

PTC® Live Global

Change Management Best Practices: Executing the Change Process

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Solutions Management Director

June 9th, 2015



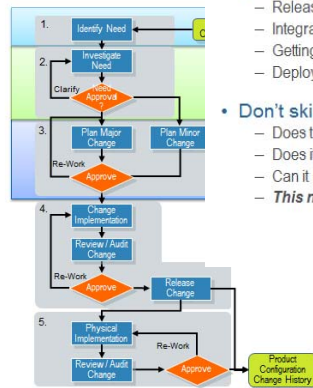
- Change Management process
- Executing Change Management – Getting more value
- Roadmap
 - Windchill 10.2 M030 & X-26



- Change Management Process overview - 2012
- Implementing the Process, OCM & Measuring Change - 2013
- Configuring Change Management - 2014

Change Management Process Overview

- **Step 1: Identify Need**
 - Describe and document product problem, enhancement or opportunity
 - Identify product items affected by problem
 - Submit problem report
- **Step 2: Investigate Need**
 - Validate problem report for clarity and accuracy
 - Analyze the "Need"
 - Develop and review solutions proposals
 - Develop business justification including impact, risk and cost for solutions
 - Approve or reject solution proposals
 - Communicate decision
- **Step 3: Change Planning**
 - Plan scope of change e.g., (minor vs. major)
 - Develop detailed plan for change including tasks, resources, scheduling
 - Approve or reject detailed plan
 - Communicate decision



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Defining your Change Management process

Scale and Scope

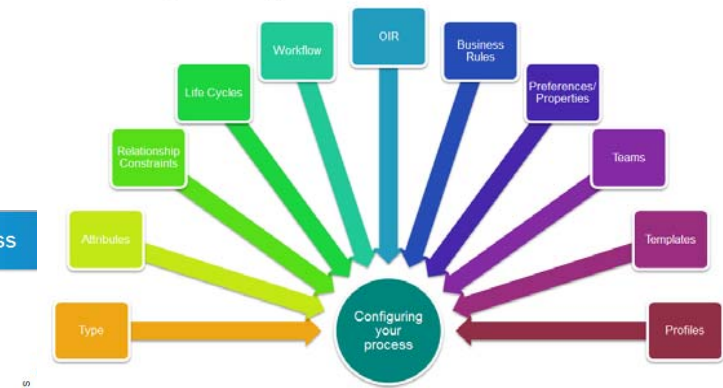
- **Find the right balance for your organization**
 - There is no single right solution
 - Understand your organizations needs and pains
 - Look at others examples
- **Where are your challenges?**
 - Releasing engineering deliverables that are correct?
 - Integrating changes into manufacturing?
 - Getting suppliers and partners aligned with changes?
 - Deploying changes to service and support?
- **Don't skimp on technical and business justification**
 - Does the change solve the technical need?
 - Does it solve it in a way that is cost efficient?
 - Can it be supported by service?
 - **This need not be a slow or complex process**

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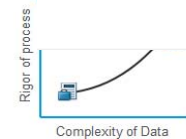
Change Management Configuration points

Tools to leverage in meeting your needs



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Item	Item Name	Item Type	Item Status	Item Date	Item Owner	Item
1	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING
2	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING
3	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING
4	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING
5	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING
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8	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING	MANUFACTURING
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Change Management Best Practices

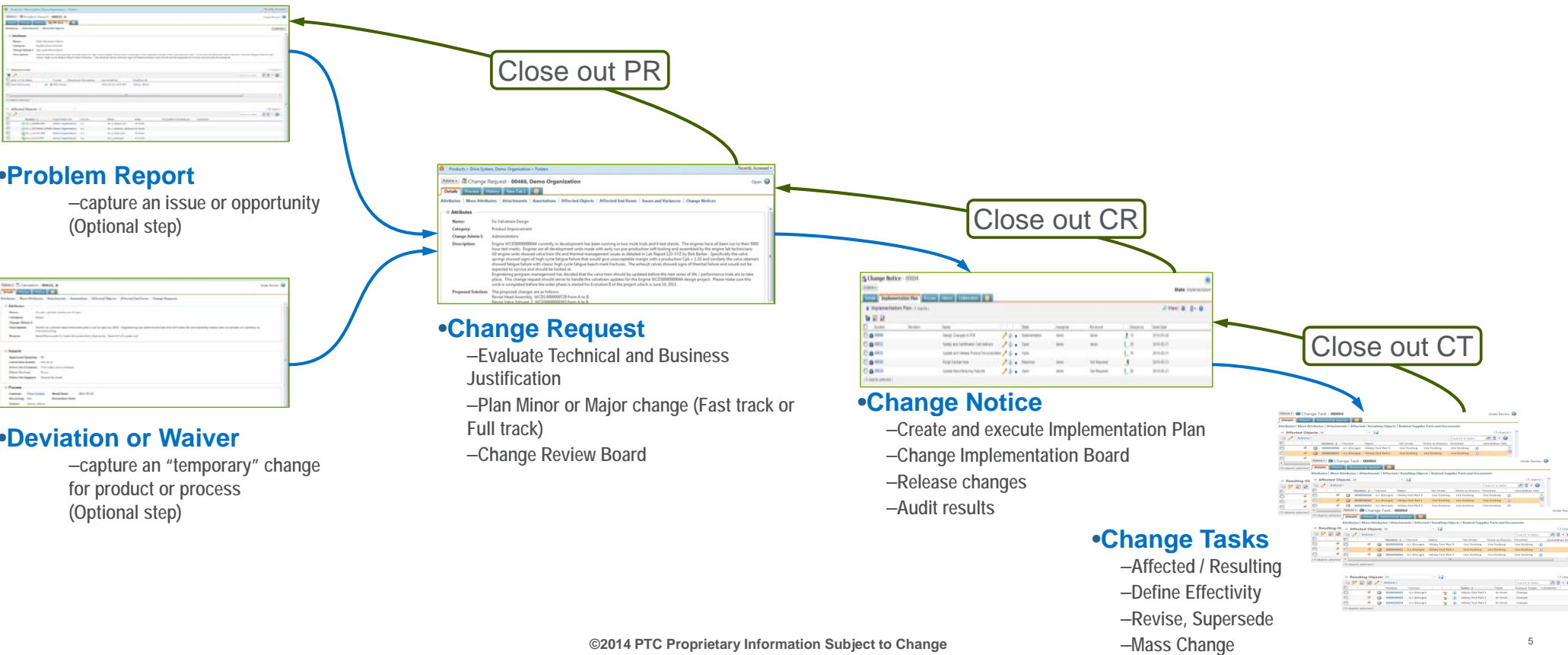
- Standardized, automated change management
- Integrated, x-discipline change management
- Integrated product issue management
- Deviation / waiver management

Key Change Management Capabilities

Pre-configured change objects	OOTB change that links product information directly to problem reports, change requests and change notices	Consistent and predictable change processing
Automatic routing of change tasks	Workflow driven tasks based on templates	Improved efficiency
Capture electronic signatures and audit trails	Change records, including sign-offs, markups and comments connected to product data	Traceability into changes
Automatic synchronization with manufacturing systems	Publish updated information to downstream systems when changes are resolved	Closed-loop changes / up-to-data manufacturing information
Business Rules	Automatically check 'actions' to ensure objects are meet process rules	Ensure processes follow company policies

Windchill Change Management Process overview

•Three processes: **FAST** (simplified oversight), **FULL** (full CRB / CIB review) and **BASIC** (very light weight CN)



Change Management Vision

- Scalable Change processes – Simple to Complex

- Provide consistent, highly flexible process execution
 - Scale from Simple to Robust change processes via configuration
- Deliver Enterprise - coordination, access, visibility -
 - Early and often view to key stake holders
- Cross-discipline involvement

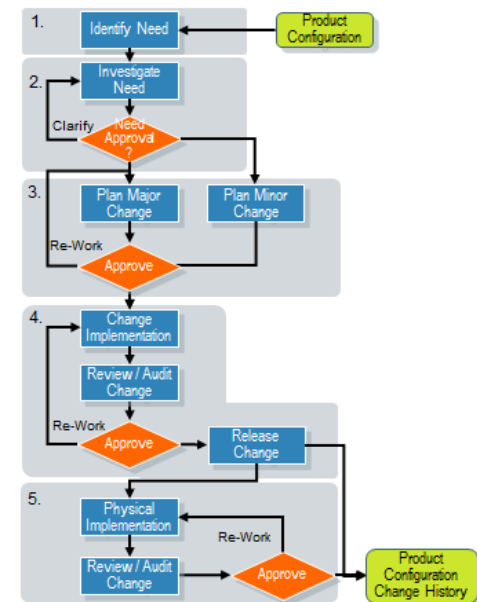
- Productivity & Planning - Changing the Change Game

- Manage WIP data throughout the change process
- Improved creation of the intent and plan of the change
 - – concurrent change/cross-discipline
- Impact analysis across configurations

- Improving Decision Quality

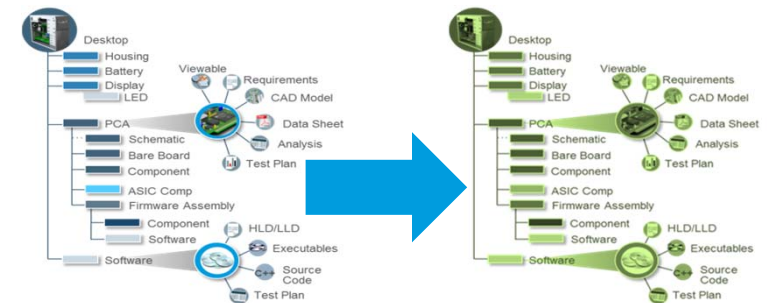
- Visibility to other Changes and previous decisions
- Help companies prepare the data to deliver repeatable, high quality decisions
- Ensure good decision quality
 - Automated/Integral Platform Validation with Change
 - Validating rule changes
 - Validating design changes

Scalable
processes



Productivity

Decision
Quality

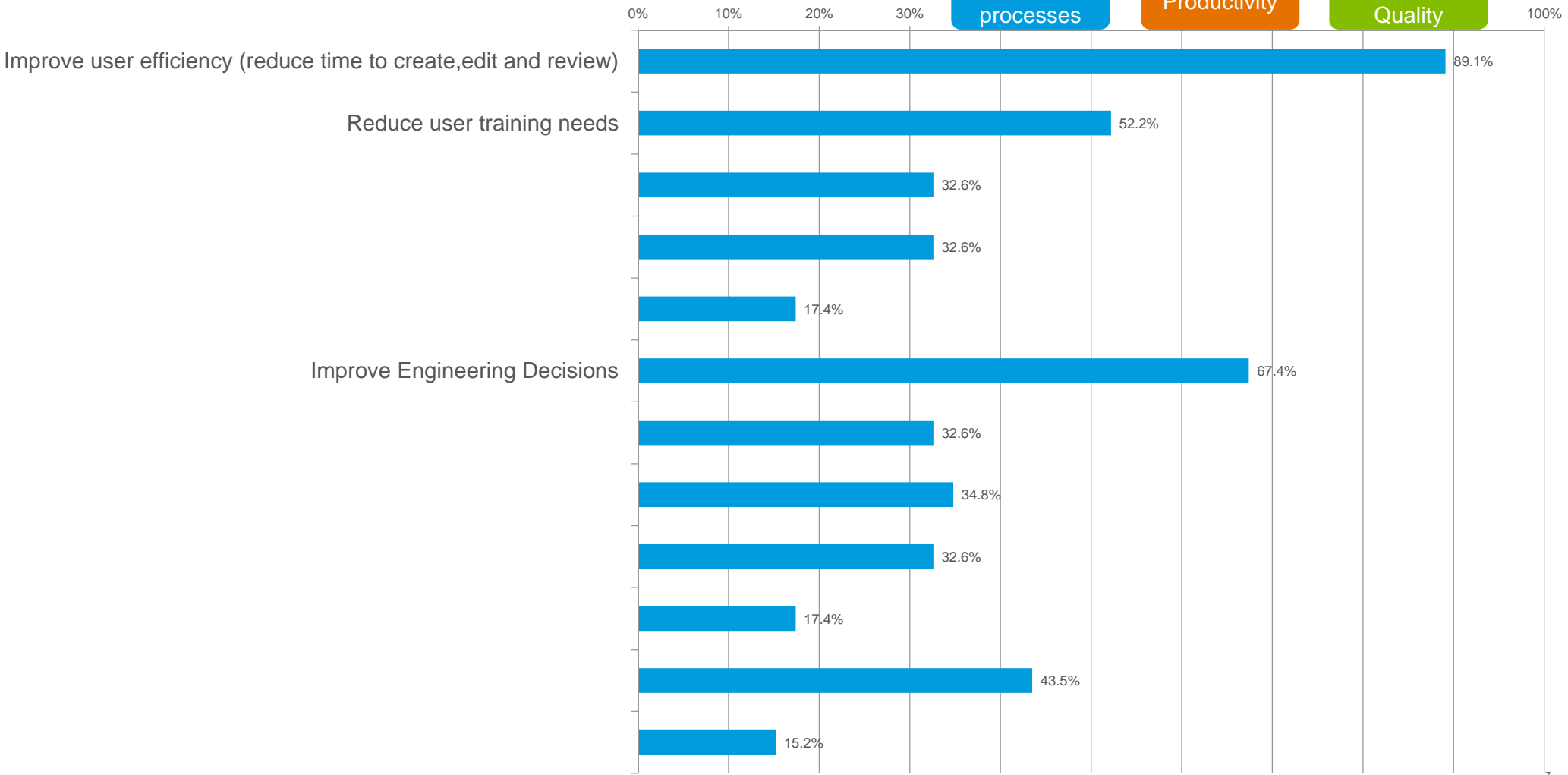


What are your Goals for your Change Management process – January 2015 survey

Scalable processes

Productivity

Decision Quality



Leveraging Windchill capabilities to streamline the process and make it easier to execute

- **Change Request Examples**

- Create the Change Request
- Analyze the Change Request

Scalable
processes

Productivity

Decision
Quality

- **Change Notice and Change Task Examples**

- Create the Change Notice from Templates
- Define Change Task users using Multiple Participants
- Update data using Supersede and Mass Change
- Work on CAD data with Add to Workspace
- Organize work on the Task list

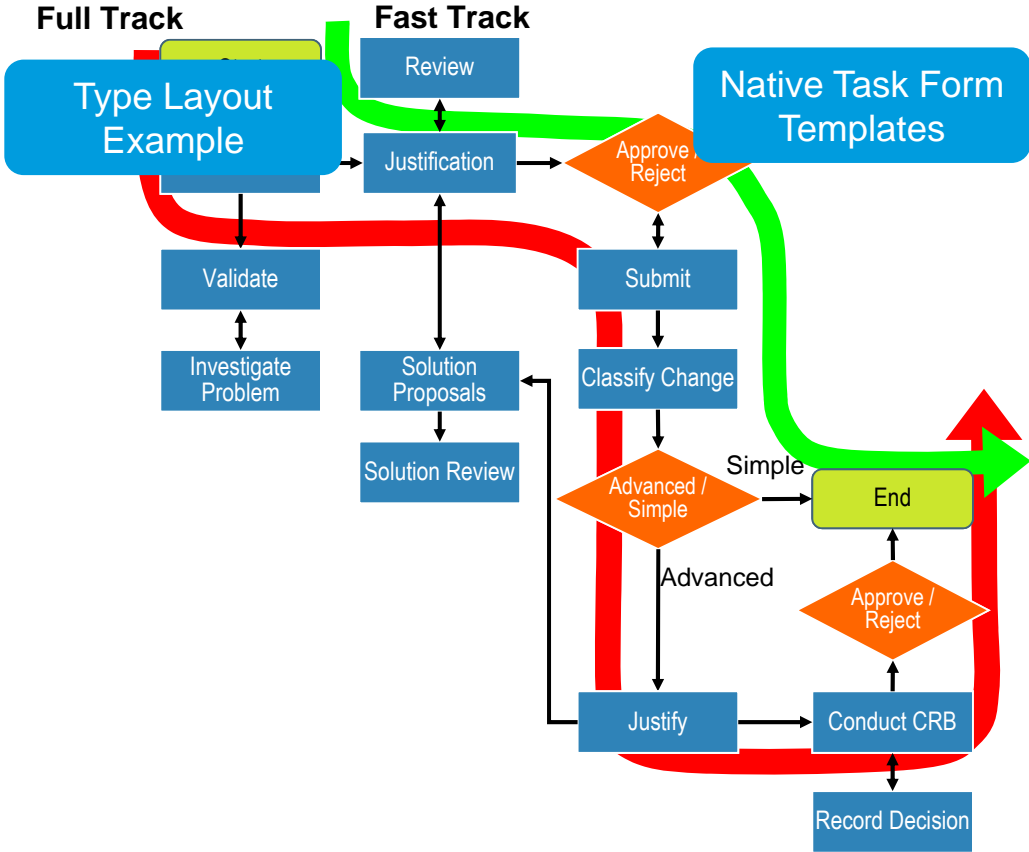
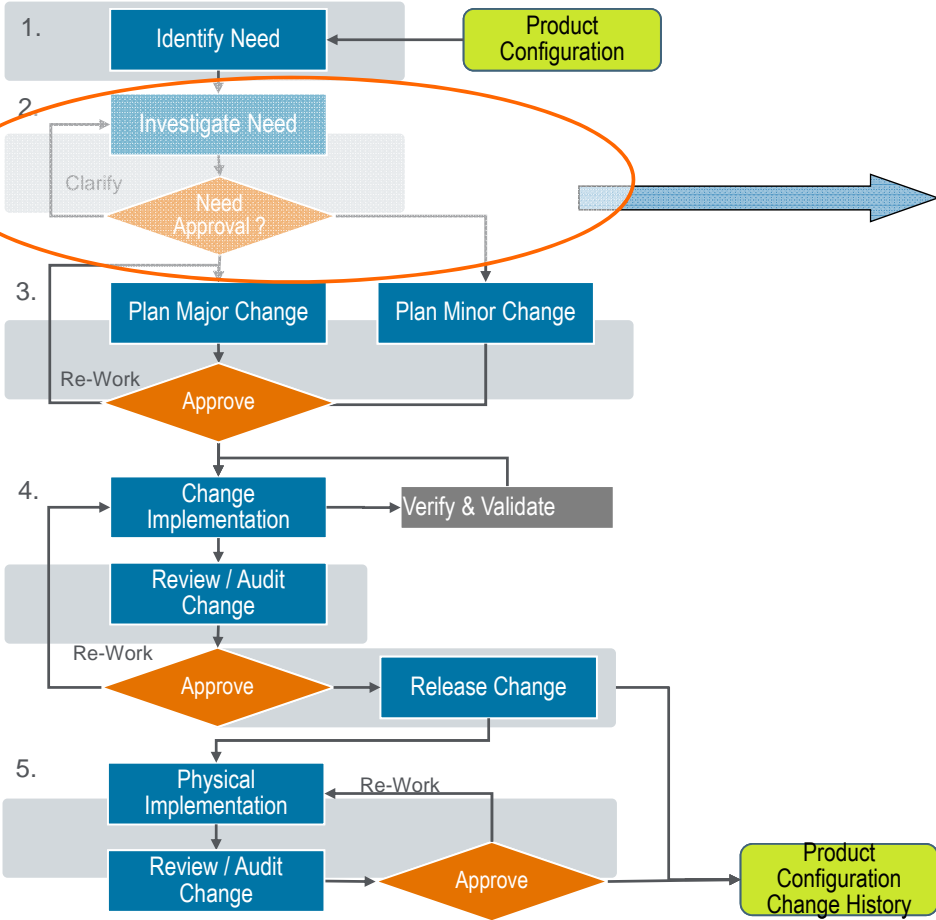
Executing the Change process – Getting more value

Process steps to highlight gaining efficiency and ease in the Change Process

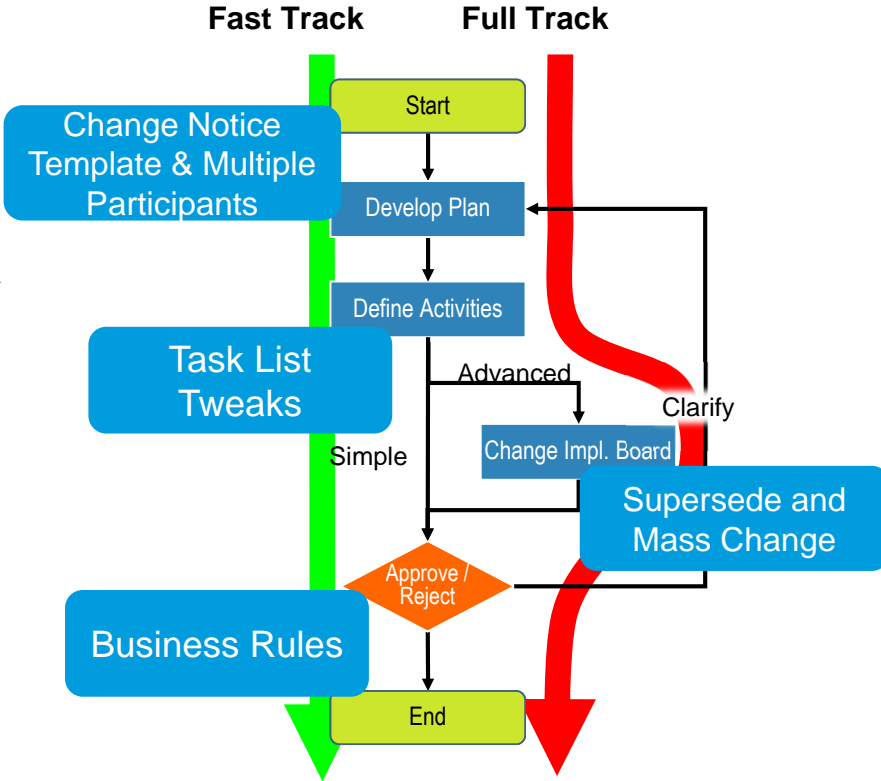
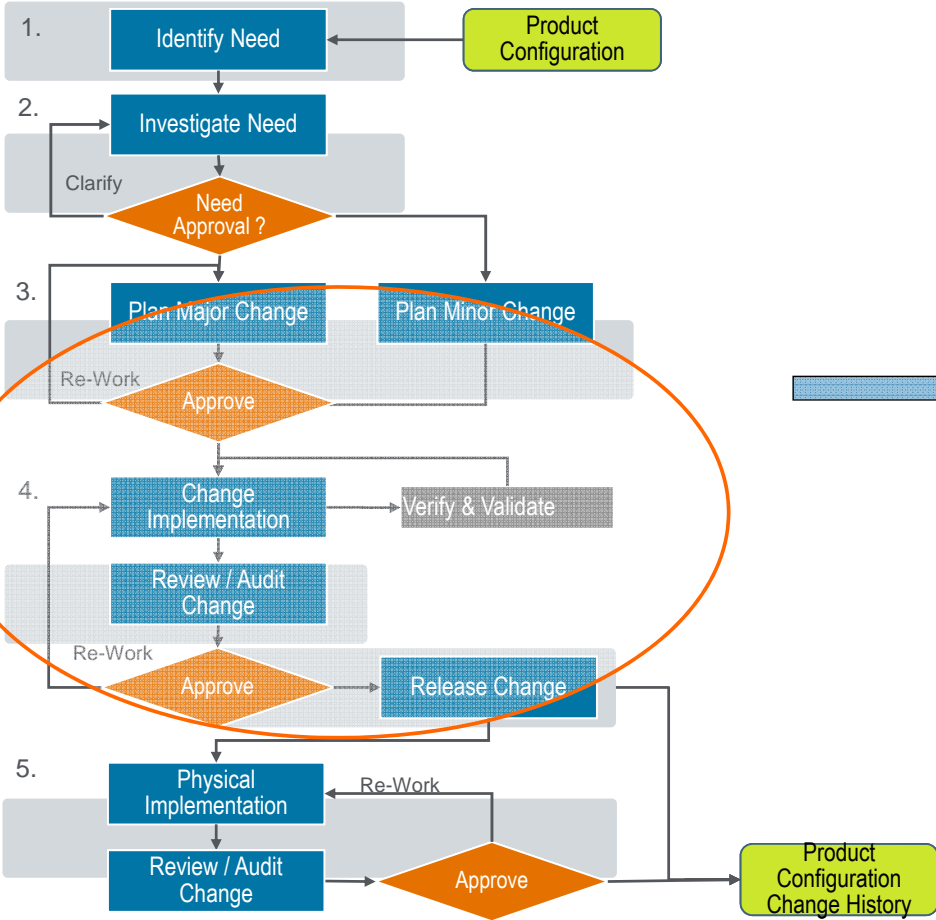
- Creating the Change Request
- Managing your Tasks
- Analyze the Change Task
- Speeding up Change Notice creation
- Validate the data on the Change
- Execute WIP updates efficiently



Change Request Process



Change Notice Process



Creating the Change Request

Scalable
processes

Productivity

Decision
Quality

Leverage Type Layout

- Deliver a more “form like” look-and-feel to the Change process
- Ease adoption of the change management process by clearly grouping information in the change
- Make reviewing simpler and quicker by providing the information users need
- Lower cost of implementation by using configuration
- Type Management Tailoring
 - Easily control what attributes are show and their order
 - Create groups to delineate different sets of attributes
 - Mix modeled and soft typed attributes
 - Support form like feel with features like row-spanning, empty cells and multi-column layouts
 - Define different layouts for Create, Edit and Info pages if needed

Actions PTC CR Simple - CR-18343 App

Details Process History Relationship Explorer

Attributes | More Attributes | Attachments | Annotations | Affected Objects | Issues and Variances | Change Notices

Attributes

Name: Support for Office 2013 on 10.0_M040
Category: Configuration Change
Change Admin ID:
Description: Bosch is requesting support for Office 2013 for DTI on Windchill 10.0_M040
Proposed Solution: Verification and Certification of Office 2013 on 10.0_M040 and updating the software matrices to reflect the support.
Business Justification: Bosch has recently rolled out Office 2013 to its large Engineering Department (250000 employees using DTI). They will not be able to upgrade Windchill at this stage so they seek support for Office 2013 on their existing releases.
UI Changes Expected: No
Risk:
Planned Effort (Days): 2
Owning IST: Windchill Content Mgmt

Related Links (Integrity, CARDS, ProjDB, V1, etc)

External Links:

CCO Impact

Build implemented:
Impact to: Test Completion Date:
Impact to: FSB Start:
Impact to: GCD Start:
Impact to: RTM Start:

Planned Effort

Product Management Effort: Lead Product Manager: Vikram Sinha
Development Planned Effort: Lead Development: Ashish Arora
QA Planned Effort: 2 Lead QA: Sandeep Gaikwad

Productivity

Decision
Quality

Native Task Form Templates – Windchill 10.2 M030

- Increase efficiency of users to review and do work in the Change Process
 - Deliver tasks with the information and actions needed right in the Workflow activity
- Improve adoption of casual and power users alike
 - Eliminate confusion for the user by removing need for additional navigation
- Reduce need for customization
 - Simple configuration to create Workflow Native Task Templates
- Native Task Templates
 - Provide Attributes, Actions and Tables from the Primary Business Object right in the Workflow task
 - Several OOTB examples provided for Problem Report, Change Request, Change Notice, Change Task and Promotion Request
 - Simple configuration to create new Native Task Template

New



Configure your Change Types

- Define Types
- Define Attributes
- Update Workflow Task layout



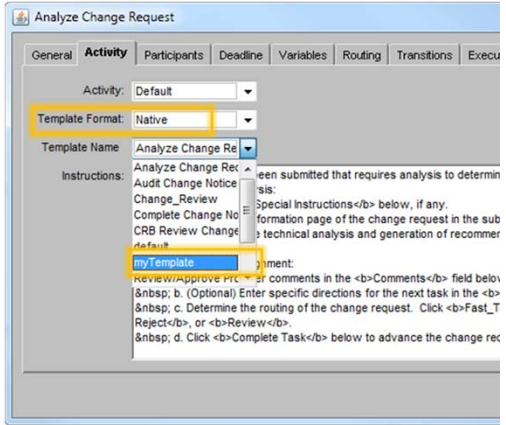
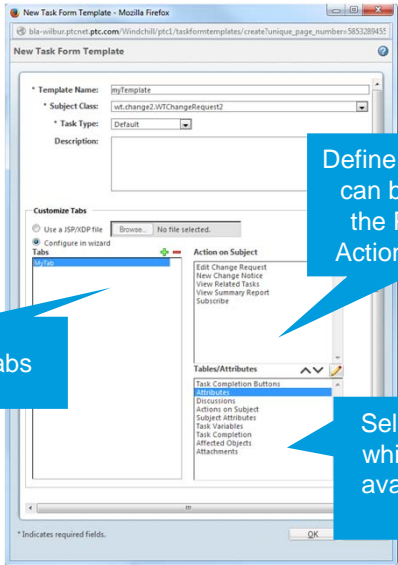
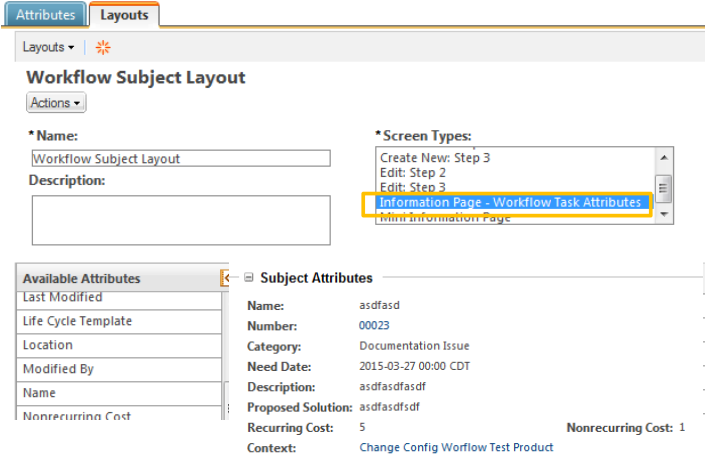
Configure your Task Form Template

- Define Task Form Templates



Update your Workflow

- Select Template for Workflow activities





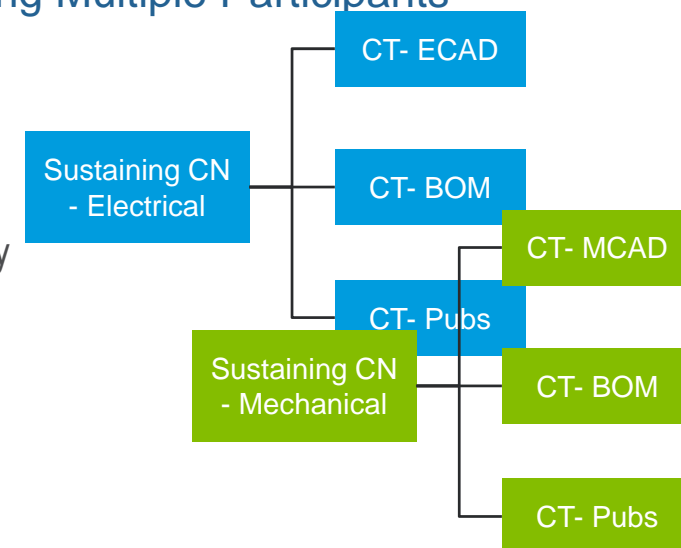
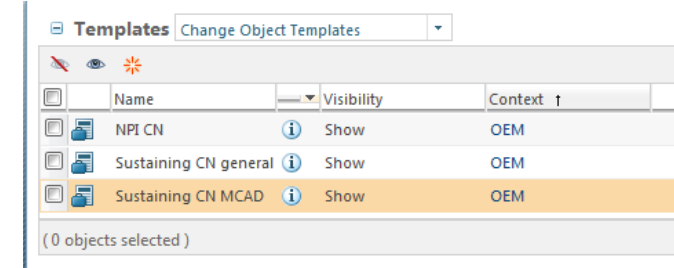
Speed up creating Change Notices

Scalable
processes

Productivity

Leveraging Change Notice Templates & Multiple Participant Change Tasks

- **Speed up creation new Change Notices and related Change Tasks**
 - Include common text and Change Tasks without having to re-type every time
- **Easily deliver more consistent Changes**
 - Provide common patterns based upon predefined Templates
- **Provide easier selection of users involved in the Change Tasks using Multiple Participants**
 - Leverage resource pools to refine who is working with the change
- **Change Notice Templates**
 - Define Templates that have predefined attributes and Change Tasks
 - Change Tasks can be sequenced and also have Affected Data added automatically
 - Create different Templates for different Change Types
- **Multiple Participants**
 - Allow 1 to many participants per role
 - Use Resource pools to map to Context Roles, Groups, Object Teams



Speed up creating Change Notices - Example

Scalable
processes

Productivity

Decision
Quality

Business Rules

- Remove manual work to validate your business data
 - Build business knowledge into the process
- Give users the right checks at the right times in the process
- Configure checks into the process
 - Reduce Customization efforts
- Business Rules Framework
 - Supports checking business conditions during the Change and Promotion process
 - Check
 - Attributes of data being released (Attribute Rule)
 - Child data is at the appropriate state (BOM Maturity Rule)
 - For Checked out data
 - Extensible framework
 - Create new rules
 - Ad-hoc launch points

Validating the Change with Business Rules- Example

Execute WIP Change efficiently

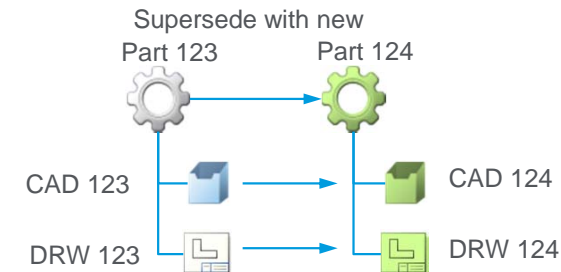
Scalable
processes

Productivity

Using Supersede and Mass Change

- Streamline the ability to work with Part and BOM updates within the Change process
- Reduce effort when having to make changes to a large number of BOMs
- Rapidly identify parts that are superseded with new or existing parts
- **Mass Change**
 - Add, Remove and Replace Parts with a minimum of steps
 - Update related CAD assemblies
 - Insert and Remove CAD and Documents to Parts (including Owner link)
 - Change usage link attributes such as Qty, Find Number, Line Number
- **Supersede**
 - Supersede with new or existing
 - Supersede 1:1, 1:n, n:1

New



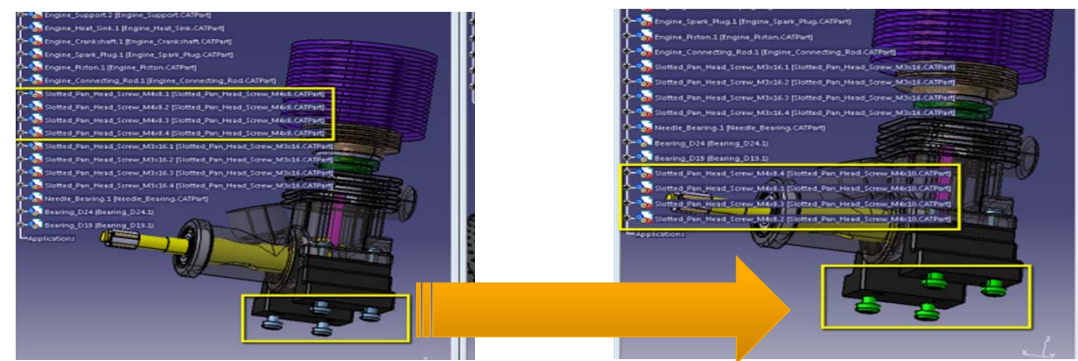
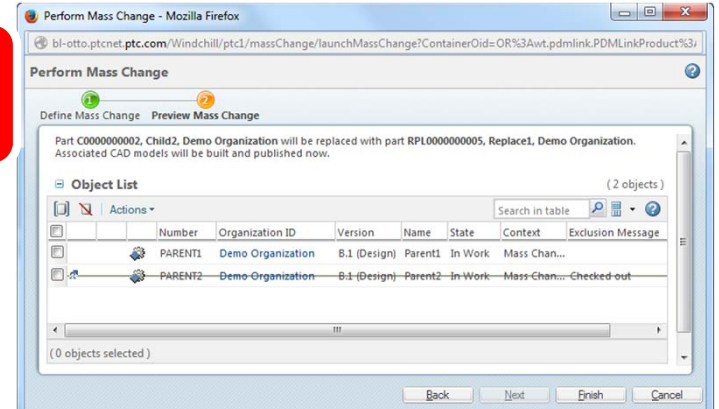
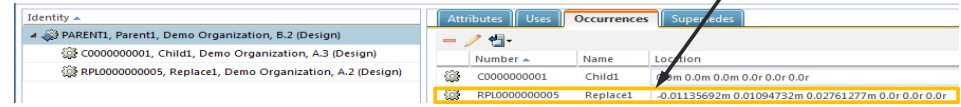
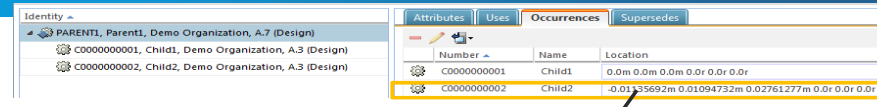
Mass Change – Windchill 10.2 M030 enhancements

Capabilities

- Provide the ability to update the CAD structure when changing the Part structure
- Capability includes Replace, Insert and Remove
- Location and other information now preserved when Replace action is done
- Enhanced feedback on Mass Change Preview step
- Mass WIP actions on Change tables, Folders and Search

Benefits

- Reduced overhead & time on reflecting a part change to its multiple parent part structure and the associated CAD structure
- Reduced overhead on locating replaced parts to correct position. Location information is preserved after Mass Change
- Improve user satisfaction on daily operations



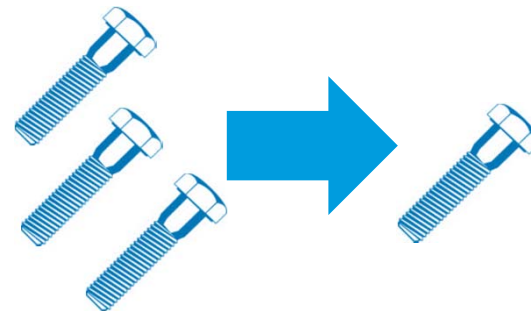
When to use supersede and when to use replacement

- **Supersede examples**

- Example 1: A company has done an analysis and discovered they have 23 part numbers for ¼-20UNC-2A 1” grade 5 hex head bolts. They want to use only one to simplify, gain ordering improvements and reduce inventory issues. They will supersede 22 of the parts with the 1 part number they will still use
- Example 2: An electronics company has determined that a specific 47µf capacitor must no longer be used due to safety issues with its design. They will supersede it with another capacitor of the same value and voltage rating

- **Replacement examples**

- “Why not just use one-way replacement?” – Good question
- Example 3: A company has two parts for a M6-1.0x16 hex head bolt. One is a Class 8.8 and one is a Class 10.9. The Class 10.9 can always replace the Class 8.8 part, but the Class 8.8 part can never replace a Class 10.9 part. In this case, neither part is being pulled from production or being identified as not to use.



Execute WIP Change efficiently- Example

Productivity

Decision
Quality

Task List Tweaks

- **Make it easier for users to find important tasks in their Tasks**
 - Leverage Alias attributes to add information to the Task list from the Primary Business Object
- **Simplify organizing of Tasks**
 - Use Grouping to rapidly layout and find task by criteria the user chooses
- **Alias Attributes**
 - Display Alias attributes for the Primary Business Object on the My Tasks Table
 - Can get information across relationships – eg. From Change Task get Change Notice Number
 - TIP: Use with Calculated Attribute if you want one column, but have attributes coming from multiple Alias relationships
 - Example – Plant attribute on Problem Report, Change Request and Change Notice

Name	Subject	State	Need Date	CN Number	PlantLocation
CR CRB Review	Change Request - 000...	Open			PLANT 007
Submit Change Request	Change Request - 000...	Open			PLANT 007
Create New Change N...	NPI CR - CR-00167,Rel...	Implementation	2015-06-25 00:00 EDT		PLANT 005
Complete Change Noti...	Change Task - 00049,(...	Implementation	2015-06-18 00:00 EDT	00045	
Complete Change Noti...	BOM Change Task - 0...	Implementation	2015-06-12 00:00 EDT	00042	
Complete Change Noti...	BOM Change Task - 0...	Implementation	2015-06-12 00:00 EDT	00042	
Submit Change Notice	Change Notice - 0006...	Open	2015-06-10 00:00 EDT		
Analyze Change Request	NPI CR - CR-00127 es...	Under Review			

- Need Date from any Change Object
- CN Number is from the parent CN of the Change Task
- Plant Location is from either a CR or CN

Promotion Request – Bonus Round!

Productivity

Decision
Quality

- Streamline Promotion Request review and approval using the Native Task Form Templates
 - Promotion Objects available in the users Workflow Task

The screenshot shows a task form titled 'Task - ENGINE CONTROL PLAN Promotion1433351843879-Approve Promotion Request' with a status of 'Under Review'. The 'Promotion Objects' section is active, displaying a table with 13 objects. The table has columns for Number, Organization ID, Version, Name, and Promoted From State. The objects listed are:

Number	Organization ID	Version	Name	Promoted From State
0000000089	OEM	A.1	ENGINE CONTROL PLAN	In Work
0000003457	OEM	A.2 (EBOM)	timing_pulley_cam	In Work
0000003458	OEM	A.2 (EBOM)	timing_skel	In Work
0000003511	OEM	A.2 (EBOM)	tensioner_timing	In Work
0000003773	OEM	A.2 (EBOM)	timing_pulley_crank_06	In Work
0000003797	OEM	A.2 (EBOM)	timing	In Work
0000003835	OEM	A.2 (EBOM)	timing_belt	In Work
TENSIONER_TIMING...	OEM	A.2	tensioner_timing.prt	In Work
TIMING_BELT.PRT	OEM	A.2	timing_belt.prt	In Work

- Simplify the Promotion Request creation further by auto setting Promotion Targets
 - Initially selected objects set as Promotion Targets – Available in Windchill 10.2 M020 CPS06 and 10.2 M030
 - New wt.property - wt.maturity.autoPromoteType
 - INITIALLY_SELECTED: Automatically promotes the initially selected objects.
 - INITIALLY_SELECTED_AND_COLLECTED: Automatically promotes both the initially selected and auto-collected objects

Executing the Change Management process

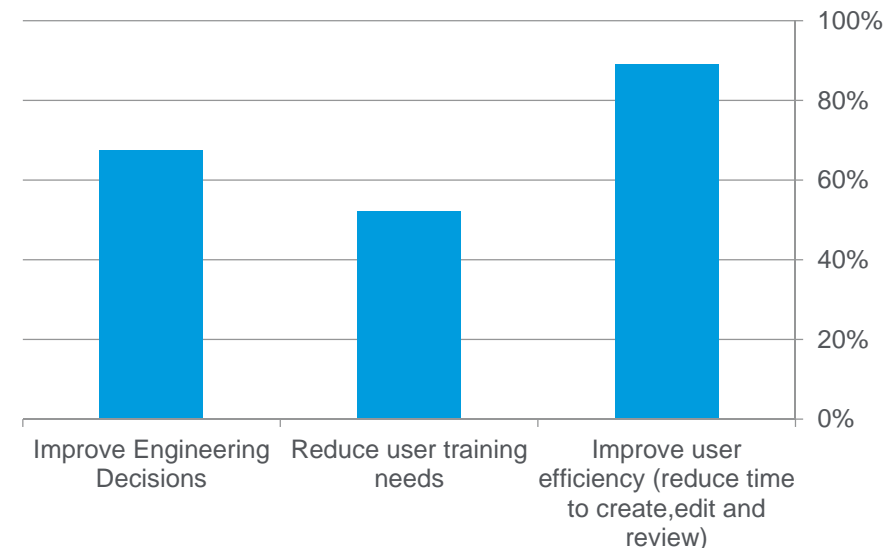
Help deliver on goals for Change Management

Scalable
processes

Productivity

Decision
Quality

- **Deliver an efficient enterprise Change Management process**
 - Leverage Windchill PDMLinks Change Management capabilities
- **Increase Value added time for users**
 - Provide access to the right actions and data at the right time
- **Improve adoption**
 - Eliminate navigation and bring information to the forefront for users
 - Make it power and simple for casual and expert users
- **Lower customization and cost of ownership**
 - Easily configurable to meet an organizations change process needs
 - Simplify deployments and migrations



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- Don't miss out on the chance to provide your feedback
- Gain a chance to win an instant prize!
- Complete your session evaluation now

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