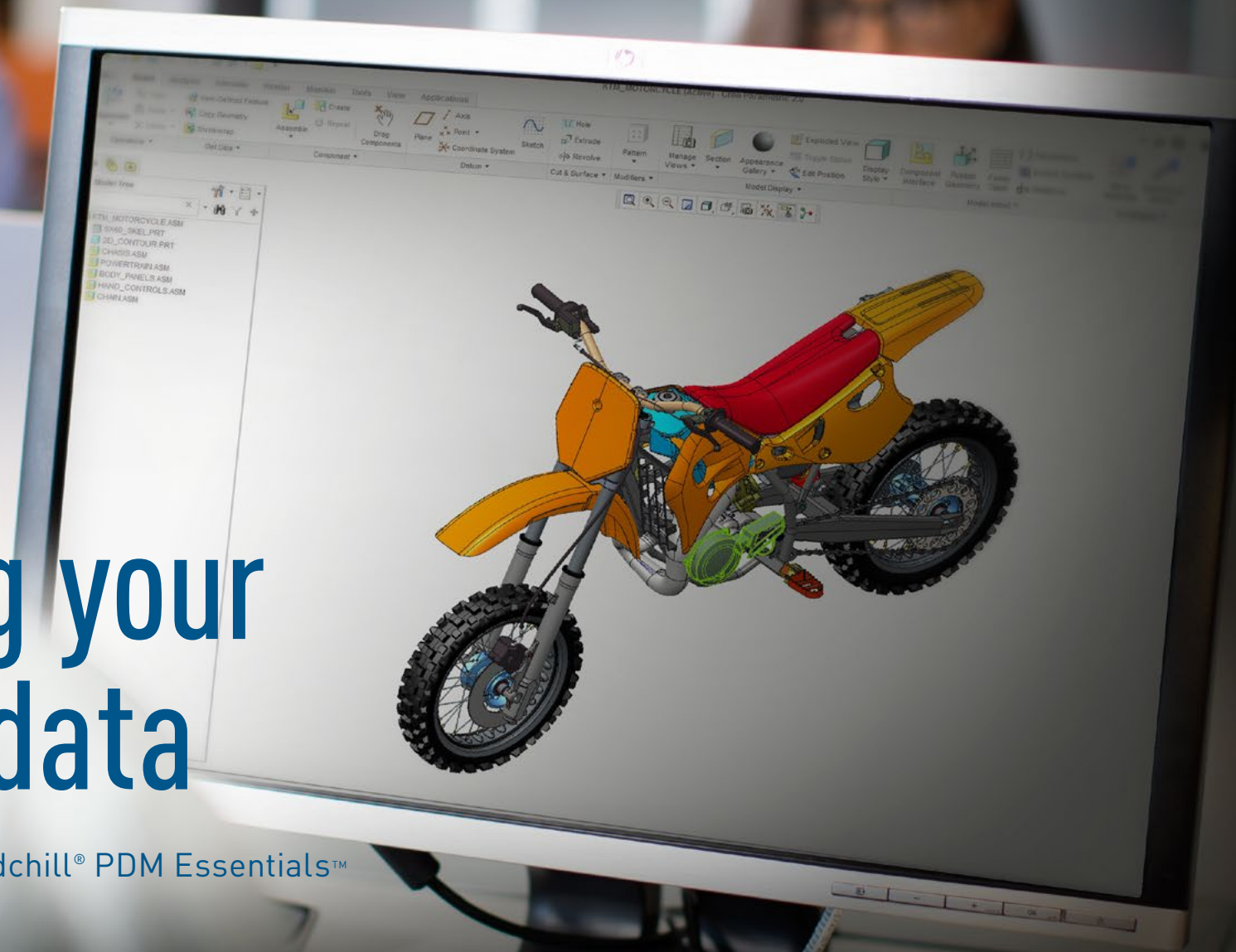


# Managing your product data

An introduction to PTC® Windchill® PDM Essentials™



Within today's highly competitive, geographically dispersed design and manufacturing environments, effectively managing product content has never been more important. The consequences of using outdated versions, losing files or failing to properly incorporate engineering changes can be severe, resulting in revenue and profitability declines as well as lost opportunities.

The PTC is a recognized leader in helping manufacturers achieve sustained product and service advantage.

The PTC Windchill product family suite is an important part of delivering that value to customers.

This ebook introduces you to PTC Windchill PDM Essentials, a quick to deploy, easy-to-use version of PTC Windchill that can help smaller organizations effectively organize and manage their product content.




## Storing and Searching for Product Information

For designers and engineers, locating product-related information is consistently among their most pressing concerns. Many organizations are frequently hampered in their search efforts by deficiencies in their existing systems. Sharing files on network drives does not allow for meaningful search and reuse of existing content. This difficulty is compounded as the complexity and quantity of products increases.

PTC Windchill PDM Essentials is the central repository for all product information. As such, there is a “single source of truth” for all product related content such as CAD models, documents, technical illustrations, calculations, and requirement specifications. The entire history for every piece of content is recorded as well as the relationships between content so you can easily answer questions such as — “Who accessed this content?”, “What changes were made?”, and “Which products use a particular component”.



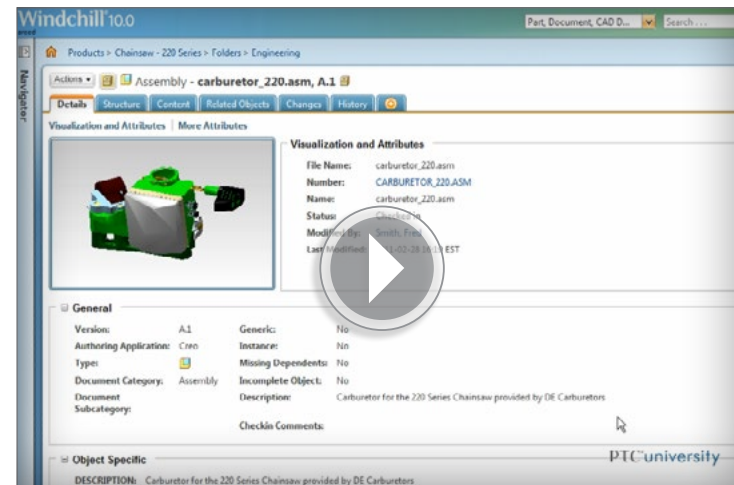
To quickly find content, the user interface always gives you immediate access to searching and browsing capabilities; from a generic toolbar at the top of the main screen to functional specific windows such as the part structure tab. Searches can be generic (e.g. find all products that begin with “101”) or complex (e.g. find all components created by me after a certain date that have been released).



### Definitions

- Content
  - Any information - CAD models, Microsoft Word documents, PDFs or spreadsheets - related to the design, development manufacturing or service of a product.

## Learn More



Easy-to-access search and browse tools, context-sensitive help and other features make it easy to navigate.

## Managing PTC® Creo® Models

Many organizations utilize PTC Windchill PDM Essentials to centrally manage models created with PTC Creo, PTC's premier design software. If you want to change a model, you first "check-out" the model to ensure that only one user at a time can make design changes. This prevents the confusion that results when multiple changes, some of which can be contradictory to one another, are made simultaneously. PTC Windchill PDM Essentials also enables you to keep track of who made which changes and when those changes were made. This provides full control over the CAD information and ensures that all stakeholders are accessing and using the most up-to-date designs.



### Definitions

- Check out  
This function allows you to "lock" an item indicating their intent to modify the item and prevent other users from submitted conflicting modifications.
- Check in  
This function relinquishes exclusive control of the item; thus giving other permitted users the ability to change it.
- Workspace  
A workspace is a private area where you can manage your CAD work and perform CAD data management operations.



## Managing Multi-CAD design environments

Although most organizations attempt to standardize on one specific CAD modeling tool, many are compelled to manage more than one type of CAD tool since they work with multiple clients, vendors and partners — each of which may use a different system. PTC Windchill PDM Essentials works efficiently with all major MCAD

systems so it can be used to store and control access to all CAD information. And, just like PTC Creo, users can access and leverage data management capabilities (like check in and check out) without leaving their native MCAD environment.

## Managing Product Structures

A product structure contains all the individual parts for a given product and is also known as the Engineering Bill of Material (eBOM). Given its ability to “read” CAD models, PTC Windchill PDM Essentials can import a CAD model and generate a part structure based on the CAD model information. Once defined, this part structure can be used to streamline tasks — such as exporting a BOM to obtain a vendor quote or transfer information to an ERP system.

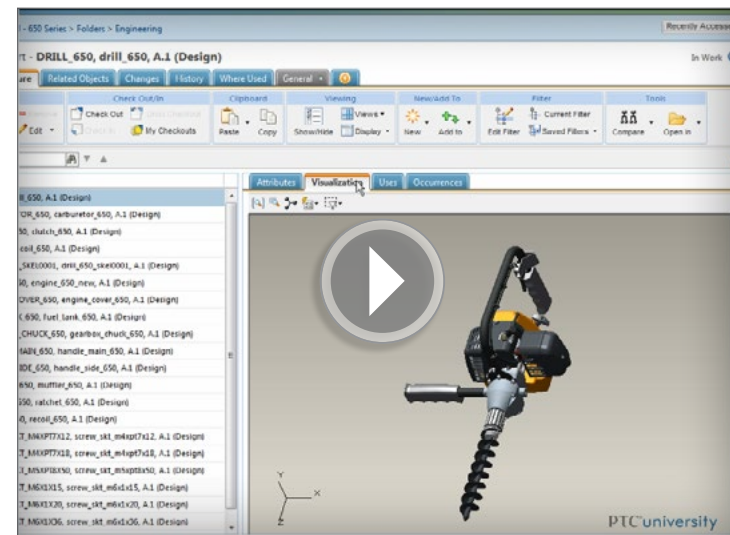
In essence, the product structure serves as the framework which contains all residing content.



### Definitions

- **Product Structure**  
A product structure contains all content - such as CAD files, specifications and assembly drawings - relevant to the product.
- **Associate**  
By establishing “links” between one product and another or between a content item and a part, associativity helps engineers understand relationships and allows for affected content to be automatically updated.

## Learn More



Navigating the product structure is easy using the Product Structure Browser

## Configuration Management

Any particular part in PTC Windchill PDM Essentials can be reused across numerous product structures; the original part definition is automatically referenced within other product structures. As such, when you make a change to a part in PTC Windchill PDM Essentials, the updated information automatically appears in any product that uses that part. By reusing existing content, this type of “building block” design saves a great deal of time and enhances overall efficiency.

Version management is used to keep track of all of these changes while maintaining the same part names. For example, if part A is modified, PTC Windchill will define the new item as part A version 2.

PTC Windchill PDM Essentials can keep track of multiple versions at the same time, so you can easily see which part versions were used in the same product over time. And for time-sensitive products, an effectivity date can be assigned to enforce that a certain version shouldn't be used before or after a certain date.



Since all content is aggregated within a central repository, it's easy to find and reuse information that already exists. This prevents anyone from inadvertently generating multiple definitions of the same part — an all-too-common occurrence that can have serious consequences.

Finally, you can preserve a configuration from a particular point in time; called a baseline. Having these historical snapshots makes it easy to do “before and after” comparisons.

### Definitions

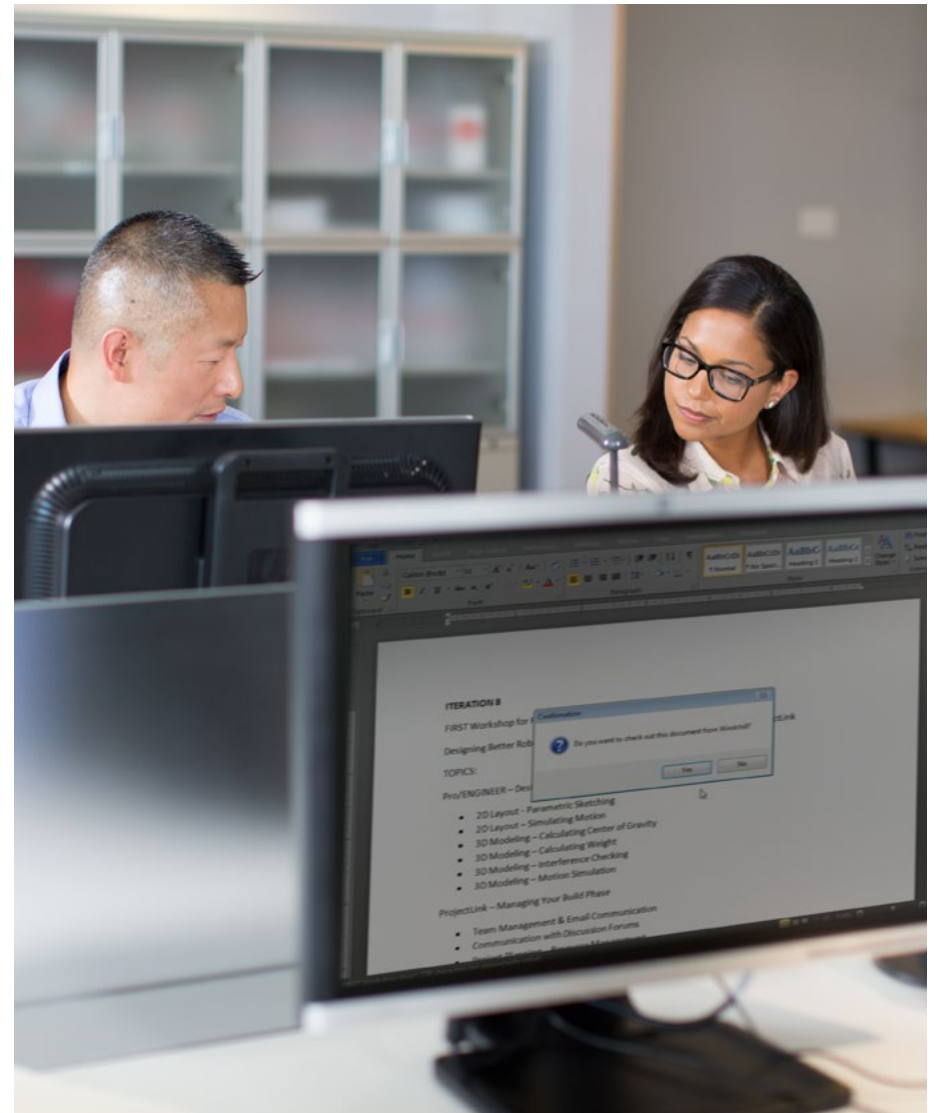
- Versions, Revisions and Iterations

Most content in PTC Windchill PDM Essentials is assigned a revision and an iteration. Together, they define the content's version (e.g., if A.1 is the version, then A is the revision and 1 is the iteration).

## Managing Documents

Organizations accustomed to storing documents on shared network drives often have difficulties locating files, determining authorship and managing changes. Using the same tools that are used with CAD documents, like version control and check in/check out, PTC Windchill PDM Essentials also helps organizations efficiently manage documents.

Many document management activities can be done in Microsoft Windows, with PTC Windchill PDM Essentials running "in the background." You can browse through product content and folders in Windows no differently than looking at other PC files. When a Word document is opened, you are asked if you wish to check out the document. After editing the document, you're asked if the document should be checked back in. If so, all comments and changes will be automatically captured.

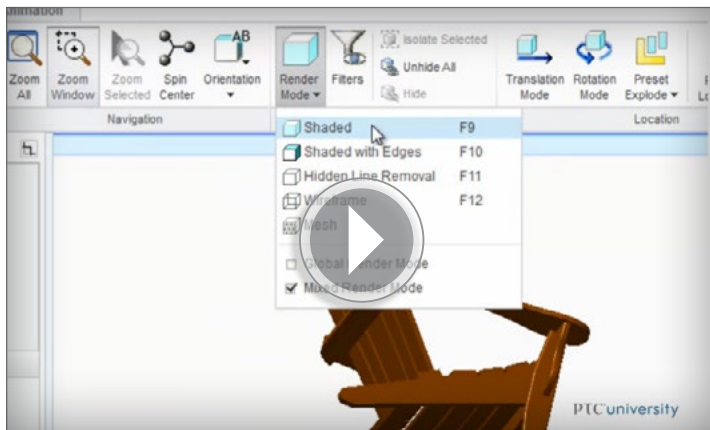




## Visually interrogate product designs

Many people inside and outside a company who need to view product models don't have a CAD design tool installed on their computer. PTC Windchill PDM Essentials comes with PTC Creo View Lite, PTC's high-performance, easy-to-use visualization tool. With its compact, yet accurate 3D viewable format, anyone can quickly access and interrogate a product model – including adding comments (or markups) and taking measurements – without disturbing the original design file. You can also use PTC Creo View Lite to view many other types of drawings, images and documents.

### Learn More



Spin, zoom, fly and more with PTC Creo View Lite



## Lifecycle promotions

Many organizations lack processes for effectively managing change. Frequently, difficulties arise because changes are “managed” on an ad-hoc, haphazard basis. In fact, being accustomed to informal practices, such organizations may even resist the idea of clearly defining an approval or promotion — even though such processes are critical to maximizing success.

PTC Windchill PDM Essentials offers organizations the ability to automatically manage simple promotion and approval processes that build upon the CAD management capabilities that everyone is already using. It is ideally suited for today’s complex manufacturing environment — one in which stakeholders tasked with approval responsibilities are often scattered around the globe. PTC Windchill PDM Essentials makes sure that every required approval has happened.

PTC Windchill also “knows” the supporting information — such as an inventory, associated costs and analysis data — that one needs to see before approving a promotion. It also provides a complete audit trail of the entire process.



### Definitions

- Workflow  
Workflow defines the steps involved in completing a task; from origination to completion.
- Promotion Process  
A series of review and approval steps that is gone through before a CAD document, part or document goes from one life cycle state to another (ex. Work-in-progress to approved)





## Collaboration

To foster collaboration in today's geographically dispersed organizations, PTC Windchill PDM Essentials provides a centralized location in which all stakeholders — including members of different external groups, such as partners, vendors and customers — can share content like designs and other critical information. Furthermore, you can securely control the content each participant sees and accesses. For example, a contractor can only see selected subsets of product information — or bids can be solicited from multiple partners with each partner only able to see their copy of an assembly drawing.

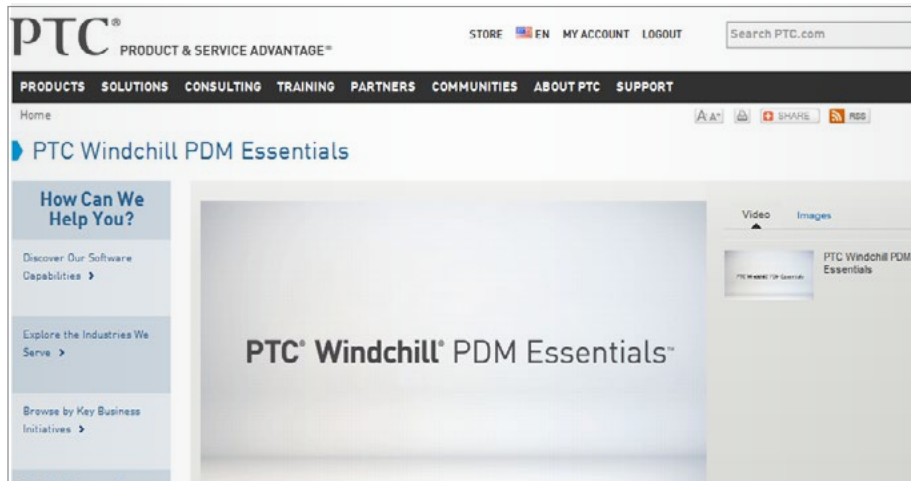
PTC Windchill PDM Essentials can also generate additional formats, automatically or on-demand, to better share information. For example, once a design is released into production, you can generate formats such as IGES and STL for manufacturing and other departments.

In serving as a collaboration platform, PTC Windchill PDM Essentials streamlines the exchange of files – large and small. The product can manage straight forward collaboration activities (e.g., allowing multiple colleagues at different locations to collectively iterate a presentation) as well as more involved situations (e.g., enabling separate teams to jointly investigate multiple design options).

## Find out more about PTC Windchill PDM Essentials

PTC has many free tools and resources to help you learn more:

## EXPLORE



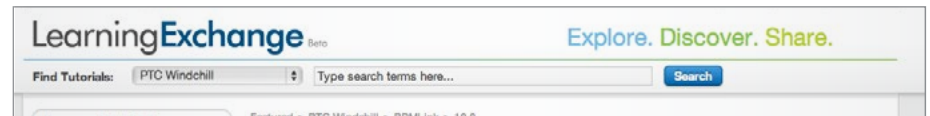
The product pages on ptc.com offer you videos, demonstrations and other resources to help you learn more about the product.

## DISCUSS



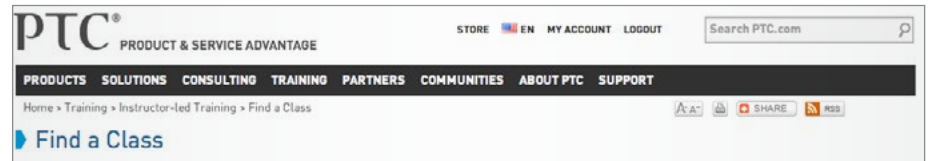
Join the conversation with other users at PTC Community.

## DISCOVER



Visit the PTC Learning Exchange for free tutorials created by PTC product experts.

## LEARN



Learn from the experts at PTC University with role-based courses that are offered online as well as in classrooms around the world.

Learn more about PTC Windchill PDM Essentials today!

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