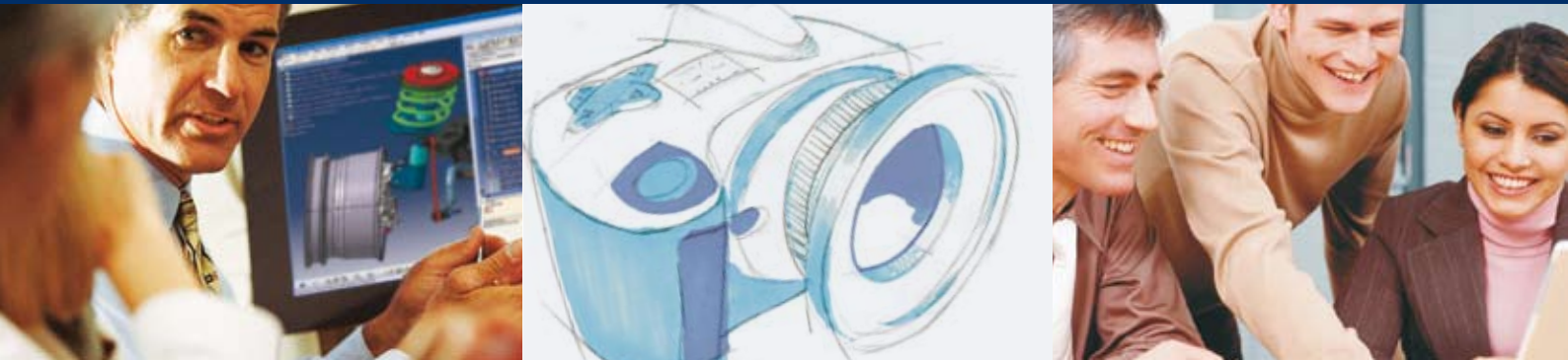


# Management System for Product Data Quality



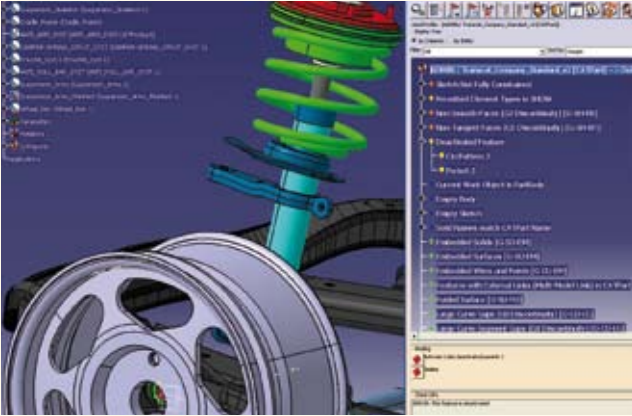
© Transcat PLM GmbH & Co. KG 0 70 5 qce

**TRANSCAT**  
A DASSAULT SYSTEMES COMPANY

# PRODUCT DATA QUALITY

## About PDQ

Producing high-quality CAD models is not only a time-consuming and costly process, it is also an important part of modern product development. Manufacturing companies today rely on virtual modeling of their products, and given the complexity of present-day design tasks, it is not surprising that errors emerge.



Q-Checker is fully integrated into CATIA V5

Q-Checker allows companies to adhere to their design methodology and meet quality requirements. With this tool, respecting these criteria becomes an automated part of product development. Any errors, which previously occurred in later phases of the process, can now be avoided from the outset. In a global process chain, which also involves suppliers with their own processes and standards, the advantages of good PDQ are even greater.

Q-Checker continually assists users in adhering to an efficient working methodology and company-specific standards. At the same time, suppliers receive check profiles from their customers and can therefore produce models that satisfy quality requirements.

Q-Checker CAA V5-Based, which is fully integrated into CATIA V5, has expanded the V5 PLM offering from Dassault Systèmes.

## Geometry, Standards and Methodology

PDQ requirements can be divided into three categories:

**Geometry** tests ensure that models in CATIA, or transferred to other systems, do not contain mistakes, which cause delays during subsequent operations. Q-Checker identifies overlaps, inconsistencies, permeations, tiny edges, folding perpendiculars, and many other errors.

**Norms and standards:** Designation and storage-status tests, as well as elements and parameters, assist users in observing CAD guidelines. Drawing verifications include sheets, views and text – for example permitted fonts.

A new Q-Checker for CATIA V5 feature is its test criteria enabling designers to adopt from the outset a company's development methodology. Such methodology is typically company-specific. Yet Q-Checker provides many standard tests on model construction, allowed dependencies, required elements and designations.

Beyond that, CATDUA may be started as a Q-Checker test.



## Quality Principles

Q-Checker covers important principles of quality management:

- as a tool for users, it recognizes and eliminates errors as early as possible
- as a PDQ management system, it ensures a continuous improvement process

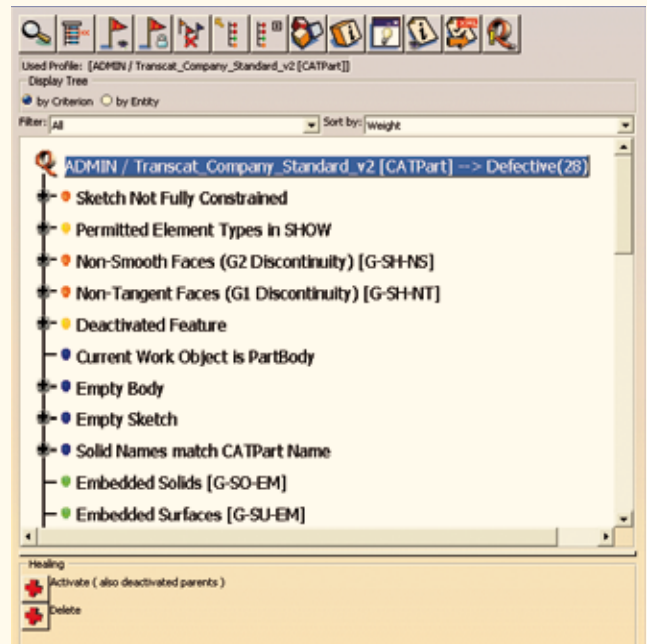
# THE TOOL FOR USERS

## Checks and Analysis

Q-Checker is self-explanatory. Without any training, designers can start using it to check parts, assembly groups, designs and other CATIA documents. Check results are displayed in an analysis window. From this vantage point, critical areas can be highlighted and error-based elements in the model can be documented with markers. Results as well as elements are made visible and easily accessible in the model tree. Fresh checks can be initiated from this point. If preferred, only new and changed elements are analyzed, thus reducing the check time.

## Repair and Assistance

Many model errors can be removed by a simple mouse click. For every check criterion, Q-Checker contains extensive explanations – written by experienced CATIA specialists – to prevent and remove mistakes. Designers receive important information about their models while at the same time improving their CATIA skills.



Intuitive analysis window

## Check Profile and Model Types

Q-Checker is configured in accordance with corporate requirements. Over 300 criteria are available for this. With newer software releases, additional criteria based on customer requirements are developed. Companies can also produce their own specific tests – for instance, via knowledgware. Regardless of the seriousness of a mistake, a check is differently weighted in a profile and indicated in the report as a warning, defect, or other error type. Certain error types can even cause the process to be aborted. Depending on the model type, one check profile can activate different checks – for example, sheet metal parts will be checked differently than cast-iron parts and models for customer A will be checked differently than models for customer B.

Current check profiles of OEMs can be found at [www.q-checker.com](http://www.q-checker.com).



User support for every check



# CONTINUOUS IMPROVEMENT PROCESS

## Q-Checker in the Process

The later an error is identified in the product development process, the more costly and time-consuming its correction becomes. Hence the great benefit of Q-Checker to companies using it in the design phase and incorporating it into the entire process. At critical points – such as release procedures or stage-gates – PDQ is guaranteed.



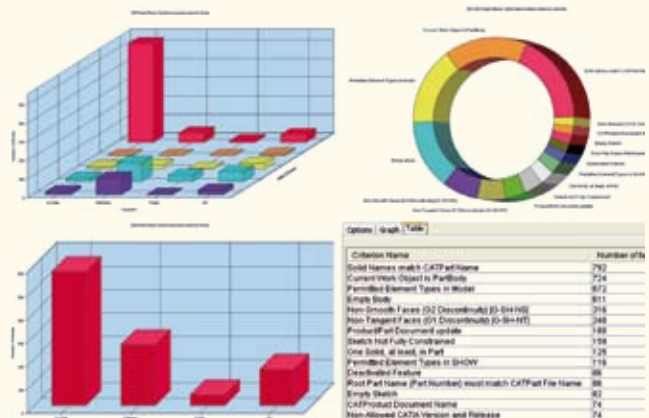
Q-Checker supports the successful completion of all important project phases before models are used in other departments or in subsequent process stages. Q-Checker transfers the model to the next stage only after all company standards and quality guidelines are respected. All models created with Q-Checker are usable for deployment in other applications such as virtual reality (VR), digital mock-up (DMU), finite element analysis (FEM), NC Programming, as well as for visualization purposes or drawing creation.

## Making PDQ Measurable with Q-Monitor

Q-Monitor makes the quality of product data visible across the entire process chain. Relevant check results are written in a database. These results make clear the current quality status as well as the success of the improvement process. Concrete evaluations are represented graphically and in the form of tables showing CAD Quality over the course of a program, quarter, year, by group, by user, etc. They also provide important information, such as the most frequent mistakes that can be eliminated through specific training, support and improved methodology. Thus statistical results continually improve the development process.

## Q-PLM for Integration into PDM (Product Data Management) and Data Exchange

Q-Checker can be integrated by automatic batch mode into important process steps. In addition to routine checks by designers, the data exchanged between OEMs and suppliers is monitored. In connection with release procedures in PDM, a review of the models is also worthwhile. Q-PLM provides – as an extension of the Q-Checker solution – standard components that facilitate a rapid and stable integration into the PLM environment.



Q-Monitor shows the PDQ in profile

# CONTINUOUS IMPROVEMENT PROCESS

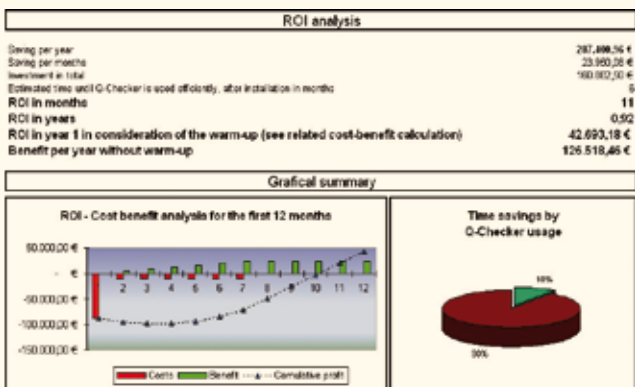
## PDQ at Significant Process Points

Q-Checker can accurately define error categories when test results influence the process. In the check profile an error is defined and evaluated. This ensures that, before data is sent, minimum requirements are respected. In models with critical errors, dispatch is interrupted or carried out only after confirmation by the user. A check-in in a PDM can be prevented if name conventions do not correspond to settings or if important model parameters are missing.



## Check Seals to Reduce Verification Time

Check seals help to minimize redundant tests across the overall development process. A detailed report with the model result is contained within the model or alternatively in a separate file. The validity of the internal or external check seal can be confirmed with Q-Checker.



ROI thanks to development time saved



## Return on Investment

ROI calculation is based on time saved in product development and subsequent process steps. Experience shows that, by maintaining quality from the outset, roughly 10 percent of development time can be saved. ROI follows through less than one year after the deployment of Q-Checker. Q-Monitor makes visible an ROI estimate using existing customer data as well as improvement achieved over time.

Besides indicating time efficiencies, another advantage Q-Checker offers users is the strengthening of their competitive position as well as improved cooperation among companies working together in the design process.

## Q-CHECKER

- 1,500 customers in all industries
- Global partner network ensuring successful deployment
- Q-PLM provides standard integrations into product data management and data exchange
- Over 300 checks can be configured to customer requirements
- OEM check profile at [www.q-checker.com](http://www.q-checker.com)



### Highlights

- Model quality, CAD-Standards and methodology are an integrative part of development
- Process-compatible models emerge at the outset for reuse in new projects and subsequent processes
- Delivery deadlines are met by avoiding late repairs
- Enhanced cooperation between design partners in a world-wide distributed development process
- With Q-Monitor a continual improvement process is established

### History

- 1990** launch of forerunner VDA Checker with Geometry criteria
- 1999** with Q-Checker, checks on CAD standards are added as well as an intuitive user interface and extensive help pages
- 2002** arrival on market of Q-Checker for CATIA V5, checks on methodology enlarge scope of deployment
- 2007** Q-Checker 2.0 improves interaction with check results through seamless integration with CATIA V5

## TRANSCAT SOFTWARE

### Make your data flow!

Founded in 1987, Transcat PLM GmbH & Co. KG is a fully-owned subsidiary of Dassault Systèmes. From the very beginning, Transcat PLM has been a solution provider specializing in Dassault Systèmes portfolio and developing add-on software to enhance the productivity of their customers. Transcat PLM's software solutions support the design process with CATIA, DELMIA and ENOVIA. Companies around the World optimise their processes and enhance their products with products from Transcat PLM. Q-Checker, CAVA, myV5, VDAFS Processor and XFileV5 are helping users in the context of a global development process.

[www.transcat-plm.com](http://www.transcat-plm.com)

Transcat PLM GmbH & Co. KG  
Am Sandfeld 11c  
76149 Karlsruhe / Germany

Klaus Werling  
Fon +49 7 21 9 70 43 75  
Fax +49 7 21 9 70 43 90  
[kwerling@transcat-plm.com](mailto:kwerling@transcat-plm.com)

[www.q-checker.com](http://www.q-checker.com)

Presented by: