



# CASE HISTORY

Faist Componenti Spa: management of inter-company collaborative PLM processes

# Faist Group

Originally founded in 1978, FAIST works in the metal sheet stamping industry. Since then, the company has developed into a multinational group that employs approximately 2,300 people in 24 industrial plants in Europe, North America and China. Today, FAIST is a global supplier of automotive and telecommunications systems, as well as industrial and consumer electronics.

FAIST has integrated its production technology with plastic materials, laser cutting and welding, cold forming of all types of metallic sheets, numeric control burr removal machining, light alloy die casting fusion, powder and liquid painting, silver and other superficial finishings, as well as a number of various automatic assembly systems.

The Group is divided into four business units. Namely: Emission Controls, which designs and produces turbo compressors and internal combustion engines' air intake and exhaust systems; Truck Bodies, which includes the renowned brand "Scattolini" and produces fittings for light commercial vehicles; Light Metal Components, which produces die casted components for the automotive and telecommunications markets; Industrial Components, which designs and produces chassis and cabinets for the electronics industry, components for automatic gear boxes and for double effect clutch transmissions, electronic control unit housings, general components for weapons and the consumer market.

HeadQuarter

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Website: [www.faist.net](http://www.faist.net)



# Context

Faist's corporate [workflows](#) are based on the [ADVANCED PRODUCT QUALITY PLANNING](#) (or [APQP](#)) process - a framework of procedures and techniques used to develop products in the industrial sector, particularly in the automotive industry - and regulated by the [Automotive Industry Action Group](#) (or [AIAG](#)) manual.

So far, the management and sharing of information and product documentation was performed through [HETEROGENEOUS REPOSITORIES AND FILESYSTEMS](#), creating problems in terms of security, data completeness and traceability of notifications.

The company structure and the presence of [PLANTS WORLDWIDE](#) led to the need of having an enterprise portal with global access capable to gather any information related to job orders and homologation procedures in a structured way, to support workflows and guarantee both data completeness and inter/intra-company collaboration.

# Challenges

**MAP** and support corporate workflows and information flows all along the product lifecycle, spanning from the customer request to production, according to the procedures of the automotive industry

**INTERCONNECT** 7 LOCAL plants of the business units through a collaborative, centralized system providing access via web

**MANAGE WORKFLOWS** and homologation documents in a single repository accessible worldwide

Get the maximum level of **AUTOMATION** throughout the progress of workflows and the generation of product-related documents

Meet the product **INFORMATION REQUIREMENT** to better manage audits by customers

**FACILITATE** analysis and evaluation activities to estimate the cost of projects carried out

Ensure users **OPERATIONAL SIMPLICITY**

# Why RuleDesigner

**ENTERPRISE WEB-BASED PLATFORM** able to interconnect the Headquarter with the several plants geographically dislocated. By mapping the organizational chart and all the inter-company relationships, the system guarantees a secure and regulated access to all the employees of the Faist group.

**MODULAR SOLUTION** that integrates the management of corporate processes and documents involved all along the product lifecycle to specific environments for managing multi-cad technical data and the configuration of automation procedures across the extended company.

**HIGH CONFIGURABILITY** of corporate workflows and procedures makes it suitable to adapt to the standards of quality of products and processes regulated at international level

**AUTOMATION** throughout the process development and the practice to assign tasks, ensuring maximum efficiency.

**FLEXIBILITY** in defining and re-configuring processes on the basis of new needs thanks to advanced administrative tools that give customers complete autonomy over their corporate informative system.

**COLLABORATION** as the system promotes documents and information sharing and the empowerment of users thanks to both easy-to-use tools and procedures that inform and assign tasks actively and automatically.

**USABLE** by all the company employees, even sporadic, thanks to a simple interaction approach putting the user in the centre of the corporate processes and keeping, at the same time, the affinity with the previous way of working.

# Project Implementation



Keywords: Multi-CAD PDM, collaborative PLM, Automotive procedures, Advanced product quality planning, RFQ, Product and Process Development, Product homologation and validation, Automation processes, Product documentation.

Local Plants **7**

Business Unit **5**



Local Team **4**

Customer Team **7**

Users **222**

Companies	
Faist componenti spa	Italia
Faist GreenTek LLC	Usa
Faist MetalMex S.de R.L.	Messico
Faist Romania srl	Romania
Faist Emission Control Co.Ltd	Cina
Faist MetalWorking srl	Romania
Faist Componenti NDP spa	Italia



**Ing. Tina Cortese**

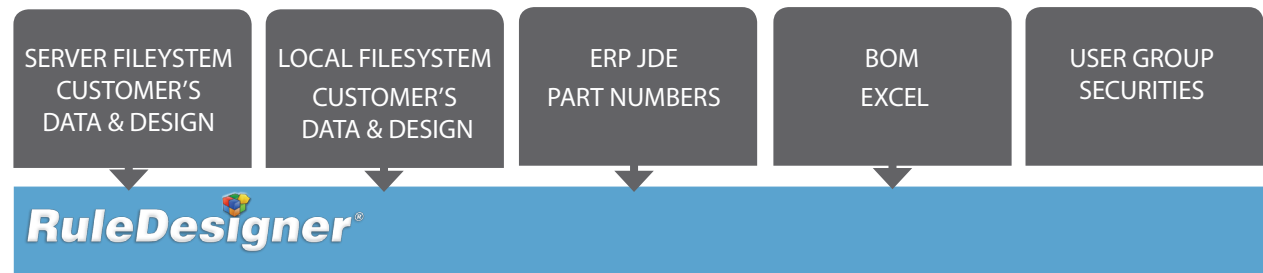
PLM Project Manager  
at Faist Componenti spa

Expert in product homologation procedures for the automotive industry.

# Management of technical

## Import product technical information

The first phase of RuleDesigner® project dealt with the import of all the product part numbers stored in JDEdwards, the existing ERP system, and the retrieval of part numbers' information and drawings from servers and local workstations.



## Manage product part-numbers and CAD drawings

Since the introduction of RuleDesigner®, product part-numbers are created exclusively inside the PDM environment and then automatically synchronized with the ERP system JDE.

Also, PDM part-numbers have been grouped in different classification categories and layouts. For each of them, it is possible to attach both technical documents retrieved from customers' title-blocks, in PDF format, and any project developed by application engineers working at Faist, in the original CAD format (CREO, SolidEdge and Catia).

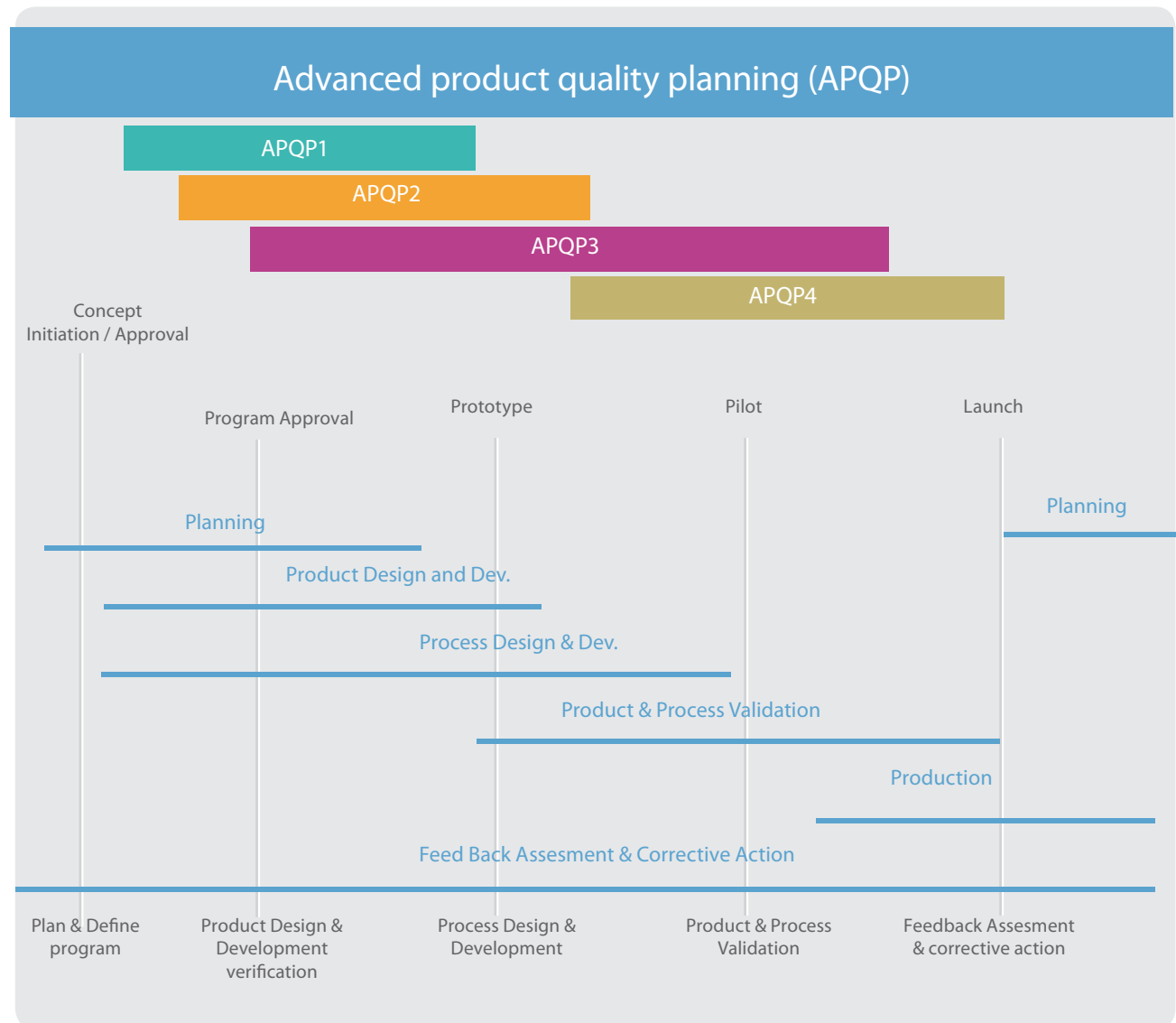
Finally, technical bill of materials (BOMs), previously managed with Microsoft Excel spreadsheets, are now completely handled inside the PDM system: BOMs are based on Faist official format; they can be edited using the revision procedure that follow specific rules set by the company and then shared using reports printed in a format which is familiar to users coming from



# Management of workflows

With regard to PLM management, with RuleDesigner® it was possible to shape the entire workflow structuring it in 4 different phases, spanning from the customer request to production.

The possibilities offered by RuleDesigner® allowed to meet Faist's need to decrease the index of defectiveness and all related costs, broadening the scope of the automotive procedures on other sectors or where not explicitly required by the customer.



## APQP1 - Workflow for request for quotation

### Steps

Analysis of the customer request
Preliminary study
Feasibility study
Risk Management
Definition of the quotation
Delivery of the quotation
Customer feedback

The request for quotation (RFQ) is managed by a dedicated project that is created on the basis of a default template. Such a template contains the correct execution flow structured in phases and involving managers and resources with details of the task to be performed.

## APQP 2- Product Development

### Steps

Project Definition
Product Definition
Validation and Tests
Release of the project

## APQP 3- Process Development

### Steps

Process Definition
Process Validation
Project Freezing
Measurement system evaluation

APQP2/3 make reference to product and process development workflows. They have been organized as templates with a general structure because they are directed to a small number of users with more advanced training on workflow management.

## APQP 4- Product and Process Validation

### Steps

Launch of validation activities
Design Check
Description of activities
Definition of supplying
Launch of sub-projects for each part-number listed in the BOM
Validation of sub-components
Preparation of a measurement system
Preparation of quality documents
Production planning

APQP4 is the workflow dedicated to validation activities and production of certifications.

This workflow embraces different sub-projects aimed at the homologation of subcomponents whose approval levels vary depending on complexity, use and application of the product, according to the PPAP (part & process approval procedures) procedures.

The development of workflows is controlled by configuration processes that, on the occurrence of specific events, can create sub-flows, create and store documents, schedule tasks, update the database, etc.

Users, according to the role held in the company, are required to fill in the project's attributes or to confirm the execution of assigned tasks.

RuleDesigner® automatically runs procedures to assign responsibilities on the basis of parameters taken from projects, BOMs' relationships, production patterns or purchasing company. Also, according to the configured numbering plan, the system generates project part-numbers and reports based on the properties of the project (for instance, Part Submission Warrant).

Key account managers can calculate the final outcome of projects with visibility of the resulting level and quotation generated. Also, parameters are associated to each project in order to evaluate performance in terms of efficiency and productivity of both resources and work teams.

## More than 100 automation procedures activated

The screenshot displays a web application interface for a project named "Semifinished rod end" (PSW150806). The interface includes a navigation menu, a project summary section, and a table of project phases. A "PART SUBMISSION WARRANT" (PSW150) form is overlaid on the bottom right, containing fields for Part Name, Description, Engineering Change Level, Dated, Safety and/or Government Regulation, Purchase order no., Weight (g), Additional Engineering Changes, Dated, Dash REV., N.A., Checking Aid no., Checking Aid Engineering Change Level, Dated, MANUFACTURING ORGANISATION INFORMATION, CUSTOMER SUBMITTAL INFORMATION, FC-FAIST COMPONENTI, Cec, MATERIALS REPORTING, Has customer-required Substances of Concern information been reported?, YES, Submitted by IMDS or other customer format: 525.

Status	Phase	Estimate Start	End	dd	Real Begin	End	dd	LT (gg)	%
PSW LEVEL 3	0 DEFINITION - P/N and LEVEL	16-04-2015	9	16-04-2015	9	0.12	16-04-2015	0	0
CLOSED	0 PSW-LEVEL 3 - DOCUMENT CHECK	16-04-2015	12	16-04-2015	12	0.00	16-04-2015	0	0
APPROVED	0 SUBMISSION RESULT	16-04-2015	12	16-04-2015	17	0.37	16-04-2015	0	0

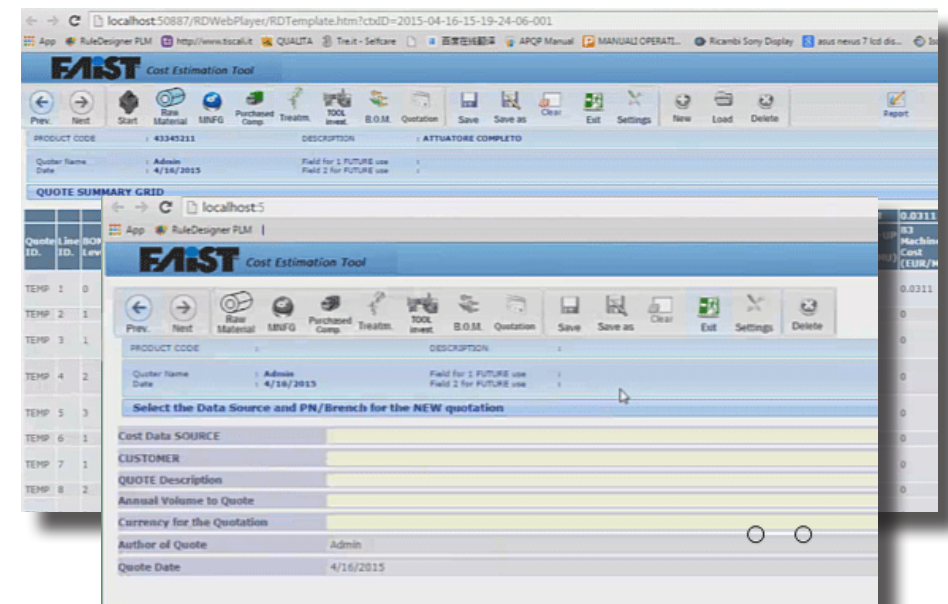
By using RuleDesigner®, it was possible to set up a configuration process, directly accessible from the project panel, to calculate and get an estimate of manufacturing costs and, at the same time, provide support in the definition of the product's quotation.

The application retrieves information on the costs by number/project from the ERP system. Users are supported by the system while entering and selecting the proper information to configure specific quotation for different sales volumes, product variants or currencies. Then, they get back a summary of the industrial costs indicating material types, necessary processing, treatments, raw material and purchasing codes.

On the occurrence of specific conditions along the workflow, it is possible to generate reports containing information concerning margins and profit percentage and duties.

All the outputs generated by the configuration process can be stored and consulted to carry out projects final analysis.

## Configurator to estimate manufacturing costs and support the generation of quotations



# Document Management and Workflow

At Faist, document management is characterized by a high complexity. This is mostly due to the fact that the company has to follow the procedures reported in the IAIG manual, but also to the specific complex reality of Faist itself.

First of all, with RuleDesigner® it was possible to set security permissions on documents. Starting from the organizational chart, users, groups, roles and functions have been defined for both the users belonging to the Corporate and the ones belonging to the plants.

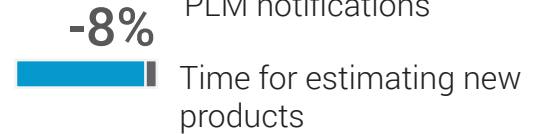
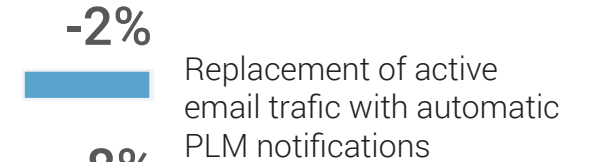
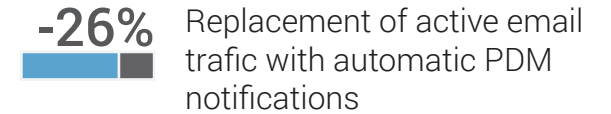
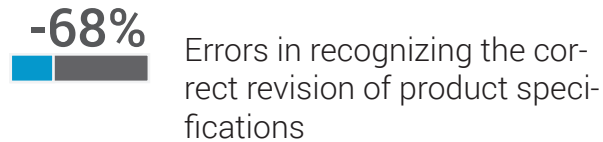
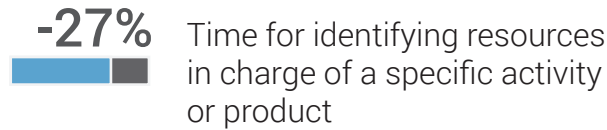
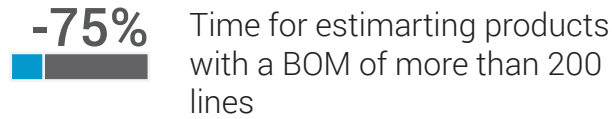
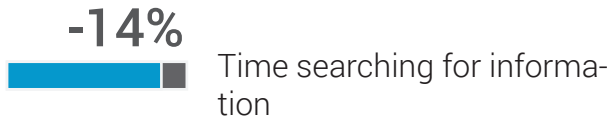
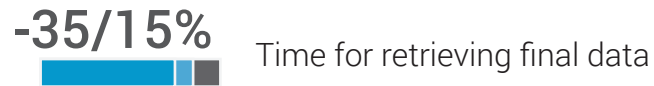
Then, the company defined the different categories of document, their respective approval workflow and versioning rules. All the documents are stored, shared and they can be consulted by using RuleDesigner® portal.

## Corporate documents organized by context with certified approval workflows

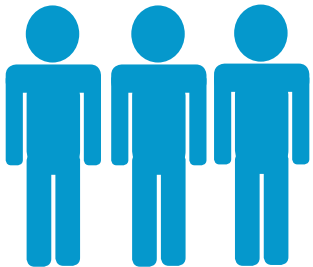
Examples of documents:

- development of product and processes
- development of business relationships with suppliers and customers
- technical documents
- process qualitative documents
- manufacturing work instructions
- operation instructions of technical specifications divided into categories typical of the production site
- manufacturing specifications to monitor checks that have to be carried out on a specific product
- user guideline containing instructions for users

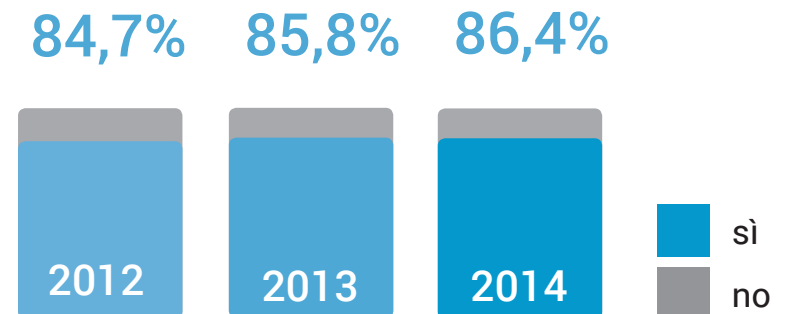
# KPI



## User Questionnaire



Are you aware of your value in relation to activities you perform?  
Do you know activities carried out before yours?



# Benefits gained

- Complete and accurate data
- Application of standard procedures in a company which is historically heterogeneous
- Sharing information with the possibility to filter it at all levels
- Less time spent in notification that can be automated
- Structured empowerment of each employee at all levels

*“ RuleDesigner helps those people who have always worked in a simple and fast way to continue working without feeling the burden of a structured management: considering that some tasks may require more time to be performed, it could be difficult to make people accept a PLM system. In fact, the use of this kind of systems is very important in terms of end user, but the greatest benefits are gained at enterprise level to manage certifications, search for information quicker and make analysis faster.*

*Today, 90% of RuleDesigner users make benefit of a ready project template without having to intervene manually to modify flows, phases or tasks.*

*The company manuals, reporting in details processes and procedures, is now available to anyone who wishes to consult it and this opportunity allows to better engage and empower all employees at Faist.*

”



## Website

[www.RuleDesigner.com](http://www.RuleDesigner.com)



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