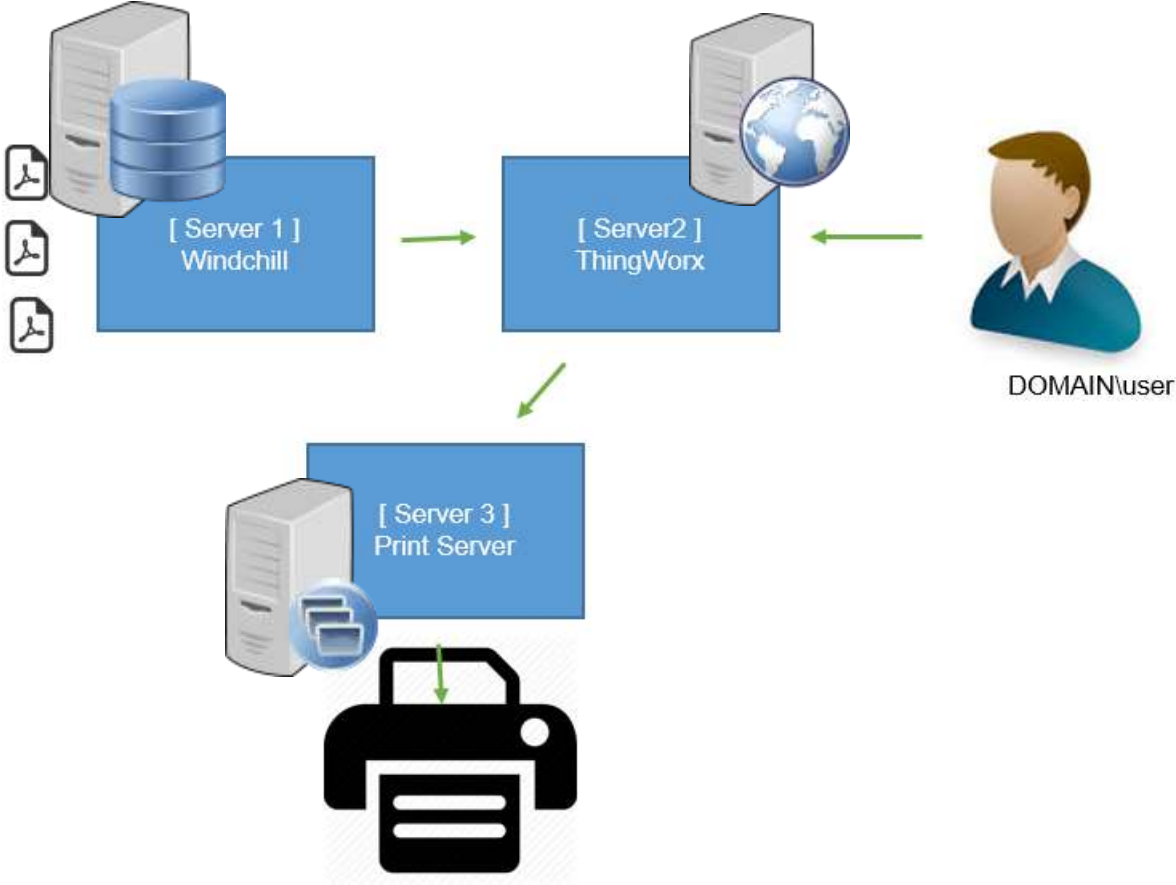
- Solution

- Extending Navigate and provide a print and zip solution for Windchill
- Use of Part Structure with filters
- Use of visualisation files(representations) with additional formats(pdf,iges,step,etc)
- Print/Zip and download or put it on a Network Drive
- Watermarking (Example project number)
- Control which printer and print size is from the PDF and rescale if necessary (A3 on A4)


- Why not create such a customization in Windchill ?

- Navigate is downwards compatible to even Windchill 10.2 F000
- No Windchill upgrade needed
- Extending Navigate is easier to do and more information can be added later on (Ex. ERP information)

uAPPS (Print) Architecture



Live DEMO




uApps Print

Administrator

← Back To Search

PART DETAILS



Number [WCDS00036](#)

Name 01-513070.a:

Version B.1 (Design)

State In Work

Add all to Queue
Add to Queue
Open Queue

Search:

image	Number	Name	Version	State	type
	WCDS000365	01-513070.asm	B.1 (Design)	In Work	WTPart
	000000001.DRW	000000001.drw	B.1 (Design)	In Work	CAD Drawing
	000000001.DRW	WCDS000062_0000000			Design File
	000000001.DRW	WCDS000062_0000000			Design File
	01-513070.ASM	01-513070.asm	B.1 (Design)	In Work	Assembly
	01-513070.ASM	WCDS000365_01-51307			Design File
	01-513070.ASM	WCDS000365_01-51307			Design File
	WCDS000067	01-21375.prt	A.1 (Design)	Released	WTPart
	000000003.DRW	000000003.drw	A.1 (Design)	Released	CAD Drawing
	000000003.DRW	WCDS000067_0000000			Design File
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	WCDS000111	01-51371.prt	A.1 (Design)	Released	WTPart
	000000006.DRW	000000006.drw	A.1 (Design)	Released	CAD Drawing
	000000006.DRW	WCDS000111_0000000			Design File
	000000006.DRW	WCDS000111_0000000			Design File

CONFIG SPECS

WTPart Design Working

uAPPS – Releases & Roadmap Outline

Batch Print – 1.0 April 2017



- ▶ Search for a Structure and print
- ▶ Change/Add printers
- ▶ Print to scale(Ex. A3 to A4)
- ▶ Windchill 10.2 and higher
- ▶ ThingWorx 8.0 support

Print Enhanced – 1.2 Aug 2017

- ▶ Print from CSV file items
- ▶ Filter BOM
- ▶ Change Format
- ▶ Watermarking



Batch Collector – 1.4 Feb 2018

- ▶ Collect and save to disk (PDF,STEP,iGES) from a structure
- ▶ Zip Files to local drive



uAPPS – 1.5 Dec 2018

- ▶ New UI / tabs
- ▶ CAD Documents
- ▶ Search CAD Structure
- ▶ Config Specs
- ▶ Default Printer



uAPPS – 2019+

- ▶ Navigate 1.8 support
- ▶ Role Based Config
- ▶ Default Config Specs
- ▶ Watermarking Enhanced
- ▶ Configurable Column Display
- ▶ Missing Viewable indicator
- ▶ Create Viewables

Key Notes

- uAPPS are easy for non/frequent Windchill users
- It can be extended easily to provide more information from different systems or Windchill attributes
- No customization needed in Windchill
- Seamless integration with Windchill and printers and setup is easy
- It is OS(Microsoft,Linux) independent for Windchill installation
- Working for Windchill 10.2 and upwards
- A lot of ideas to possibilities to extend functionality

Questions ?