Change Management Best Practices: Executing the Change Process

Jeff Zemsky
Solutions Management Director

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Agenda

• Change Management process

• Executing Change Management – Getting more value

• Roadmap
  – Windchill 10.2 M030 & X-26
Change Management sessions

- Change Management Process overview - 2012
- Implementing the Process, OCM & Measuring Change - 2013
- Configuring Change Management - 2014
### Key Capabilities for Change Management

#### Change Management Best Practices

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

#### Key Change Management Capabilities

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

- Problem Report
  - capture an issue or opportunity (Optional step)
- Deviation or Waiver
  - capture an “temporary” change for product or process (Optional step)
- Change Request
  - Evaluate Technical and Business Justification
  - Plan Minor or Major change (Fast track or Full track)
  - Change Review Board
- Change Notice
  - Create and execute Implementation Plan
  - Change Implementation Board
  - Release changes
  - Audit results
- Change Tasks
  - Affected / Resulting
  - Define Effectivity
  - Revise, Supersede
  - Mass Change

Three processes: FAST (simplified oversight), FULL (full CRB / CIB review) and BASIC (very light weight CN)
• **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 stakeholders
  - 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
What are your Goals for your Change Management process – January 2015 survey

- **Scalable processes**
- **Productivity**
- **Decision Quality**

- **Improve user efficiency (reduce time to create, edit and review)**
  - 89.1%

- **Reduce user training needs**
  - 52.2%

- **Improve Part Reuse**
  - 32.6%

- **Reduce Time to Market**
  - 32.6%

- **Lower Scrap Rate**
  - 17.4%

- **Improve Engineering Decisions**
  - 67.4%

- **Improve Manufacturing Decisions**
  - 34.8%

- **Increase Customer Satisfaction**
  - 32.6%

- **Increase Value Added time**
  - 32.6%

- **Increase Self-service**
  - 43.5%

- **Reduce the number of Changes**
  - 15.2%

- **Other (please specify)**
  - 0%
Leveraging Windchill capabilities to streamline the process and make it easier to execute

- **Change Request Examples**
  - Create the Change Request
  - Analyze the Change Request

- **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

Spend more time on Value-Added Activities

50% → 20%

Scalable processes
Productivity
Decision Quality
Scalable processes
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Scalable processes
Productivity
Decision Quality
Change Notice Process

1. Identify Need

2. Investigate Need
   - Clarify
   - Need Approval?

3. Plan Major Change
   - Plan Minor Change

4. Change Implementation
   - Verify & Validate
   - Review / Audit Change
   - Approve
   - Release Change

5. Physical Implementation
   - Review / Audit Change
   - Approve

Product Configuration

Fast Track
- Start
- Develop Plan
- Define Activities
- Task List Tweaks
- Supersedes and Mass Change
- Business Rules
- Approve / Reject
- End

Full Track
- Advanced
- Change Impl. Board
- Simple
- Clarify

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Creating the Change Request

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
Example
Analyze the Change Request

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
Using Native Task Form Templates – Windchill 10.2 M030

Configure your Change Types
- Define Types
- Define Attributes
- Update Workflow Task layout

Define actions that can be done on the PBO from Action pull down

Configure your Task Form Template
- Define Task Form Templates
- Select Template for Workflow activities

Create Tabs
Select and order which tables are available on that tab
Speed up creating Change Notices

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
Validating the Change

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
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
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
Part Supersede

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 had 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
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

- 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
Managing your Tasks - Examples
• Streamline Promotion Request review and approval using the Native Task Form Templates
  – Promotion Objects available in the users Workflow Task

• 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
Promotion Request example
Executing the Change Management process

Help deliver on goals for Change Management

• **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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