NX for Knowledge Re-use

Best-in-class knowledge re-use solutions reap the highest savings benefits for your company

Benefits

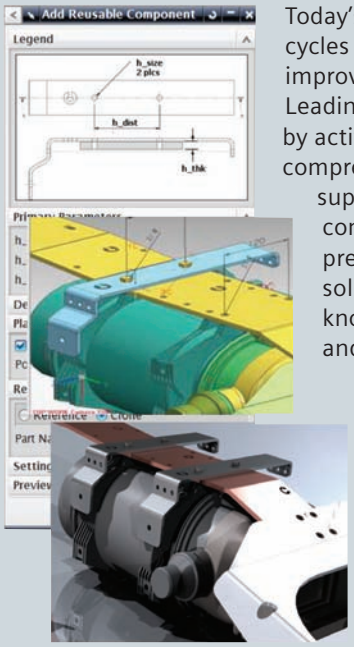
- Promotes efficient re-use of NX models and design aides throughout the design cycle
- Dramatically reduces design development time, cost and effort
- Prevents parts duplication from proliferating your corporate database
- Helps your product development organization standardize to a uniform set of design methodologies
- Reduces time-to-market for product variations
- Saves valuable designer time by providing out-of-the-box standard parts libraries
- Eliminates need for specialized expertise by leveraging codeless capture techniques

Features

- Reuse Library that functions as a central re-use platform and repository while facilitating:
  - Ability to drag and drop re-usable objects into an NX session
  - Automatic part member selection
  - Automatic "one-step" mating

Summary

NX™ product development software enables companies to meet higher cost-cutting targets and faster time-to-market deadlines by facilitating knowledge re-use. NX provides four key capabilities – including knowledge capture, management, location and automation tools – that your company can leverage to re-use many different kinds of knowledge. These capabilities help you transform re-usable designs hidden inside large databases (as well as knowledge that resides in the minds of your value chain's experts) into company-wide knowledge that is 100 percent visible and accessible to all users who participate in your design cycle.



NX Reuse Library accelerates product realization.

Today's product development programs and design cycles are challenged to reduce development costs, improve productivity and increase product quality. Leading-edge companies pursue these objectives by actively adopting re-use strategies. NX provides comprehensive knowledge re-use solutions that support these strategies, enabling your company to nurture and leverage its most precious asset – your product knowledge. These solutions maximize the value of your product knowledge, drive your cost reduction initiatives and accelerate your change processes.

NX knowledge re-use comprises four high-level functional capabilities that enable you to implement a comprehensive re-use strategy.

- Capture functionality enables you to rapidly capture many different kinds of product knowledge
- Manage functionality enables you to manage the knowledge you capture in a repository of re-usable design elements and propagate their use through enterprise libraries

NX

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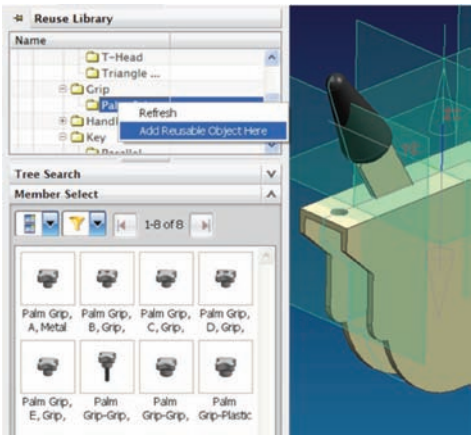
NX for Knowledge Re-use

Featrues *continued*

- Direct integration with Teamcenter's classification capabilities
- Geolus integration for exact and similar geometric shape searching
- Product Template Studio for codeless knowledge capture
- NX Machinery Library ready-made parts in all major standards
- Locate functionality enables you to organize your enterprise's design assets into Teamcenter® software-managed hierarchical structures so this knowledge is more highly visible; NX integrates with the Geolus® Search engine to enable users to instantly mine your NX environment for specific types of designs
- Automate functionality enables you to automate design workflows with knowledge embedded in re-usable design objects



Capture re-usable feature/object templates through simple cut and paste into the NX Reuse Library.

Capturing re-usable knowledge during the design process

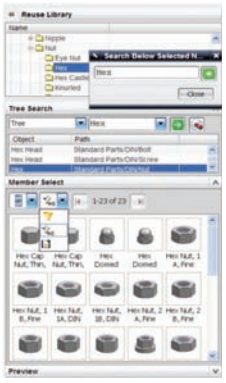
Capturing knowledge and getting it into a digital product development environment is crucial for realizing the large rewards associated with knowledge re-use. With NX, your user communities can rapidly capture and create re-usable design elements while they participate in everyday design processes.

Other types of knowledge can also be added to the Reuse Library by using dedicated dialogs that capture knowledge without the need for coding.

NX Product Template Studio is one such codeless tool. Using simple drag-and-drop methods, an NX designer can greatly simplify interaction with useful parametric models by quickly and easily wrapping a descriptive user interface around the design. This packaged template can then be easily re-used by subsequent designers. With the ability to include product manufacturing information, drawings, kinematics or dynamics analyses, finite element analyses and more as part of a product template package, Product Template Studio has proven to be a powerful new way to capture robust, self-validating modular packages of product design in an easily re-usable form.

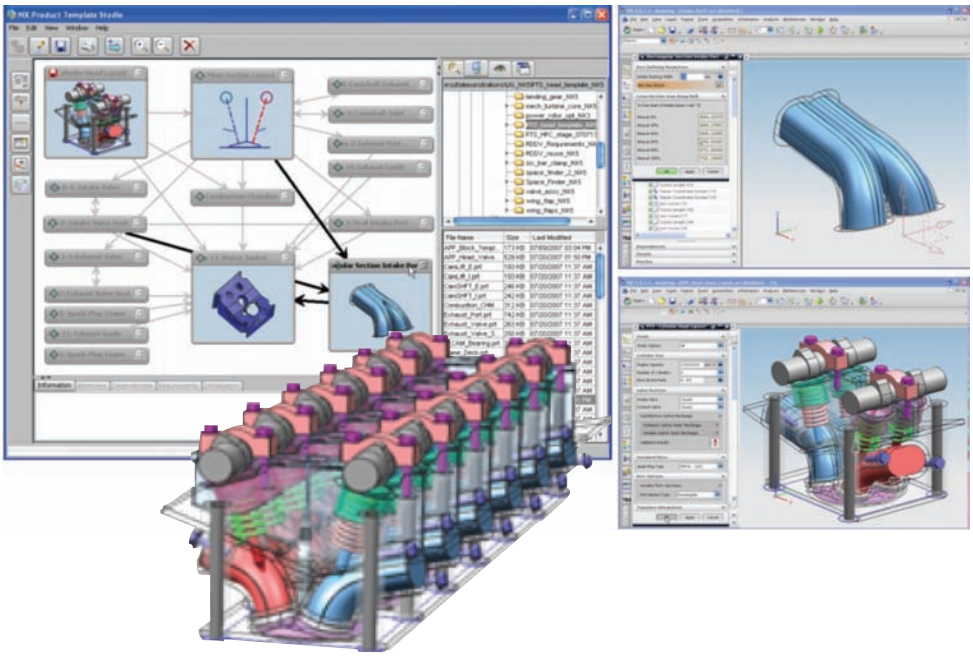
Managing re-useable knowledge through a common repository

The Reuse Library provides NX users with a common repository for locating re-usable knowledge on an enterprise basis. A resource bar on the NX graphics screens places an entire repository of re-usable knowledge at your designers' fingertips: re-usable designs; standard parts; design features; and Product Template Studio templates. Designers quickly locate what they need, and drag and drop the object into the NX session.



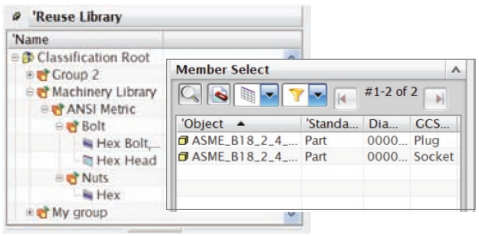
NX Reuse Library provides quick access to re-usable design data throughout the design process.

Your company easily administers these libraries, organizes their content, adds new assets to existing libraries and protects this knowledge from accidental changes. Individual users can create their own sets of re-usable assets, which can be promoted into company-wide libraries once these assets gain traction throughout your enterprise.

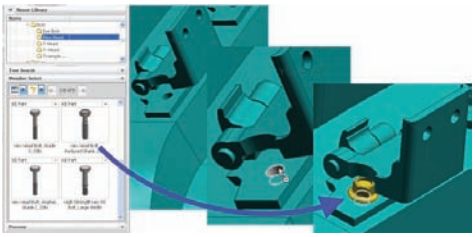


Facilitating fast access and promoting design re-use

NX integration with Teamcenter's classification capabilities NX designers have instant access to the classification hierarchy without exiting the NX environment. Designers who work within an NX session can navigate in real time through a class hierarchy, view class attributes and issue queries to search for class members based on ranges of class attribute values. Once the class member is found, designers simply drag and drop the member into the NX session.

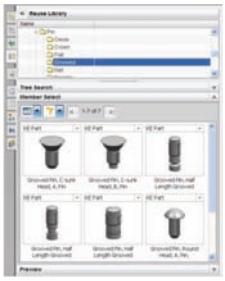


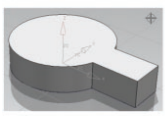
NX integration with Geolus Geolus Search is a high-performance 3D geometry search engine allowing users to instantly mine their enterprise's large heterogeneous data sources for similar or exact designs, and receive results within a fraction of a second. Geolus integration reduces your company's part development costs by enabling designers to find part designs that already exist instead of designing entirely from scratch. Geolus is also used to find and prevent duplicate parts from entering into your corporate databases.

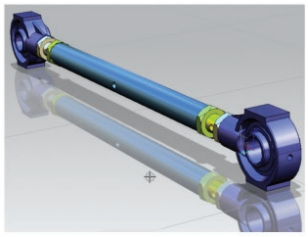


Automating workflows to accelerate design
NX provides a variety of automated design workflows that exploit embedded knowledge captured within re-usable design objects. In a typical use case, NX automatically selects the correct member within a standard part library and mates the member onto the assembly. Constraints are automatically created, standards are automatically enforced and validation checks are automatically executed to ensure correctness.

Ready-to-use standard parts libraries
Above and beyond the four major components that comprise NX's Knowledge Re-use capabilities, your NX environment can leverage the NX Machinery Library of ready-to-use standard parts. This library consists of more than 100,000 standard parts including screws, washers, nuts, bearings, pins and other design items. These parts are available in ANSI, ISO, DIN JIT GB and GOST standards. Once installation in native NX mode or Teamcenter-managed mode is complete, users simply drag and drop any standard part from the Reuse Library directly into an assembly.







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