

— QUALITY REAPS REWARDS

# eQMS solutions for the real world

- Each individual Quality Center module is an expert in its field, even as a stand-alone solution.

By linking the modules as a complete QMS software (eQMS), the software offers optimal functionality and represents a quality control loop.

For further information please go to

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

	<b>Company profile</b>	<b>3</b>
	<b>Philosophy</b>	<b>4</b>
	<b>Basic functions</b>	<b>5</b>
	<b>Web applications</b>	<b>6</b>
	<b>Interfaces</b>	<b>7</b>
<b>QC</b>	<b>QC Navigator</b>	<b>8</b>
<b>APQP</b>	<b>Advanced Product Quality Planning</b>	<b>9</b>
<b>AM</b>	<b>Requirements Management</b>	<b>11</b>
<b>FMEA</b>	<b>Failure Mode and Effects Analysis</b>	<b>13</b>
<b>PP/CP</b>	<b>Inspection Plan and Control Plan</b>	<b>15</b>
	<b>Successful duo – FMEA &amp; PP/CP</b>	<b>17</b>
<b>PDE</b>	<b>Inspection data acquisition</b>	<b>19</b>
<b>WE/WA</b>	<b>Incoming / Outgoing goods inspection</b>	<b>21</b>
<b>LS</b>	<b>Control Center</b>	<b>23</b>
<b>HBW</b>	<b>Feasibility Study</b>	<b>25</b>
<b>ISIR</b>	<b>Initial Sample Inspection Report</b>	<b>27</b>
<b>PMV</b>	<b>Inspection Equipment Management</b>	<b>29</b>
<b>AUDIT</b>	<b>Audit Management</b>	<b>31</b>
<b>KM</b>	<b>Competence Management</b>	<b>33</b>
<b>RKM</b>	<b>Complaints Management</b>	<b>35</b>
<b>MM</b>	<b>Action Management</b>	<b>37</b>
<b>LIB</b>	<b>Supplier Evaluation</b>	<b>39</b>
	<b>Supply Chain Quality Center</b>	<b>41</b>
<b>AC</b>	<b>Analysis Center</b>	<b>43</b>
<b>DC</b>	<b>Document Center</b>	<b>45</b>
	<b>Service &amp; Training</b>	<b>47</b>

# Perfection in terms of quality

## We offer solutions for your quality management

More knowledge, more benefits, more quality – PeakAvenue GmbH is one of the leading providers of computer-aided solutions for quality management.

### Innovative partner

PeakAvenue combines over 30 years of experience in engineering and quality management and has established itself as a secure and reliable partner for innovative and customized software solutions. The key for the great success of the Quality Center is our absolute willingness to see the growing quality requirements of industry as a challenge to continuously develop our products.

### At home in many sectors

The long-term relationships with our customers are witness to successful and trusting cooperation. Our highly qualified and motivated employees are constantly seeking the best and most economically efficient solution. Our customers include medium-sized companies in the electronics, automotive, medical technology, plastics, and metal processing sectors as well as large global companies.

### Efficiency through a variety of applications

Quality Center modules work as a complete QMS system that is closed in a control loop, but can also be combined in any way or used flexibly as perfect "Stand-alone solutions". The software is based on effective error prevention and the consistent digital exchange of quality information. This guarantees a significant cost reduction and ensures long-term competitiveness and economic success.

### Extensive consulting

To ensure that the Quality Center works smoothly, we not only offer the software but also the adequate consulting: needs analysis, advice, solution design, individual adjustments including support and training. PeakAvenue guarantees optimal operational integration – across industries and internationally!

### Global presence

Thanks to our global network of sales partners, we are present in the most important regions. Together with our local partners we will find the best solution for your needs – both regionally and internationally when introducing a eQMS standard for your global quality management.



# Infusing Quality into every step

## Using PeakAvenue makes quality management productive

Unlike classic QMS software, PeakAvenue networks modules in such a way that the software can be used strategically beyond error prevention:

### Proactive quality assurance

While conventional quality assurance largely consists of detecting and subsequently correcting errors by means of defined inspection routines, the PeakAvenue Quality Control Loop starts much earlier and deeper: Active quality management continuously generates new knowledge, which is used to illustrate all development and production processes transparently and exclude sources of error in advance. Elaborate inspections can be significantly reduced with this targeted approach.

### Sustainable quality management

This way, quality assurance becomes sustainable quality management. Linking information from the eQMS solution creates synergy effects that hold the potential for constant quality optimization – and not just at the product level!

### Digital quality processes

Benefit from the digital exchange of quality information – especially as a networked solution across company boundaries. The modern information and communication technologies of PeakAvenue eQMS provide effective connectivity between your teams, departments, locations and suppliers.

### Continuous optimization

The PeakAvenue Quality Management is based on the continuous improvement process (CIP) and follows the principle of the PDCA cycle with its four central phases. All eQMS modules are geared towards this system – they act together in such a way that your operational processes and results undergo continuous optimization.

### Productivity through knowledge

This ultimately results in a pool of knowledge that is of interest to the cost-intensive area of quality assurance, opening up potential innovation and savings. The Quality Control Loop activates this knowledge, links it to other information, and makes it available immediately. With our quality management, we transform knowledge into productive performance.





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PEAKAVENUE QC

# Quality Center

**Flexible, efficient, consistent: Applying many functions of the PeakAvenue Quality Center, you create the basis of a thoroughly established and expandable QMS software.**

## Modular system configuration

Expand your system! The modular structure of a QMS software enables you to select the right solutions for your processes. The modules can be used independently, or combined, as required. PeakAvenue Quality Center merges with your requirements and can be expanded in a flexible manner.

## Individual surface

Use personal design options! The integrated plug-in technology allows you to customize the user interface of the program according to your needs and preferences, e.g. with individually selectable color themes and configurable windows.

## Central data management

Create a consistent database! Once you have collected data, it is available to you in all modules! All master data, drawings and documents are managed centrally by Quality Center. All networked modules access the same and up-to-date database. Of course it is possible to import data from an existing PPS and ERP system.

## Active drawing integration

Stay flexible! Regardless of whether you are dealing with 2D drawings, 3D PDFs, or OCR for scanned drawings: Quality Center makes it possible to integrate all drawings across all modules.

## Perfect system integration

Utilize efficient interfaces! Suitable and effective interfaces for all standard systems are at your disposal! The same applies to company software such as PPS/ERP, BDE, SAP, CAD. An additional benefit is that MS Office, Q-DAS, electronic measuring equipment and measuring machines can be easily integrated.

## Global commitment

Work globally! The PeakAvenue eQMS supports your work across time zones and, thanks to its multilingual capability, can be easily internationalized.

## Secure processes

Use the support in your quality processes! All modules support you in complying with established industry standards and norms according to requirements of ISO 9001, IATF 16949, VDA, AIAG, FDA, QDX.

## Reports as required

Benefit from individual evaluation options! The Quality Center not only offers all common standard evaluations – it also allows you to generate your own specific analyses and create individual printouts using the report designer.

## Central action management

Organize reliably! All actions from quality processes can be edited and tracked centrally and web-based. Active appointment reminders, automatic reminders and follow-up by email rigorously support the processes in your company.

## WEB SOLUTIONS

# QC - Web and QC - Supply Chain

**Information anytime, anywhere: Accelerate communication with web solutions and offer your employees and suppliers easy access to quality processes.**

## Improving performance of the supply chain

A system-based approach creates the opportunity to improve performance in the digital supply chain. The web-based solution allows you to synchronize the quality processes of your company with your suppliers. Q-processes such as APQP, Feasibility Study, ISIR, Complaints Management, Audit incl. actions are quickly and safely exchanged via QC - Supply Chain, without media disruption, between you and your suppliers. Data analysis takes place in the desired granularity including supplier data. The web-based QC - Supply Chain can be hosted by yourself or a digital platform can be used.

## Central overview of the QC - Web

Offer your employees easy access to your PeakAvenue eQMS solution on the Intranet. Thus, for example, all employees can quickly access and edit their actions via the web application. If the action is related to a quality process, the respective context of the action (complaint, audit) can be viewed.



## INTERFACES

# Action and Reaction

**Design efficient interfaces and gain valuable synergy effects with the right connection and use of eQMS solutions and modules.**

## Dynamic transfer of transaction data

Using the transaction data interface, you can transfer production orders (SPC and intermediate inspections), incoming goods, machine quantities, and much more from any third-party system to the Quality Center. Your system is always up to date due to real-time transmission. For example, you can view delivered goods shortly after they were booked into your system and check for defects in the module PDE (Inspection data acquisition). You also have the option to increase the fluidity of the process by connecting a barcode scanner. The transaction data interface is based on REST APIs and is, therefore, very flexible.

## Practice-oriented master data interface

Avoid redundancies: With the practice-oriented master data interface, you can reliably transfer data such as parts, business partners or customers, suppliers, employees, or manufacturing facilities from any third-party system to the Quality Center and synchronize accordingly. The transfer takes place in form of text files (CSV file with fixed length) or through direct database access. The configuration of the interface data can be defined by you in the Quality Center.

## Save time, reduce errors with measuring machine interfaces (APDE)

Quality Center automatically collects the measurement protocols exported by the machine from a directory. The appropriate inspection is automatically created in Statistical Process Control, the measurement report is imported, and the inspection is subsequently closed. By eliminating manual input of the actual values, you save time and avoid input errors and thus conserve quality resources. In the module Control Center you will also find an overview of the inspections created.

## Suitable SAP interfaces

The Quality Center offers customized interfaces for your existing SAP system. Transfer, for example your characteristics, including specification, from the module Initial Sampling to the SAP inspection characteristics for central administration. In addition, capture your complaints and errors in your existing SAP system and transmit the relevant data directly to FMEA. Supported by building block technology and inheritance, you carry out a comprehensive failure mode and effects analysis. Obtained knowledge and results are then sent back to your SAP system as part of the 8D method.



## QC NAVIGATOR

# All processes at a glance

**Central access:** The PeakAvenue QC Navigator allows you to access all information directly and in an organized manner.

## Quick overview

QC Navigator provides central and quick access to all illustrated and quality-relevant processes in the different Quality Center modules. All part, customer or supplier related processes can be accessed directly: Do you wish to view a specific initial sample, FMEA, or inspection plan? The QC Navigator provides the required information at a glance. There is no need to switch to a different module. When visiting customers or performing audits, all quality status are immediately available to you. Thanks to the direct link to modules, you can quickly edit a process and adjust it directly, if required.

## Life cycles at the touch of a button

The QC Navigator generates complete life-cycles of a product at the touch of a button. This means that each of your employees can provide the correct information at any time, thus demonstrating to be a competent contact person. The direct and cross-module availability of current and extensive customers, as well as product information, brings you and your employees quickly up-to-date. This enables you to provide a direct and subject relevant service to your customers, which in turn increases their satisfaction.

## QC Navigator features available to you:

- Central and quick access to all quality processes of a part or business partner
- Organization of quality processes and documents on personal QC desktop
- Supports the preparation of audits, certifications, and customer visits
- Complete information transparency for all departments
- Overview of all actions for a part/a business partner





— APQP

# Advanced Product Quality Planning

**Complete project overview: APQP creates the basis for a successful start of production.**

## **Safeguarding series start-up**

Advanced Product Quality Planning (APQP) is based on the requirements of those industrial companies whose subcontractors are integral to project development. The APQP software module is available for defining and carrying out work packages and forms the basis for successful and efficient project control.

## **Up-to-date and in-depth information**

APQP details everything in a project up to the start of production, including all partial projects, milestones, quality gates, deadlines, and overview of costs. All documents connected to the respective project are saved – which makes APQP a key tool to guarantee the success of a project.

## **One step ahead – proactive operation**

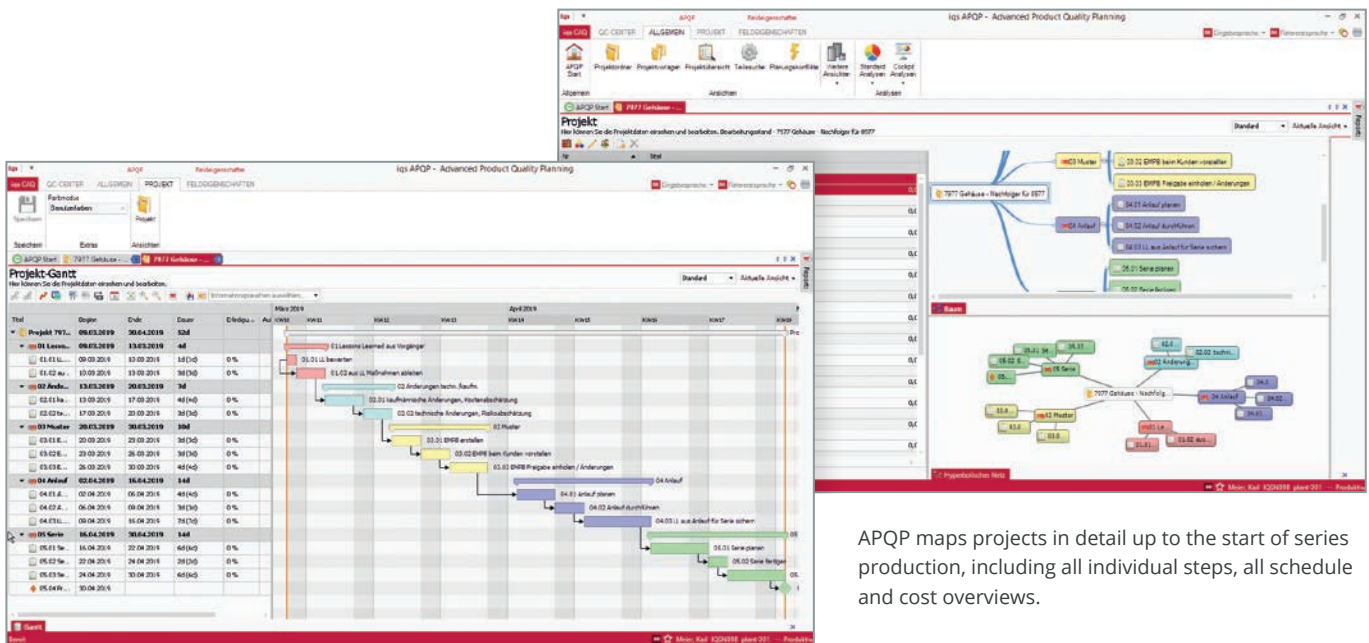
By visualizing real data, quality gates, and the critical path, you can identify deviations from specifications and their effects on the future course of the project. Therefore, you can take immediate corrective actions, identify risks in advance and proactively reduce them.

## **Time and cost savings**

Generate different reports automatically and say goodbye to time-consuming, cost-intensive, and error-prone processes. Gone are the days of status reports that you manually transfer from Office files to report forms required by customers.

## **Recognize interactions**

Integrate all suppliers in your supply chain with QC - Supply Chain – so that every company involved has access to the same information as well as dates in the web application. Real data from suppliers enable you to immediately recognize interactions and dependencies within the course of the project.



APQP maps projects in detail up to the start of series production, including all individual steps, all schedule and cost overviews.

## APQP features available to you:

- Creation of project templates, checklists and status reports
- You can use different types of calendars for project planning in Gantt
- Building block technology – contents of various project templates can be combined into one project
- Definition of different project teams within projects
- Link to parts lists, e.g. for planning initial sampling of a product
- Always up-to-date drawings or 3D PDFs available thanks to cross-module drawing integration
- Link of all quality processes for easy navigation, e.g. direct access to the corresponding process in modules ISIR and FMEA
- Cross-project evaluations, e.g. target and actual comparison
- Gantt chart with critical path and customer / project deadlines (milestones)
- Clear presentation of all projects in the GYR table
- Change management – archiving and versioning of project statuses and all status reports as well as direct version comparison
- Action management with status, dates, and persons responsible
- One or more employees and thus actions can be assigned to each work package
- Resource planning (employee workload) including consideration of employee calendar
- Saving of all APQP-relevant documents via integrated document management
- Graphical display of costs as well as the degree of completion of a project and its subactions
- Evaluation of project classifications with Analysis Center
- Exchange, edit, and monitor of supplier actions via QC - Supply Chain
- Logbook for commenting on project progress

# Requirements Management

**Keep track of requirements: Requirements Management provides access to current requirements of your entire product range at any time.**

## Include specifications

Requirements include specifications that play an important role in manufacturing processes and on for initial sample inspection reports, FMEAs, inspection plans, SPC, incoming and outgoing goods inspections, and for complaint management. For example, if you work with technical drawings in your company, these include specifications such as variable dimensions or attributive characteristics that place special requirements on your processes. These specifications are available to you through Requirements Management (AM) throughout the entire eQMS solution.

## Requirements and products linked

Reliably manage all versions of requirements in Quality Center. This includes requirements from inspection specification, legal guidelines, packaging regulations, 2D drawings, and associated 3D PDF. This way, the parts master data can always be linked centrally with current documents. Each module provides access to information such as current documents, drawings, and usage of characteristics.

## Automatic characteristics generation

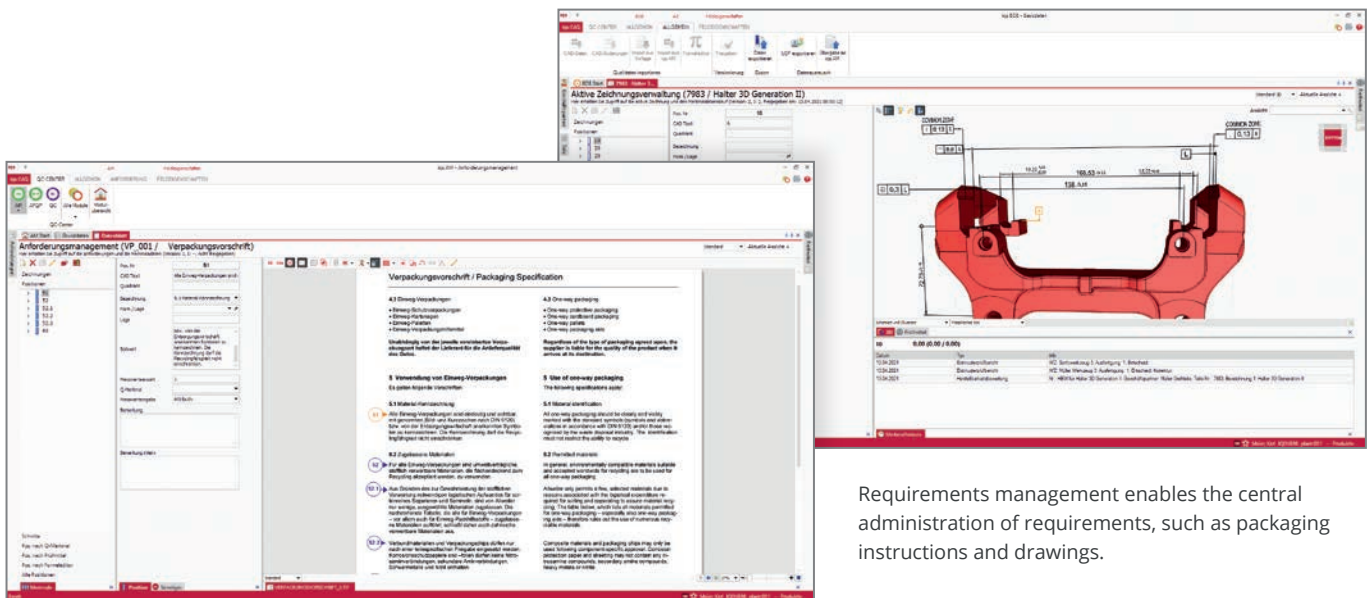
Requirements Management automatically imports specifications from all common CAD formats and PDF files into the QMS software. This way, centrally defined requirements are available to all modules and can be adopted as a characteristic, then supplemented by you, if required.

## Integration of scanned documents

You don't have access to the data file? No worries. With the help of optical character recognition, OCR, characteristics or specifications can also be taken from scanned documents (.tif, .pdf) and integrated into Requirements Management.

## Change management

Stay on top of things: All changes are documented and clearly visualized – so you can just keep track of the modifications between versions. This allows you to generate a characteristic life cycle – all processes and results for each characteristic can be displayed at the touch of a button.



Requirements management enables the central administration of requirements, such as packaging instructions and drawings.

## Requirements Management features available to you:

- Convenient administration of requirements
- Access from all Quality Center modules, such as FMEA, Inspection Plan and Control Plan, Complaint Management, and Inspection data acquisition, to documents and respective specifications
- Active change management – changes to requirements are clearly visualized
- Characteristics history available at the touch of a button
- Guarantee of document authenticity by importing image and data formats
- Automatic drawings import with nominal values and tolerances from CAD files, independent from the system used to create it
- Import of scanned documents (.tif, .pdf) through OCR
- Import and processing of 2D and 3D PDF files
- Extracting tables in drawings
- Stored 3D PDF for improved visualization and easier communication between customer and supplier
- Grouping of characteristics in, e.g. construction elements via UDF (User Defined Features)



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**FMEA**

# Failure Mode and Effects Analysis

**Error prevention made easy: Link FMEA with Inspection Planning and Complaints Management modules and receive consistent support in error prevention.**

## Quality knowledge

Only a current and well-maintained Failure Mode and Effects Analysis (FMEA) is really efficient. Every entry into this central knowledge resource expands quality know-how. With the Quality Center module FMEA you can conveniently create and update all system-, process- and design-FMEAs according to the standards. You can carry out your risk analysis according to the AIAG & VDA method in seven steps (planning and preparation, structural analysis, functional analysis, error analysis, risk analysis, optimization, documentation of results). The integration of FMEA into the QMS software results in significant synergies between FMEA, inspection planning, and action and complaint management. Avoid repetitive errors in the future and let your know-how flow into the development of new parts. Consistently close the quality control loop with FMEA.

## Simple use of similarities

Inheritance technology and the reuse of integrated building blocks make use of similarities between products or components within the modular family of parts. Share your error knowledge across all locations: With FMEA, changes entered in one place are automatically transferred to all relevant parts – safely and easily.

## Automatic characteristics generation

The Requirements Management automatically imports the specifications from all common CAD formats and PDF files into the Quality Center. This way, centrally defined requirements are available to all modules, e.g. when creating an FMEA, and can be adopted as a characteristic and supplemented by you if necessary.

## Causes and effects

The FMEA is the most important instrument in preventing production failures – the Quality Center refers back to the FMEA in the event of internal or external complaints and makes the creation and maintenance of additional failure catalogs superfluous. When recording new failures in production and complaints, the person responsible for the FMEA is automatically informed and the FMEA can be updated.

## All actions at a glance

Track and check all defined actions and their effectiveness with the integrated action management of FMEA. The consequential results are automatically fed back to the FMEA so that you can reliably compare prognosis and reality.

## Integrated risk analysis

You will receive effective support in weighing the risks: Evaluate the chain of failures with the action priority via stored risk catalogs according to the AIAG & VDA manual. Individual risk catalogs can also be added with plant-specific explanatory texts. Within FMEA you can filter and visualize failure chains incl. all actions according to action priority.

## Individual design of printouts

The integrated report designer can be used to redesign supplied standard reports according to your requirements. Apart from making adjustments according to your corporate design, you can also add/remove table columns or fields.



The AP matrix visualizes the risks and enables you to prioritize processing.

## FMEA features available to you:

- Creation and administration of design and process FMEA as well as their combination in a hybrid FMEA; compliant with VDA / AIAG standards or freely definable risk catalogs with action priority
- Full integration of FMEA into QMS software or as a stand-alone solution
- Complete CAD data integration Flexibly configurable interface to map individual moderation types and phases
- Creation, maintenance and processing in the form and/or network and tree representations
- Clear navigation in structure tree, the system element network and the hyperbolic network
- Simplified data entry using autocomplete
- Fast creation and processing of an FMEA for similar parts and processes using inheritance technology and integration of any number of modules
- Graphic error and function network
- FMEA is always up-to-date: Findings and errors from production or from complaints are automatically available in FMEA
- Identification of repeat errors
- Similarities and differences between individual products in a family are immediately apparent
- Comprehensive evaluations, for example Pareto analysis, failure analysis incl. highlighting of critical paths
- Process-oriented failure evaluation across part families
- The criticality of critical characteristics can be stored in a comparable manner
- Consideration of link elements for products, e.g. welded seams
- Release method with comments and warnings regarding consistency rules
- Versioning takes place according to document chronology; automatic version comparison and display of differences
- Multilingual data entry including translation aid
- Integrated action management with detection, prevention and general actions. All actions can be viewed in the web application at any time
- Automatic update of FMEA when actions are completed
- Synchronization of FMEA, inspection plan and control plan at any point in time when editing
- FMEA cover sheet report with stored risk catalogs (including action priority) for traceability of FMEA assessment

— PP/CP

# Inspection Plan and Control Plan

**Check only where it is necessary: PP/CP generates inspection plans directly and quickly with building block technology or directly from the technical drawing.**

## Well-organized inspections

To guarantee product quality, various inspections can be carried out across the entire value chain, if required, i.e. from incoming goods, to various production stages, and to outgoing goods. The Inspection Planning (PP/CP) facilitates to create inspection and control plans for the areas of incoming / outgoing goods inspection, for intermediate inspections, and SPC.

## Greater efficiency thanks to drawing integration

Drawing integration in PP/CP considerably accelerates the process of creating inspection plans. All required inspection plan positions are taken directly from CAD data to the inspection plan. The transfer of characteristics from scanned drawings is carried out with the support of optical character recognition, OCR.

## Inheritance

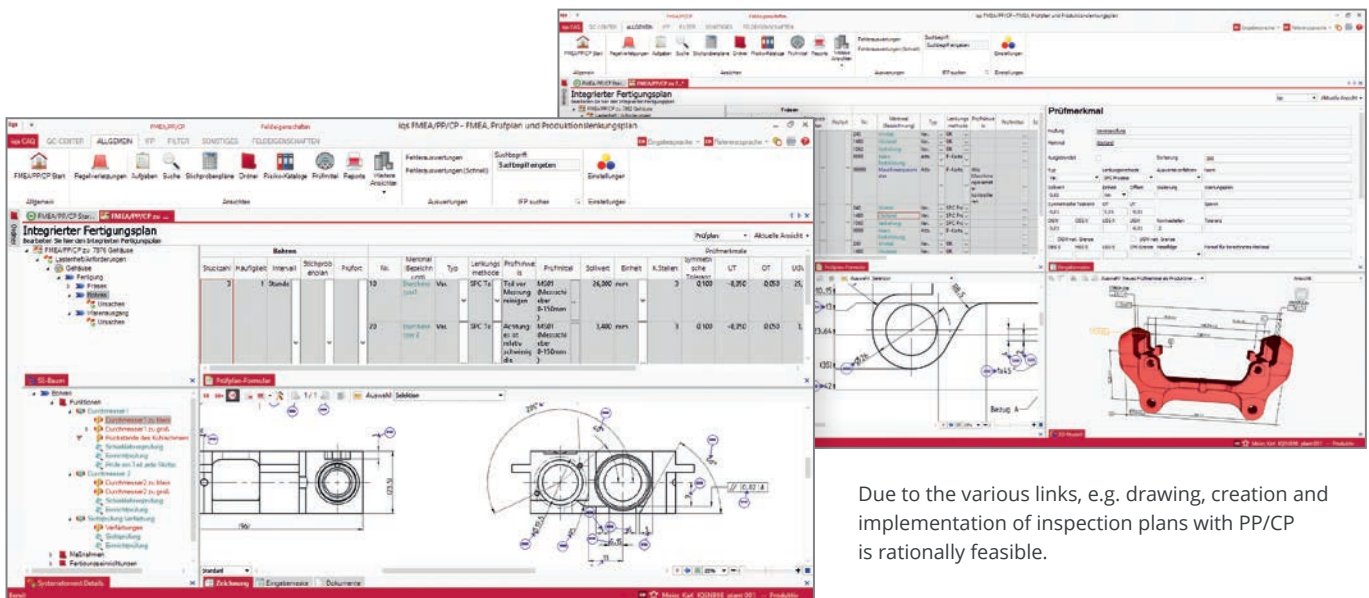
Simplify your inspection plan creation! Create various building blocks for your inspection plan based on product families and similar processes. Once created, these building blocks can be reused quickly and easily due to the inheritance technology in part-specific inspection plans, and adapted individually at any time.

## Reduce inspection costs

Thanks to the close connection between the Quality Center modules PP/CP and FMEA, each individual inspection will be fully justified – unnecessary inspections are systematically identified and eliminated. The inspection effort is based on real requirements, resulting in significant reduction of costs and time. You can now justify remaining inspections internally or to customers at any time.

## Complete documentation

With PP/CP you can generate a detailed inspection plan history for each product at the touch of a button. You can access all versioned and complete inspection plans at any time – for example during audits or customer visits.



Due to the various links, e.g. drawing, creation and implementation of inspection plans with PP/CP is rationally feasible.

## Inspection and Control Plan features available to you:

- Central inspection planning for the areas of incoming / outgoing goods inspection, intermediate inspections, and SPC
- CAD data integration – automatic creation of inspection plans by clicking directly on the characteristics in the drawing, and automatic adjustment of the inspection plans when drawing changes occur
- Support of article, process, cavity, tool and machine related inspections
- Process and product family inspection plans
- Simple document maintenance using inheritance and building block technology
- Determination of the required inspection size, e.g. according to AQL
- Individual inspection intervals with reference to time, quantity, and batch
- Supplementation of inspection plans with videos, images, inspection specifications, drawings
- Calculated characteristics
- Multiple use of characteristics
- Inspection note for each characteristic
- When creating an inspection plan from FMEA, any number of FMEA product characteristics functions with the same cause can be assigned to an inspection characteristic
- Reduction of inspection effort through the definition of proxy characteristics
- Inspection equipment allocated directly from Inspection Equipment Management (PMV)
- Link to existing inspection equipment capability studies, e.g. solara.MP from Q-DAS
- Justified testing based on FMEA
- Synchronization of FMEA, Inspection Plan and Control Plan
- Automatic generation of flow charts and inspection information boards
- Release and versioning of documents with history



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**FMEA & PP/CP**

# The successful duo

**The most efficient link: PeakAvenue Quality Center enables you to turn knowledge into quality.**

## Store knowledge

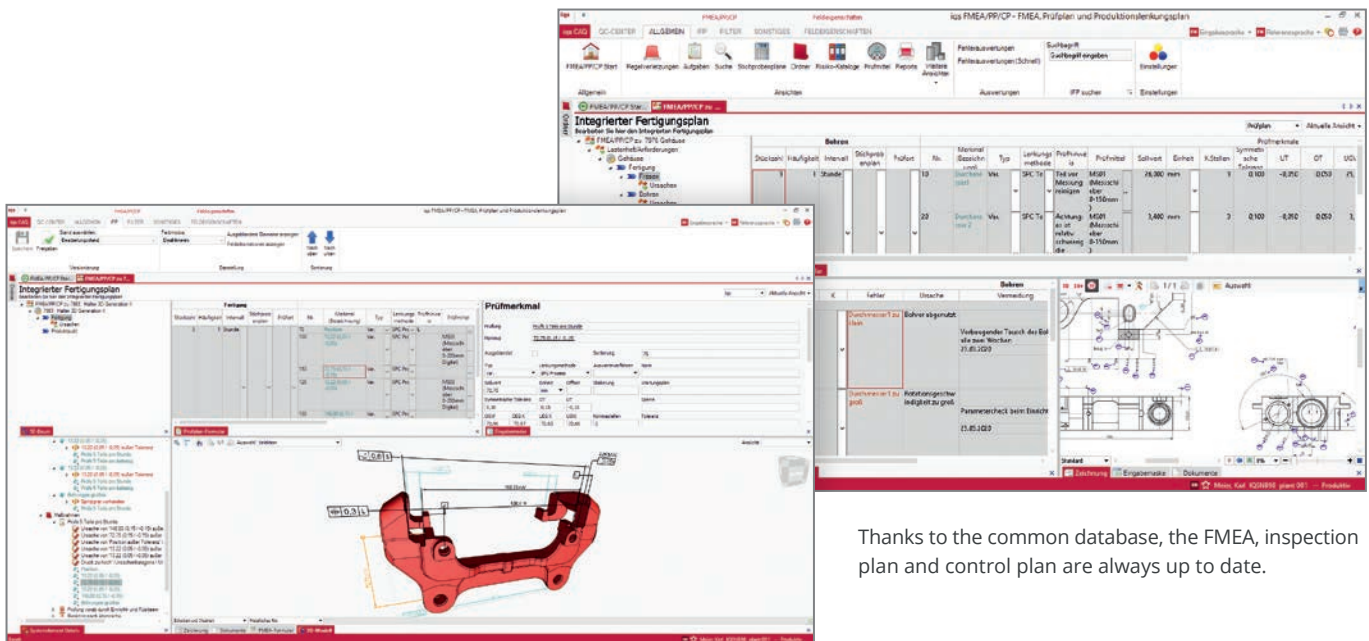
Even if the modules are already working extremely effectively for you as "stand-alone solutions", the business benefits can be increased even further by actively linking the modules. A particularly efficient example shows the interaction of FMEA, Inspection Plan and Control Plan (PP/CP). You benefit from a highly efficient interaction through the combination of these modules: Document the entire know-how of production and channel the information return from complaints as well as internal error capture. This enables you to permanently update the level of knowledge about your in-house processes and turn the FMEA and inspection planning into living documents.

## Previous dilemma: Inconsistent data maintenance

So that FMEAs, Inspection and Control plans can be accessed at any time means that production documents must be created, constantly maintained, and managed. As it was practically impossible in the past to maintain a logical link between the information content of the various documents, processing had to be carried out manually, which was time consuming. Often, data records were copied and overwritten without recording which document served as a template and which relationships existed – as a result, the consistency of documents was lost.

## Solution: document inheritance

Linking of the Quality Center modules FMEA and PP/CP enables you to process the production documents at the same time. Due to the one-time input of information fields and the subsequent automatic synchronization of all relevant documents, you accelerate processes, save time and create consistency without errors. With FMEA and PP/CP, you also utilize the principle of document inheritance, which was developed by PeakAvenue. This means that the links, differences, and similarities between your documents remain and can thus be used and presented more efficiently. Automatic versioning takes place at the same time of all statuses, as required by IATF 16949, and other standards.



Thanks to the common database, the FMEA, inspection plan and control plan are always up to date.

## FMEA & PP/CP features available to you:

- Combined creation and processing of FMEA, Inspection Plan and Control Plan or also as individual documents
- Efficient processing due to document inheritance
- Consistent production documents through synchronization of FMEA, inspection and control plans
- Central inspection planning for SPC, incoming / outgoing goods inspection, and intermediate inspections
- Comparison of FMEA with errors from manufacturing process, including internal complaints and customer complaints
- Up-to-date planning documents through the return of actual information from production, inspections and complaints
- Review of the effectiveness of actions to eliminate errors
- Integration of current drawing and 3D PDF with access to all drawing characteristics
- Availability of history through automatic versioning of documents
- Release system with information on consistency rules
- Automatic creation of flow charts and inspections note boards
- Knowledge resource for manufacturing know-how

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PDE

# Inspection data acquisition

**Goal driven inspection: Working with individual documents is a thing of the past! With Inspection data acquisition, you organize and manage every inspection process.**

## Less is more

Inspection data acquisition (PDE) provides the basis for production accompanying inspections, process controls, and intermediate inspection. The inspection can be triggered by the ongoing production process or the inspection order. With the optional feedback to FMEA, you optimize the inspection continuously: All results obtained are not only used for the current determination of the quality situation – they also consistently expand the knowledge resource of your company and thus create the decision-making basis for necessary inspections.

## Inspection Management

The inspection order allows you to display all inspections that are carried out with a part-production combination. Here you can find additional information such as order or batch numbers and create a reference to the corresponding inspection plan. Transfer your inspection orders automatically via an integrated transaction data interface.

## Plan, scope, and schedule in a targeted manner

In inspection planning, you specify the intervals and to what extent the inspection (quantity and inspection characteristics) is due. You also define the specific inspection sequence yourself, e.g. whether additional set-up, first part and last part inspections have to be carried out. You can determine whether the inspection sequence is based on the specimen or characteristic. Define which characteristics are to be checked at which inspection location (central/decentralized). Distribute the scope of the inspection in a targeted manner and thus create the conditions for individual, efficient inspections.

## Simple inspections with visual support

With the inspector authentication, you document which inspector carries out the respective inspection. The due date and scope of the inspection are already defined and clearly structured by inspection planning. The inspector will be supported by graphical inspection notes (images, drawings, videos, PDF documents, etc.). The characteristics to be inspected are displayed by the integration of drawings. Make the drawing available interactively on a second screen. Record measured values automatically using electronic measuring equipment or machines. Depending on the responsibility, an inspector can plan inspections independently and intervene in the event of deviations. In the deviation analysis, the inspector selects the failure and cause links from the FMEA and receives predefined reaction plan action. In addition, an internal complaint can be triggered at any time. Once the measurement data has been recorded, it is available for all types of evaluations.



With the p-chart you can carry out inspections as "error tally lists" with warning limits on the basis of FMEA.

## Inspection data acquisition features available to you:

- Central inspection planning with PP/CP
- Production, intermediate inspections and inspections using a p-chart
- Connection of electronic measuring equipment; integration of measurement data from complex measurement and inspection systems, multi-point measurement technology
- Separately definable sample intervals and sizes for each characteristic to be inspected
- Overview of current trends during the inspection
- Storage of formulas for calculated characteristics
- Triggering of complaints and concessions when deviations occur
- Comparison of event and actions with FMEA
- Characteristics to be inspected are visualized using CAD data integration
- Serial, parallel, and freely definable measured value input, tabular input
- Cavity-related management of the control chart types for attributive and variable characteristics
- Traceability of batches, orders, and customer-specific parameters
- Automation of the inspection process via an interface to ERP systems
- Differentiation between machine and tool production



— WE/WA

# Incoming / Outgoing goods inspection

**Minimize inspection effort: Using incoming and outgoing goods inspection, you reduce the effort via targeted inspections with dynamic processes**

## Incoming goods inspection

If preliminary products already contain quality defects, these run through the entire subsequent production process and affect the overall quality of a product – even if you adhere to all quality assurance steps in your company. If quality-relevant characteristics are already checked upon delivery and they do not meet the requirements, this immediately triggers a supplier complaint and the risk of defective goods is considerably reduced.

## Individual supplier assessment

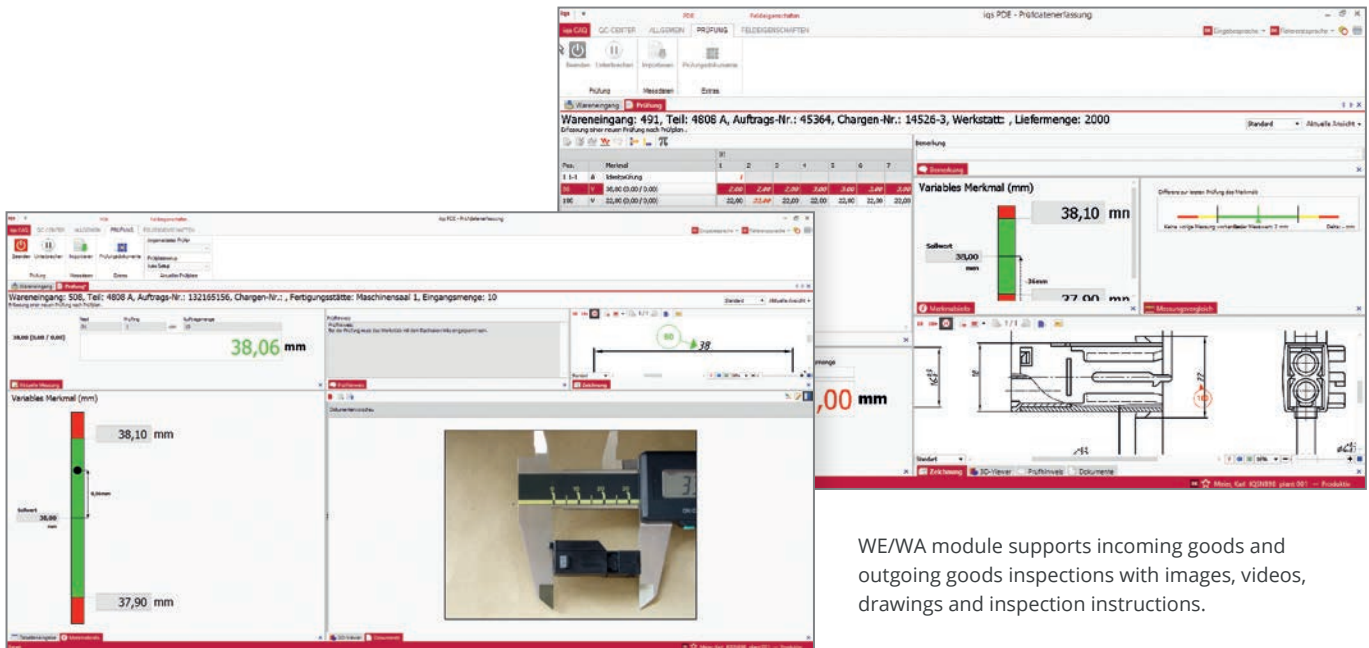
Already thinking today about tomorrow: classify reliable partners! Thanks to the intelligent link up to Supplier Evaluation, you can appoint those partners who constantly meet your requirements. This knowledge makes it easier for you to choose the right supplier and assures the quality of your products right from the beginning.

## Outgoing goods inspection

Make sure that only high quality goods leave the warehouse. Different methods and techniques for outgoing goods inspection – can also be used for the final inspection – guarantee compliance with quality requirements of your customers.

## Minimal inspection effort

Trust is good, inspection is better? No! You should therefore only check in those cases where you expect mistakes to occur. Sampling and dynamic modification procedures are defined in the inspection plan to optimize the inspection effort. These can also be automatically triggered via an interface to an ERP or PPS system. Control charts are kept for all collected data, which is available for graphical or tabular analyses in Control Center.



WE/WA module supports incoming goods and outgoing goods inspections with images, videos, drawings and inspection instructions.

## Incoming / Outgoing goods inspection available to you:

- Central inspection planning with PP/CP
- Versioned, inheriting inspection plan
- Random sample planning according to standards or freely definable; process and characteristic-oriented, based on quantities, suppliers, customers and production facilities as well as factory and inspection location
- Dynamic sampling of inspection severity (skip lot) against customer complaints
- Automatic generation of inspection orders via interfaces to ERP and PPS systems
- Inspection note graphic information, e.g. images or videos
- Visualization of characteristics to be inspected through CAD data integration
- Visual and audible display of deviations
- Filing of inspection equipment and link to electronic measuring equipment
- Cavity based measured value acquisition
- Graphical and statistical analyses, e.g. single value, mean value, variance
- Histogram, probability networks
- Information on the current status of inspections, supplier status, concessions, complaints
- Activation of complaints via Complaints Management
- Links to Supplier Evaluation (LIB)

# Control Center

**Extensive functionalities:** The Control Center makes all performed inspections, including results, available to you.

## Comprehensive overview

The Control Center (LS) enables you to efficiently monitor inspections within your company. In addition to the planning of inspection orders, this also includes the assessment of random samples, which means you are always informed about the quality of your production. By comparing different control charts and characteristics, you can optimize production parameters. For example, you can identify the best machine for a specific tool! Based on inspection plans created with PP/CP, you automatically generate and version the required control charts. Your employees in charge can be informed about events such as the breach of control limits by email.

## Control inspection orders

You can use Control Center to create inspection orders for all types of inspections, such as production-accompanying inspections, intermediate inspections, incoming goods and outgoing goods inspections, and start immediately. You can suspend or end these inspection orders at any time. Via the transaction data interface, they can be automatically generated using your production orders from your ERP or MES system orders.

## Structured presentation

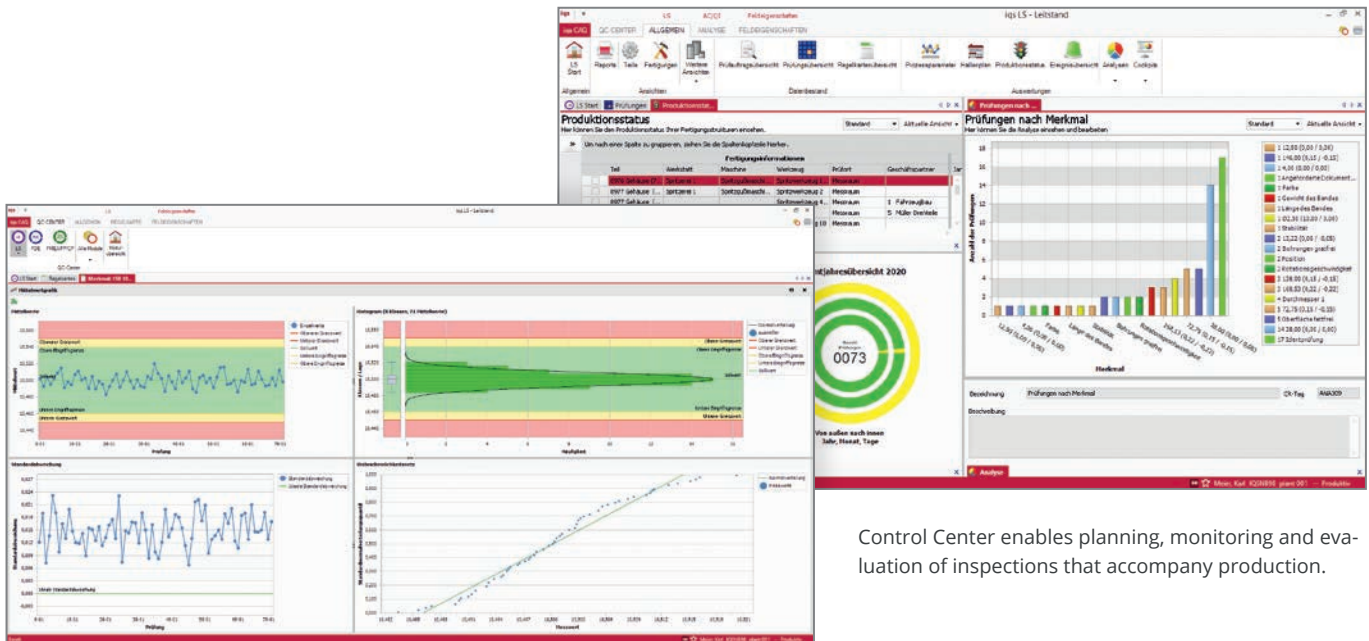
The Control Center represents the production structure, including production areas, machines, and tools, and allocates the parts, as well as corresponding inspection plans. The current product status will be displayed by simple traffic light system, which also shows at which part manufacturing combination the limit was exceeded. Search simply and specifically for inspection orders, inspections and control charts, criteria (such as date range), part, business partner, production, etc. and get a comprehensive overview.

## Clear navigation

The continuous navigation offers the possibility, for example, to get to the inspection and to the deviation analysis with the help of the inspection order. You can also navigate to the inspection plan via the control chart. In addition you receive individual values, mean values and various graphic evaluations for each control chart. In case of similar characteristics, you can simply display the control charts simultaneously on the screen for comparison.

## Output in Q-DAS format

To evaluate the inspection results, a suitable DFQ file can be generated at any time and processed with qs-STAT and opened automatically by Q-DAS for further evaluation.



Control Center enables planning, monitoring and evaluation of inspections that accompany production.

## Control Center features available to you:

- Comprehensive evaluations and statistics:
  - Machine, tool and cavity-related evaluations
  - Probability plot, histogram
  - Batch and order-related evaluations
  - Monitoring process capability; optional interface to qs-STAT from Q-DAS
  - Tracking of measured values across tolerance changes
  - Display of limit value box plot
  - Order evaluations
- Control center functionality for machines and hall layout
- Clear presentation of sample evaluation status
- Overview of production status, i.e. traffic light status according to sample, machine, tool, production area with drill-down to individual inspection processes



# Feasibility Study

**Risk minimization right from the start: efficient, advanced, quality planning**

## **Secure basis for your parts and risk management**

With careful advance quality planning, you create the best conditions for stable and minimized process failure costs in your company! The feasibility assessment tool, which is supported by the HBW software module lets you keep an eye on the feasibility of requirements for your product at all times. Every characteristic, whether for in-house production or purchased parts, can be individually analyzed on the technical drawing. With this secure basis, you can confidently negotiate specific adjustments with your suppliers. A reliable overview at the touch of a button serves as a backing for preparing your offer: all risks, actions, and costs in one place.

## **Highly rated**

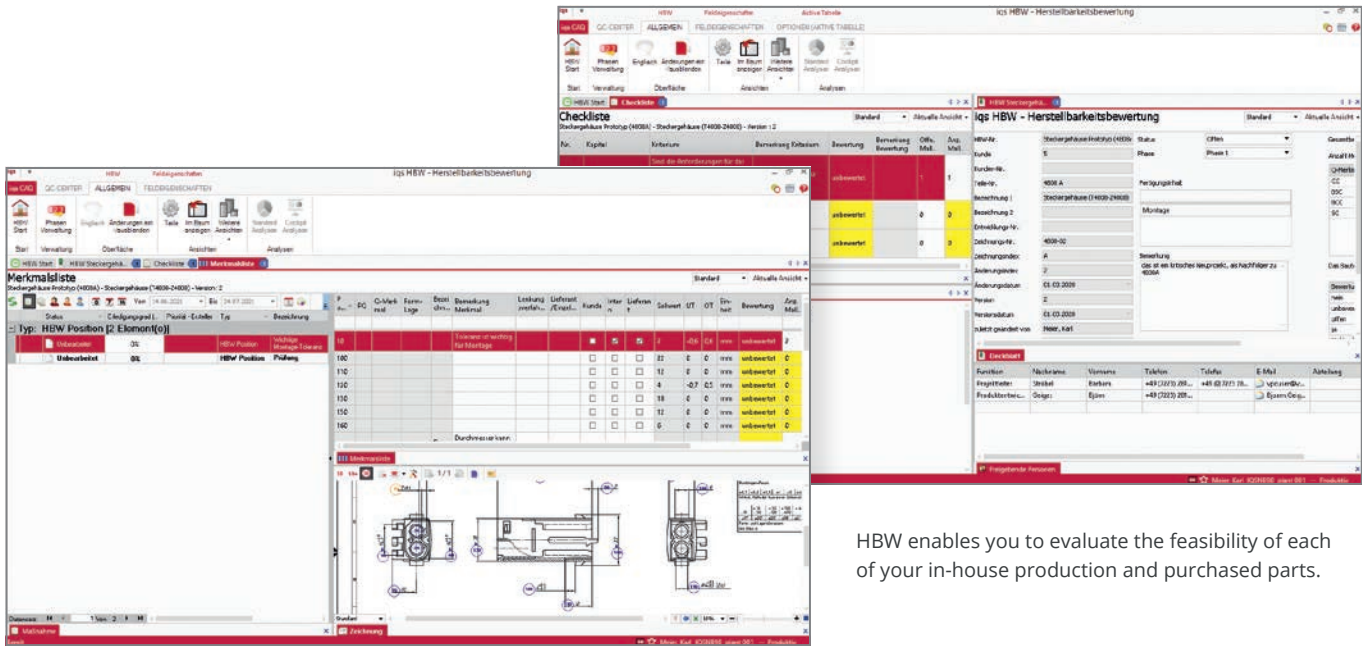
You receive a clear assessment of all part characteristics in every product phase. The results, including attached documents, are displayed in a comprehensible manner. You can also display all changes that occur during a product life cycle via the drawing integration and phase-dependent catalogs of criteria in HBW – simply and reliably. With the help of the evaluation of individual product versions, you can always make reliable statements about the respective degree of maturity of your product and its feasibility.

## **Complete tracking of actions**

Thanks to the integration of HBW in the QMS software, you possess a complete process documentation for every in-house production part and purchased part. All actions regarding the topic feasibility assessment can be filtered and tackled in a targeted manner.

## **Assessment from a supplier perspective**

Ask your supplier the feasibility questions at an early stage of your product development process. Use QC - Supply Chain to exchange specifications, general questions, and assessments in a comprehensible and structured way. Additionally, you will be supported regarding the definition and tracing of your supplier's activities.



HBW enables you to evaluate the feasibility of each of your in-house production and purchased parts.

## Feasibility Study features available to you:

- Creation, management, documentation of feasibility studies
- Clear overview of open, in progress, and updated feasibility studies
- Freely definable criteria catalogs for easy transfer to checklist templates
- Checklists can be adapted to the respective project and production phases
- Risk assessment for the selection of suppliers
- Quick generation of characteristics lists by including CAD data
- Synchronization of feasibility studies with drawing changes
- Direct feasibility studies for characteristics as well as determination of the control procedures and inspection methods
- Each characteristic can be evaluated individually
- Integrated action management
- Comprehensive and diverse analyses including
- Excel export
- Attachment of documents possible
- Analyzed characteristics and criteria as well as actions are directly reported back by the supplier in QC - Supply Chain
- Drawing integration OCR, 2D and 3D PDF
- Storage of version-related contact persons
- Traceability of changes by comparison with the previous version

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ISIR

# Initial Sample Inspection Report

**Quick and safe for series approval: ISIR offers an enormous timesaving potential. Create your initial sample test reports 70% faster.**

## Minimize delays

The Initial Sample Inspection Report (ISIR) is the rational, computer-aided software solution for quick, easy creation and evaluation of initial sample inspection reports in line with PPAP, VDA and customer-specific formats.

## Transfer and positioning of nominal values

Nominal values and tolerances are electronically extracted from requirements, e.g. drawings and then transferred with a few clicks to Initial Sample Inspection Report. The positioning of the drawing takes place at the same time and saves you tedious, and error-prone, manual transfers. Data transfer is not dependent on a specific CAD system. Since ISIR supports optical character recognition, OCR, you can easily transfer characteristics from scan files (.tif, .pdf) into the target inspection report.

## Measuring equipment included

Actual values measured with electronic measuring equipment are taken over directly and assigned to the corresponding inspection report items. Filter all positions of the initial sample inspection report for missing or deviating actual values and edit them specifically.

## Change management

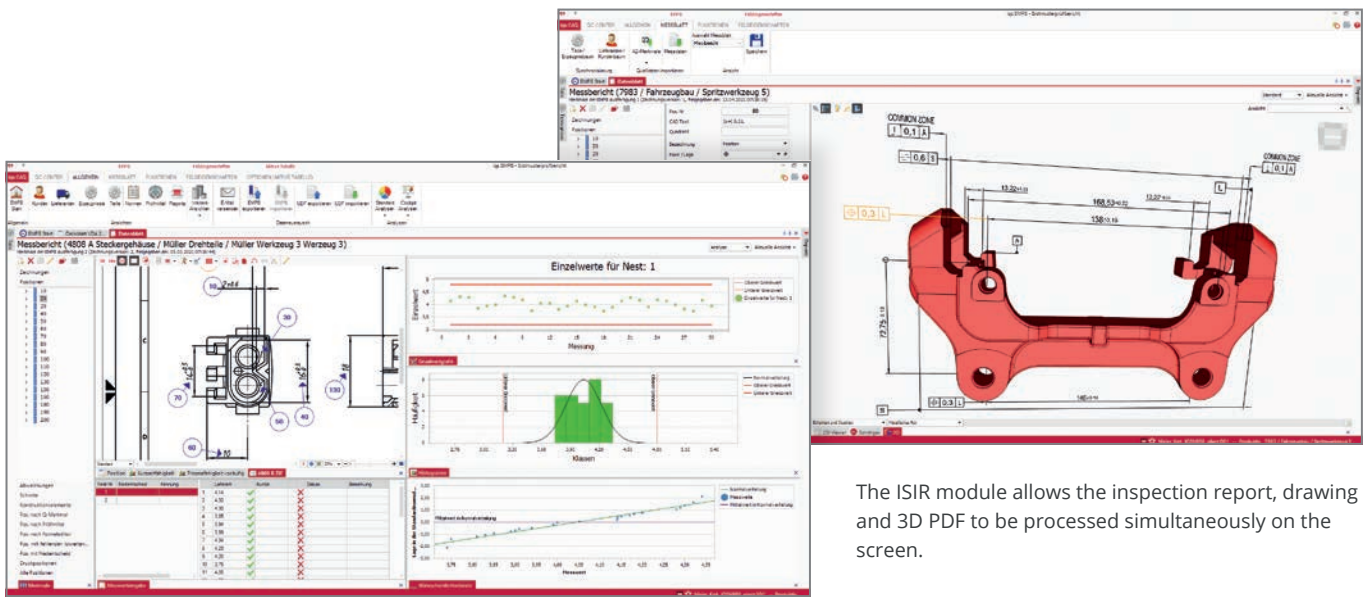
The module documents and visualizes each of your changes automatically. You can automatically transfer changed characteristics or individually determined items to the change report without manual comparison.

## Three-dimensional matching

More than just two-dimensional: Using the 3D PDF, you can work outside of the two-dimensional drawing. Characteristics can be imported directly into the ISIR from the 3D PDF and transferred to the measuring machine for offline programming.

## Process initial sampling online

Make the initial sample inspection report, including the stamped drawings, available to your suppliers in QC - Supply Chain. They, in turn, can edit the document using a web browser. This means there is no need for your suppliers to install any software on their own computer to process the initial sample inspection report. You can make all processes and applications available online via the central web installation.



The ISIR module allows the inspection report, drawing and 3D PDF to be processed simultaneously on the screen.

## Initial Sample Inspection Report features available to you:

- Complete transfer of nominal values and tolerances from the CAD drawing or from scanned documents (.tif, .pdf)
- Import and processing 2D and 3D PDF files
- Integrated standards manager for the automatic addition of general tolerances
- Automatic positioning of the drawing
- Differentiation according to cavities
- Connection to measuring machines and digital measuring equipment with automatic measured values transfer
- Transfer of characteristics to the measuring machine for offline programming
- Characteristics link to 3D PDF
- 3D viewer for measurement comparison between customer and supplier
- Check for missing actual values and deviations
- Statistical evaluations and graphics
- Preliminary process and machine capability interface to qs-STAT from Q-DAS
- Print out the stamped drawing with position numbers and identifiers
- Export of the initial sample inspection report in Excel format
- Sending initial sample inspection reports with all documents and positioned drawing by email
- Editing, administration, and display of special measurements
- Versioned filing and paperless administration. Filing of ISIR document is also possible in SAP/DVS
- Automatic transfer of ISIR positions to Inspection Plan (PP/CP)
- QDX interface
- Electronic signature is available as an add-on
- QC - Supply Chain for web-based and efficient supplier sampling

— PMV

# Inspection Equipment Management

**More than calibration and administration: Inspection Equipment Management aids your product quality with the correct inspection equipment.**

## Quick and comprehensive

Inspection Equipment Management (PMV) provides you with up-to-date and reliable information about the status, location and use of the inspection equipment. At the same time, it enables the measuring devices to be checked. This optimizes resources, because maintenance and operational planning of the inspection equipment can be carried out effectively and seamlessly.

## Inspection equipment history

A complete lifecycle with all accompanying documents is available for each inspection equipment. Here, for example, you will find recorded inspection requests, completed inspections (including recorded measured values and filed certificates), complaints, repairs, change of locations, status changes, and changes to inspection periods. You can also add company specific events individually.

## Inspection equipment capability/MSA

One component of inspection equipment management is the proof of suitability for inspection processes. Examine, among other things, the inspection equipment capability, determine the capability indices  $C_g$  and  $C_{gk}$ , and assess the measurement equipment scatter with, and without user influence. For this purpose, input and output data are exchanged with solara.MP from Q-DAS. The results are documented in PMV based on inspection equipment.

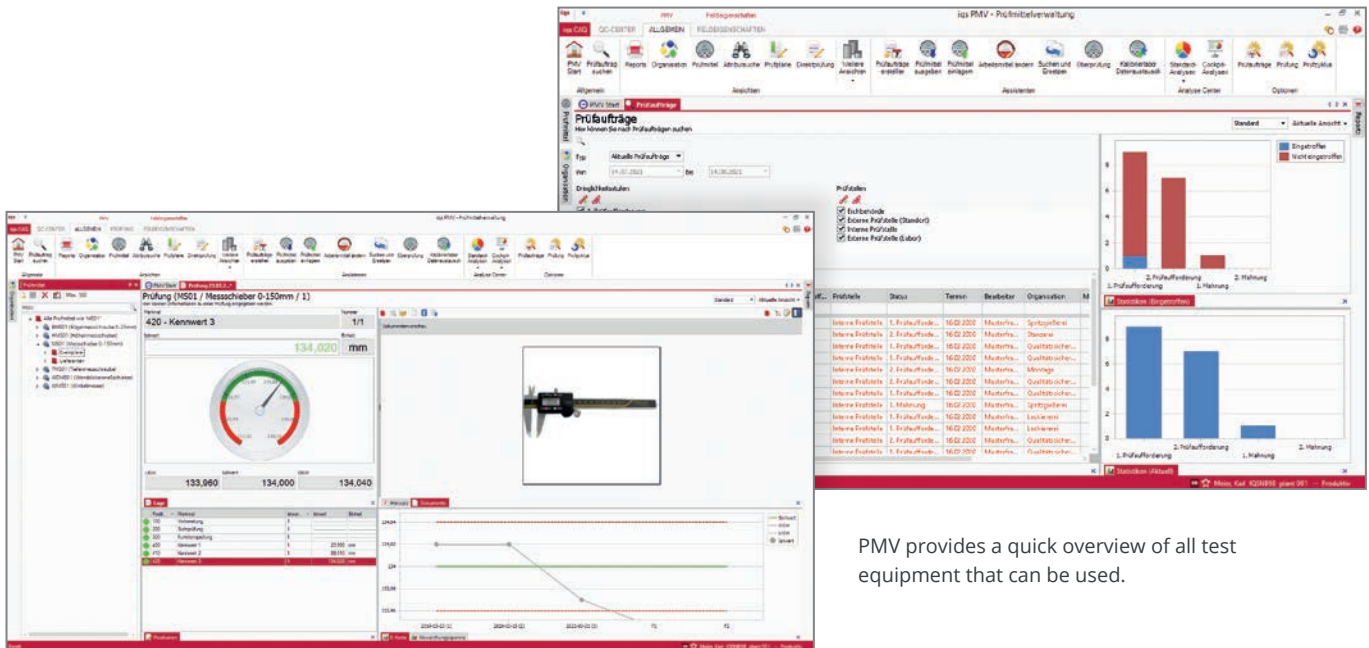
## Inspection planning wizard

With the help of the inspection order wizard, you can determine all due inspection equipment, forward inspection requests by email, and automatically send reminders for overdue inspection equipment. The PMV module uses the document inheritance technology developed by PeakAvenue in order to utilize similarities in inspection plans. You can store and allocate corresponding standards to each inspection equipment.

## Order management

An order list displays an overview of open or unprocessed inspection orders, in-house inspection centers, and external calibration companies. The module also supports the creation of delivery notes for accredited companies to calibrate respective inspection equipment.





PMV provides a quick overview of all test equipment that can be used.

## Inspection Equipment Management features available to you:

- Extensive software for inspection equipment management and monitoring as well as maintenance
- Efficient management of individual inspection equipment and inspection norms, fixtures, inspection statuses and complete measuring equipment groups
- Inspection equipment organization in various views
- All inspection equipment at an inspection station can be checked and summarized
- Secure certification via complete inspection equipment history
- Quick creation and amendment of inspection plans through inheritance technology
- Graphical inspection information, e.g. drawing sections, videos and images
- Versioned inspection planning
- Wizard for automatic identification of inspection equipment that is due
- Distribution of inspection orders via email, including levels of urgency
- New inspection equipment can be checked for operational integrity and a complaint can be triggered if necessary
- Procedure for preventing the occurrence of overdue inspection equipment (escalation model)
- Inspection equipment can be allocated to different inspection cycles with a corresponding inspection plan, considering the operating time (dynamic modification)
- Link to the inspection process suitability solara.MP from Q-DAS
- One-sided and calculated characteristics (formula editor)
- Simple automatic data exchange via VDI 2623 with external calibration service providers
- Order processing including delivery note issue, e.g. for calibration laboratories
- Comprehensive analysis, e.g. inspection equipment cost analysis

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**AUDIT**

# Audit Management

**Stress less for your upcoming audits: The organizational tool you need in the audit process.**

## Handling audits consistently

The planning and implementation of audits require a high level of organizational effort. Using AUDIT, you clearly reduce documentation and monitoring efforts. Check your quality standards for compliance and effectiveness, and use the software to ensure consistent planning and implementation of customer, supplier, and internal audits.

## An overview of audits

A central calendar gives you a comprehensive overview of your audits at any time. Here you can access information on all audits – whether internal or external audits, system, process, or product audits. This central administration enables you to filter for organization, time, business partner or partial audits and continue working on your audit program in a targeted manner.

## Flexible planning

Define standard-related question catalogs and combine them freely with your own company catalogs. In combination with the integrated module Inspection Plan, you have inspection characteristics at your disposal for product audits in addition to questions. Flexible settings enable you to determine the procedure (catalog or free findings) in systems and process audits as well as the level of detail (including root cause analysis). For these various authorizations, you can file auditor qualifications and repetition intervals for each type of audit.

## Simple implementation

Carry out audits with the support of predefined question, cause, and action catalogs. Utilize the integration of drawings for evaluating characteristics during product audits. Make targeted findings, including their evaluation, and support them with photos and other documents. During the audit, filter for missing findings or deviations for which actions must be defined. Visualize your audit results in a norm-specific manner (VDA 6.3) using customizable reports and the integrated Analysis Center with predefined evaluations.

## Offline Audit

Offline Audit supports you in the mobile execution of audits – independent of your eQMS solution and database connections. As an auditor, you process the different audit types (process, system, VDA 6.3 audit) and make findings, which you can supplement with documents, notes, photos and actions. After the audit, all recorded audit data is synchronized with your central database.

## Track audits efficiently

Track all necessary actions for findings easily and on schedule via the integrated action management or Intranet (QC - Web). Via the QC - Supply Chain, you enable your suppliers to retrieve, process, and trace audits and you, in turn, receive direct feedback on the processing status of the actions.



Audit Management supports you in the successful implementation of audits.

## Audit Management features available to you:

- Flexible definition of all types of audits, such as internal/external system audit, process audit, product audit, supplier audit
- Use of norm-based question catalogs, e.g. IAF16949, ISO 9001, ISO 50001, ISO 14001, VDA 6.3 or in-house catalogs
- Adding your own questions while performing the audit and adding new questions to existing checklists
- Freely definable evaluation criteria corresponding to audit types
- Detailed recording of statements with root cause analysis as well as comparison with norms requirements
- Storage of the audit qualification depending on the type of audit
- Overview of audits, deadlines with drill-down on individual processes
- Actions in the Intranet for direct processing
- Reminder for audits to be planned for each repetition interval
- Adoption of the audit results in Supplier Evaluation
- Comprehensive presentation of all audits in a calendar overview (timeline) for central administration
- Define audit team, including roles
- Clear presentation of all audits in structure trees for organization, business partner and part
- Comprehensive information about the audit to all parties involved via email with audit details and attached reports
- Filter option in the audit, e.g. after assessment of findings, findings without actions, etc.
- Customizable reports using an integrated report designer
- Comprehensive assessment using standard analysis supplied or freely definable
- Warnings in the event of deviations or regular reports by the Q-Agent

# Competence Management

**Know what you know: With the Competence Management you promote and plan qualification measures reliably and expand the competencies and qualifications of your employees!**

## **Knowledge management through target competencies**

Knowledge is particularly emphasized in ISO 9001. Information on how to achieve the company's goals will be the decisive success factor. Which knowledge and which skills are required for which areas? In the organizational structure, define the target competencies that are required in the respective area.

## **Qualifications overview for qualification assurance**

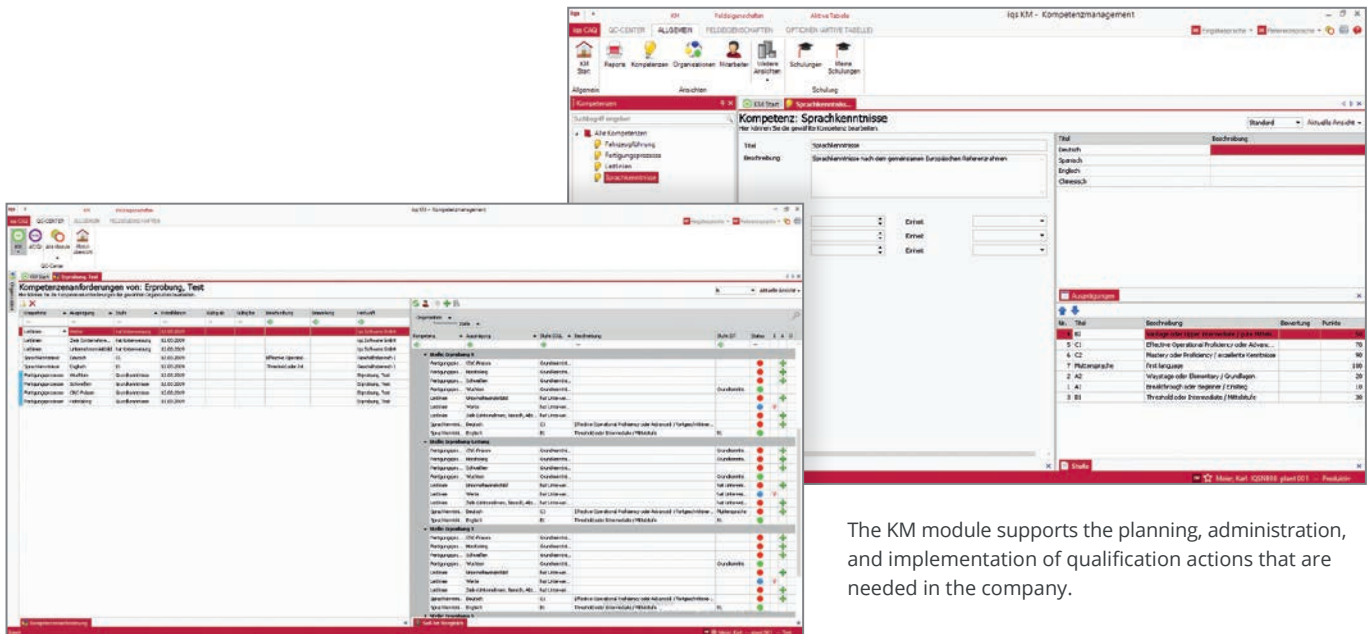
You can document the qualifications of your employees with appropriate evidence such as certificates. That way you can use all qualifications at any time to plan actions or fill vacancies. When limited qualifications expire, the Competence Management (KM) module reminds you to initiate appropriate training and further education actions in good time. With this qualification overview, you can effectively care for the qualification assurance of your employees and your company.

## **Check competencies with a target/actual comparison**

In the KM module, you can check the current status and the ideal status for departmental or job-related skills by comparing target skills with actual skills: Store the required values and use the information to quickly and easily manage the target/actual comparison. This gives you a meaningful overview of differences and the resulting training requirements.

## **Check, promote and record current qualifications**

KM is an efficient tool for planning training actions as well as monitoring success using evidence of competence: By efficiently planning necessary training and further education, you promote the competencies of your employees. If successful, the participant's current qualification will expand and the proof of competence in the form of certificates will be stored in the system.



The KM module supports the planning, administration, and implementation of qualification actions that are needed in the company.

## Competence Management features available to you:

- Reuse of previously defined competencies
- Administration of certificates with expiry dates in integrated document management
- Training invitation to participants by email
- Reminder email before expiry of the time-limited qualification
- Comprehensive determination of competencies and the need for action in each area
- Fulfillment of documentation requirement according to ISO 9001
- Competence levels can be freely defined
- Comparison of target and actual qualifications to determine training actions
- Education passport for employees
- Cross-departmental planning of training sessions



# Complaints Management

**Use complaints positively: Avoid repetitive errors and reduce your costs with Complaints Management.**

## Quick reaction

Complaints should be resolved quickly and smoothly. Using the Complaints Management (RKM) you create, process and track complaints – externally and internally, for suppliers and customers or within your own company departments.

## Design processes individually

With RKM you design all steps and procedures for processing complaints according to your internal specifications through predefined methods. These contain the necessary information as well as specifications for time procedure (1-2-14 rule). Of course, templates such as 8D, 4D reports and CAPA are also available for this purpose.

## Direct access via the web

Make communication between those involved even easier and more direct with the Intranet-based QC - Web: Here you can record and process complaints directly in the web browser. With QC - Supply Chain, you actively involve your suppliers in the entire complaint process, including an 8D report.

## Use existing knowledge

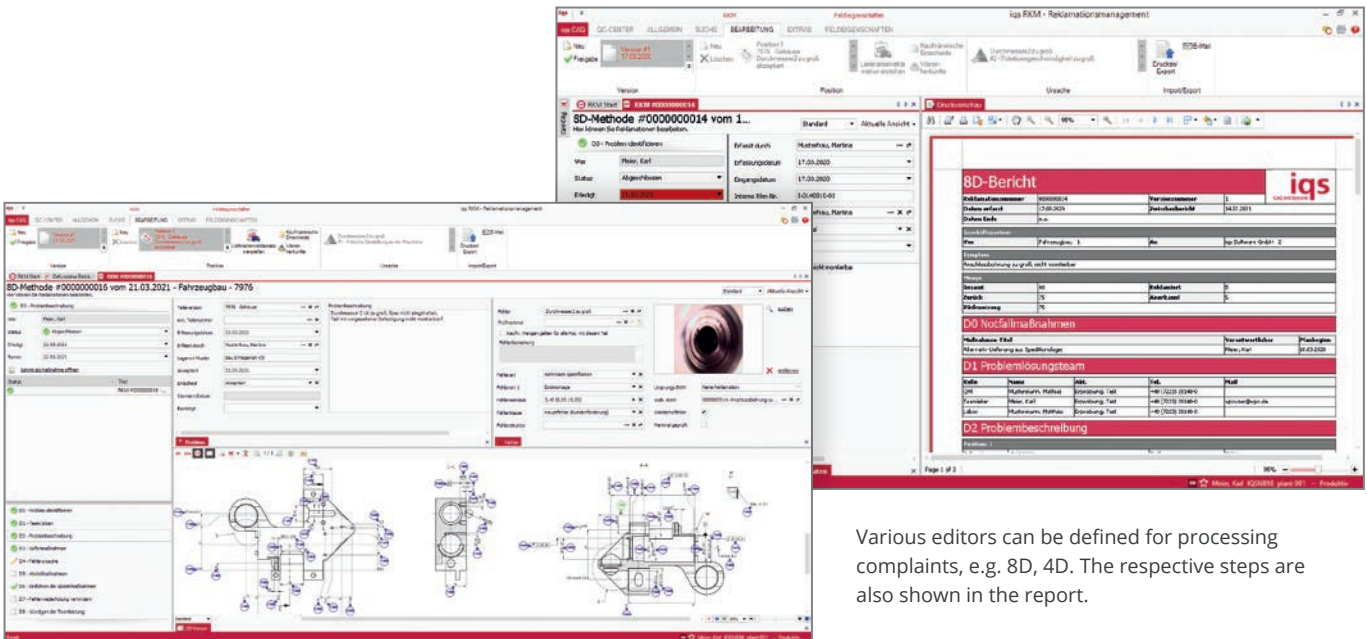
You can use the eQMSdatabase while processing your complaint. Similar errors or repeat errors are automatically flagged; actions already initiated can be checked and, where appropriate, included in current complaints.

## Rapid evaluation

The integrated Analysis Center grants access to a wide range of reports on your current quality levels. This way, you can immediately determine which complaints and the resulting action have already been processed or are still open. Understand very quickly where the priority, causes and costs of failures lie and take targeted action to improve your complaint process by evaluating the diagnosis time.

## Immediate feedback to planning

Transfer errors with corresponding actions directly from the Quality Center module FMEA. RKM transfers new errors to the FMEA, which you can update immediately and make it available to the system. In addition, the integrated error analysis provides you with an up-to-date overview about the progress of defined corrective actions.



Various editors can be defined for processing complaints, e.g. 8D, 4D. The respective steps are also shown in the report.

## Complaints Management features available to you:

- Generating supplier and internal complaints, e.g. from Incoming / Outgoing goods inspection or from the inspection during production
- Complaint reports according to 8D, 4D and CAPA method or individual reports
- Processing of customer complaints and issuing customer-specific reports
- Freely configurable workflows for processing complaints
- Paperless exchange of supplier complaints with automatic import of responses via QC - Supply Chain
- Internal or external complaints dispatch as an event mail with all documents, images, videos, drawings, reports
- Integrated CBR procedure (case-based reasoning). Find solutions to problems quickly using a similarity search
- Automatic detection of repeat errors
- Import of failures and causes directly from FMEA. Transfer of new failures to FMEA automatically by informing the person responsible for FMEA
- Ishikawa diagrams and 5-why-method for defining the cause and effect
- Integration of Lessons Learned; Poka Yoke, Yokoten via actions
- Convenient and cross-departmental action monitoring with Action Management for tracking deadlines, degrees of completion, responsibilities and costs
- Substantial analysis using Analysis Center, e.g. Pareto analysis, cost analysis, graphics, filtered work plans and individual assessments
- The Q-Agent acts as an early warning system and sends information when, or before, limits have been exceeded, e.g. number of complaints per business partner. Quality reports can be time-controlled and sent to a defined distribution list.
- Time measurement of individual processing steps of the complaint (diagnosis time)
- QC - Web for web-based complaint processing on the Intranet
- Log book for commenting on the progress of a complaint

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**MM**

# Action Management

**Everything at a glance: manage and track with Action Management**

## Central instrument

Action Management (MM) accesses other Quality Center modules which may have actions attached to them. This provides you with a central overview and the option to track all actions from Complaints Management, FMEA, audits, Inspection data acquisition and APQP. Furthermore, it allows actions from independent modules to be included, therefore optimizing the organization of your own actions. This way MM automatically supervises all deadlines and creates follow-ups and reminders.

## Multilevel filtering

The Action Management module enables you to filter across multiple levels, e.g. departments, teams or individual employees. It makes the MM module the ideal management tool for overviews of optimal control of resources for executing planned actions.

## Greatest security

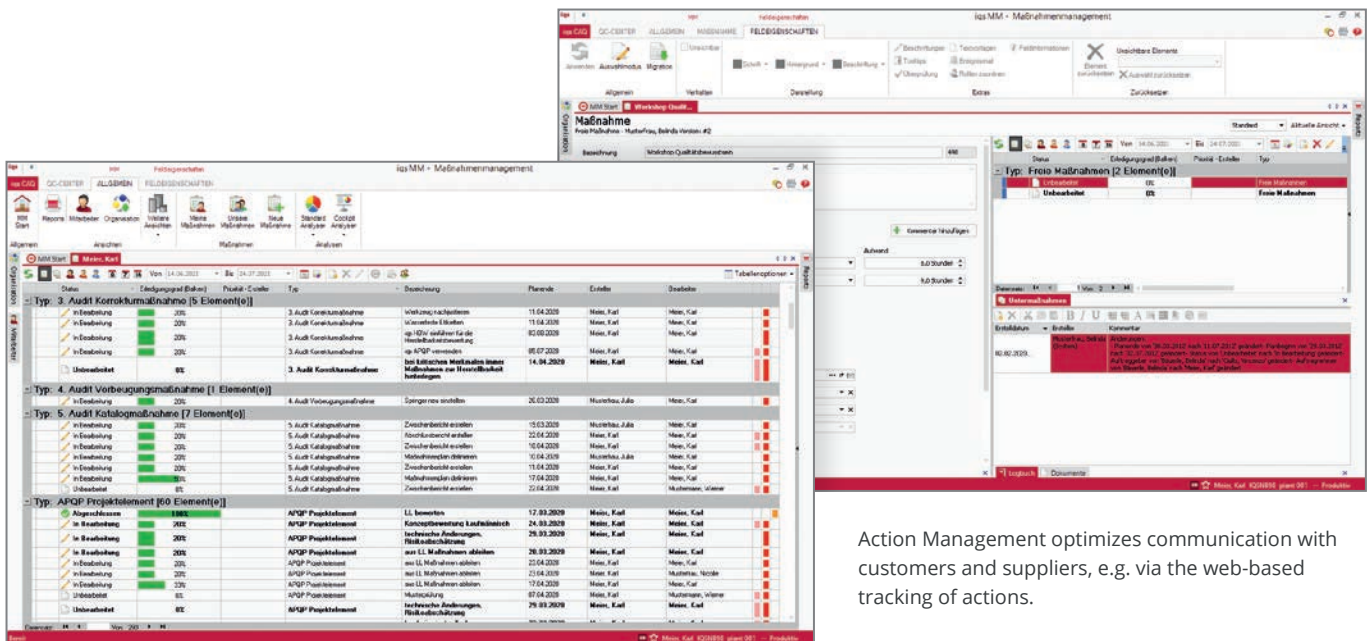
In MM, defined actions cannot be lost. The software gives control over completion statuses and the efficiency of actions via identification analysis – at a glance it is possible to see which actions have been successfully completed, remain open, or are partially completed. MM increases security in your company.

## Clear communication

The escalation management automatically informs defined personnel if actions have not been processed, or deadlines exceeded. Actions between customers and suppliers can be exchanged and supervised via QC - Supply Chain.

## Simple processing via QC - Web

All employees, including those outside the QM department, can take action quickly on the intranet via the web and edit actions. If the action is related to a Q-process, the respective context of the action (complaint, audit) can be viewed.



Action Management optimizes communication with customers and suppliers, e.g. via the web-based tracking of actions.

## Action Management features available to you:

- Capturing actions, effective scheduling and documentation of time and costs
- Definition of persons responsible for action processing, including team administration
- Support of the defining actions through freely definable action catalogs
- Review of the degree of completion and effectiveness of actions
- Informing those responsible about open actions and completed actions by email
- Reminder of outstanding actions by follow up email
- Integrated overview of individual and delegated actions; extended to all Quality Center modules as well as user-related and cross-divisional
- Splitting up into sub-actions and tracking these sub-actions separately
- Multiple analysis, e.g. open actions related to departments
- Logbook for commenting on the progress of an action
- Escalation Management
- Tracking of actions, as well as costs and logbook entries, via the Intranet, also as a tablet application
- Exchanging, processing and monitoring of actions with customers and suppliers via QC - Supply chain
- Cyclical actions e.g. to remember requalification of a part

# Supplier Evaluation

**Fair evaluations and design of actions: With the Supplier Evaluation module you create a transparent evaluation of your suppliers based on your criteria.**

## Clear standards

With Supplier Evaluation (LIB), you classify your suppliers on the basis of objective key data, e.g. based on the number of complaints or exceeding delivery dates. By including the standards that were defined by you as so-called "soft facts", such as flexibility, price range or availability, you complete the evaluation criteria individually. The result of the current quality data will be forwarded to you in a specified series report, defined by you.

## How to rate?

Your evaluation can include hard facts and soft facts, and transparently displays the calculation formulas for you. Audits, complaints, incoming goods, and other quality processes can be filtered and rated according to certain criteria, such as "penalty points" for customer complaints, goods delivered too early or too late, and poor audit results. The requirements are summarized in a evaluation scheme. You can also version the scheme so that evaluation processes are always carried out according to the current scheme. Use evaluation runs regularly to receive up-to-date quality data. You can apply your evaluation scheme for all suppliers, or different schemes for defined supplier groups, such as material group.

## Simulate evaluations

In order to use the quality numbers sensibly, you can test new evaluation schemes without saving the evaluation. This way, you can check whether your selected criteria gives you the information you want in order to classify your suppliers and determine the best possible criteria catalog for a evaluation based on your standards.

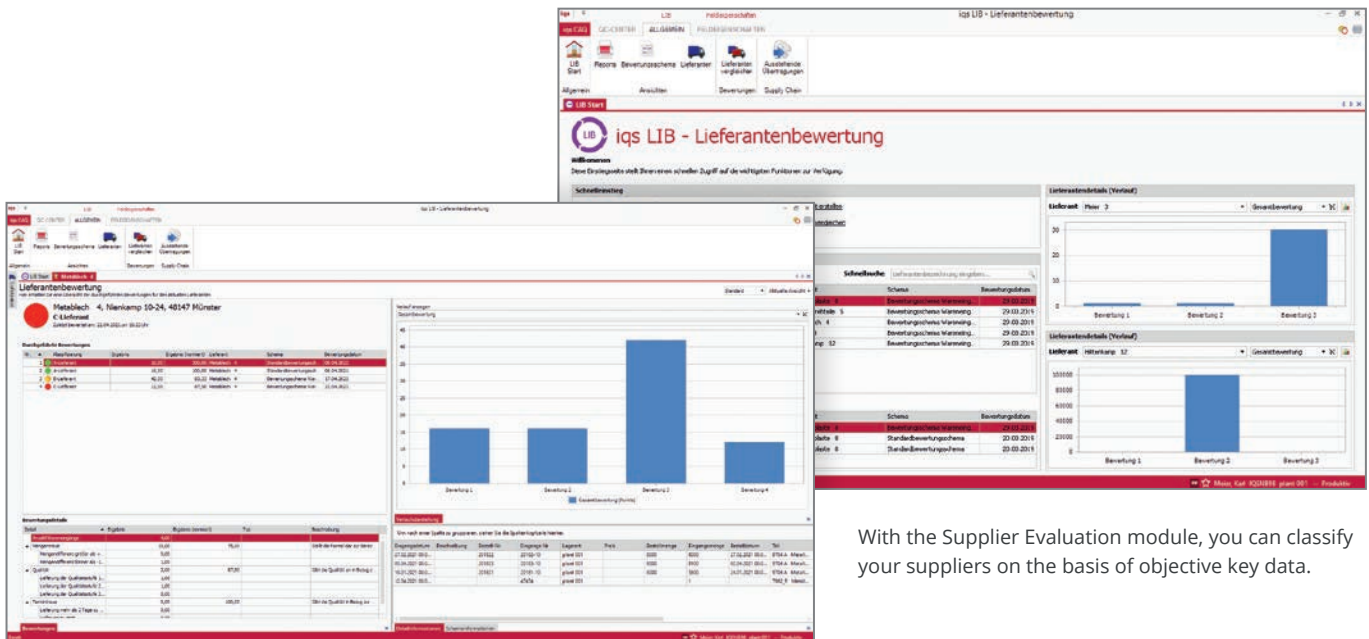
## Evaluations history and comparison

The results of regular evaluation runs are displayed as a chronological sequence. This allows you to see how your suppliers are developing over a period of time. You can also see the results as a graph to compare your suppliers quickly and clearly. The supplier comparison gives you the option of comparing several suppliers who have been rated according to the same evaluation scheme and to determine which supplier does better or worse in which category. This gives you a comprehensive and meaningful picture of all your suppliers.

## Transparency for both parties

To ensure transparent evaluation, your suppliers can check their current quality status via the the web solution QC - Supply Chain. Not only the evaluation result is shown clearly here, but also the evaluation formulas you have specified and the underlying quality processes. This gives both sides a fair opportunity to take action.





With the Supplier Evaluation module, you can classify your suppliers on the basis of objective key data.

## Supplier Evaluation features available to you:

- Comprehensive evaluation options by setting the criteria according to VDA or individually adapting freely definable standards – for all suppliers or according to supplier groups
- Freely selectable weighting of criteria according to the company's own standards for soft and hard facts
- Allocation of an arbitrary number of soft facts, such as accessibility, punctuality
- Automatic classification of suppliers into classes after evaluation, e.g. A, B, C supplier
- Monthly automatic calculation of supplier key data for constantly updated quality data
- Automatic generation of key data from the Quality Center modules Incoming goods inspection and Complaints Management, or the incoming goods data of an ERP system as well as transfer of supplier evaluation to ERP system
- Simple creation of a wide range of reports with or without a stored calculation formula
- Temporary evaluation for ad hoc query or for inspection of evaluation scheme
- Evaluation history to extrapolate trends for supplier development as well as comparison options of supplier groups
- Transparent and fair conditions via QC - Supply Chain, which allows suppliers to access their quality key data

## QC - SUPPLY CHAIN

# Web Solutions

**Professional communication:** Using the comprehensive QC - Supply Chain involves your suppliers in quality work.

## Efficient solution

Frequently recurring, operational processes when co-operating with suppliers in quality management tie up resources and cause high process costs.

Utilizing a web-based solution that is specifically customized for customer and supplier cooperation means that you have tools at your disposal that help you optimize and save resources and process costs when working with your business partners. With digitization in the supply chain, you reduce costs, increase quality, and significantly accelerate the processes in the supply chain. In doing so, you save valuable personnel and time resources.

Based on the individual process steps of the supply chain, you receive valuable support for the entire quality control loop via web-based communication.

## Professional add-ons

Thanks to the QC - Supply Chain, both customer and supplier work consistently on quality processes in a central system. To do this, start quality processes, such as APQP, Feasibility Study, Initial Sampling, Complaints Processing, Audit, or Supplier Evaluation in the Quality Center. Add additional documents to the process, such as drawings and images, and make this data available to the supplier for processing. Your supplier adds the required data in the quality process, such as measured values, project deadlines, corrective actions, and documents. Once it has been added, the data is available to you as the current status in the process.

## Optimal data usage

Maintain structured data once! Then you and everyone involved can view the progress of the quality process at any time. Actions and appointments are clearly assigned and can be tracked centrally. The information and documents required in each case are part of the quality process and are available to you as well as all internal and external editors.

By using this web-based solution, your suppliers do not need additional software. You save time and money by eliminating installation and training times and maintain professional, digital cooperation and quality work with your suppliers!



## QC - Supply Chain features available to you:

### > APQP

- Clear project planning for all people responsible
- Actions with necessary information and documents visible
- Project progress and disruptions are immediately recognizable

### > Feasibility Study

- Detailed evaluation of the characteristics
- Characteristic reference to the drawing
- Answering phase-dependent criteria catalogs
- Definition of actions to ensure feasibility
- Completion of documents
- Transparent presentation of the overall status

### > Initial sampling

- Paperless sampling processing
- Clear sampling processes
- Identical characteristics descriptions
- Avoidance of recursions
- Positioned drawing is available interactively

### > Processing complaints

- Direct online editing of 8D report
- On schedule responses of suppliers
- Overview of all open actions in central action management

### > Action management

- Overview of all actions from supplier quality activities
- Central planning and tracking
- Action processing with logbook, documents, and proof of effectiveness

### > AUDIT

- Access to audit results and statements
- Definition of corrective actions by the supplier
- Direct assessment by auditor

### > Supplier Evaluation

- Every supplier knows their current quality status
- The evaluation criteria are shown in detail

### > Tool information system

- Tool monitoring by adjustment of planned and real output
- Reduction of the risk of tool wear
- Planned and early replacement of tools

# Analysis Center

**Filtering, analyzing and visualizing: Be proactive by using reliable key data.**

## The basis for clear decisions

To act responsibly, you need secure, transparent and, above all, up-to-date information. In the area of quality assurance in particular, you create the indispensable basis for effective reaction and timely action in your company with analyses that can be created quickly as well as forecasts and early warnings when limits are exceeded. Accelerate your communication: Use the integrated Q-Agent for the time-controlled dispatch of quality reports to a defined distribution group.

## Access to all relevant modules

The Analysis Center (AC) gives you central access to all Quality Center modules that are required and relevant for the creation of your analyses – including Complaint Management, audits, or APQP. Utilizing the integrated filter function helps you generate detailed analyses over freely definable periods of time.

## Get to the core of the matter quickly

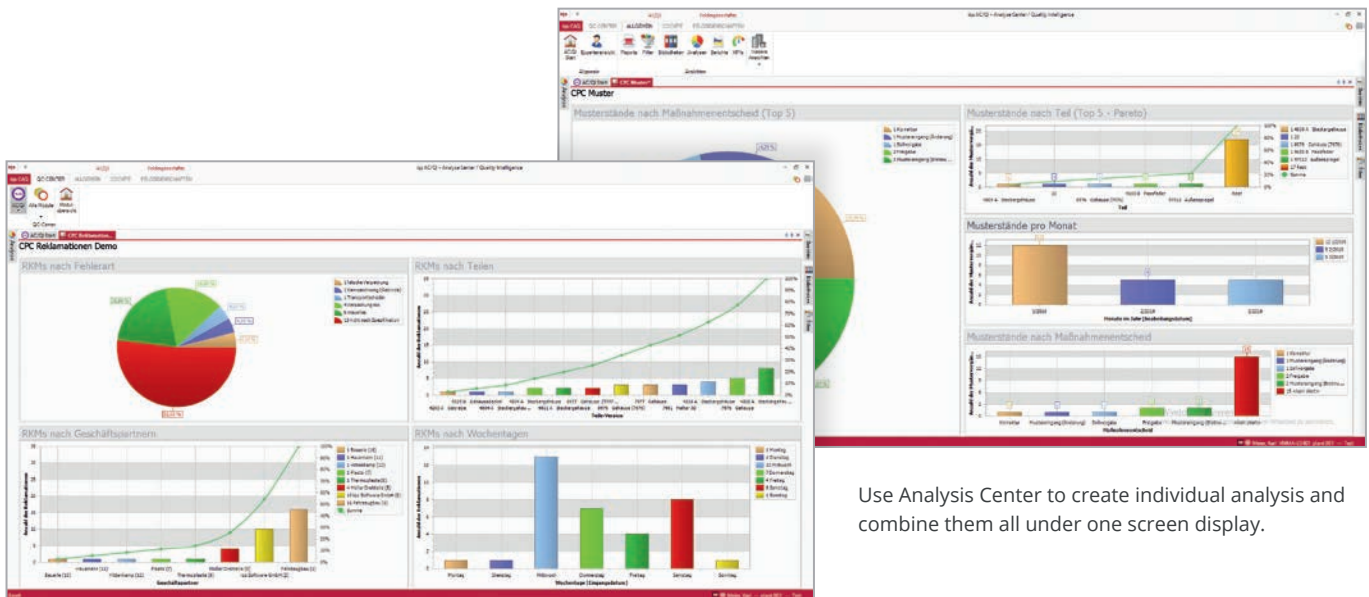
What is particularly interesting, of all the analyses that Analysis Center creates, you can switch directly to the corresponding processes on which the analysis is based. This feature makes the Analysis Center an instrument of extreme usefulness. The analysis database can also be made available as a list at any time and exported to Excel.

## Accessible key data

Translate and condense assessments of your corporate key data in concise diagrams – easily done with the cockpit charts from the Analysis Center. You can compare nominal and actual values at a glance. The drill-down function also gives you direct access to the underlying detailed analyses and processes.

## Individual presentations

The Analysis Center is designed in such a way that you can use it to create not only individual analysis, but also graphical displays. You can modify diagrams according to your own requirements and combine them in one screen – this way you can quickly identify context. Analysis schedules allow, e.g. the automatic creation of monthly reports in which you can focus on defined periods of time by filtering within the analysis. The Analysis Center will continue to support you with Pareto analysis as well as data export in formats ready for presentations, e.g. PowerPoint.



Use Analysis Center to create individual analysis and combine them all under one screen display.

## Analysis Center features available to you:

- Accesses all analysis-relevant Quality Center modules directly
- Filter criteria can be defined in detail, e.g. part families, cost centers, manufacturing facilities, or measure-specific
- Versatile and diverse standard analysis already integrated in the system
- Company-specific report templates can be stored
- Cockpit charts summarize the key data in graphics
- Faster, visual comparison of nominal and actual values
- Access to the detailed analysis and individual process in the QMS software via the drill-down function
- Support of Pareto analyses
- Clear navigation through various analysis in the hyperbolic net or tree structure
- Sending and displaying analyses by email within the company – also cyclically by the Q-Agent
- Using stored formulas with variables, e.g. simulate and represent quality goals and limits. Data can be extra-polated based on past values (regression analysis)
- Timely warning by Q-Agent before or in the event of violations of defined limits, also predictions into the future, e.g. exceeding the number of complaints in the next quarter
- Time controlled sending of quality reports to a defined distribution list by Q-Agent
- Direct allocation of analysis to the relevant Quality Center module
- Integrated report generator for cyclical generation, e.g. quarterly reports



# Document Center

**Intelligently managed: With the Document Center, you have current Documents at your fingertips.**

## Data volumes under control

Every company process generates new documentation – the more complex the task or process, the more data will be created. Drawings, images, or videos are increasingly being added to written correspondence. All individual documents must be meaningfully managed, archived, and published within the company. It is precisely these error-prone individual tasks that Document Center (DC) takes on.

## Filing and publishing

Scan your documents, or simply drag and drop them from Explorer into the application. You can define context information to facilitate retrieval. Each file undergoes a release process, where predefined classifications are set. All your employees can use the Intranet Viewer to search, display, and print documents.

## Document retrieval

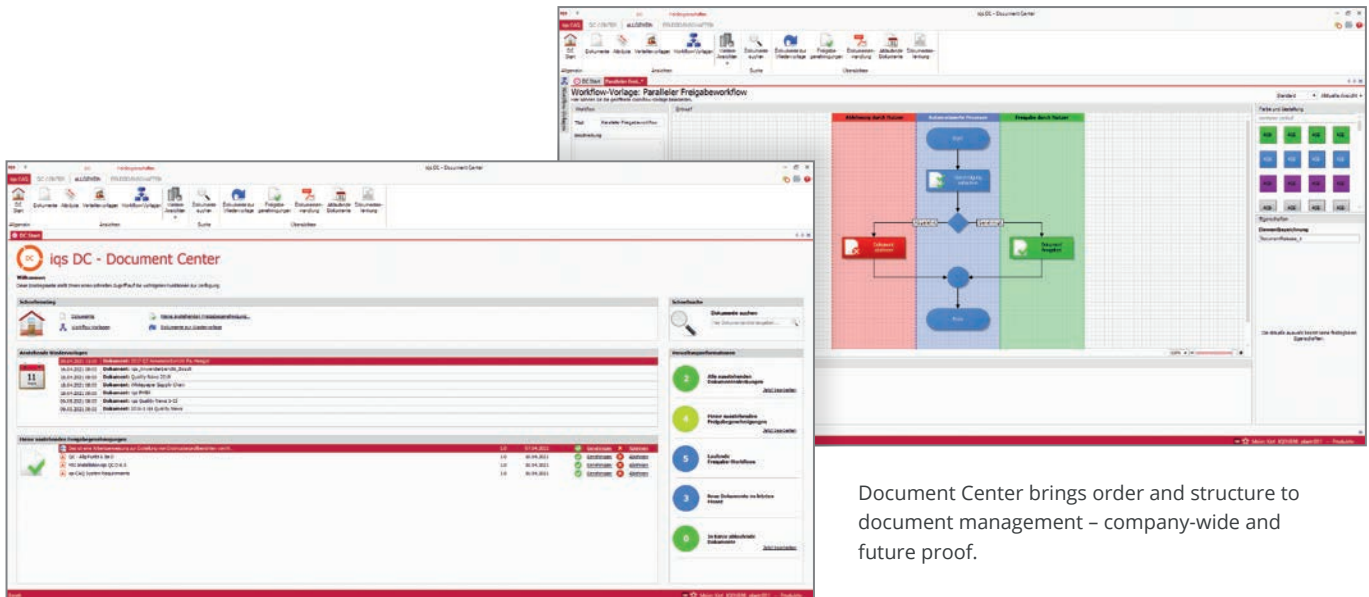
You can easily retrieve stored data files using various search criteria: in the tree structure, by document name, attribute, context or description, graphical navigation, full text search, or similarity search. This ensures that nothing gets lost.

## Read-protect and validity

All printable documents are automatically converted to PDF in the background. The format of the original file is thus retained. This means that you meet the legal requirements for a digital archive. Each document is unique – however, you can use links that allow you to access it in different folders simultaneously. If you change the document, the change is automatically visible at all folders. This process eliminates problems regarding different document versions – the stored version history can be viewed at any time.

## Document control

Use the Document Center to manage your documents in compliance with ISO 9001. The linked document version to the quality process is transparent at all times and, if necessary, it can be easily and comprehensibly changed for a recent released version.



Document Center brings order and structure to document management – company-wide and future proof.

## The Document Center features available to you:

- Company-specific, graphical navigation interface for quick access to documents
- Integrated workflow ensures the efficient approval and information process with a reminder function for all parties involved
- Automatic email notification to predefined people in case changes occur in a document folder
- The search for similar and related documents enables quick access to variants
- Conversion of documents to PDF format when they are filed; retention of original file
- Easy recovery of documents: search in tree structure, search for title components and key words, full-text search, object search, graphical navigation, etc.
- Company-wide, cross-location publication of documents in the Intranet (QC - Web)
- Simultaneous storage of a document in several folders by linking
- Integrated release function ensures complete version history
- Stamp function for unambiguous identification of documents, e.g. for release or return
- Documents used daily can be arranged on a personal desktop. The documents are directly linked to the respective process in Quality Center, e.g. complaints, initial sample inspection report

# Here for you

**Our training and education offer – individual, efficient and goal-oriented**

## Easy to learn, quick to use

Quality center was designed from the bottom up so that you can use it quickly and efficiently. However, as the operational benefit is greater, the better the user knows the features and special features, we offer you and your company individual and practical training packages. The content of the training packages is customized to your individual requirements of your company, your specific wishes and processes.

## Training

We offer software training directly at our premises! The advantages for you are: Each participant is provided with their own PC, concentrated learning without interruptions from the daily work and complete focus are guaranteed.

## Online training

Enter our virtual training room! Our trainers convey all the necessary learning content of our software training courses live, independent of location and flexible in

terms of time. You save time, travel and accommodation expenses and get the maximum learning effect through our expert live training with access to the software. Use the advantages of our online training for yourself and your employees!

## Consulting

We deliver not only everything about QMS software, but also offer the appropriate consulting for your company! That way, you can benefit from our knowledge and from a wealth of experience.

## Our goal

Innovative software development does not happen on a drawing board, but in close cooperation with you as the user. Thus we do not only grow with our customers, we also learn from them and with each other – one more reason why satisfied customers and long-term partnerships are particularly important to us.

## What we offer:

- Consulting and product presentation at your location
- Your personal project manager with support right from the start – even after the introductory phase
- Telephone support with short response times
- Extensive system and remote maintenance service
- Continuous product improvements and advancements
- Individual training according to your tasks, training at all employee levels, key user training courses "Train the trainer"
- Competent support in network and database management
- Training in our training center or online in the virtual classroom with tried and tested methods and didactics

## > **We will make time for you!**

Experience what our QMS software can do for you on your premises or on the internet.

You will be surprised how perfectly our modules interact with each other and how excellently they integrate into your IT landscape as well as your processes.



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