WebCenter 16.1 Release Notes

1. Introduction

This document gives an overview of the new features and changes in WebCenter 16.1. It only covers the changes since WebCenter 16.0.

If you are updating from WebCenter 16.0 or earlier versions, we advise your reading the release notes of all versions between your current version and WebCenter 16.1. You can find these on the documentation page of WebCenter: https://www.esko.com/en/Support/Product?id=WebCenter&ver=16.0

For System Requirements, see: WebCenter system requirements - Product overview page.

1.1 Highlights of the 16.1 Release

Note: Some of the functionalities described in this document are restricted to installations with specific functional licenses. For details, see: KB82221376: WebCenter - Which module license unlocks which part of WebCenter's functionality

Program Management

WebCenter's program or campaign management capabilities are significantly strengthened with this release.
In a larger program or campaign, individual projects are used split work between different work groups, to express individual time lines and hold different meta-data and statuses.
Strong relationships can now be expressed between projects in a flexible and dynamic way. Any level of sub-projects are supported and a project can have multiple parents to logically map to re-used components to the project structure.
An all-new rule engine allows automatic update of meta-data, time-lines and statuses across the full project hierarchy. Freely expressible business rules will keep all parts of the program updated with minimal manual intervention.
New hierarchical drilldown functionality allow program managers to quickly get an overview, identify risk parts and do the necessary interventions – all in one flexible dashboard.

Search Dashboards

The most visible addition in WebCenter is the new search dashboard concept. A renewed search setup UI and an all new dashboard builder allows for easy creation and maintenance of any number of flexible and feature rich dashboards. A fully updated search engine supports creation of a long range of highly dynamic charts, graphs, counters and facet lists based on a majority of the searchable data in WebCenter.

Packaging Content Management – Nutrition Facts Tables

WebCenter's Packaging Content Management solution, introduced in WebCenter 16.0, has in this version been further strengthened.

The biggest addition is the table content functionality that support efficient management and update of e.g. Nutrition Facts tables. Linking this to Esko's Adobe Illustrator solutions, it becomes simple, safe and efficient to create or update tables on packaging by allowing in-context approval and removing any need for retyping.

Asset Management Connections – MediaBeacon integration

The new asset management connection functionality supports Esko's product offering by significantly improving the integration between a WebCenter installation used for packaging change management and a MediaBeacon or other WebCenter installation serving as the corporate Asset Management hub.

Viewing Microsoft Office and other non-native file formats

WebCenter's viewing capabilities already supporting a wide range of graphics and structural design formats are extended with a flexible module that opens up for fully integrated viewing, annotation and approval of among others Microsoft Office document formats.

Simplified Approval setup and Approver access

A list of UX improvements makes it much simpler to involve new people into a document approval. Without leaving the approval setup, users can be created in WebCenter with predefined preferences, invited to the project and assigned to a selected role. By also enabling a new type of token based authentication, a new user can enter the system without having to enter any authentication details.

2. Contents

3. Release Content

The Esko Software Suite for WebCenter 16.1 contains:
- Platform 16 WebCenter DVD that includes WebCenter 16.1 and ArtiosCAD 16.0.1en Enterprise installer [1)2)3)]
- Platform 16 Engines Software Installation DVD with Automation Engine 16.0.1 or later.
- WebCenter Release Notes (this document; also present on the installation DVD)
- ArtiosCAD Enterprise and WebCenter Documentation (PDF format)

1) *An update to ArtiosCAD 16.0.1en Enterprise build 620 or later is mandatory for WebCenter 16.1 (on the application server only).*
2) *An update of the License Manager (installed from the ArtiosCAD installer) is mandatory when updating from WebCenter 14.1.x or older.*
3) *Installation of boards and ArtiosCAD defaults is mandatory to work correctly with CAD documents in WebCenter.*

4. Licensing and IT Requirements

4.1 Licensing

For a WebCenter 16.1 installation, you need WebCenter 16.1 and ArtiosCAD 16 licenses.

For WebCenter 16.1, you can either have Concurrent (Base or Advanced) or Named User WebCenter licenses. If you have both, only the Named Users licenses will be taken into account.

4.2 IT Requirements

The responsive WebCenter UI is optimized to work on the latest generation of all major browsers (mobile and desktop): Internet Explorer, Edge, Chrome, Firefox, and Safari. Internet Explorer 10 and older are not recommended for use with WebCenter 16.1.

Read also the Installation Guide and System Requirements. See https://www.esko.com/en/support/product?id=WebCenter.

5. Knowledge Base

You can use the Esko Knowledge Base to find articles containing tips & tricks   to Esko related products.

Esko Knowledge Base (all products):
https://www.esko.com/en/Support/Documentation/

All articles related to WebCenter:
https://www.esko.com/en/Support/SearchResult?product=WebCenter&Keyword=WebCenter
To limit your search, edit the Knowledge Base Search field to contain both WebCenter and your own criteria. The special keywords AND and OR can be used with brackets and wildcard characters (? and *) to refine the search.

6. New and changed features in WebCenter 16.1

6.1 Program Management

In WebCenter 16.1 we have introduced the program management functionality. We have added the concept of a Parent – Child relationship between projects. A Parent Project can have multiple Child Projects and a Child Project can have multiple Parent Projects. These relationships make it possible to have a hierarchy of projects.

The relationship between projects is stored in the database, how to create Child Projects or Parent Projects is explained below.
Project Members which change Project permissions can add Child/Parent Projects to a given project.
WebCenter does not allow cyclic dependencies. Templates cannot have a Child or Parent Project.
Whenever the relationship between Child and Parent Project is changed, this event is logged in the project history and notifications on the event can be sent.
The relationship is added to the search index and you can only see the relationship by using a search.

6.1.1 *Viewing Parent – Child relationships*

There is no out-of-the-box functionality to display Child Projects or Parent Projects of a given project. You need to create a saved search if you want to see the Parent Projects or Child Projects of a project. See the Search for Child and Parent Projects section and the related user documentation for details on how to setup these types of searches.

6.1.2 *Create Parent – Child relationships*

We've introduced multiple ways to link a Child Project to the Parent Project. Some of these can be done by users (via the UI) others can be automated (using the SDK or Workflows).

1. Create Child Projects using the Project Creation Workflow Node
   See section Add as Child Project of current Project.
   This way of working will be used if your use case allows for an automated process without human interaction. It allows you to create a lot of Child Projects in a structured and systematic way.
   Note: it is not needed all Child Projects carry one component. It is possible to combine multiple components, group them together based on common attribute values for instance and launch them in dedicated Child Projects.
2. Create Child Project
   If you want a more flexible, ad hoc way to create Child Projects, you can use the "Create Child Project" menu item. This menu item will typically be configured in the Parent Project.
   When you use this menu item, a pre-configured template will be used to create the Child, and data from the Parent Project will get propagated to the Child Project, for example, attribute values and role assignment will default to the values of the Parent Project.
   The document selection section can be configured to select documents from the Parent Project only.
   See documentation on how to set up this "Create Child Project" menu item and more details of this type of project creation.
3. Attach existing Projects as Child Projects
   If you want to use an existing project and use it as a Child Project of the current Project, you can use the "Attach Child Project(s)" menu item.

This menu item will typically be configured in the Parent Project.

The menu item will bring up a saved search that offers the user a selection of Projects that can be attached to the current project. The search that is used will typically use SmartNames in order to use meta-data from the Parent Project to filter the possible selections of the Projects to attach. For instance, you only want to attach projects that have the same product code and that are in status Active.

See documentation on how to set up this "Attach Child Project(s)" menu item and for more details on this type of project creation.

4. Create a variant of an existing Child Project

If you want to use start from an existing Child Project and want to create a variant of this project, you can use the "Create Sibling Project" menu item. This menu item will typically be available in the Child Project. This type of project creation is the same as the Copy project, with the only difference that the resulting project is also a Child Project of the original Project.

See documentation on how to set up this "Create Sibling Project" menu item and for more details on this type of project creation.

6.1.3 *Component specification*

Specification of components is an important part of Program Management.

This version contains an easy to use duplicate option for components (document references). When you use the duplicate action, a copy of the component – represented as a document – will be made including its meta-data and document references values.

This allows you to create variants of a complex specification using the duplicate feature. Further, the meta-data of the variants can be edited before saving the specifications.

The key improvement is the ability to duplicate hierarchies of components (documents) even if they contain newly specified (uploaded/created/copied) documents. This allows users to build up a complex component in one go mixing prepared/standardized components with new ones.

Note: When you duplicate a new document row and upload a document, the document only gets uploaded once. The duplicated rows will reference to this document.

For more details please consult the WebCenter documentation.

6.1.4 *Rule Engine*

The rule engine is a Program Management related functionality that enables you to start tasks automatically based on events in your project. Whenever an event occurs (e.g. when you change the project status) all the rules that were interested in that event will be executed immediately. In the Program Management use case, the rule engine assures communication between Parent and Child Projects and keeps meta-data in sync and KPI's up to date.

Although the rule engine is developed in the context of Program Management, it equally serves a more general use case. See section 6.10 for more details.

6.1.5 *JavaScript workflow node*

The JavaScript node is a new node that was added to the Workflows. This new node allows you to traverse the hierarchy of projects in a campaign so that you can use one workflow to manage your campaign. See also JavaScript Node.

6.2 Search Dashboards

In WebCenter 16.1, you can make very powerful searches which look for example like this:
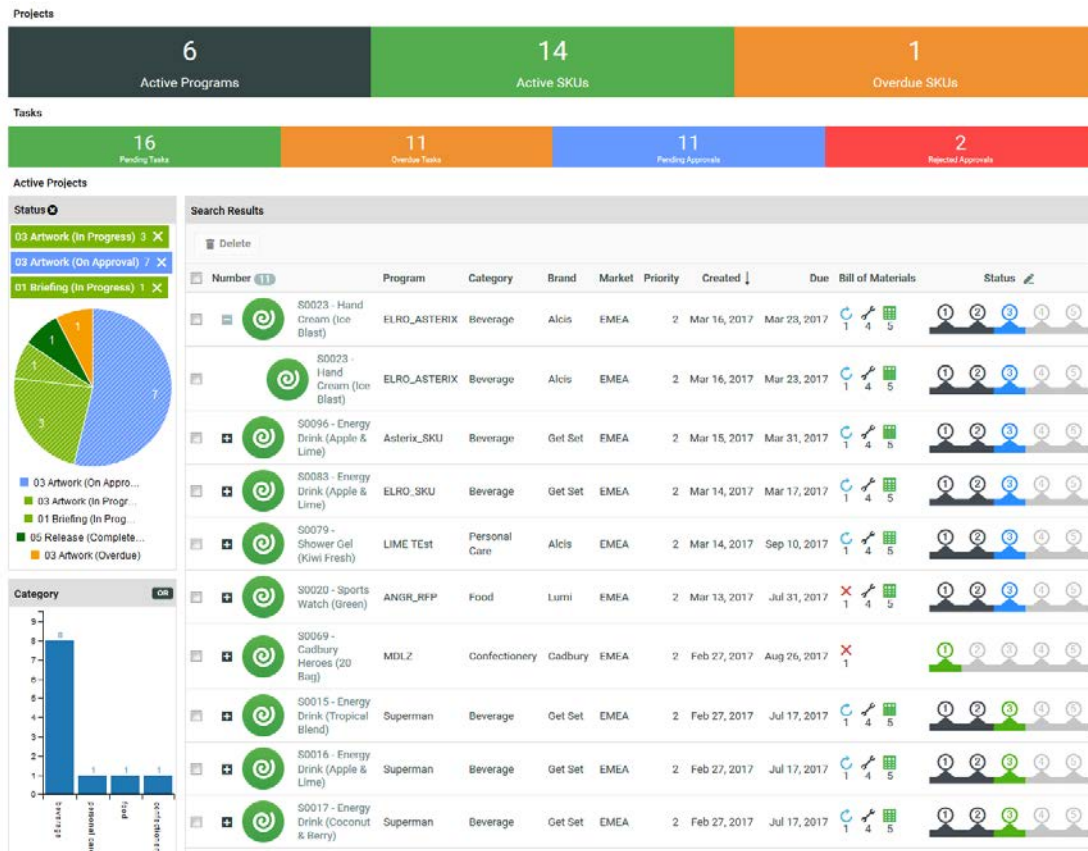
These "dashboards" can be built with the Search Dashboard builder.

The Dashboard Builder allows the admin user to move all the components like the parameter panel, Cart, Asset Browser… of a Search around.

Next to the Dashboard Builder we also introduced some new components like Graphs & Counter blocks.

Note that the graphs and other visualizations introduced in 16.1 are optimized for operational rather than KPI reporting.

The graphs show information about the current state of the system and so they can be used for operational day to day reporting. The facet graphs, lists, etc. are intended to give users an overview of what is available in the system and to make it easier for them to find back what they are looking for.

6.2.1 *Dashboard Builder in Search*

WebCenter Dashboard organizes and presents information in a way that is easy to read and interpret. It is built using a set of smaller components (blocks) with specific information.

The administrator user has to configure each of these blocks in a Saved Search. He can decide the layout and configure it with the components that suit the user's interest.

To configure a Dashboard, you simply drag each component into your canvas from a gallery. Each of these components can accommodate specific settings and search criteria.

You can configure Dashboards with Project, Document, and Task searches. Once setup, Search Dashboards can be used on all places where you can use a Saved Search.

As a new feature, search dashboards can also be used as project landing page (see section 6.15) or as start (home) page (see section 6.19.3).

6.2.2 *Search Facet Blocks*

Search can now show "facets". Facets is a way to summarize the values of all the results in the search.

In the example below, we facet on an attribute called "Sub Category". The top 10 values are shown with the amount of projects they are used in. You can filter the results by selecting one or multiple values. In the example "quad foil", "depower" and "trainer" are selected. When selecting some values all the results and other facet blocks are filtered to only show projects that have these attributes.
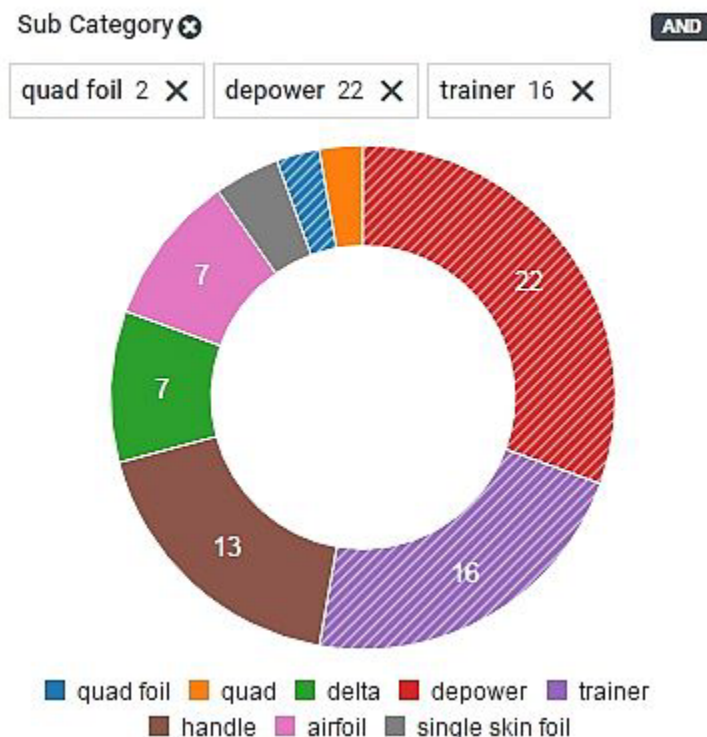
For most criteria, there is also a toggle to switch between AND and OR. This allows you to show the projects that have any of the selected values or only show the projects that have all the selected values.

Facets can be visualized in a couple of ways: donut charts, pie charts, bar charts, lists or as a counter bar.

Some examples:
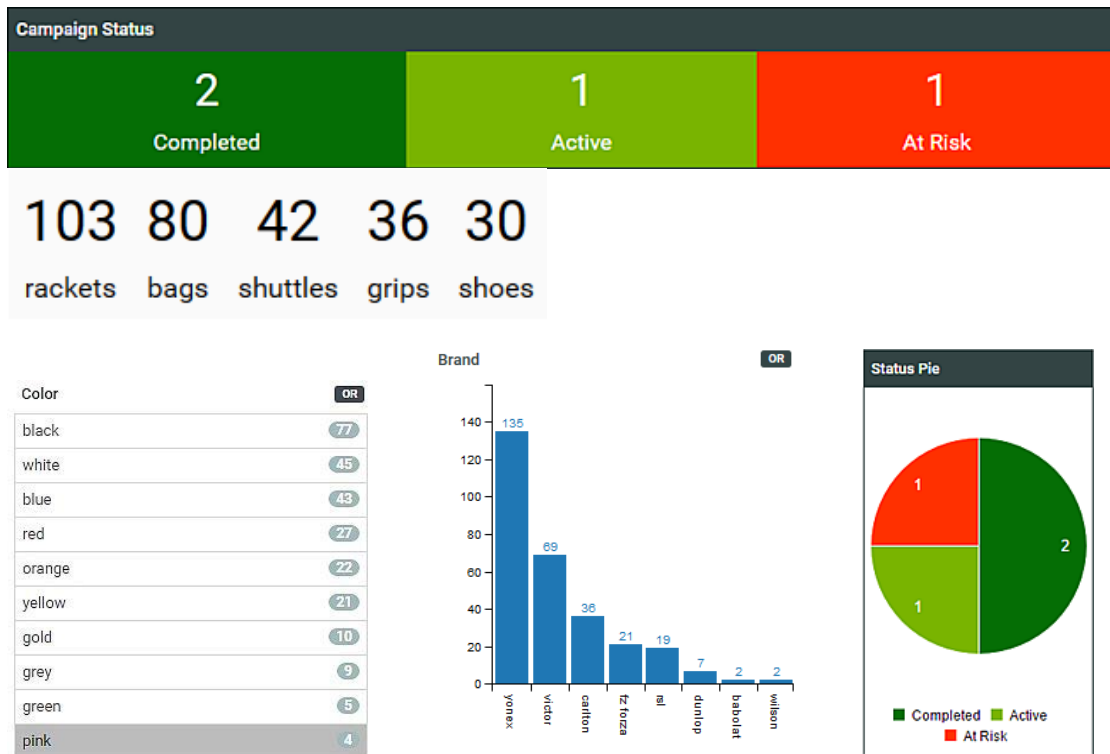
This functionality is available for projects, documents and tasks.

In a Project Search you can facet on the Project Status, Project Manager, Created Date, Customer/Location, all project text and date Attributes, Roles and more…

In a Document Search you can facet on Approval Status, Version author, Author's Location, Approval Stage, all document text and date Attributes and more …

In a Task Search you can facet on Assignee, Assignee's Location, Due Date, Start Date, Task Status, all Task text and date Specifications and more …

6.2.3 *Search Counter Blocks*

Counter blocks are another new addition. These blocks are available in Project, Document and Task searches.

These blocks are configured with another Saved Search and they only show a single count: how many results the configured Saved Search returns.
The blocks also allow you to click on them redirecting you to the configured Saved Search itself.

The configured Saved Search can also contain SmartNames if the block is used in a project or document context.

An example:

6.2.4 *Rich Text Block*

With the Dashboard you can also add a simple Rich Text block. This can be used to display titles, descriptions, small images or even embedded videos inside the Search Dashboard.

6.3 Microsoft Office file support in Viewer

WebCenter 16.1 introduces Extended Viewing support. It is now possible to view a range of other file types in the HTML5 Viewer. These types include Microsoft Word, PowerPoint and Excel. It allows users to view, annotate and approve more types of documents inside WebCenter without having to download them.

Any document can be viewed in the viewer if you set up a script to convert your file to a pdf with Automation Engine's Scriptrunner. It is also possible to have the script output SVG documents. In that case, it will be possible to use deep zoom and text selection in the viewer, but compare options will be disabled.

6.3.1 *Configuration*

You can configure which Automation Engine workflow to run by adding the following to your customizationConfig.xml

```
<SupportedViewableOther>
    <extension value=".doc" ViewGenerationTicket="<Name of AE ticket>"/>
    <extension value=".docx" ViewGenerationTicket="<Name of AE ticket>"/>
    <extension value=".ppt" ViewGenerationTicket="<Name of AE ticket>"/>
    <extension value=".pptx" ViewGenerationTicket="<Name of AE ticket>"/>
    <extension value=".txt" ViewGenerationTicket="<Name of another AE
ticket>"/>
</SupportedViewableOther>
```

Because WebCenter allows deployment of multiple web instances on one server and the configuration is done per instance, the configuration will not be used by the Workflow Engine, which is shared across all instances. To push a configuration to the Workflow Engine, you can add the following to your customizationConfig.xml file.

```
<MainInstance value="true"/>
```

For Microsoft Word and PowerPoint, preconfigured Automation Engine Tickets and scripts for the Script Runner have been provided in the "Examples" folder after installation.

To know more about the setup, see our full documentation or the Knowledge Base.

6.3.2 *Licensing*

A License "Viewable Other Documents" is required for this functionality to work. Not having the license will have the following impact:

- New Documents will not go through the Checking and Registering phase when uploaded, even though they are configured in config.xml
- Documents that were already in the system will no longer be handled as viewable. It will no longer be possible to open them in the 2D viewer, even though the view files are available.

6.3.3 *Text Selection*

If a document with SVG view files is opened in the viewer, a Text Selection Tool button will be shown in the toolbar. When this tool is activated, the user can select text from the Document by dragging the mouse over it. After selection, an annotation containing the selected text can easily be created with one button click. The annotation can be edited the same way as all user annotations in WebCenter.

6.4 Nutrition Facts Tables

The nutrition facts table (also known as the nutrition information panel, and other slight variations) is a highly regulated and required component in food and beverage packaging.

WebCenter Packaging Content Management offers a platform for data management of nutrition facts, review and reuse. The feature allows you to create Tables for your artwork from scratch. It is also possible to import them from Dynamic Tables and store them in WebCenter. These tables can be exported in GS1-XML to communicate between different systems during the artwork management workflow. You can involve various stakeholders through an approval process.

6.4.1 *Table Components*

A Table in WebCenter is a collection of statements. The table is treated like a single document with multiple statements. A Table has Content Permissions mapped to certain Roles and specified Languages.

6.4.1.1 *Statements*

A Table contains statements with a text label and an editable field. You can define different approval processes for these statements. While the Table Templates contain a pre-determined set of such statements (based on FDA regulations, for example), it is possible to add and delete statements.

6.4.1.2 *Preview*

An intuitive preview section adjacent to the edit fields displays the data in the context of the table design. The changes you make are highlighted on the go to give you a very visual data entry process.

6.4.1.3 *Element Type*

This indicates what the value of the element represents (e.g.: "Calories", "Vitamin A", "Saturated Fats" …).

Although it is possible to use your custom Types, the Templates come with GS1 nutrient element types.

6.4.1.4 Instance

This will be a number indicating the numbered occurrence of a particular Element Type in the table. It takes the value "1" except when there are multiple occurrences. If you have three daily values for every nutrient, their individual instances will be "1", "2" and "3".

6.4.1.5 State

The statements can be in one of the following states: Draft, Pending Signoff, and Signed Off. Users with corresponding permissions can change the state of each element.

6.4.1.6 Value

The actual value of this element that will be displayed in the table (e.g. "230", "10 g", "2%" …) Static and Variable part: The text part of the table is treated as static and the numeric fields as variables. This means that users won't be able to edit or adapt the design components of the layout. There are exceptions to this rule: for example, the "Serving Size" in "cups".

6.4.2 Supported Table Types

Tables are created based on a Template (Document Templates). An administrator user can import two types of Table Templates into your system. For example, an FDA approved template with pre-selected nutrition fact statements.

6.4.2.1 Simple Table

A simple Table in WebCenter has editable fields, where the editors manually type in the data. You will have a preview on the right-hand side which highlights the fields where you are editing.

6.4.2.2 Smart Table

You can automate the data collection process required in creating or updating the tables. The process starts with a Table Template with SmartNames. These fields can use List SmartNames or any WebCenter SmartName such as Attributes.
SmartNames are resolved as actual entries in the context of a Project. This way, you can source the data instead of typing in the data manually. This approach helps you to avoid data entry errors in nutrition facts. Also, when you require corrections to any of the data fields, you can just edit a single data source instead of updating all related tables.

6.4.3 Nutrition Facts Tables Edit and Approval

Editing and approval functionality is provided for Nutrition Facts Tables as it's provided in text statements. As described in Smart Tables section user gets the additional feature to add statements as SmartNames which can be resolved to get actual values.
You can either approve statements in the table or approve the whole table. Read more in the documentation.

6.4.4 Workflow support for Nutrition Facts Tables

6.4.4.1 Import Dynamic Table

The Import Dynamic Table extracts the Dynamic Table from your artwork(s) as Table Content Documents. It is not limited to only importing tables from artwork, but can also link the imported Table Documents to the Artwork's attribute category. Another nice thing about this node is that it can be configured to reuse the existing Table Document in WebCenter if it has been already linked into Artwork with a GS1 XML created from WebCenter.

The main features are:
- Specify a document template to be applied on the extracted Table Document. Optionally add elements/set values from the document template.
- Configure which document reference attribute of the Artwork file will be used for linking the imported Table.
- In the Language Mapping tab, the Locale ID of the Dynamic Table can be mapped to the corresponding language in WebCenter.

6.4.4.2 Update Table Document

A new node Update Table Document has been added in WebCenter 16.1 to update a Table Document automatically through a workflow. It can be configured to update the following important fields in Table.

- Table settings (or properties that typical a content manager sets)
- Permissions
- Add/remove table elements
- Perform Approval actions on table elements

Note that this node bypasses the permission check and validation check for changing approval status. As long as the Table Document is in valid status after applying all the updates in the node, the specified value is applied. For example, a translation element status can be changed from Approved to Rejected, something that is not possible in UI.

6.5 Packaging Content Management Improvements

In addition to the Nutrition Facts table support described in section 6.4, WebCenter 16.1 features several extensions to the PCM functionality.

6.5.1 Improved Text Statement display

6.5.1.1 More compact display for short Text Statements

The concept of this feature is to provide better visibility of text statements in a documents table, where multiple documents are shown together.
When text statement is short and can be displayed in single line, the display becomes more compact and occupy less space.

6.5.1.2 Avoid showing Languages that are not in the current Project

Additional focus is given to statements which are part of the set of project languages. Other statements are hidden in a section which is still viewable on user request.

6.5.2 Improved Workflow functionality for Text Statements

6.5.2.1 Improved GS1 Export functionality

The GS1 Export node is improved with a setting for the folder name where the newly created GS1 file will be added. With this feature, there is no longer a need to use the copy/move node to group related files together in one folder.
The GS1 Export node also works for Table Content documents (NFT or .wtc)

6.5.2.2 Improved XLIFF Export functionality

The XLIFF Export node has been enhanced with new features -
- Option to include statements whose master language is still not signed-off

- Option to not create entries in the XLIFF file for WCC documents where target language is not already added
- Option to specify a folder for the newly created XLIFF file
- XLIFF Export node also works for Table Content document (NFT or .wtc)
- Check XLIFF text limit in section 6.5.3.

6.5.2.3 Router node improvements for PCM

The Router node can now route on both Table and Text Content Properties. The Element Type property can be used to identify if the document is Table Content or Text Content and route to different paths. Routing can also be done based on Content Language status meaning the status of individual languages added to the document.

6.5.2.4 Update Text Document

A new node for updating Text Document has been added in WebCenter 16.1. Update Text Document provides the ability to update a Text Document automatically through a workflow. Almost every change possible manually can be done automatically with this node, including changes to content manager fields like the Text content properties and permissions as well as edit /approval of text statements.

6.5.3 Specify a Text Length Limit

A new feature has been added in Text Document to set a soft limit in the number of characters that can go in a text, master or translation. This feature will trigger a warning when characters added in any text exceeds the Text Length Limit. Additional characters will not result in an error.

This feature is compatible with external translation tools like SDL Trados. SDL Trados will show an indication of the length restriction when an XLIFF file is generated for a text document that has a specified Text Length Limit.

6.5.4 Improved/simplified UI for Export to GS1/XLIFF

Similar to enhancements done to XLIFF and GS1 nodes, manual operation for Export GS1/XLIFF are also enhanced.
The XLIFF Export enhancements are:
- Option to include statements whose master language is still not signed-off.
- Option to not create entries in the XLIFF file for WCC documents if target language is not already added to them.
- Can now generate XLIFF file for both Table Content(.wtc) and Text Content documents(.wcc)
- Check XLIFF text length limit as described in section 6.5.3

GS1 Export can now create XML file for both Table Content (.wtc) and Text Content (.wcc) documents.

6.5.5 Locale mapping for Text Statements from within the Viewer

The Text Statements widget in the Viewer is now improved to override the locale mapping for the text statements. When an artwork is imported using "Import Dynamic Text" node, the user will have specified the locale to language mapping in the node. Using this configuration, all the text on the artwork will be added to the correct language. Along with text information, location information is added to text statements. This is used in the Viewer to create markup around the text thus allowing the user to see where the text is appearing on the artwork when a text statements is selected in the Text Statements widget.

If there are extra languages in the Text Statements document (more languages than specified on the artwork), and user wants to know where this text would appear on the artwork, the widget allows overriding the locale mapping with different languages available in the Project.

6.6 Named Users License model

The Named User License model is introduced in WebCenter 16.1. The concept of this license model is that you pay for the number of existing users in the system. All existing active users can log in at any time. There is no limit on how many users can concurrently log in to the system.

In this model, we have three types of users. Each type of user is limited by a license:

- Admin/PM users:
  These are the users that are assigned as either Administrators or Project Managers.
- Regular users:
  These are users who are not Administrators or Project Managers.
- SDK Sessions users:
  These users represent integration user accounts and they are characterized by allowing more than the default number of the concurrent sessions.

The number of available licenses and the number of users of each type are shown on the Users overview page.
When counting the number of users, deactivated users (see section Deactivated Users) are not taken into account.

Remark: in the Named License Model, the number of PCM licenses needs to be equal to the sum of the number of Admin/PM and Regular users. If these numbers does not match, you will not be able to use the PCM functionality.

6.7 Deactivated Users

Users in WebCenter can be deactivated. Deactivated users cannot login to WebCenter. They cannot be invited into projects, assigned to a task or invited to an approval. A task or an approval with a deactivated user assigned cannot be started. Deactivated users remain in the system allowing to track previous actions, but they cannot be involved in new work (unless firs re-activated). Deactivated users do not take up licenses in the Named User License model (see Named Users License model). If a user is deactivated, it is clearly marked in the user interface.

Deactivated Users do not receive e-mail notifications (project notification framework, overdue notifications or workflow triggered notifications).

An administrator or project manager with Create User rights can deactivate a user by unchecking the 'Active User' option at the user details page. A project manager with create user rights can only deactivate users he created himself.

When deactivating a user the following checks are performed:
- The user has documents in his approval to-do list that are directly assigned to this user.
- The user is a direct task assignee of an active task.
- The user is currently logged in into WebCenter.

In case any of the checks are positive, a message is shown. Clicking this message shows the details. None of these dependencies is blocking for deactivating the user. The message is also shown for an already deactivated user allowing to see work blocked by the deactivation of the user.

The user is effectively deactivated when the user details page is saved. In case the user was logged in at that moment, he/she is logged out of the system.

The user deactivation is logged in the User Management History.

It is not possible to deactivate the built-in users (ADMIN, CADX, WORKFLOW, and CLEANUP). Note that these users do not take up a license. The user is also not able to deactivate himself.

It is also possible to specify automatic users deactivation. The options are:
- No automatic deactivation (default option)
- Deactivate after X working days: an input field allows to specify the number of working days from the current day. The calculated deactivation date is shown. If the user already had an amount of days after which he gets deactivated configured, the input field is grayed out. However, a button allows the administrator/project manager to explicitly request the deactivation date to be recalculated from the current date.
- Deactivate at a specified date: a date picker is used to pick a date. Note: the user must first be made active to be able to select this option.

The automatic deactivation happens on the calculated/specified date at 23:59:59 server time.

Activating non-active users can be done from the user details page by checking the Active User checkbox or via the "Activate Users" action on the users overview page by an admin or a project manager with create user rights (for users created by this project manager only).

The user activation is also logged in the User Management history.

Please note that a user can only be reactivated 24 hours after the previous activation or manual deactivation. When a user is automatically deactivated there is no restrictions to when he can be reactivated again.

6.8 In Context User Creation

The Approval page has received an overhaul to allow for the creation and invitation of users without leaving the page.

6.8.1 *Improved UI*

The user interface of the approval page has been updated to reduce white space and to work better on mobile and small screens. A new component on the page enables project managers to quickly pick approvers. The component filters the available members of the project and also not (yet) invited users based on username, first name, last name and e-mail address. If the new approver is not a member of the project yet or is deactivated, the necessary steps are taken to invite the user and activate him without leaving the approval page. The functionality automatically adapts to the rights of the current user.

6.8.2 *In Context User Creation*

Administrators and Project Managers with User Creation rights can use a new function on the approval page to easily create new users. When filtering the

existing users yields no satisfying result, the Project Manager can click on a button or press enter to open a popup, pre-filled based on the entered filter. After confirmation, the user is created in the system, invited to the project (in a selected role) and added to the list of approvers, - all without leaving the approval page. The newly created users inherit all the preferences, SSO settings and automatic deactivation settings from a 'Approval User Template' which the User Creator can select on the 'My Preferences' page.

6.8.3 *Token Authentication*

Often the users created directly from the approval page will be users without prior knowledge of WebCenter that only need to access the site to view and approve a document. To this process as smooth as possible a new SSO type is added: Token Authentication. If enabled, this authentication type grants a special token to each user that can be appended to a WebCenter URL. Using such a URL will allow the user access to the system without using login name or password. The duration of validity of this token can be configured by an admin user. See also section 6.8.

6.8.4 *Notification Enhancements*

If token authentication is enabled for a certain user, the authentication token is appended to the links sent out to this user by the notification system. This permits users that are added to the approval cycle to log in automatically when receiving the approval link. This option is for obvious reasons not recommended for regulated industries.

6.9 Asset Management connections

WebCenter 16.1 introduces the concept of "Asset management connections". With this concept, it is possible to connect to an external asset management system and make use of the documents that are stored on that system. In WebCenter 16.1 two kinds of asset management system are supported: WebCenter and MediaBeacon.

6.9.1 *Managing Asset Management connections*

An admin menu item "Asset Management Connections" is added to the "Configuration" menu where asset management connections can be added and managed.

6.9.2 *Upload from external Asset Management connection*

The Asset Management connections can be used to configure a new custom Document Creation source. When uploading documents to WebCenter, it is now possible to select documents from the external asset management system. In the WebCenter case, the user is able to select documents from a predefined Saved Search. For MediaBeacon, the popup will display a MediaBeacon workspace. The metadata present on the external system can also be imported into WebCenter.

6.9.3 *Push back to external Asset Management system*

To be able to push back a new version of a document to the asset management system a new workflow node is added (see Upload document to Asset Management System node). Once the node is configured with the correct information about the Asset Management connection and a mapping between the WebCenter attributes and the metadata of the external system, the node can be used in a workflow.

6.10 Rule Engine

For opening the rule configuration page, an admin user navigates to the Project Details page. In the 'Configure' section, a tab called 'Rules Setup' can be found. After clicking the option, an overview of all the rules configured for that project / template is shown. The admin user only has the option to edit the rule set in a template (see it as the owner of the rule set). In a normal project, the admin can find a link to the original Template where he can configure the rule set.

New rules can be added by pressing the 'New Rule' button. The admin user can configure a name, a description, an order (by default filled in with the next available order number), the triggers and the actions for the rule. When saving the rule, a validation happens to make sure the rule has a name, a valid order, at least one trigger and at least one action.
The supported triggers are:
- **Project status change:** when configuring this trigger, the actions of the rule will be executed when the project status changes.
- **Project due date change:** when this trigger is configured, the actions of the rule will be executed when the project due date changes.
- **Attribute change:** this trigger can be used to only execute the actions when a given attribute changes. During the configuration the admin can select the specific attribute from a searchable dropdown.

The administrator can configure multiple triggers (OR) for the same actions by clicking the '+' sign. The 'x' button of a row can be used to remove previously added triggers.

The supported actions are:
- **Start task:** this action can start a new task on the current project. During the configuration, the admin must specify which task has to be started by means of a searchable dropdown.

The administrator can configure multiple actions (AND) for triggers by clicking on the '+' sign. The 'x' button of a row can be used to remove previously added actions.

An existing rule can also be edited by clicking on the name of the rule, for example, to change the order.

If you no longer need a rule, you can select one (or more) rule(s) and then click the Delete Rule button to delete them.

A rule can also be enabled/disabled. When a rule is disabled, its actions are no longer executed when one of his triggers are fired.

After configuring a rule set in a template, the rule set will also be set by default in all the projects derived from that template. A derived project is a project that is either created from the template itself or from another derived project. When a trigger is fired in such a project (by anyone, including system and all users), all the enabled rules within the rule set are evaluated. This means that for every rule all the configured actions are executed. When multiple rules are triggered by the same event, the rules will be evaluated according to their order.

By default, all rule evaluations are logged in the project history by two events:
- Rule evaluation succeeded: when the evaluation of a rule was successfully completed.
- Rule evaluation failed: when the evaluation of a rule failed. The reason of the failure is mentioned along.

This is configurable and you can also choose to send e-mails upon successful or failed rule evaluations.

When a project/template is saved as a template, a deep copy of the rules is made, making sure it can work with its own rule set.

When a template is exported/imported, the rules are exported/imported along. All tasks used in the rule set actions will be exported as well. When the template already existed before the import, the existing rule set is merged with the imported rule set. Rules with the same name are overridden.

A selected set of rules can also be exported/imported from the rules page, if you want to reuse them in another template.

6.11 Workflow Improvements

6.11.1 *JavaScript Node*

A new Execute JavaScript node is available in the HTML5 Workflow Editor allowing to execute custom JavaScript code. When double clicking the node, a JavaScript editor becomes available with basic syntax checking and autocompletion. The node has access to a WebCenter API allowing it to execute actions like checking and changing project attributes, project status, project due date, accessing/changing Parent and Child Projects, tasks, etc. It is currently not possible to access documents traveling in the workflow.

A very simple example:

var project = API.getProject(); // returns current project
var attribute = project.getAttribute("Brand"); // returns attribute "Brand"
var value = attribute.getValue(); // returns attribute value of attribute "Brand"
var newBrandValue = value + 'new'; // construct a new value
attribute.setValue(newBrandValue); // set a new value for the attribute "Brand"

The JavaScript editor also has:
-    a line and column indication of the cursor
-    line and characters count of the script
A script can be maximum 100.000 characters. If you exceed this limit, you get a warning icon and will be asked to correct before saving.

Workflow node JavaScript is executed in a sandboxed environment. This means that no other Java classes and/or methods but the ones of our API can be accessed through JavaScript. There is a limit of the stack depth (by default 10.000) to avoid infinite recursions and there is also an instruction count limit (by default 1.000.000) to avoid infinite loops. The maximum script size is also enforced during execution.
Any (JavaScript) error puts the token on the error pin with an appropriate error message.

6.11.2 *Upload document to Asset Management System node*

A new node 'Upload document to Asset Management System' is available (HTML5 Workflow Editor) to push back a new version of a document to an asset management system (see Asset management connections). This can be another WebCenter or a MediaBeacon server.

Double-clicking the 'Upload document to Asset Management System' node opens up a panel that initially only has one searchable dropdown. This dropdown contains all Asset Management Connections that were set up in WebCenter. The user may choose to select a connection or leave it blank.

If an Asset Management Connection is chosen from the dropdown, depending on the type of Asset Management Connection, other fields will be shown in the panel. This allows the users to configure the upload to a specific Asset Management system. The Asset Management Connection plugin will then try to upload the document.

If no Asset Management Connection is chosen from the list. The Workflow will look at the Asset Management System the incoming document came from. If there is no such system, the workflow will fail. If a system is defined, the workflow will use the upload mechanism of that system to push the document back.

6.11.3 *Create Project Node improvements*

6.11.3.1 *Move incoming Documents*

The Create Project workflow node has a new radio button in the Documents tab to Move incoming Documents to the new project. This only works for the Current WebCenter selection; if you select Other WebCenter, an error is shown during execution. When activated, a parameter Target Folder Name becomes visible which allows specifying the name of the folder to move the document to. If nothing is filled in, the root folder is assumed. If the folder is not found upon execution, a "Folder not found" error is shown.

6.11.3.2 *Add as Child Project of current Project*

To create Parent-Child relationships automatically via a workflow, a new checkbox is added on the Project tab (default off) to add the new or modified project as a Child Project of the current project.

Note: you cannot use this checkbox to unset an existing project relationship.

6.11.4 *Temporary download link as SmartName in Send Notification node*

The Send Notification node has a new SmartName for its mail body section in the "Links" category called "Temporary Document Download Link", It resolves during execution to a long URL allowing a non-authenticated download (limited in time). This SmartName is only visible if the feature is enabled in the system security settings. If the feature is disabled after configuration of the workflow node, an error is shown during execution if this SmartName is encountered.

When the node gets multiple documents as input, the e-mail body will only have a link to the first incoming document; this applies also to the temporary document download link.

6.11.5 *Status parameters is now Smartname enabled*

Some workflow node now also supports a SmartName for the status parameter. The SmartName parameter should resolve to a valid status name. The following nodes and parameters are smartname enabled:
- Set Project Status node – Status parameter
- Create Project node - Project Status parameter
- Set Workflow Status node – Status parameter

- Task (Type) node – Status parameter

This feature is only available in the HTML5 Workflow Editor.

6.11.6 *"Update the Task if existing" is disabled for workflow nodes*

The option "Update the Task if existing (otherwise add incremental number)" of a workflow task node is now disabled in the HTML5 Workflow Editor because it did not work well in the field. For example, an already existing completed workflow task, would not be restarted by using this option.
The option is also ignored during execution. This means a new workflow task (with another name) will be created, even if you had the option turned on.
For manual task nodes, the option is still available.

6.11.7 *Clear Workflow improvements*

The user experience of the Clear Workflow button in the HTML5 Workflow Editor is improved. Instead of converting the workflow back to a manual task (after confirmation) as an irreversible action, the Clear Workflow button now removes all nodes except the Start node and one Completed node as an undoable action. To persist, the user has to click the save icon. When during save, only a Start node and one Completed node are detected, a confirmation message is shown to ask to turn the workflow back to a manual task. If yes is clicked, the workflow is saved and the page reloads and the default workflow with only the Start and Completed node is shown. The workflow is then a manual task again. This is not undoable. If no is clicked, the workflow is just saved. This is undoable.

6.11.8 *License requirements*

For running workflows, you need to have either the "WebCenter Lifecycle Management" or the "WebCenter Task Management Advanced" license.

6.11.9 *Java Workflow Editor deprecated*

The Java workflow editor is deprecated as of WebCenter 16.1. Use the HTML5 workflow editor instead. New functionality is no longer ported to the Java version and it is planned to be removed in the next major version.

6.12 Search improvements

In addition to the new Search Dashboard described in section 1.1, WebCenter 16.1 comes with a long list of search enhancements.

6.12.1 *Updated UI*

6.12.1.1 *Simpler selection of Attributes, Specifications and Characteristics*

Selecting Attributes & Specifications in Search now has a nicer user experience. When you click on the "Attributes…"/ or "Specifications…" link, a popup opens where you can easily select the attributes/specifications which you would like to add to your search.

It is possible to filter on the name of the attribute/specification, or add a list of attributes/specifications in one go.
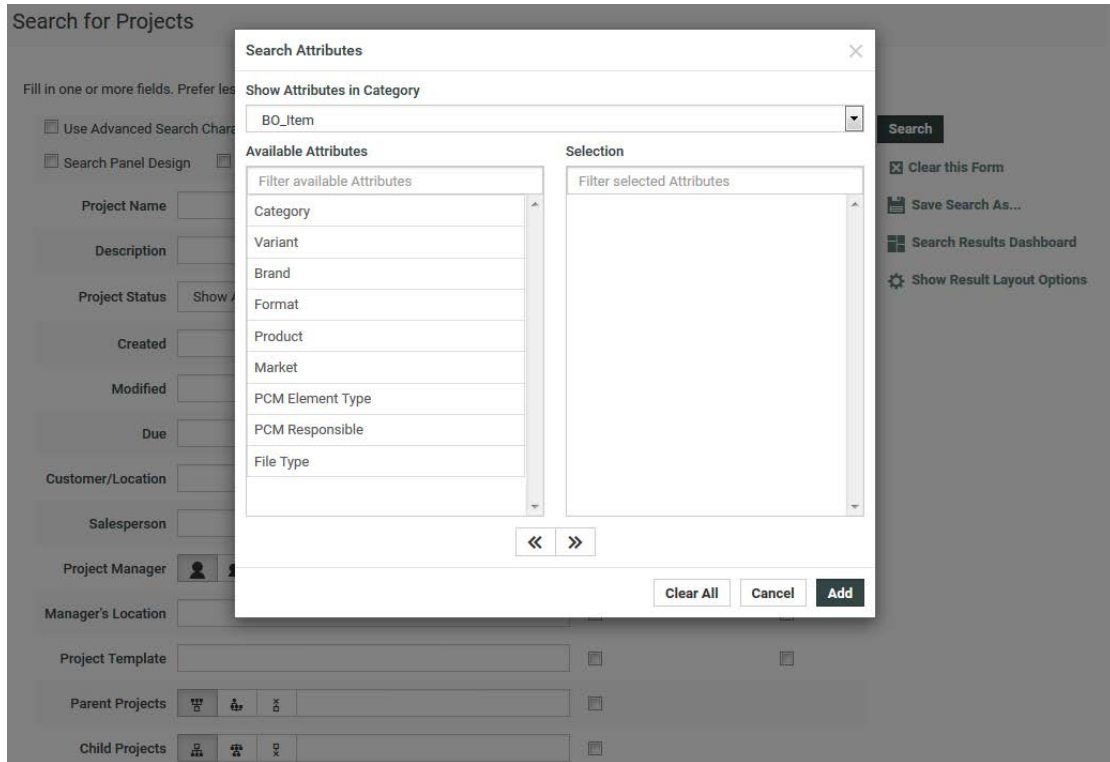
After you added the attributes/specifications, new rows will appear on the search setup page where all the properties can be configured.
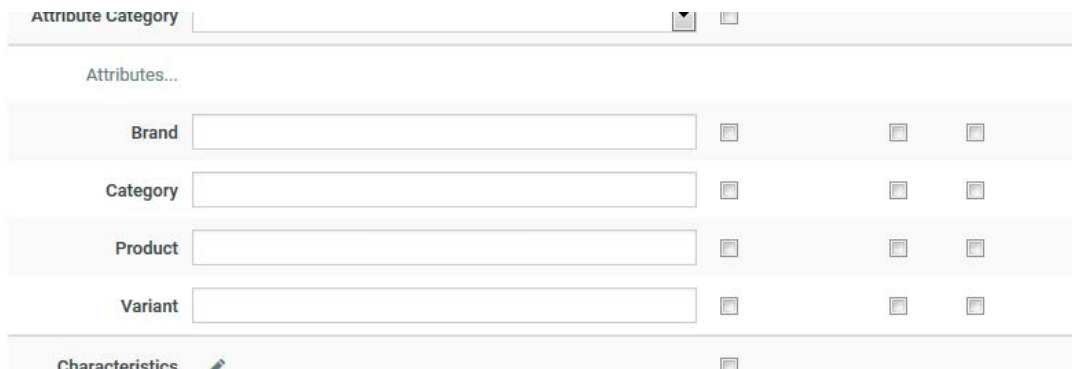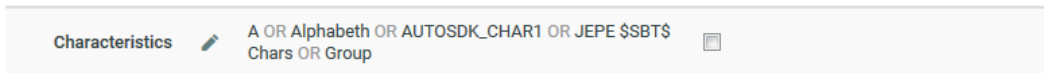

These new rows behave in the same way as the other rows on the setup page.

Similarly, Characteristics can now also be selected in a popup. You can filter on the name of the characteristic and the results now update while you are typing.
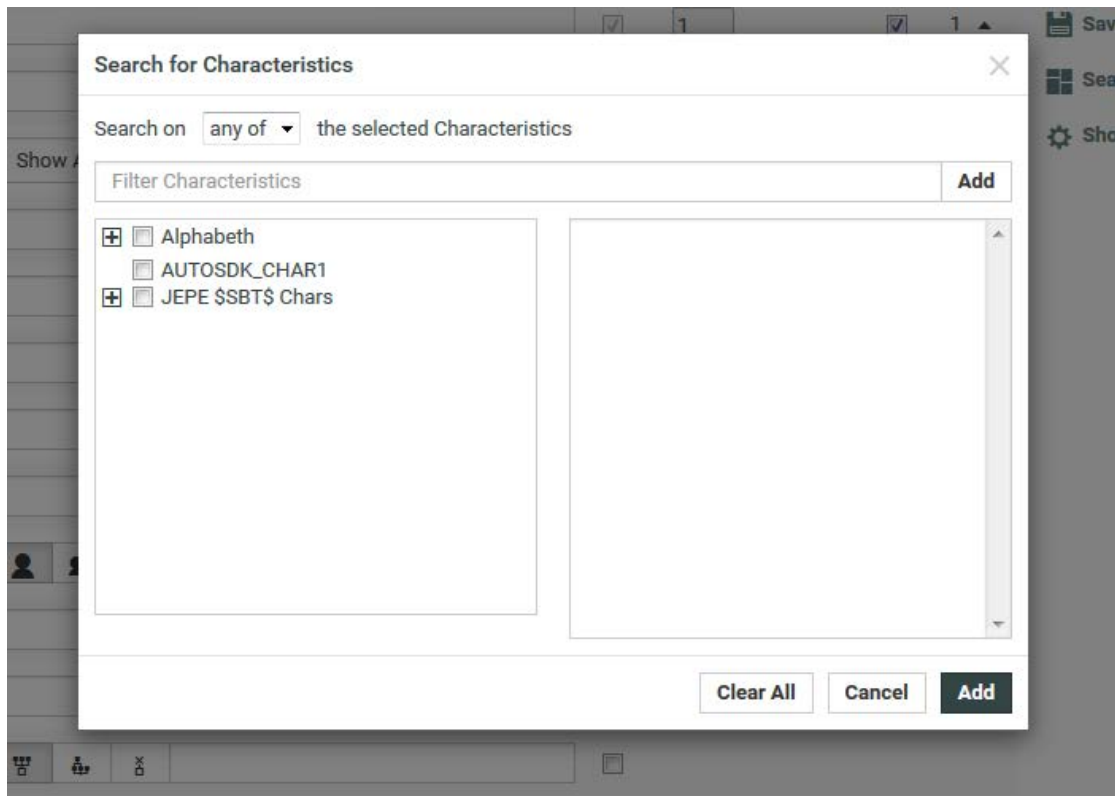
After selecting some characteristics, the row on the search setup looks like:

6.12.2 *Save Saved Search*

If a User has the rights to make changes to a saved search, two buttons appear in the header of the Edit Saved Search page:

1. <u>Save</u>: Clicking this button saves changes to the Saved Search that was selected for editing. The user stays on the edit page and a message is shown whether the changes were correctly saved or not.
2. <u>Save as...</u>: Clicking this button executes the standard 'Save a Search' functionality (forwarding the User to a page where he can set a name and type of the current Search)

If the User has no rights to update the selected Saved Search, only the "Save as…" button is shown.

6.12.3 *Search for Child and Parent Projects*

In the project sections of search (Project Search, but also project combined document and task searches), two new fields are added to search for Parent Projects and Child Projects. You have the option to only search direct Parent/Child Projects, in All Parent/Child Projects (any of the Parent/Child Projects in the chain) or projects without Parent/Child Projects.

If the direct/all Parent/Child Projects option is chosen, you can enter a name (or ID) expressing that you want to list all projects having that project as Child or Parent Project. If the No Parent Projects or No Child Projects option is chosen, it will search for projects without Parent or Child Projects respectively.

Examples:

If you have the Parent/Child relationships Project 1 > Project 2 > Project 3 and you enter "Project 1" as Parent Project then:

-        If you have chosen Search only Direct Parent Project: Project 2 is shown in the search results

-        If you have chosen Search in All Parent Projects: Project 2 and Project 3 is shown in the search results

Similarly, if you enter "Project 3" as Child Project, the direct level will only show Project 2, and all will show Project 1 and Project 2.

If you select No Parent Projects, Project 1 will be shown. Similarly, if you select No Child Projects, Project 3 will be shown.

You can use SmartNames on these new fields. The most typical case will be to set the "Parent Project" criteria to the [Project ID], this allow the user to see all the Child Project of a Current project. It is better to use the Project ID smartname because this one is independent of the tokenization of the name (in other words you don't have to take advanced characters into account or use quotes around the name to find an exact match). Similarly, you can also choose the Parent Project ID smartname to see all projects with the same parent(s) (siblings + itself).

The returned parent or Child Projects results are filtered against the user's view permission.

6.12.4 *"Allow Detaching Child Projects" action*

A new action "Detach Child Project" is available in Search. Enabling this action will allow you to detach the selected projects you find in search from their parent.

Because there can be multiple parents, this action will only show up if the Search is shown in a specific project context (so, when shown from a customized menu in a project). The action will then assume that the project you want to remove it the project you are currently looking at.

Currently this action will not show up outside of a project context.

6.12.5 *New [Project ID] smartname*

A new SmartName is available in Search: [Project ID]. This SmartName can be used in any field where you can use a project name. This includes the Parent/Child Project fields, the Project Name field or the Project Template field.

The main difference with the [Project Name] SmartName is that the [Project ID] SmartName guarantees that only the actual project in which the search is run is found. When using the [Project Name] SmartName, you can also accidentally find projects which have the same name but with some additional text after it.

6.12.6 *Search Drilldown*

A new option called Drilldown is added to the Result Layout Options for Project Searches. A Drilldown is a saved search that is executed when clicking on an expand icon on the project search results page. The results of the Drilldown are inserted into the search results table of the parent search, indicating a hierarchy of searches. The Drilldown is given the expanded project as a context which allows for SmartName enabled saved searches. A good example is expanding a Parent Project to show its Child Projects.

Drilldowns can be task, document or project searches; each project search possibly having its own Drilldown.

6.12.7 *Keyword Search as Search Criteria in Advanced Search*

Keyword field is now available as a configurable field on the search setup page. This makes it possible to add the field in the design panel of a saved search now.

For example:

If you do not have "Use Advanced Search Characters" enabled in your Saved Search, it will find the exact same results as the keywords search which is in the top right corner of any page.

6.12.8 *Search for Task Creation Date*

Task Creation Date is now available on the Task Search Setup page. You can search on it, make it visible in the results or add it as a filter above the search results.

6.12.9 *Search for Document Approval Stage*

The Document Approval Stage is now available on the Document Search Setup page. You can search on it, make it visible in the results or add it as a filter above the search results.

6.12.10 *Search for Project and Document Attribute Category*

It is now possible to filter projects and documents by the assigned Attribute Category. This should make it easier to make searches for specific "types" of projects/documents.

6.12.11 *Search for Project Template*

You can now also search projects by the name of the Project Template. Like the new Attribute Category filter, this filter will make it easier to make searches for specific "types" of projects.

6.12.12 *Searching on multiple Task Statuses*

Like for Project Status, it is now possible to search on multiple Task Statuses with OR, * and other search operators.

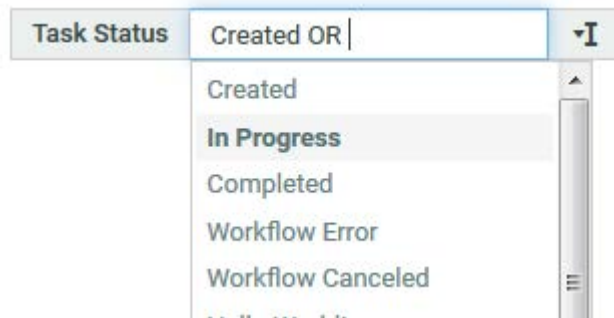### 6.12.13 *Bill of Materials label in Search Results can now be configured*

It is now possible to configure the label of the Bill of Materials Column in the Search Results.

An example where the label was changed to "Required Parts":

6.12.14 *Customized table header labels in Export to Excel*

In Export to Excel, the headers of the columns will now show the same information as the search results table itself. This means that the headers in Excel are now also translated and can be customized in the same way as the headers in the search results table. They will now also show information about the shown units.

6.12.15 *Searching for Documents or Projects where the name starts with given string*

A small change has been applied to the Project Name and Document Name field in the search.

When using wildcards, the search will now try to match the full name of the project or document. Before, it would also return results if a word inside the project or document name matched the query.

Before, entering Proj* in the project name field searched for projects where the name contained a word starting with "Proj". It would, for example, find: "Test Project"

Now, entering Proj* in the project name field searches for projects where the full project name starts with "Proj". It will not find "Test Project", but it will find "Project 0001".

This change was made to make it easier to search for projects with specifically structured name prefixes.

6.12.16 *Asset Browser changes*

6.12.16.1 *Visualization of selection*

The Asset Browser has changed a show more accurately what it will actually search for.

In the example image to the right, we selected "Grips" and "Babolat" and "Carlton".
You can see that the Asset Browser shows all brands of "Grips" (below the "Grips") as selected as well.
For the "Bags" it also has a clear indication that some of the brands of Bags have been selected.
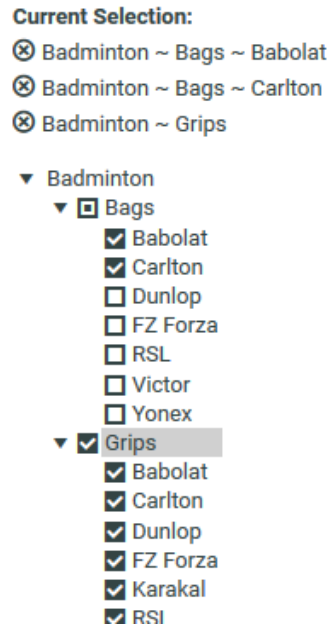
6.12.16.2 *Asset Browser and Cascading dropdowns*

In 16.1 the Asset Browser will now work nicely together with the Cascading dropdowns in the design panel. It is no longer necessary to choose one of the two.
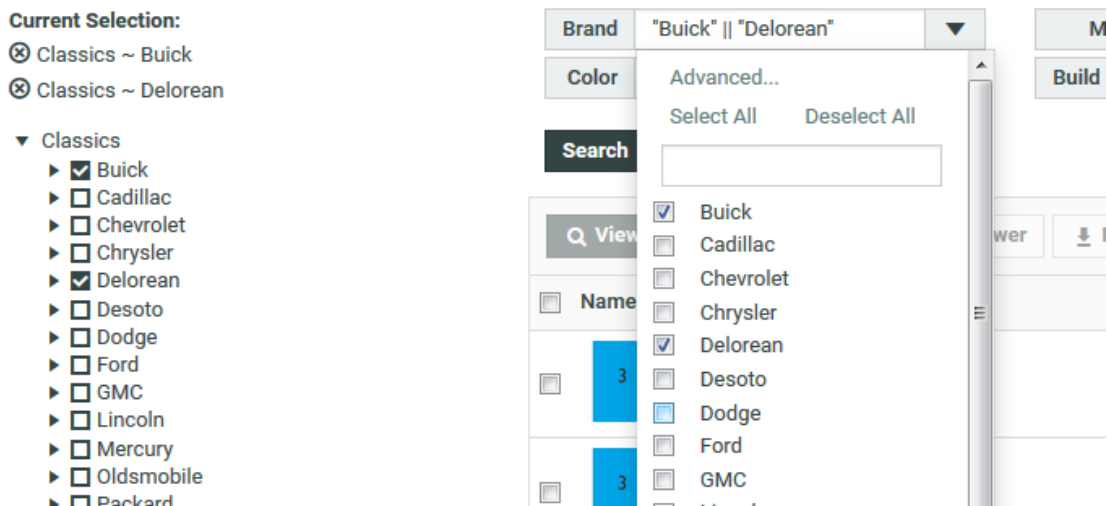
6.12.17 *Sorting with empty values*

When sorting on a column projects/documents/tasks with empty values for that column will now always be at the end. They will be at the end, both when sorting ascending and descending on that column.

6.12.18 *Project Roles available in Task and Document Search*

You can now filter on and view Roles in Task and Document searches.

For example, showing the assignee of the "APPROVER" role in the project in a Task Search:

6.12.19 *Bill of Materials supported in grid view*

When enabling "Bill of Materials" to be visible in the results, this will now also show up in Project Search grid view.

6.12.20 *Attribute date & time in Export to Excel*

The system wide option "Show date and time for Date Attributes/Specifications in Search Results" is now also applied when the results are exported to Excel.
If the option is on, dates in Excel will be formatted so that the time is also shown.

Note: this does not affect the actual data that is written to Excel and you can still change the formatting in Excel afterward.

6.12.21 *Reduced the list of available special characters*

To avoid unexpected results, less special search characters are supported from this version onwards. Characters which are no longer treated as having a special meaning are [,], {, }, ^, :, +, -, and !.

As an alternative to – and !, the NOT keyword is available even without special characters and is more flexible in how it can be used.

The main advantage of this change is that even with special character enabled users do not have to take special care anymore about searching for values containing these characters.

The full list of search operators that are always available is:

OR, AND, NOT, *, ?, and " "

When enabling the Advanced Search Characters, the following operators become available also:

&&, ||, ( ), ~, and \

Note: these are always available for attributes at the moment.

6.12.22 *Additional minor Search improvements*

6.12.22.1 *Units in search results are correctly updating*

When running a saved search, the units shown in the results are now correctly adapting to the metric/imperial user preference of the user.

6.12.22.2 *Import/Export of a Search containing deleted attributes*

Exporting and importing of searches now works fine if the search was configured with some attributes that no longer exist on the system.

6.12.22.3 *"Advanced Search Characters" disabled by default*

When setting up a new Search, the "Advanced Search Characters" checkbox will now always be unchecked by default for all users. If you do want to use special characters you have to check it manually.

6.12.22.4 *Search button option off by default for new searches*

From this version, the Search button option is no longer selected by default for new searches. This change was made as most advanced search setups work far better without needing the user to press Search for an update.

6.12.22.5 *Time zone for dates in Excel*

Dates in Export to Excel are now consistently shown in the time zone of the user.

6.13 Viewer and Annotation improvements

6.13.1 *Annotation Thumbnails for ArtiosCAD documents and other viewable documents*

The annotation overview tab in the document details page has been extended to support more document types. The thumbnails that show the individual annotations on the page will now also work with ArtiosCAD documents or documents that have been uploaded as "viewable other" in general (such as Microsoft Office files).

6.13.2 *Marburg Medium Braille Specification*

The braille tool in the viewer has received an upgrade. It can now also check if the selected braille conforms to the Marburg Medium Braille Specification.

The Marburg Medium Braille Specification is a specification for setting braille type, recommended by European and North American standards for pharmaceutical packaging and labels. There are different braille specifications for different purposes, Marburg Medium is specifically designed for use on packaging for medicinal products.

For more info: https://wiki.esko.com/pages/viewpage.action?pageId=183801770

6.14 Traceability on Deleted Projects/Templates

Deleted items in WebCenter remain in the database until the cleanup tool has been run. In WebCenter 16.1, there is a dedicated page in the Admin section that shows the deleted projects and templates. In this page, when clicking on the project/template name, the history page of the deleted project/template is shown. On this page you can see all the events that happened in the deleted project/template up to and including the deletion.

The delete action is now a dedicated event that is recorded in the project history. The user who performed the action and the time of deletion is listed.

6.15 Configurable Project Landing Pages

It is now possible to add custom Landing Pages for different roles. The configuration of this functionality is done in a template. All projects - also the previously created projects - derived from this template (meaning projects created directly from the template or as a copy of a project that was) will have the same configuration.

During the configuration, an admin user can make a link between the role in the project and which page is the most interesting for that role. As an example, you could configure that all members of a Designer role should have the Documents page as Project Landing Page.

The possible project landing pages that can be configured are:
- Saved search. Specify which saved search to use.
- Documents page. Specify which folder has to be opened by default.
- Attributes page. Specify the attribute category view that has to be used
- Approval page
- Tasks page
- Bill of Materials page

The order in which the role is linked to the Project Landing Page is important. The first Project Landing Page that matches the role of the user will be used for the user. When the role field is left empty this Project Landing Page will match all possible roles (this way the admin can specify a default Project Landing Page).
It is easy to change the order of the Landing Pages by using drag and drop.

Once the Landing Pages are set up, when a user (of a given role) opens the project, the Project Landing Page configured for the role of the user (or the default Landing Page) will be opened.

Note: the landing page will be filtered against the menu of a user. This ensures that the user can only have a landing page that is in line with his personal menu.

6.16 Token Authentication

A new authentication type was added to WebCenter: "Token Authentication". It allows users to directly authenticate to WebCenter based on a URL. No username and password authentication is done for this authentication type.
In order to use the "Token Authentication" plugin, an instance of this type is created and enable it for the relevant users. When desired, the plugin can be totally removed from WebCenter by deleting the appropriate plugin file in the installation.

6.17 Performance improvements

6.17.1 *Improved front-end performance*

From this version, WebCenter uses priority based loading of components. This ensures that the most critical page components like (action) menus get a higher priority and thus load before other less critical components (like badges). This, for example, allows you to navigate faster through WebCenter.

We also optimized some important components like attribute categories by using more "lazy" loading. As a result, you will have to wait less before a category is loaded because scripts and components are only loaded when needed.

6.18 Other improvements

6.18.1 *Auto Delete Task Option*

A task type can have the option to automatically delete the task when it is completed successfully. This option comes in handy when you want to keep the task overview page clean and you do not want to clutter the overview with tasks that are completed and not relevant anymore.
For instance, tasks that are started by the rule engine will typically be set to auto delete as they are not relevant anymore once they are executed. The project history will still keep track of the fact that the task was started and completed successfully.

6.18.2 *Extensions to Table Based Rendering for Document References*

The table based rendering of documents has received two new options to display information about the source project of the document:
Project Property:
- o Project Name: the name of the project the document sits in
- o Project Due Date: if set, the due date of the project the document sits in
- o Project Status: the current project status of the project the document sits in. A dropdown is available to select whether to show (similar to Search Layout options) the label and icon of the status:
  - ▪ Show Label and Icon: shows both the label and icon of the project status stacked
  - ▪ Show Only Label: shows only the label of the project status
  - ▪ Show Color Label: shows the color label of the project status
  - ▪ Show Only Icon: shows only the icon of the project status.

Project Attribute: The details show the list of attributes in the system.

Note that similar to document attributes rich text attributes cannot be shown and document references are shown as a list of links. In a project creation context where the document source operation is not link or reference, nothing is shown for the project properties/attributes, because they will be copied/moved/created in the not yet existing project. For link/reference, the information of the "source" projects is shown. Note: we always show the saved information. That means we only see the project information when linking to the current project after saving it.

6.18.3 *Have a Saved Search as a Start Page*

A saved search can be selected as the Start Page. It can be selected on site level and on user level.
Having a saved search in the menu item and have it set as a start page creates a

very good user experience: when the user logs in, he immediately lands on his configured dashboard page.

6.18.4 *Batch Count of saved search based menu items*

A search result count badge is now shown for a saved search menu item in project or document details next to the title of the tab. This is only done for the non-active tabs. This is very handy to see for example the number of Child/Parent Projects of the current project.

6.18.5 *Delegated Role invite of Group with User assignee*

The delegated role invite though task specification (on task complete) or project attributes (on project creation) has been extended to also support groups with a user assignee.
Use one of the patterns:

Username [Groupname]

Lastname, Firstname (Username) [Groupname]

to get the group "Groupname" invited with the user "Username" as assignee. If the user "Username" is not a member of the group "Groupname", no change to the role assignees will be made.

If the group "Groupname" was already invited to the role, only the user assignee will change.

6.18.6 *Enforce Document Reference Latest version option*

When a document reference attribute is configured to contain the "Latest Version" of a document, the code will prevent that you can "downgrade" a version of the referenced document.
This change serves a common PCM scenario: a user can create a new version of a text statement document by entering data, which happens typically in a different tab as where you have the overview of the text statements. After entering data in the text statement in a details tab, WebCenter will ensure that this data is maintained when making changes in the overview tab afterwards.

6.18.7 *Restore previous document thumbnail when deleting latest version*

When deleting a document version for a viewable document, WebCenter will attempt to regenerate the document thumbnail so that the thumbnail matches the latest version of the document in WebCenter.

6.18.8 *Allow having no Document Sources attached to a Form Table*

It's possible to configure a document reference attribute category with no document sources in it. This is especially handy if the user should be prevented from adding new documents via the document reference interface, but still be able to modify inline attributes, properties or upload new versions or duplicate documents that are already there.

6.18.9 *Document source "Project+Folder" is now "Select from Project"*

The document source "Project+Folder" lets you select a project and document from that project to Copy, Move or Link to your current project. There is no folder selection involved, thus it got changed to the better fitting name "Select from Project" to not confuse users.

6.18.10 *Project Managers can set menu for users they have created*

Project Managers with Create User rights can now set the menu for the users they have created.

6.18.11 *E-Mail Notifications support Authenticated links*

If a User – who has Authenticated Token User login method enabled (for details see User Authentication Improvements) - should receive a WebCenter e-mail Notification (either for a specific Event or as an Overdue Reminder for an Approval Document or Task) all the links that point to various related WebCenter objects (e.g. Project, Document or Task) will contain the needed information so that when such a link is clicked by the recipient he gets taken directly to the appropriate details page instead of going to the login page first.
Note: Group that uses Group-email will always receive the simple links when used as a Notification recipient.

6.18.12 *Limited visibility for built-in Reports*

The visibility of the built-in 'Find lost documents' and 'Project history' reports is now limited to the administrator users only. So other users will not see them in the Search > Reports list anymore.

Those two reports are now also listed in the admin section at the Preferences > Reports page. It is not possible to update, delete or download the built-in reports. But at the report details page, it is possible to select groups of people which will have the right to run the report (applicable for the Project history report only).

6.18.13 *Extended Apply Preferences with Group invites*

In the apply preferences, there is a new option to apply a group membership also. If the "Group Memberships" option is checked, the selected users will be also invited to all groups the specific user selected in "Take Preferences From" is invited to. Existing group memberships are not touched. In case no specific user is selected, this option has no effect.

This option is available for the administrator users only. It is not available for the PM users with create user right.

6.18.14 *Support for hidden document reference properties duplication*

When a document reference attribute/specification has a Reference Category configured in particular attribute category/task type, all the attributes from the Reference Category become available as document reference properties. But only those configured in the rendering configuration of the attribute category as Reference Properties are visible/usable in WebCenter UI. The rest is so-called "hidden document reference properties". Different reference properties can be visible/hidden in different views of the same attribute category. Moreover, special functionality like PCM utilizes hidden reference properties for internal working.

Before just the values of visible reference properties were copied when a document row was duplicated within the document table. The improvement done in this version is that the values of hidden reference properties are copied as well during the duplicate operation.

6.18.15 *Use Project Characteristics as filter for Project Details Actions*

In the Menu Builder, Project Details actions can now be filtered based on Project Characteristics. This feature allows for presenting different project details actions in a project depending on the project template used to create the project.

6.19 SDK changes

For full list of SDK changes, please consult WebCenter 16.1 SDK documentation, section 7: List of changes.

6.19.1 *Automation Engine Integrate with WebCenter task extensions*

New actions

- Invite Group in a Role with User Representative
- Create Project Link
- Remove Project Link
- Replace Project Link

Improved existing actions

Create Project action – new parameters to specify parent and child project(s):
- Parent Project
- Child Project

Create User and **Edit User** actions – new parameters to control what settings/properties should be inherited from system default or even a custom template user:
- Template User
- Apply Default User Preferences
- Apply Companies and Groups visibility
- Activate User (only for Edit User action)

Download Document action – new parameter to control whether the downloaded document should be ZIP compressed or not:
- Download in ZIP archive

Get Projects action – definition of output parameters extended by parent and child projects info.

Get Objects Visible to User action – support for more
- Include visible Projects
- Include visible Templates
- Filter Projects (filtering by name)
- Project List Type (I'm in, I manage, All my projects)

Create Text Content action - Significantly improved action with multiple more parameters and capabilities.

7. Known issues and limitations

7.1 First Search Index rebuild

As with every upgrade, a full search index rebuild needs to happen after upgrading to WebCenter 16.1.
Note however that **the first search index rebuild after upgrading to 16.1 can take considerably longer** than a standard index rebuild as it will regenerate all CAD file related search perspectives in the Filestore.

7.2 WebCenter iOS App limitations

The WebCenter iOS App has known limitations when connecting to WebCenter 14.0.2 or earlier. These are described in [KB185607215: WebCenter - Which versions of WebCenter are supported by the WebCenter iOS App for iPhone/iPad](#) .

7.3 Packaging Content Management

When there are multiple users for approving a language for Text Content document, in HTML5 Viewer, user will not see the "my approval icon", instead he will see only pending approval icon.

If user with an updated locale mapping in Viewer updates Text Content and saves, the locale mapping will be lost. The user has to refresh the Viewer page and redo the locale mapping.

Update Table Document node will add new document version even if Table is not updated with changes configured in the "Values" tab.

7.4 Document references and Documents table

7.4.1 *Project document reference attribute value can be reset by completion of a task*

Having a task configured to "Synchronize Project Attributes and Task Specifications" AND "Update empty values" (in Task Type -> Specifications tab) with the same document reference attribute/specification as in project attribute category.
If the task is completed when the document reference specification is read-only, the update of the corresponding project attribute document reference value resets the project attribute value to empty value no matter what value is in the completed task document reference specification.

8. Additional Upgrade notes

8.1 Cleaning up old search indexes

As with every upgrade, a search index rebuild needs to happen after upgrading to WebCenter 16.1. After the index rebuild however, some potentially rather big folders will be left on the file system which will no longer be used.

After 16.1 is installed (can be before the index rebuild) these folders can be deleted to save space. Only folders having a name starting with "00001_" in the directory "C:\Artios\WebCenter\searchindex" should be removed. All the folders starting with "00000_" should be kept.
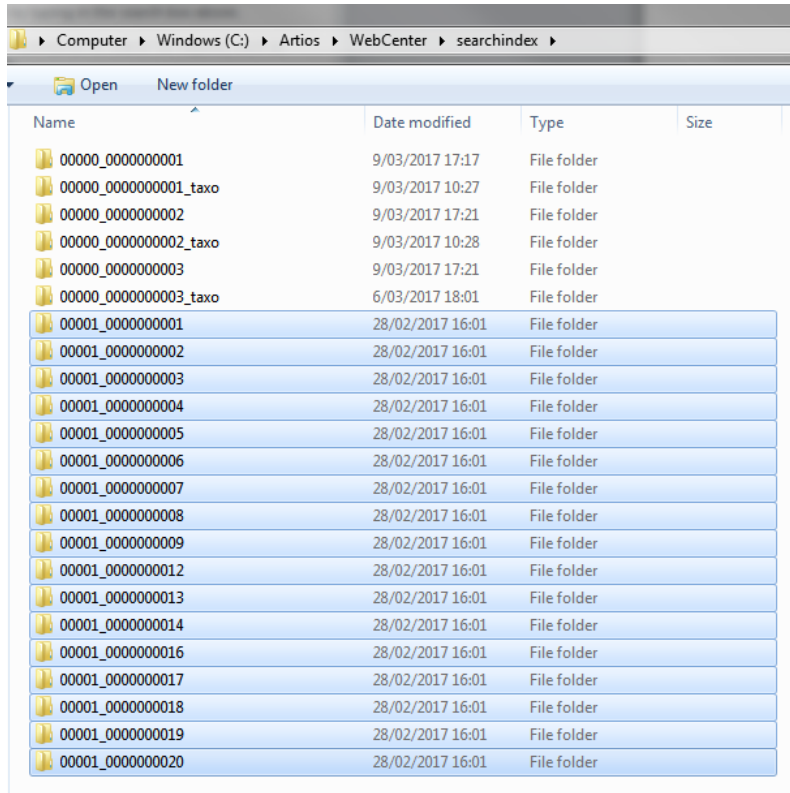
9. Solved customer issues

The following issues logged or reported by customers have been solved since WebCenter 16.0.

JIRA Number	CS Number	Description
WCR-17949 WCR-15920 WCR-16289	CS00837343 CS00693774 CS00691177	List attributes got disconnected when removing views in the Attribute Category
WCR-17933	CS00830958	When searching for tasks/documents/projects that have a date between two dates specified by the user Search will now include both dates in the results. (In 16.0 the last date was excluded and first date included, before 16.0 both dates were excluded)
WCR-17911	CS00836389	Upload Multiple Documents link disappears on Task Execution Page when form builder is used
WCR-17884	CS00832719	Fixed issue with Export to Excel which occurs when saved searches are added in the menu
WCR-17378	CS00802245	Using an asset browser in a document reference, copy a search parameter in the project creation form
WCR-16867	CS00720696	When uploading a new version of a graphic document, the document will be made viewable even when something goes wrong in the upload process such as starting an approval cycle. (approval cycle could fail because of unassigned roles)
WCR-16824	CS00707629	In search results for a design or canvas search, column name for depth is called "height" instead of

		"depth".
WCR-16762	CS00718576	Asser Browser not working correctly on all situations
WCR-16479	CS00703934	Menu Disappears when using the custom create task button
WCR-16454	CS00705992	In case you want to change the time part (drop-down) of a date/time parameter for a custom report, you get an error "Please enter a valid value for the parameter …"
WCR-16444	CS00705939	Notifications coming from workflows (Send Notification, or Task Node notifications) to groups were not respecting group e-mail settings. E-mails were still sent to all members.
WCR-16375	CS00704116	Incorrect handling of trailing spaces in ZIP folder names caused Check and Register to fail (ZIP Graphics)
WCR-16372 WCR-15116	CS00704825 CS00681294	Empty router corrupts workflow XML. Fixed a bug that corrupts the workflow when leaving the attribute field empty in the router node.
WCR-16291	CS00701937	A PM user cannot create a project from a template as get permission denied. (User has only view and add permissions)
WCR-16278	CS00699985	PAFSC files are supported now: when uploading, they will be recognized as graphic files and they will be rendered. They can be opened in the viewer.
WCR-16229	CS00697734	In case a document has been approved in one project and then moved to another project, some operations (like uploading a new document to the document doc. ref. attributes) can wrongly resolve the current document project to be the original one.
WCR-16169	CS00699376	Project Manager is not copied when copying a project
WCR-16168 WCR-16148	CS00699439 CS00698771	Project creation gives an error when Rich Text attributes are mandatory
WCR-16134 WCR-15832	CS00698879 CS00693599	Restricted Set sync with Project Attribute category gives an error.
WCR-16088	CS00698787	Task Execution Page - on filter option in Task Assignee drop down: when having a lot of users/groups in the project, and when using the filter to find back the user, sometime the user was not listed.
WCR-16013 WCR-15265	CS00696643 CS00681276	Not possible to run searches which contains '/'
WCR-15838	CS00693887	Saved Searches cannot be exported/imported when deleted attributes are present on it.
WCR-15834	CS00692866	Due date was still in red in the UI even task was completed in a project.
WCR-15801 WCR-14834	CS00692855 CS00677792	Printing of Attributes page is not correct.
WCR-15769	CS00692548	When Task Execution view is added to a task, multiple upload link is not shown.
WCR-15768	CS00692533	Minor corrections of Russian translation
WCR-15700 WCR-14840	CS00690899 CS00674493	Chili viewer does not work in WCR via Safari v10

WCR-15578	CS00688530	CreateProject SDK call did not support sending event notifications when modifying an existing Project. Added the same event type handling as for ModifyProject SDK call: - General Project Info (Project Name and/or Description) changed - Project Status changed - Project Members Invited (when changing Status from non-Active one to an Active one) - Project Due Date changed
WCR-15376	CS00686448	Alignment issue with attributes and titles on Attribute Category page
WCR-15334	CS00685797	My Approvals action buttons on My Work page no longer overlap with document name and document selection box.
WCR-15311	CS00684796	Double dropdown arrow shows for cascading attributes on search results page
WCR-15295	CS00684285	When a view was requested that was not available (e.g. Creation on Project Creation page), the attribute category switches back to the Default view, but not all options of the view (like for example keep session alive) were respected.
WCR-15273	CS00682330	Fixed a rendering issue in IE where the label of the "browse" input was not entirely displayed.
WCR-15270	CS00682328	UI change applied. On attribute category, was not possible to change the title style to 'attribute' style.
WCR-15238	CS00682462	When the attribute category was outdated (this can happen when you rename an attribute), then the export of projects did not work well. When trying to export the project using the SDK, an unclear error message was shown.
WCR-15156	CS00680103	When downloading multiple documents with non-ASCII characters in the filename, the name of the document were replaced by unreadable characters in the zip file
WCR-15122 WCR-14403	CS00679898 CS00669074	Task allows to be completed without required attributed to be filled in on task execution page.
WCR-15119	CS00678725	After upgrading to WebCenter 14.1.1 or later, the DB scripts could give an error on certain SQL queries.
WCR-14904	CS00680273	It was no longer possible to find spaces with a * in search
WCR-14866	CS00678530	When opening the TEP and the task has a workflow, the completed button is not available. Normally, WF tasks will close the upper task when possible, but in case a condition is not met, the task remains open and the user does not have the possibility to close the task manually.
WCR-14827	CS00677024	Improved error handling when opening Collada files which have too complex geometry to display.
WCR-14795 WCR-14325	CS00676198 CS00668885	In case a template was configured to define the PM, some other operations requiring PM rights could get wrong during the project creation.
WCR-14786	CS00670903	When clicking one of the approval buttons in the HTML5 Viewer you could get an error

		complexApproval.approveRejectDialog: TypeError: cannot set property 'onmouseover' of null which is now fixed.
WCR-14779	CS00675887	Printing of project attributes was showing scrollbars for images.
WCR-14770	CS00675549	Form Builder: Assign Roles is only visible when "Invite Other Members" is enabled
WCR-14769	CS00669616	Possibility to create project with required attributes on project creation.
WCR-14747	CS00674957	WebCenter will now correctly capture resolution of PNG and BMP files uploaded for viewing. As an effect, files of these formats can easier be compared with other file formats in the viewer.
WCR-14694	CS00673591	In the HTML5 WF Editor's Send Notification and Task Type nodes, it is now possible to add the <head> HTML tag in the message's source code. This allows the use of the <style> tag to define custom styles.
WCR-14517	CS00671348	Fixed bug where submit workflow node that had a workflow error could not be retried.
WCR-14451	CS00671442	Annotations of Reference Document now loading automatically when using the "View Reference" compare mode.
WCR-14420	CS00670050	Saved Searches with SmartNames doesn't save the search criteria Version Author as ME
WCR-14415	CS00665383	Typo in the indexing code caused ArtiosCAD Design and Canvas documents to be stored with DEPTH property set to WIDTH value
WCR-14403 WCR-13407 WCR-16967	CS00669074 CS00648175 CS00719960	Task allows to be completed without required attributed to be filled in on task execution page.
WCR-14402	CS00669777	The annotation filters in the annotation overview tab of the document details page are now localized.
WCR-14366	CS00668948	Pageindex parameter has no default value in the WebCenter 16 SDK
WCR-14327	CS00668958	Document Source Project + Folder doesn't work in Tasks
WCR-14297	CS00665099	Fixed bug where select parent workflow node only looked at up to 200 parents.
WCR-14233	CS00665223	Annotations not appearing using Safari
WCR-14163	CS00638732	Attributes are populated even if ArtiosCAD file is downloaded from within WebCenter.
WCR-13996	CS00662381	Now it is possible again to print images and background colors when printing from a WebCenter Page
WCR-13944	CS00657641	When migrating documents using ArtiosCAD, the documents are not auto named.
WCR-13942	CS00657527	On a freshly installed system, creating a project thumbnail automatically from a document thumbnail (MAKE PROJECT THUMBNAIL) could fail.
WCR-13915	CS00648544	Corrected Screen display on Ink Information page for Digital film documents with multiple screen definitions per ink
WCR-13914	CS00659164	Menu buttons and page titles now stay visible in all situations.
WCR-13904	CS00658313	Project attributes couldn't be updated from ACAD.

WCR-13706	CS00656555	Unsupported CAD line style 70 was added
WCR-13661	CS00656167	Canceled status was not localized in some pages in WebCenter.
WCR-13570	CS00649724	It is possible to create new users via CreateUser.jsp SDK call even on systems not connected to LDAP again.
WCR-13559	CS00651829	Problem fixed when different versions of a document have a different approval. In some cases, it could be that the final approval could not be given because of a 'corrupt' approval setup.
WCR-13537	CS00650631	Fixed JavaScript & Workflow row action buttons in the rows of Document Search Results
WCR-13515	CS00649164	From now on user can configure documents rendering in Task Execution page Documents section even if the particular task type doesn't allow to add documents. The reason is the task can for example "inherit" documents from a previous task / node in a workflow and this change is to allow power users to control how they should be displayed.
WCR-13514	CS00647910	Workflows did not complete when using a copied complete status node.
WCR-13334	CS00645678	Document source New (a new document from predefined document template(s)) now works correctly even if there are multiple such a document sources configured in project creation page, each using a different document template.
WCR-13328	CS00645597	When having different instances of WebCenter, and when changing (adding/removing/modifying) the project statuses in one instance, the other instance would not update to have the new Project Statuses. This is fixed now. Note that there is a delay of 30 minutes until the instances will update their project statuses
WCR-13206	CS00641534	Not possible to compare versions larger than 5 (NrOfVersionToKeep) for multi-page PDF
WCR-13156	CS00639789	Pagelists with different page sizes could make the HTML5 Viewer not load the pagelist document.
WCR-13039	CS00631409	When deleting a user/group/role that is added as an approval user on a lot of projects, an SQL error was generated. This happens only on Oracle.
WCR-12375	CS00616758	Attributes not updated correctly when document is added as reference in multiple ways.
WCR-12285	CS00622495	Certificate issues with SAML
WCR-12130	CS00570887	Solved issue with LDAP users not being able to log in if LDAP folder contained special characters like + or #.