


How to Successfully Manage Your Company's Product Lifecycle





The process of developing a product is a complex challenge for any company, regardless of whether they are producing a pencil or the latest high-tech medical device.

This holistic approach, known as Product Lifecycle Management (or PLM), which begins at the initial idea phase, moving through design, manufacturing, service and, eventually, disposal of the product , has become increasingly more important with the evolution of modern manufacturing.

Managing the lifecycle of a product has never been an easy task, since the process is made up of a variety of steps, workers, departments, and suppliers from different locations, and in some cases, different countries.

Along with the inherent complexity of this process, an increase in complex regulations has made managing the product's lifecycle even more important for the success of organizations.

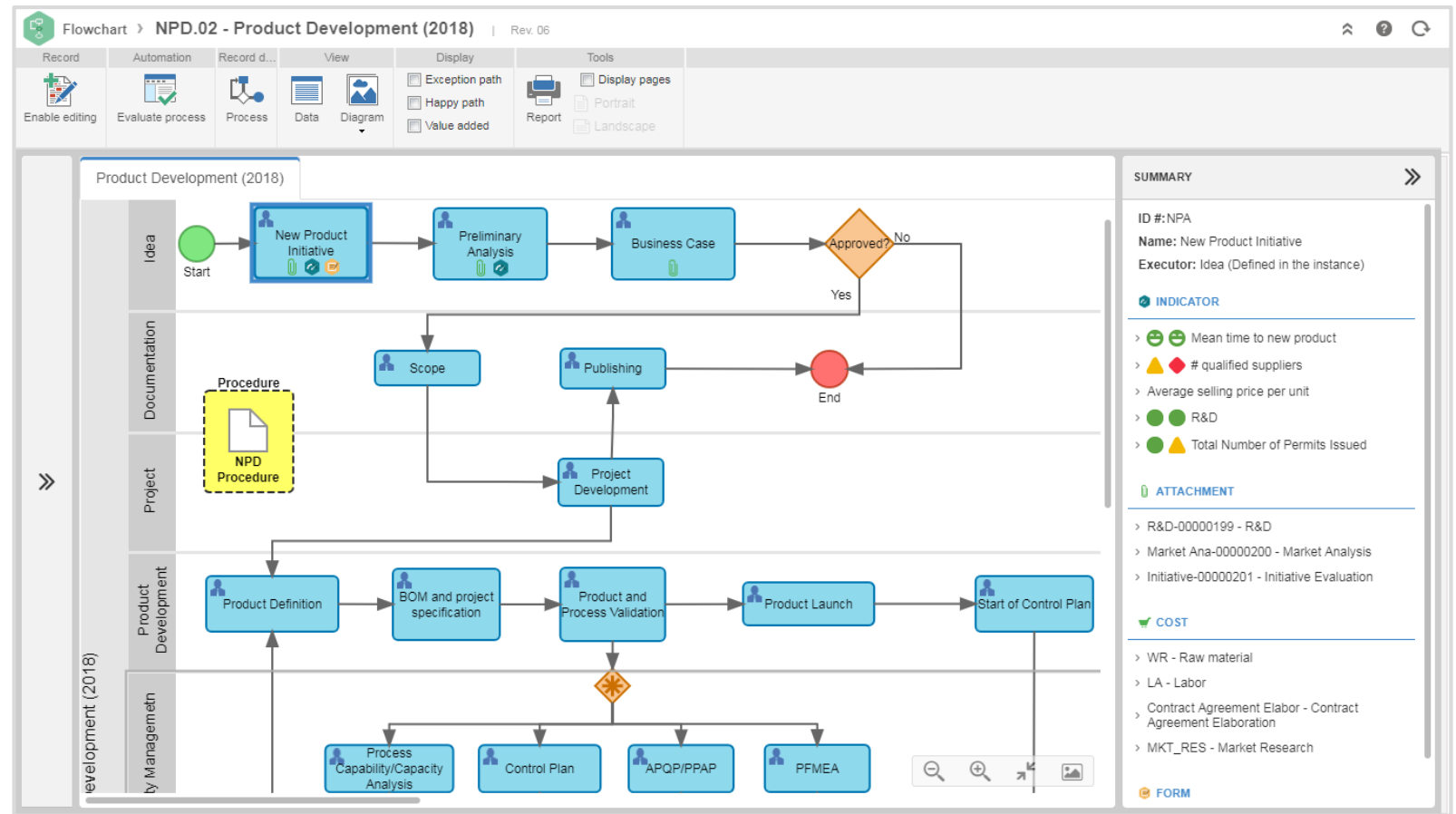
This eBook will show you what you need to do to successfully manage your company's product lifecycle in an organized, efficient and effective manner.

Product Lifecycle Process

The foundation of a successful Product Lifecycle Management strategy relies on how your product lifecycle processes are mapped and configured.

Your processes should be clear, easy-to-use, contain information and data that is permanently accessible, and be able to connect to existing applications and user interfaces.

The goal here is to unify the people, product development processes, and content that moves workflows, providing tools to automate, monitor and analyze manufacturing and business processes.



Idea Management

Ranking data

ID # Name

Description Initiative

	Order	Name	Result	Value	Color
<input checked="" type="radio"/>	1	4 Cylinder Water-Cooled Engine Block	Priority 1	1000.00	■
<input type="radio"/>	2	New Gear Box	Priority 1	940.00	■
<input type="radio"/>	3	Hydrogen Combustion Engine - 2016 Model	Priority 1	870.00	■
<input type="radio"/>	4	Dual voltage motor vehicle electrical system	Priority 1	865.00	■
<input type="radio"/>	5	Hot/cold water tube connection structure for plastic faucets	Priority 2	830.00	■

Total: 10

Created on Last updated Updated by

Next, it is time to identify, prioritize, balance and manage the mix of product development ideas that will make the greatest contribution to the organization's strategy and plans.

At this stage, it's important to derive priority scores and evaluate initiatives to optimize the use of resources.

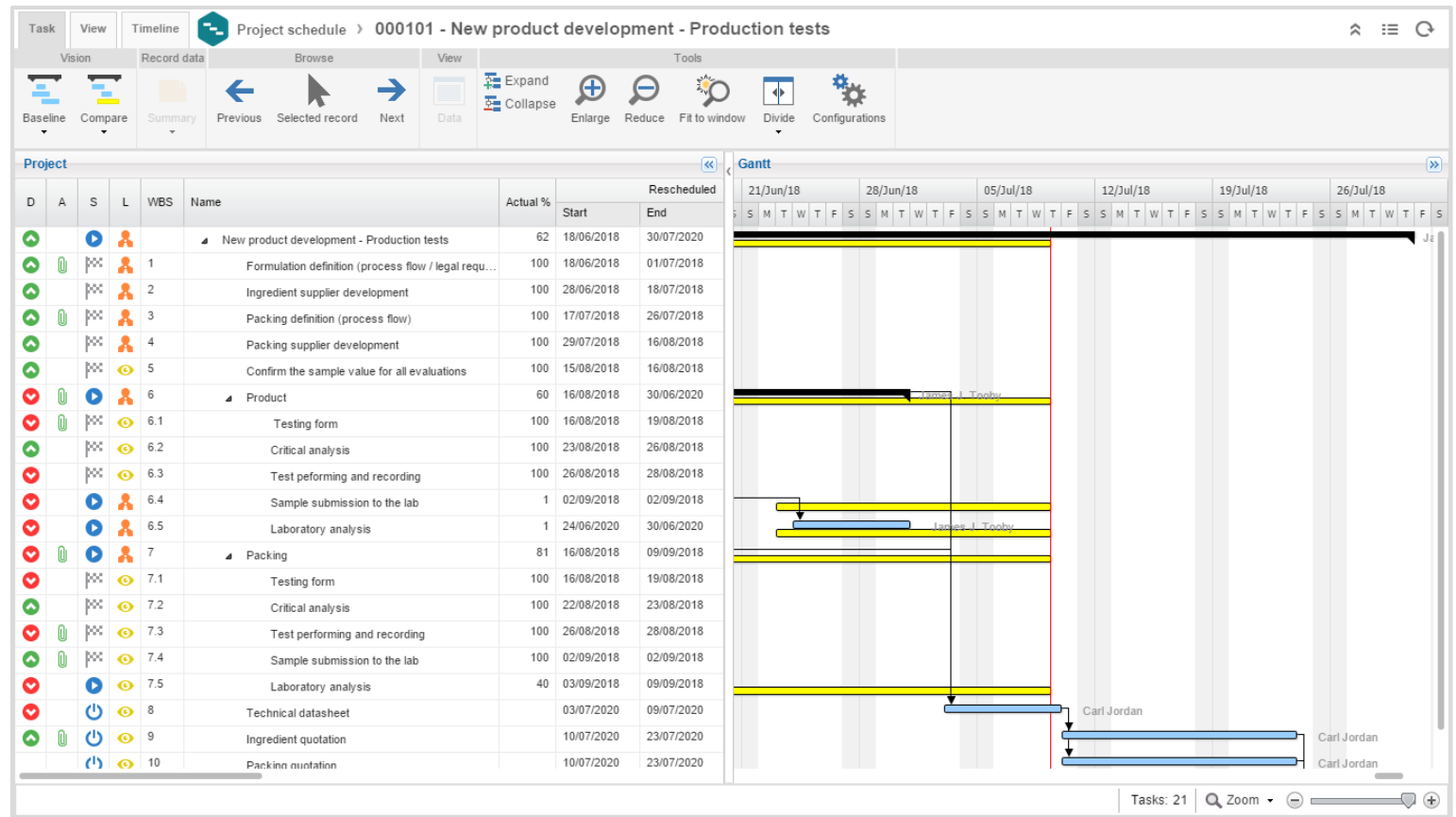
Make sure you also analyze different scenarios through simulations to guarantee that the organization's efforts are focused on the right innovation initiatives in the right strategic areas.

Product Development and Manufacturing Projects

After you've identified which initiatives to concentrate your efforts on, it's now time to plan and automate product development and manufacturing project requests.

The goal here is to streamline project execution and delivery by managing project scope, schedules, quality, risk, costs, and resources. Make sure you also track project metrics, including status, phase, costs, cycle time and indicators.

As for your project resources, make sure you manage and control resource capacity, assignments, allocations, costs, and utilization. It is essential to allocate your resources based on their availability, roles, skills, and competencies.



Product Data Management

The screenshot displays the 'Item data' view for '9082133 - Truck Engine' in a 'Released' state. The interface includes a top navigation bar with icons for General data, Revision, Structure, Electronic file, Characteristics, Documentation, Companies, Tooling, and Associations. A left sidebar shows a 'NAVIGATION' menu with 'General data', 'Properties', and 'Attributes'. The main content area is titled 'GENERAL DATA' and contains the following information:

- Item:** 9082133 - Truck Engine | Released (with a green release icon)
- Revision:** 1 in 3/23/2017 | Current (with a green checkmark icon)
- Item type:** 001.01 - Engine blocks
- Responsible team:** 003 - Quality management team
- Cost:** 37,000.00
- Measurement unit:** Un - Unit
- Drawing ID #:** (empty field)
- Internal item:** ☒ Internal item ☐ External item
- Comments:** V8 Truck Engine for all category TRK5-134.2018-2020 models.
- Created on:** 8/18/2016
- Last updated:** 6/19/2017
- Updated by:** Kevin J. Harper

The next step in successfully managing your company's product lifecycle is managing the product's data.

This is the heart of the PLM process and where some of the most critical tasks will take place. At this stage, the ability to capture and manage consistent, accurate and reliable data about your products is critical.

Some of the data includes:

- Product definition
- Product design
- Product structure
- Engineering data
- Manufactures
- Suppliers
- Revisions

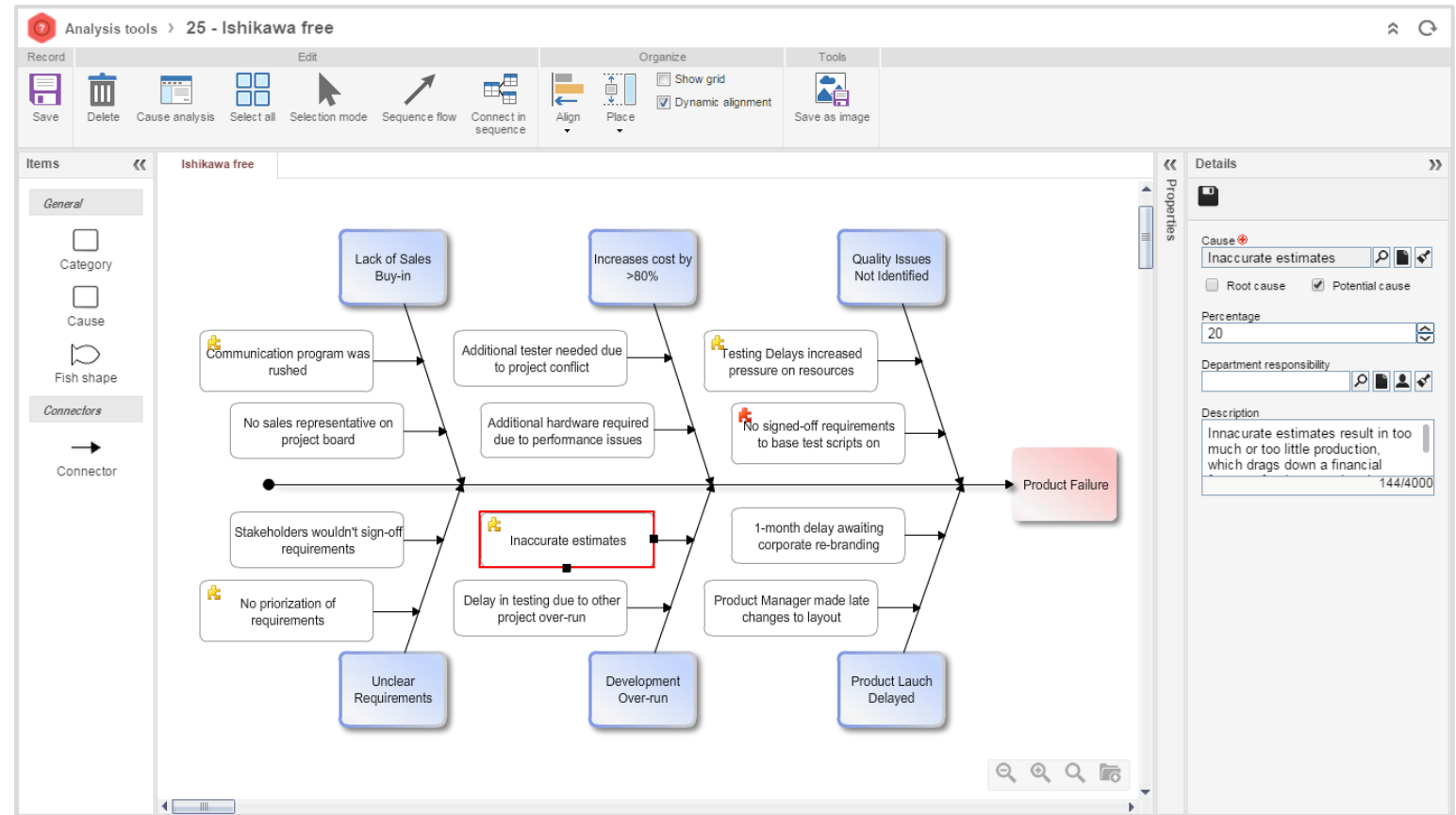
Product Quality

Managing your product quality is another crucial part of a successful PLM Strategy; and across the globe, manufacturers dedicate valuable time and resources to this specific matter.

The goal is to guarantee that the product being released into the market meets the various quality standards not only set by the organization, but also required by law.

Here, it's important to focus on:

- Failure Mode and Effect Analysis (FMEA)
- Product Inspection
- Customer Requirements & Satisfaction



Product Quality | Failure Mode and Effect Analysis (FMEA)

The screenshot displays the FMEA software interface for 'FMEA/131105 - Outer metal - Stamping Process Flow'. The main workspace is titled '210110-1805 - INPROCESS INSPECTION'. A navigation pane on the left lists process steps: 1801 - Receiving material and ins, 1804 - Transfer of raw materials, 1805 - Inprocess inspection (selected), 1144 - Final Inspection (Eng), 1143 - Final Inspection (Qty), and 1145 - Packaging and labeling.

The main area shows a detailed view of a failure mode: 'Accumulation of parts on dies'. The failure mode is selected from a dropdown, and a 'New failure mode' button is available. The failure mode is associated with the function 'Blanking' and the requirement 'Parts should be as per print drawing.'.

Failure mode	Failure effect	Potential causes of failure	Recommended action
Failure mode: Accumulation of part...	Failure effect: Difficult to process th...	Failure cause: Improper method of p...	Recommended action: Resharp Drill
Severity: 6 - Loss or degradati...	Occurrence: 7 - High	Detection: 4 - Moderately high	Responsible: LogUsu - Lora Usher
Classification: Security	Preventive controls for the mode: * Verification ... * PLC control...	Corrective controls for the mode: * Cross verifi... * Guiding pin...	Type: Corrective
Minor failure effects: * Poor aesth... * Warranty fa...	Preventive controls for the cause: * Verification ... * First part a...		Deadline: 10/23/2017

Monitoring failures identified in the failure modes and effect analysis will help the company improve products and processes while also lowering engineering workload, improve resource availability and identify, analyze and improve high-risk components.

It's important to create and monitor indicators for severity and risk priority which will help highlight failure causes, improve product design, reliability, quality, and safety.

Product Quality | Inspection

Inspecting the quality of the goods and materials delivered by suppliers along with delivery and service performance is another aspect that can greatly impact your product's quality.

Create an Acceptable Quality Level (AQL) table to calculate inspection sample sizes and criteria. Also, make sure to link your company's inspection processes to the quality management processes.

The goal here is to increase visibility and traceability of supplier compliance processes, integrate suppliers in the quality management process and mitigate supplier risks.

The screenshot shows a software interface for inspection data management. The title bar indicates the current record is 'PA-057 - Alternator support', which is an 'External finished product' and is 'Finished'. The interface is divided into several sections:

- Record Data:** Includes icons for 'General data', 'Documentation', and 'Nonconformity'.
- NAVIGATION:** A sidebar with links to 'Identification', 'Qualification', 'Inspection' (selected), and 'Release'.
- INSPECTION:** The main section, which is currently 'Approved' (indicated by a green bar and a checkmark icon).
- Inspection Details:** A table showing inspection results for 'AO - Amp Output'. The 'Service center' is '005 - Shipping Center' and the 'Responsible' person is 'Thomas Taylor'. The 'Specification' is 'Nominal value: 1,000.00 (USL: 1,100.00 / LSL: 900.00)' and the 'Measurement unit' is 'Ampère (A)'. There are links for 'Gages (0)', 'Attachments (0)', and 'Documents (0)'.
- Cycle 1:** A section showing the sample size of 8. It includes a bar chart with a green bar for 'Accepted' (Ac) and a red bar for 'Rejected' (Re). The total accepted items are 8 and the total rejected items are 0. Below the chart, there are 8 data points with their values: 1 (950.00), 2 (1,100.00), 3 (950.00), 4 (950.00), 5 (950.00), 6 (975.00), 7 (1,000.00), and 8 (1,000.00).

Product Quality | Customer Requirements & Satisfaction

The screenshot displays a software interface for a 'Customer Complaint Form'. The interface is divided into several sections:

- Top Bar:** Contains the title 'Form > CC01 - Customer Complaint Form' and a breadcrumb 'CC01 - Customer Complaint'. It also includes a set of icons for various actions like Record, Actions, Edit, Organize, View, and Tools.
- Left Panel (Items):** A sidebar with two main categories: 'Components' (Input, List of values, CheckBox, RadioButton, SpinInput, Text, Date, Time, Grid, File, Signature) and 'Structural elements' (FieldSet, Title, Image, Button, Container, Attachments).
- Main Form Area:** The central workspace for editing the form. It features a header with the 'Acome' logo and the title 'Customer Complaint Form'. The form is organized into three main sections:
 - 1. Customer Details:** Includes fields for Title (Mr, Mrs, etc.), Family name (surname), Given names, Postcode, Street address, Number, City, State, Neighborhood, Email address (if applicable), Home telephone number, Business telephone number, and Mobile telephone number.
 - 2. Details of goods or services supplied to the customer:** Includes a date field for 'Date of purchase or service' and a text area for 'Description of the goods or service including make, model, type of service, purchase method, etc.'. Below this is a section for 'Details of what the customer complaint is' with a text area.
 - 3. Office use only:** Includes fields for 'Complaint received by', 'Date received', 'Action taken or required', and 'Date action completed'. It also has radio buttons for 'In person' and 'In writing'.
- Right Panel (Properties):** A sidebar for configuring the form, with sections for 'Configuration', 'Status', and 'Size'.

One of the most important parts of your product's quality is managing customer requirements and satisfaction. The information provided by them is crucial to your continuous improvement initiatives.

Keep in mind that your business will be 100% worthless without its customers, therefore, adequately managing customer complaints, incidents and problems along with finding and fixing the root cause of any issues are fundamental not only to the success of your products but to the success of your overall business as well.

Documents and Content

As you might imagine, the entire process of managing products is going to create a variety of different documents such as contracts, spreadsheets, R&D studies, drawings, CAD models, financial statements, project reports, performance reports etc.

It's extremely important to make sure that each one of these documents is categorized, stored, managed, secured and controlled end-to-end.

This will not only help you whenever you need historical data or references, but it will also help you avoid litigation down the road.

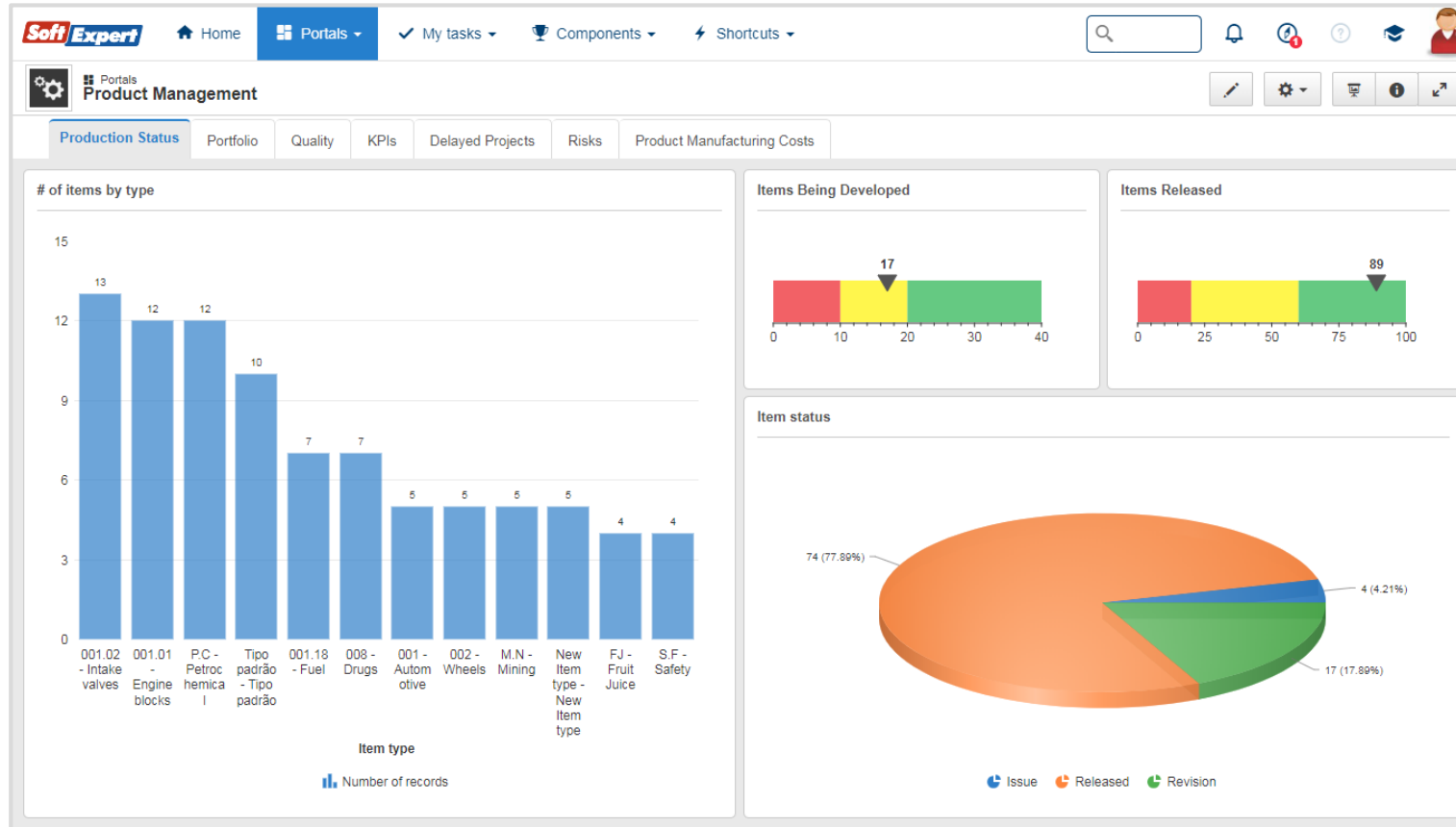
The screenshot displays the Soft Expert Document (DC021) interface. The top navigation bar includes links for Home, Portals, My tasks, Components, and Shortcuts. The main content area is divided into several sections:

- Search filters:** Includes a quick search bar and saved searches like 'My documents', 'Favorites', and 'Documents close to due date'.
- Type:** A dropdown menu to select the document type.
- Advanced filters:** A section for more detailed filtering options.
- Group by:** A dropdown menu set to 'Category'.
- Search results:** A list of documents categorized under 'ENG-Engineering'. The list includes folders for various engineering documents, such as 'ENG.001-Prototypes', 'ENG.002-2D Drawings', 'ENG.004-Technical specifications', 'ENG.005-Technical procedures', 'ENG.006-Engineering reports', 'ENG.007-Technical appraisal', 'ENG.008-Logical', 'ENG.009-Calculation memories', 'ENG.010-In development projects', 'ENG.011-Obsolete projects', 'ENG02-Engineering', 'ENG02.003-3D Drawings', and 'ENG.003-3D Drawings'.
- Document details:** A table showing document information for 'Main tunnel water drainage'.
- Document preview:** A preview of the selected document, 'Water_Drainage_in_Main_Tunnel.dwg', showing technical drawings.

Title	Revision	Date	Hits
Main tunnel water drainage	00	4/19/2017	17
Main loft	00	4/19/2017	12
Roof	03	5/14/2018	6
GIS 002514	00	7/10/2015	10
GIS 002515	00	7/10/2015	6

Total records: 419


Data Analysis



As you may have noticed throughout this eBook, the PLM process is going to generate an incredible amount of data throughout the entire lifecycle of the product. Now imagine the amount of data generated at a company that produces tens or hundreds of products.

Make sure you are able to take what seems to be this indecipherable mass of data and extract any trends or patterns that are buried within it. Then, it's important to take this information and arrange and summarize it, perform comparisons, and extract meaningful information that can be valuable to the organization.

Lastly, present your findings and conclusions in an easy-to-understand manner using different types of graphs, charts, and visual aids that can be accessed by stakeholders wherever they may be.

A blurred background image showing several people in a meeting or collaborative work environment. One person in the foreground is holding a yellow folder or document. The overall scene suggests a professional setting focused on teamwork and business operations.

Now that you've learned **how to successfully manage your company's product lifecycle**, find out more about the most complete and innovative solution in the market for Product Lifecycle Management, regulatory compliance, and business excellence

SoftExpert PLM is a Product Lifecycle Management software that leverages data from across the enterprise to help managers make better decisions about product development, management, design, and production.

The solution provides a complete data management system that allows users to assign all of the data necessary to describe design, manufacturing, purchasing, quality/test, and service aspects of product records. Product data can be defined by any product object (parts/components, documents, Bill of Material [BOM], machines/instruments, costs, characteristics, etc.).

Automating Product Lifecycle Management is a key ingredient to boosting performance and productivity rates at your business and while also avoiding mistakes and re-work.

SoftExpert PLM is an affordable, easy-to-use web-based Product Lifecycle Management (PLM) solution that allows companies to manage the entire product lifecycle from conception, design, and manufacture, through service and disposal.



[Learn more about the solution](#)

SoftExpert Excellence Suite



SoftExpert Excellence Suite is the most comprehensive framework of independent yet united solutions to achieve business performance excellence, streamline corporate governance, risk and compliance programs, and ensure continuous business process improvement.

Companies may not need all applications at once, or may want to deploy one application module at a time, growing gradually as the need arises. Whatever the strategy chosen, only a fully shared environment allows its applications to fit together like puzzle pieces and work seamlessly.

About SoftExpert

SoftExpert is a market leader in software and services for enterprise-wide business process improvement and compliance management, providing the most comprehensive application suite to empower organizations to increase business performance at all levels and to maximize industry-mandated compliance and corporate governance programs.

Founded in 1995 and currently with more than 2,000 customers and 300,000 users worldwide, SoftExpert solutions are used by leading corporations in all kinds of industries, including manufacturing, automotive, life sciences, food and beverage, mining and metals, oil and gas, high-tech and IT, energy and utilities, government and public sector, financial services, transportation and logistics, healthcare, and many others.

SoftExpert, along with its extensive network of international partners, provides hosting, implementation, post-sales support and validation services for all solutions to ensure that customers get the maximum value from their investments.



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