Quality reaps rewards

··· CAQ SOLUTIONS FOR THE REAL WORLD

PRODUCT OVERVIEW



iqs CAQ solutions - reduce costs, prevent errors and increase quality!



Quality management with added value

Error prevention strengthens your competitive position

Today, in virtually every industry, cost pressures and high product quality dominate. As a result consistent business optimisation measures are demanded from all level. The key to creating greater quality and thus greater added value is through use of a dynamic quality management system.

However, quality management is still largely considered to be a testing procedure based on specific inspection operations and statistical process control measures. For the most part these processes remain as "information islands" despite the fact they are linked to business success and bring added value.

iqs Quality Center links the knowledge from the individual quality assurance modules into one central database, therefore building a control loop where feedback can be actively used. The iqs Quality Center grows into an extensive and comprehensive business knowledge pool. The link up and depth of integration, consistent and simple handling, makes iqs Quality Center one of the most innovative and forward thinking CAQ systems.

Since our foundation in 1995 we have been consistently working on software solutions for efficient quality management, constantly seeking to extend and improve them. Only thorough knowledge and the correlation between cause and effect can true process reliability be realised in the workplace.

All our products, concepts, developments and improvements are based on working closely with our customers from all branches of industry.

I would like to express my sincere thanks for this close, trusting working relationship.

Siegfried Schmar

Dr. rer. nat. Siegfried Schmalz

Managing Director iqs



Quality right from the start

The iqs modules and services in one glance

Even as a stand alone solution each iqs module is a specialist in its field.

Through linking the modules as a complete CAQ system, the software offers you the best possible functionality.

You can find further information at

www.iqs.de

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Synonymous with Quality

Solutions for your quality management

More knowledge, more use, more quality - iqs Software GmbH is one of the market leaders in computer based solutions for quality management.

For more than 15 years we have been a safe and reliable partner for innovative and forward looking solutions in the quality assurance field. To guarantee the success of the iqs Quality Center we are constantly on standby to take the growing quality requirements from industry as a challenge for a permanent improvement and development of our products. Your success is our goal.

Long term customer relationships are testament to a successful and trustworthy partnership. Our highly qualified and motivated staff are constantly looking for the best and most economically efficient solutions to fit each customer. Our customer base includes medium sized firms from the electronics.

automotive, medical technologies, plastics and metal processing industries as well as worldwide large businesses. Through the german "Initiative Mittelstand" scheme iqs has often been singled out and awarded for its innovation.

In their entirety the iqs modules act as a complete closed control loop CAQ system, but can nevertheless be combined at will or individually to make the perfect flexible stand alone solutions. The software brings an efficient error prevention, guaranteed to drive cost reductions and ensure your long term competitive advantage and economic success.

To ensure the smooth running of the iqs CAQ system, iqs also offers full consulting, needs analysis, solution conception, individual tailor made solutions, support and training. This ensures the optimal integration of the software into your firm both cross industry and internationally.

Quality reaps rewards

Dynamic quality management via iqs

Contrary to classical CAQ systems, iqs software intelligently links its modules. This has the effect that alongside error prevention, the software constantly, evolves providing you with strategical advantages.

Whereas conventional quality management seeks to detect mistakes using pre determined test routines and subsequently eliminate these errors, iqs' principle takes this a step further. The active quality management generates permanent new knowledge through which all development and production processes can be mapped out and sources of errors eliminated. This has the knock on effect of focusing test and inspection planning where it is required therefore saving time and money.

Using this method quality assurance creates permanent and effective quality management. Synergy effects emerge from linking the information in the CAQ system, which has the potential for constant quality optimisation at all levels of the organisation not just the product level itself.

The iqs quality management is based on a continuous improvement process (CIP) and follows the principle of the PDCA cycle with its four central phases. All iqs modules are aligned to this system, operating together and applying a permanent optimisation to company processes and results.

This creates a pool of knowledge which opens savings potentials - incredibly exciting for quality assurance innovation. The iqs principle activates this knowledge, links it to further information and makes it widely available. In short, iqs quality management brings knowledge into productive performance.

Flexible, efficient and consistent

The iqs Quality Center – every last detail covered

> Central Data Management

Recorded only once and then available in all modules. All dynamic and master data, drawings and documents are all centrally managed by the iqs Quality Center. Therefore the time consuming and error prone method of entering the same data in different areas does not apply here, as all iqs modules access the exact same data pool. Naturally data can also be transferred from an existing PPS system.

> Interface Compatibility

Compatible interfaces are available for all normal databases and in-house software, for example: PPS / ERP, BDE, SAP, CAD, MS Office. Measuring machines and electronic measuring equipment are also easily integrated.

> Process Orientation

All iqs modules support established industry standards and comply with the regulations set out in ISO 9001, QS 9000, VDA 6.1 and ISO/TS 16949.

> Multilingual Functionality

Thanks to the multilingual capacity of the iqs modules, the internationalisation of the iqs system is not a problem. Furthermore the software has the facility to adapt to internal terms, acronyms and language.

> Individual User Interface

The integrated Plug-in technology enables the user to easily adjust the user interface of the program to suit individual requirements.

> Reporting to suit your needs

The iqs system offers not only standard reports but enables you to generate specific individual analysis and, via the form editor, allows you to create your own print outs.

> Integrated Workflow

An active task manager, automatic reminder mechanism and resubmission by email support the business's workflow process. Furthermore, iqs Workflow Management improves efficiency in processing and document flow as the need for paper documents is drastically reduced.

> Security Center

The user management enables detailed allocation of access rights; furthermore the system has multi client capacity.

> Uses in the Internet

The iqs modules ISIR, RKM, LIB, AC and MM are available with the corresponding web links so that communication with suppliers is more efficient and successful.

Convincing Functionality

What makes the igs system unique

> The principle of simplification

The iqs modules are designed for maximum efficiency and therefore so conceived that quality management workflows are simplified.

> Characteristics from paper templates

The iqs AZ module doesn't just transfer drawing characteristics from CAD data but also enables the automatic import of digitised paper drawings via OCR.

> Link between 2D, 3D and master data

Alongside the 2D drawings, the CAQ system also uses 3D models and links this centrally to the master data of a part. Therefore it is possible for each iqs module to access the current drawing and its characteristics.

> Visualising changes at the press of a button

Each and every drawing change is visualised by the CAQ system, amended via change management and a history or so-called "CV" of the characteristic created.

> 3D model for better communication

The 3D model is available in every iqs CAQ module. Communication between supplier and customer, or indeed internally, is made much easier via this visual support, for example, when comparing measurements for initial sampling.

> Intelligent documentation modification

A targeted transfer from basic document modification to the designated following hierarchical document level is carried out through inheritance. This saves copying data and therefore reduces maintenance and sources of error.

> Closed control cycle

By linking the following iqs modules: FMEA, PP/CP, complaints (RKM) and action management (PDCA cycles), the prevention of errors is clearly supported.

> Efficient supplier integration

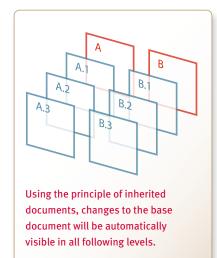
Via the web based iqs quality portal in the ISIR, RKM, LIB, AC and MM modules, you are able to integrate your suppliers into your quality management.

> All information at a glance

An overview is gained as follows: after entering a part number or a customer, the iqs QC-Navigator module makes available all corresponding quality processes and documents to look at or work on. Furthermore you can leave the functionalities of different modules open next to one another and save them as individual views.

> Reports and Analyses

The iqs Analysis Center is a tool for creating and preparing different analyses. The display can be for example, graphically animated. You can go through different levels of analysis via drill down. Analyses are available as Web Applications.





Always up to date

Drawing is the focal point

ACTIVE DRAWING INTEGRATION

...**>**

Via iqs AZ the current drawing is available in every iqs Quality Center module.

> Integrated Defined Information

Technical drawings contain defined information, for example, measure or attributive characteristics that have an important role both in the manufacturing processes and in creating initial sample inspection reports, control plans, SPC, goods received / goods dispatched inspections and complaints management.

> Link data to drawings

The iqs Quality Center administers all the versions' statuses from both 2D drawings as well as the accompanying 3D model so that the part master data is always linked to the most up to date drawing. As this is carried out centrally, it is accessible from every iqs module that accesses drawings enabling the management and administration of characteristics possible.

> Automatic positioning

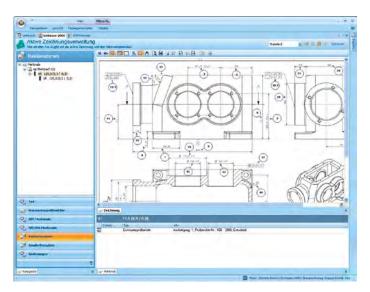
iqs AZ automatically imports drawing characteristics and allots clear characteristic numbering from all established CAD formats as well as digitised paper drawings via optical character recognition OCR. The transfer of set points and tolerances, as seen for example in the initial sample inspection report, as well as the stamping of the drawing is carried out automatically.

> Change management

All drawing changes are documented and clearly visible so that you can track the modifications between different versions. This drawing reference enables you to create a history or "CV" for each characteristic and show all processes and results for the characteristic at the press of a button. Repeated errors are recognisable and corresponding actions can be defined.

> Three dimensional comparisons

Via the added 3D model you can clearly define the exact alignment of a part in 3D and therefore permits items such as inspection notes to be visually displayed. Customers and suppliers have simultaneously the same view making communication, for example when defining the basis of measurement in ISIRs, faster and more precise.



igs AZ makes the current valid drawing and complete history of a characteristic available at the press of a button.

Highlights > iqs AZ

- > Convenient drawing management
- > Automatic drawing import from CAD data including set points and tolerances irrespective of the original CAD system used to create the drawing
- > Import of digitised paper drawings via OCR
- > Drawing is always complete and exact via import of picture and data formats
- > Automatic positioning of the drawing
- > 3D model for better visualisation and simpler communication between customer and supplier

- > Active change management: drawing changes are clearly visible e.g. the inspection plans of changed characteristics will be shown so that they can be immediately changed
- > Characteristic history visible at the press of a button
- > Automatic creation of inspection plans via clicking on the drawing measurements
- > Drawing available to the machine operator via the recording of inspection data module making the creation of inspection plan outlines unnecessary

> Access to the drawing and characteristics from all iqs modules e.g. SPC, inspection plan and ISIR

iqs AZ notably improves the quality process via the link to all iqs modules e.g.

>iqs FMEA →iqs ISIR →iqs RKM →iqs PP/CP



--> FMEA & PP/CP

The success duo

Knowledge creates quality

> Saving knowledge

Even if, as a stand-alone solution, iqs modules have increased the effectiveness of working, the corporate use thereof can be further increased by linking the modules. A particularly efficient example of this can be seen in the co-operation between the iqs FMEA and iqs inspection and control plan modules. This interplay documents the total knowhow of production, channels the information from complaints and internal error recording, permanently updates this knowledge and the FMEA and turns the inspection plan into a living document.

> Improved maintenance in a shorter timeframe

To ensure that FMEAs and inspection and control plans are always up to date when you want to use them, these production documents must be added, constantly maintained and managed. Until now, the logical link between the information content of the different documents was not possible, the processing was both time consuming and carried

out manually. Frequently data records had to be copied and overwritten without specifying which document served as the submission and which the combined version was.

> References remain within

Via their link, the two modules iqs FMEA and iqs PP/CP enable simultaneous editing of production documents. The information fields need only be worked on once and they are then automatically synchronised in all relevant documentation – speeding up the workflow, saving time and creating consistency and error free work. iqs FMEA and iqs PP/CP use the principle of inherited documentation developed by iqs – the combinations, differences and commonalities within documents are retained enabling you to use and display them. At the same time, the automatic versioning of all statuses is maintained such as per ISO /TS 16949.

Highlights > iqs FMEA und PP/CP

- Creation and editing of FMEA, work, inspection and control plans in combination (integrated production plans) or as individual documents
- Efficient processing through document inheritance
- Consistent production documentation through synchronisation of FMEA, work, inspection and control plans
- Central inspection planning for SPC, WE/ WA and intermediate testing

- Matching the FMEA with errors from the manufacturing process with internal complaints and customer complaints
- Current planning documents via feedback from actual information from production, inspection and complaints
- Checking the effectiveness of actions for eliminating errors
- Integration of the current drawing and 3D model with access to all drawing characteristics

- Availability of the history through versioning documents
- Release
- Automatic creation of flow charts and inspection note boards
- > Knowledge memory for production know-how

FMEA

PP/CP



Failure prevention made easy

Cost reductions through faster failure analysis

FAILURE MODE AND EFFECTS ANALYSIS

··· Via the link to the igs inspection planning and complaints management, the iqs FMEA consistently supports error prevention.

> Quality Knowledge

Only a current and well maintained failure mode effects analysis (FMEA) is really efficient. Via iqs FMEA you can create and update all system, process and construction FMEAs company wide. Every entry into this central knowledge memory enlarges the quality know-how. And because the iqs FMEA is built upon a database, it offers not only maximum efficiency but is also completely integrated into the CAQ system.

> All actions at a glance

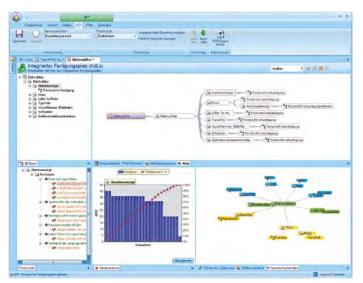
The integrated action management enables all defined actions and tasks to be tracked and effectively checked. The resulting outcomes are automatically fed back into the FMEA so that prognosis and reality can be compared.

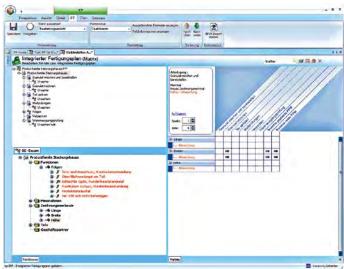
> Easy to use similarities

iqs' inheritance technique and the use of integrated building blocks benefits from the product and component similarities within the modular family. Its task is to ensure that any changes made in one area are automatically transferred to all relevant parts. Compared to the traditional method of making copies or manually inputting data, this technique requires minimum labour input.

> Causes and effects

The FMEA is the most important tool in preventing production failures. From complaints to manufacturing problems, the iqs Quality Center feeds back into the FMEA ensuring that the error catalogue is always maintained and updated. By recording new errors found in production and complaints feedback, the FMEA automatically informs any responsible personnel and can be immediately updated.





The iqs error process matrix optimises processes and inspection costs and lays the foundation for evaluing inspections.

Highlights > iqs FMEA

- > Creation and administration of system, process and construction FMEAs as well as those combinations in a hybrid FMEA
- > Database based structure enables integration in the iqs CAQ system
- > Versioning resulting from chronological origin of the documents, automatic version comparison of differences
- > Creation, maintenance and editing possible in either tree structure, graphical net plan diagram or hyperbolic net
- > iqs FMEA is current and up to date: knowledge and errors from production or complaints management will be automatically transferred to the FMEA
- > Graphical error and functions net
- > Releasing and administration of rights

- > Fast creation and editing of an FMEA for related parts and processes via the iqs inheritance technique and integration and reuse of any number of building blocks
- > Common elements and differences of individual products of the same family are immediately recognisable
- > Clearly laid out hyperbolic navigation in the system element net
- > Failure process matrix for inspection cost optimisation
- > Integrated action management
- > Process orientated error analysis throughout part families
- > Creation of an FMEA possible in other languages

- > Extensive evaluations for example, pareto analyses, RPZ masses, error analyses with critical path display
- > Simplified data input and data consistency via automatic integration
- > Module for easy error recording
- > Definition of characteristics for process and product as the basis of a control plan
- > Synchronisation of the FMEA and PP (integrated production plan)

iqs FMEA notably improves the quality process via the link to all iqs modules e.g. >iqs PP/CP →iqs RKM →iqs SPC →iqs MM



Inspection only where necessary

Optimal inspection cycles reduce inspection costs

INSPECTION PLAN AND CONTROL PLAN

••• igs PP/CP generates inspection plans directly and quickly from the initial sample inspection reports or technical drawings without transcription errors.

> Well organised testing

In order to guarantee product quality, it can be necessary to carry out tests on the entire value added chain - from goods received for the different production steps right up to production exit or goods dispatched. The iqs PP/CP control and inspection planning module facilitates the creation of control and inspection reports for both incoming and outgoing goods as well as intermediate tests and SPC.

> Greater efficiency thanks to drawing integration

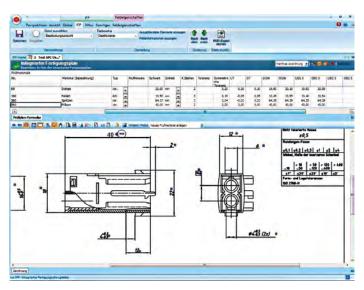
Linking up to the iqs AZ module substantially accelerates the process of creating inspection reports. All necessary inspection report positions must be highlighted in each drawing and then transferred to the report. The transfer of characteristics from digitised paper drawings is carried out via optical character recognition (OCR). Inspection plan outlines must neither be separately created nor maintained. iqs' inheritance technique simplifies the integration of other building blocks from the product family into the inspection report status.

> Fully justified inspections

Through a close link between the iqs PP/CP and the iqs FMEA module, each individual inspection will be fully justified. Unnecessary inspections are systematically identified and eliminated thereby concentrating inspection efforts on real requirements resulting in a clear reduction in both costs as well as time savings. Remaining inspections originate either internally or from customers.

> Complete documentation

All inspection plans are versioned and completed - an advantage for audits and customer visits. At the press of a button the iqs PP/CP can generate a detailed inspection plan for each product.



The creation and implementation of inspection plans is made more efficient through the multiple links to other items such as the drawing.

Highlights > iqs PP/CP

- > Central inspection planning in the areas of goods received / goods dispatched, intermediate tests and SPC
- > Justified testing through FMEA feedback
- > Support of article, process, cavity, tool, conveyor and machine related inspections
- > Process and product family inspection plans
- > Simple document maintenance through inheritance technology
- > Calculated characteristics
- > Multiple use of characteristics
- > Inspection notes for each characteristic
- > Random sample plans, multiple random sample plans and inspection severity dynamisation

- > Detection of necessary random sample size are AQL (DIN ISO 2589-1)
- > Individual checking intervals with time, amount and charge reference
- > Inspection plans supplemented with videos, pictures, specifications and drafts
- > Synchronisation of FMEA and PP
- > Synchronised inspection and control plan
- > Automatic generation of flow charts and inspection severity tables
- > Inspection notes can be directly added to the 3D model
- > Deviations in inspection plans directly to the iqs ISIR initial sample inspection reports

- > Release and day to day versioning of the documents complete with history
- > Creation of inspection plans through use of technical drawings and comparison of drawing changes for the alignment of inspection plans

iqs PP/CP notably improves the quality process via the link to other iqs modules e.g.

> iqs FMEA → iqs SPC → iqs WE/WA → iqs AZ



Goal driven inspection

iqs SPC reduces inspection expenditure whilst improving quality

STATISTICAL PROCESS CONTROL

••• Employees no longer have to work from individual documents as the inspection characteristics, inspection notes, work instructions and drawings can be displayed side by side on the monitor.

> Less is more

iqs statistical process control provides a basis for production accompanying inspection, process regulation and control as well as intermediate testing. The inspection can be triggered by both the current manufacturing process and the inspection order. The optional feedback into the FMEA program optimises continual inspection. All results obtained can be used not only to asses the current quality situation but additionally they further the knowledge pool of your business. Both the PP and CP modules support the control over how your processes are handled.

> Recording test data

Graphical references (photos, drawings, videos, pdf documents etc) support the entry of measured values for characteristics to be inspected and are displayed through the iqs Active Drawing Integration AZ module. Via electronic measuring equipment the measured values can be recorded automatically. Depending on the responsibilities of the inspector, he can independently develop inspection plans and react accordingly to deviations. The measured data is immediately available for all sorts of analyses.

> Control Center

The control center offers you an efficient way of monitoring all production accompanying inspections. As well as planning inspection orders, the control center also evaluates random sample inspections thereby informing you about the quality of your production. Through the comparison of different SPC and attribute charts, production parameters can be optimised and the best machines for a particular tool be chosen. The control center displays the manufacturing structure including the production area, conveyors, machines as well as tools and assigns the components to corresponding inspection plans. From the inspection plans created by iqs PP/CP, the desired SPC charts are automatically generated and versioned. The necessary employees can be automatically informed via email about events such as control limits being exceeded.



igs SPC enables the planing, surveillance and analysis of production accompanying inspections.

Highlights > iqs SPC

- > Central inspection planning with iqs Production Plan / Control Plan (PP/CP)
- > Production and intermediate testing
- > Connection to electronic measuring equipment, integration of measured data from complex measurement and inspection systems and multi positional measurement technologies
- > Control centre functionality for machines, conveyors and hall plans (Internet/ Intranet enabled)
- > Random sample interval and size for each characteristic to be inspected separately definable
- > Overview of the current trends during inspection
- > Filing of forms for calculated characteristics
- > Triggering of complaints and concessions via the occurrence of deviations

- > Characteristics to be inspected are visualised through CAD data integration
- > Comparison of events and actions via the FMEA
- > Cavity related management of control charts, different types of control charts for both attributive and variable characteristics
- > Back tracking of batches, orders and customer specific parameters
- > Automating of the inspection process via interface to an ERP system
- > Extensive analysis and statistics
 - Machines, tools and cavity related evaluations
 - Probability nets, histograms and order related analysis
 - Surveillance of process capacity according to DIN 55319

- Tracking of measured values above value limit changes
- Box plot display of value limits
- Overall order analysis
- > Serial, parallel and free definable measure value input and tabular input
- > Distinction between conveyor, machine and tool production

iqs SPC notably improves the quality process via the link to all other iqs modules e.g.

>iqs PP/CP →iqs AZ →iqs RKM →iqs FMEA





Minimising inspection effort

Goods received and internal production at a glance

GOODS RECEIVED / GOODS DISPATCHED INSPECTION

> Goods Received Inspection

Pre-existing quality defects in delivered primary products will influence every stage of the manufacturing process and impact on the overall quality of a finished product. The inspection of quality relevant characteristics during the delivery process considerably reduces this risk. If the delivered product does not correspond to the specifications, this immediately activates a supplier complaint.

> Goods Dispatched Inspection

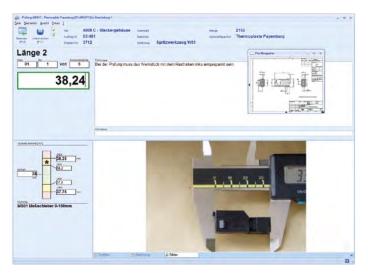
In order to ensure that your customer receives the required quality, the same methods and techniques used in the goods received area are also available for the final checking process. Using this facility, only products that match the required customer specifications will leave your business.

> Minimum Inspection Effort

Inspect only in circumstances where you expect mistakes to occur. In order to optimise the inspection effort, the control plan defines random samples and denomination procedures. The random samples themselves can be automatically activated through an interface to an ERP or PPS system. All collected data is logged on control cards, which can be made available for graphical or tabular analyses in the iqs Control Center.

> Individual Supplier Assessment

Thanks to the intelligent link up to the iqs LIB Supplier Assessment module, you can immediately appoint those partners who have been proven to offer high quality and reliability. This knowledge makes it easy to choose a suitable supplier and be certain of the quality of your product from the outset.



The igs WE/WA module supports goods received and goods dispatched inspections with pictures, videos, the drawing and inspection notes.

Highlights > iqs WE/WA

- > Central inspection planning with iqs Production Plan / Control Plan (PP/CP)
- > Versioned, inherited inspection notes
- > Random sample planning to standards or a freely definable process / characteristic basis. These can be based on amounts, suppliers, customers and production facilities as well as factory or inspection location. Furthermore multiple random sample planning can be carried out on user-defined parts
- > Dynamic sampling of inspection severity (Skip lot) against customer complaints
- > Automatic generation of inspection tasks via interface to the ERP and PPS Systems

- > Inspection note graphics, for example photos or videos
- > Characteristics to be inspected are visualised through the CAD data integration
- > Visual and audible display of deviations
- > Inspection equipment filing and link to electronic measuring equipment
- > Cavity based measured value acquisition
- > Graphical and statistical analyses; single values, mean values, s-card
- > Histogram, probability networks
- > Information on the current status of samplings, supplier status, concessions, complaints

- > Automatic activation of complaints via the iqs Complaints Management RKM module
- > Links to iqs Supplier Assessment LIB

iqs WE/WA notably improves the quality process via the link to all iqs modules e.g.

> iqs AZ → iqs PP/CP → iqs RKM → iqs LIB



Taking advantage of time

The quick and secure path to start of production release

INITIAL SAMPLE INSPECTION REPORT

••• Used consistently the ias ISIR offers you an enormous time saving potential – in practice you can create initial sample inspection reports up to 80% faster.

> Minimising delays

The iqs initial sample inspection report ISIR is an efficient computer aided software solution for the fast, simple creation and evaluation of initial sample inspection reports in both PPAP, VDA and customer specific formats.

> Transfer and positioning of set point values

Tolerances and set points are electronically extracted from the drawing and transferred to the ISIR. Simultaneously the program carries out the positioning of the drawing. The laborious time consuming inaccurate process of transferring inspection values is no longer applicable. Data transfer is not dependent on a specific CAD system.

> Importing paper drawings

The automatic transfer of characteristics is also feasible from digitised paper drawings (.tif, .pdf). Via optical character recognition OCR the set values report can be easily created.

> Measuring equipment

Actual values from associated measuring equipment are directly transferred and assigned to the corresponding inspection report positions. All positions in the ISIR are checked for errors or deviations against the actual values and specifically worked on.

> Drawing changes

All drawing changes are automatically documented and visualised. Without the need for manual comparison, changed characteristics or specific positions can be transferred to the change report.

> Three dimensional comparison

Via the added 3D model you can clearly define the exact alignment of a part in 3D and therefore permit items such as inspection notes to be visually displayed. Customers and suppliers have simultaneously the same view making communication, for example when defining the basis of measurement in ISIRs, faster and more precise.

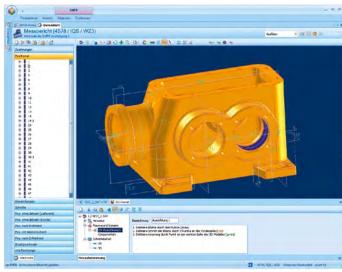
> UDF- User Defined Feature

Corresponding characteristics will have construction elements or UDFs (user defined features) allocated to them e.g. areas, bore diameters which in turn are made available via an xml interface for all following processes such as planing, production and quality assurance.

> Faster via web portal

The iqs ISIR secures and ensures all initial sample inspection reports are write protected including the stamped drawing and makes it available via the web portal - thereby enabling suppliers to edit the document via a normal web browser. The sampling takes place paperless and with minimal costs.





> iqs ISIR permits simultaneous editing of inspection reports, drawings and 3D models on one monitor.

Highlights > iqs ISIR

- > Full transfer of set points and tolerances from both the CAD drawing or digitised paper drawing (.tif, .pdf)
- > Automatic positioning of the drawing
- > Statistical analyses and graphics
- > Process and machine capability
- > Cavity differentiation
- > Connection to measuring machines and digital measuring equipment with automatic measured values transfer
- > Transfer of 3D models to the measuring machines for offline programming
- > Set point and actual value comparison between the 3D model and scatter plot
- > 3D model for measurement comparison between customer and supplier
- > Checking for deviations and missing actual values
- > Integrated standard manager for the automatic checking of free size tolerances

- > Statistical and graphical evaluations
- > Company wide access via the ISIR viewer to inspection reports and drawings
- > iqs web portal for direct customer sampling
- > Export of the initial sample inspection report in excel format
- > ISIR reader for paperless customer information
- > Editing, administration and display of special measurements
- > Print out of the stamped drawing with position numbers and identifiers
- > Versioned filing and paperless administration. Filing of ISIR documents also possible in SAP / DVS
- > Initial sample inspection reports together with positioned drawing and all documents sent per email

- > Automatic transfer of the ISIR positions to the iqs inspection planning
- > Fast creation of SAP inspection plans via the SAP interface
- > Characteristic link up to 3D model
- > Inter divisional process optimisation via UDF
- > IMDS connection
- > Valid electronic signature is available as an add-on

iqs ISIR notably improves the quality process via the link to other iqs modules e.g.

> iqs PP/CP → iqs APQP → iqs PMV



Using complaints positively

Cost reductions through error prevention

COMPLAINTS MANAGEMENT

••• Communication between supplier and customer is now paperless thanks to the help of the iqs RKM via either an editor or portal.

> Quick reaction

Complaints should be quickly and smoothly resolved. iqs complaints management module enables you to create, work on and track complaints - both internally and externally - at suppliers and customers or within an individual department of a firm.

> Create individual workflows

Using iqs RKM you can create corresponding company specific templates for all steps and workflows regarding the processing of customer complaints. Naturally templates are also available for 8D, 5D and 4D reports.

> Direct supplier involvement

Complaints reach suppliers in XML format who then process the complaints directly in an editor. Suppliers' comments and answers are automatically imported by customers, removing the time consuming process of transcribing and copying.

> Using existing knowledge

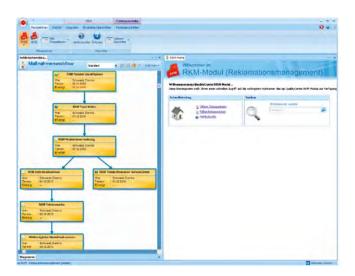
During the processing of complaints you can access the iqs RKM database. This contains similar errors together with successful actions and enables direct transfer to the complaint being processed.

> Fast evaluation

The integrated iqs Analysis Center enables multiple analyses on current quality levels. It is clear which complaints, and therefore the resulting actions, are currently being processed or are still open. It is quickly easy to see where the weak points, causes and errors lie. Analyses are available as Web Applications.

> Immediate flow back into planning

Errors and their corresponding actions can be directly transferred into iqs FMEA. New errors transferred from iqs RKM to iqs FMEA are quickly updated.



> Create an individual workflow for processing complaints. You can directly edit individual steps for each workflow object.

Highlights > iqs RKM

- > Automatic generation of customer, supplier and internal complaints
- > Any number of freely configurable Workflows
- > Complaint reports according to 8D, 5D and 4D methodology or individual
- > Tailor made workflow for processing complaints and concessions
- > Paperless exchange of supplier complaints with automatic import of responses via RKM editor
- > Internal or external complaints dispatch via event mail including all relevant documents such as photos, drawings or reports
- > Automatic detection of repeated errors

- > Extensive analysis via the iqs Analysis Center e.g. pareto analysis, lists and individual evaluations
- > Time recording of individual process steps
- > Experiences actively useful e.g. to generate lessons learned, poka yoke, yokoten
- > Multi lingual capacity
- > Action management for tracking due dates, responsibilities and costs
- > Quick locator for complaints and relevant actions via the program's systematic search for similarities
- > Transfer of failures and actions directly into FMEA, saving new failures in FMEA

> Evaluation of remedial actions through assessment of occurrence and detections probabilities

iqs RKM notably improves the quality process via the link to all iqs modules e.g.

>iqs FMEA →iqs LIB →iqs MM →iqs WE/WA



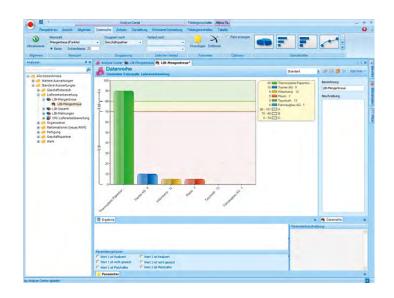
Objective view of your partner

Transparent supplier analysis

SUPPLIER ANALYSIS

> Clear measurement criteria

iqs LIB 'supplier analysis supports the classification of subcontractors through means of allocating objective quality numbers (e.g. number of complaints, delivery date overruns) and additionally by showing the progression of PPM error rates. This assessment is supplemented by the inclusion of "soft factors" (flexibility, price segment, accessibility). If the agreed quality number is exceeded, the iqs Q-Agent automatically informs the pre-defined distribution circle (if required). Each supplier can see their current quality status via an internet portal.



Highlights > iqs LIB

- > Monthly automatic calculation of supplier identification numbers
- > Web portal gives suppliers access to their quality figures
- > Automatic creation of multiple internal and external usable reports e.g. for supplier development
- > Evaluation criteria per VDA or freely definable

- > Weighting of criteria for soft and hard facts
- > Automatic classification of suppliers in classes
- > Assignment of an arbitrary number of soft factors such as accessibility or flexible pricing
- > Pareto analysis with liberal combination possibilities for example products, business partners, goods groups, factories

> Automatic generation of labels from the goods received inspection and iqs complaints management or from goods received data of an ERP system; transfer of supplier grading to an ERP system

7

iqs LIB notably improves the quality process via the link to all igs modules e.g.

> iqs RKM → iqs AC → iqs WE/WA



Relieving the burden of auditing

Consistent documentation makes audits easier

AUDIT

> Conclusive audit handling

The better internal and external audits are documented, the faster and more accurate they are to prepare and follow up. iqs Audit is a software module that releases you from the time and effort of documenting and storing. It makes it easy to check your quality processes with respect to both compliance and effectiveness. iqs Audit lends itself to conclusive planning, implementation, documentation and management of customer, supplier and internal audits. Through the integrated action management function, all necessary planned tasks are tracked to endure they are completed on time. Supplier actions can be called up via the web portal and the current status clearly seen.



Highlights > iqs ADT

- > Creation and administration of question catalogues on subjects, TS 16949, VDA or in-house catalogues
- > Question catalogues using template, individual or standard question catalogues
- > Mobile data input for actions and deadlines
- > Automatic reminders by email

- > Integrated action management where each question can have actions attached
- > Suppliers can view actions and clearly see the status of each process via the web portal
- > Alternative results display
- > Free analysis schema

- > Distinction between main and sub deviations
- > Graphical and tabular results

iqs Audit notably improves the quality process via the link to other iqs modules e.g.

> iqs MM > iqs LIB > iqs AC



A complete overview

On-time completion of all actions

ACTION MANAGEMENT

> A central instrument

iqs MM action management accesses other iqs modules which have actions attached to them and brings them together under one roof. This gives a central overview and makes it possible to centrally track all actions from complaints management (RKM), FMEA, audits, statistical process control (SPC) and APQP. Furthermore, it allows actions from independent modules to be included, therefore optimising the organisation of your own tasks. In this way iqs MM automatically supervises all deadlines and creates follow ups and reminders.

> Multilevel filtering

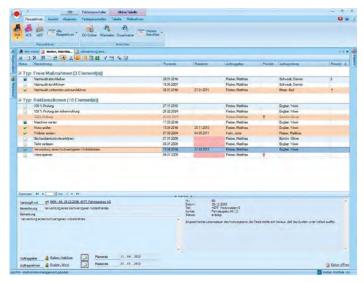
iqs MM enables you to filter out on multiple levels e.g.: via departments, teams or individual employees. In this way iqs MM serves as the idea management tool for the overview of the optimal control of resources for executing planned actions.

> Greater security

Via iqs MM defined actions cannot be lost. The software gives control over completion statuses and the efficiency of actions via identification analyses. At a glance it is possible to see which actions have been successfully closed, remain open or are partially completed. iqs MM raises reliability.

> Clear communication

The escalation management automatically informs pre defined personnel if actions have not been processed or deadlines overrun. Via the iqs quality portal actions between customers and suppliers can be exchanged and supervised.



iqs MM optimises communication between customers and suppliers e.g. via web based action tracking.

Highlights > iqs MM

- > Capturing actions effective resource planning through documentation of time and costs
- > Commitment from the team or person in charge to handle the actions including team administration
- > Support for defining actions through freely definable action catalogues
- > Checks completed status and efficiency of actions
- > Information from the person in charge regarding actions and completed actions taken directly from the system and sent by email
- > Reminder of outstanding actions by follow up email

- > Integrated overview of individual and delegated actions - extended to all iqs modules as well as user related and departmental wide actions
- > Ability to divide into sub actions and have separate tracking for these sub actions
- > Multiple analyses e.g. open actions related to an individual employee or department
- > Logbook for commentary on the progress of an action
- > Action tracking via Intranet
- > Exchange, processing and supervision of actions with customers as well as suppliers via iqs quality portal

- > Synchronisation possible with MS Outlook, PDA and mobiles
- > Via iqs workflow object you can create links for direct access to a defined document location
- > Supports decisions through mapping process chains as workflow
- > Escalation management

iqs MM notable improves the quality process via the link to other iqs modules e.g.

>iqs FMEA →iqs RKM →iqs ADT →iqs APQP



Central instrument

Filtering, analysing and visualising

ANALYSIS CENTER

> The basis for clear decisions

Businesses require secure, transparent and above all else up to date information. Quick analysis is key in the within the time critical, results driven area of quality assurance providing the basis for effective reaction.

> Access to all relevant modules

iqs Analysis Center enables central access to all iqs modules where creation of analyses is relevant, for example complaints management, supplier evaluations, SPC or APQP. The integrated filtering function generates analyses via freely definable timeframes right down to the last detail.

> Get to the core of the matter quickly

What is particularly interesting out of all the analyses that the iqs AC creates, is that you can move directly to the corresponding process on which the analysis is based. This is an especially useful feature of the iqs AC. The analyses can be sent as a workflow object, which improves the communication within the firm.

> Key data at your fingertips

The iqs AC 'Cockpit Charts' translate and summarise the analyses of company key data via diagrams. Set points and actual values are comparable in one glance; the drill down function opens direct access to each detailed analysis and the process behind it.

> Individual displays

The iqs Analysis Center is so designed that not only does it support individual analyses but also graphical displays. You can modify diagrams to suit individual requirements and combine them in one screen view. This way you can quickly recognise combinations. Time plans enable automatic creation of, for example, monthly reports and within the anlysis you can zoom in to set time frames; iqs AC supports pareto analyses and data export in presentation formats.

> Web Application

The analyses are available as web applications.



Use iqs AC to create individual analyses and combine them all under one screen display.

Highlights > iqs AC

- > Directly accesses all iqs modules relevant for analyses.
- > Filter criteria definable in detail e.g. part families, cost centres, production facilities or action specific
- > Direct switch from analysis to the corresponding process in the CAQ system
- > Cockpit charts summarise the key data in graphics
- > Faster, visual comparison between actual values and set points

- > Access to detailed analysis and individual processes via the drill down function
- > Individual combinations and positioning of diagrams on the screen
- > Supports pareto analysis
- > Ability to send and show analyses as workflow objects within the company
- > MS office integration export function for various file formats such as Excel or PowerPoint

- > Word-Add-Ins e.g for the automatic generation of quarterly reports on the quality level
- > Analyses are available as Web **Applications**

iqs AC notably improves the quality process via the link to other iqs modules e.g.

>iqs RKM →iqs LIB →iqs MM →iqs SPC



Smart help in the background

Critical situations automatically identified

Q-AGENT

> Problems quickly recognised

iqs Q-Agent constantly runs in the background and promptly notifies you of critical situations. Through this you can quickly react and defuse problems such as critical customer complaints. Via the iqs Analysis Center, any number of queries and analyses can be defined as well as generated - for example the number of customer complaints from a particular customer. In the event of exceeding the set objectives the Q-Agent software automatically informs you by email or SMS.



Highlights > iqs QA

- > Definition of any number of queries
- > All queries and analyses generated via iqs Analysis Center
- > Cyclical, daily queries
- > Background search for critical situations
- > Information via email or SMS
- > Available company wide
- > Works with all iqs modules together



QC-Navigator

Central access with all details

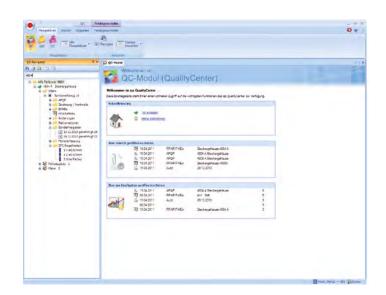
NAVIGATOR

> Put yourself in the picture

iqs QC-Navigator serves as the central, rapid access point for all mapped quality relevant processes in the different iqs modules. All business processes for a part, customer or supplier such as initial sampling, FMEAs, inspection plans are visible in one glance without having to change to a specific module. For customer visits or audits all quality statuses are available at the press of a button. Through the direct link to the iqs modules, you can quickly edit a process if and when necessary.

> Full history at the press of a button

At the press of a button the iqs QC-Navigator generates the full history of a product. At any one time, each employee can obtain the right information. The advantage: customer satisfaction via current and extensive customer information.



Highlights > iqs QC-Navigator

- > Central, quick access to all quality processes for a part or a business partner
- > Supports preparation of audits, certification and customer visits
- Complete information transparency for all departments
- > Rapid, secure informational value regarding customers or internal queries
- > Overview of all open actions for a specific process
- > Complete correspondence of a process visible



Seamless project overview

Detects and eliminates bottlenecks in advance

ADVANCED PRODUCTION QUALITY PLANNING

••• iqs APQP offers the basis for a successful start of production via planned deadlines.

> Safeguarding the start of production

Advanced product quality planning is based upon the requirements of large industrial firms whose subcontractors are integral to project development. The iqs APQP software module is available for defining and carrying out actions and forms the basis for successful project control.

> Deadline axle with in-depth information

iqs APQP details everything in a project up to the start of production, including all individual steps, deadlines and cost demands. As all documents connected to the respective project are saved, APQP is a key tool in guaranteeing a project's success.

> One step ahead - proactive operation

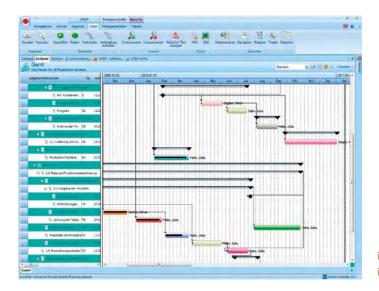
The software highlights any deviations from the specifications and can demonstrate the implications of these deviations for the future course of the project. Counter measures can be immediately introduced. Risks are therefore identified earlier and dealt with proactively.

> Time and cost savings

Up to now status reports have had to be manually transferred from office files into the report form demanded by the respective customer - an extensive high cost, inaccurate procedure. With iqs APQP different report forms can be generated automatically.

> Recognising mutual interdependency

iqs APQP integrates all partners of a delivery chain - therefore the same information base is available to all. Mutual dependencies within a project development are directly recognisable.



iqs APQP details everything in a project up to the start of production, including all individual steps, deadlines and cost demands.

Highlights > iqs APQP

- > Data transfer with other project controller systems
- > Project wide evaluations, time and actual comparisons
- > Creation of project templates, checklists and status reports according to QS9000 or individual definitions
- > Gantt diagrams, pert diagrams, network plan, critical path
- > Workflow with information management, for example event mail and escalation management
- > Current drawing at hand via iqs AZ
- > Change management archiving and versioning of intermediate status and all status reports

- > Action management with status, deadlines and responsibilities
- > Each action linked to sub actions
- > Resource planning (employee's workload)
- > Link to part lists for planning of initial sampling
- > Link to quality processes for easy navigation, e.g. direct access in the corresponding process in the modules ISIR and FMEA
- > Risk assessment
- > Saving of all APQP relevant documents via integrated document management
- > Different projects teams definable for different project phases

- > Graphical display of costs as well as completion status of a project
- > GYR table

iqs APQP notably improves the quality process via the link to all igs modules e.g.

>iqs FMEA >iqs ISIR >iqs AZ >iqs MM



More than calibration and administration

igs PMV ensures the right inspection equipment is to hand

INSPECTION EQUIPMENT MANAGEMENT

••• iqs PMV supervises product quality with the right inspection equipment.

> Quick and comprehensive

iqs inspection equipment management gives you up to date secure information on the validity of your inspection equipment whilst simultaneously enabling the measuring instruments to be checked and inspected. This optimises resources as service and maintenance planning of the inspection equipment as well as resource scheduling are continuously and efficiently taking place.

> Inspection equipment history

The software makes available a complete history of each piece of inspection equipment together with any corresponding documentation that has been recorded such as complaints, location changes, repairs or inspections. Furthermore any company specific events can be individually added.

> Inspection equipment capacity

The Inspection Equipment Capability is an integral building block for determining inspection equipment capacity. With iqs PMF you are able to determine the cg and cgk indices, complete scatter ranges (with or without user input), conduct inspection stabilities and support the inspection capacity process.

> Assistance with inspection planning

The inspection order assistant plans inspection orders, checks that all necessary equipment will be available at the due time, sends inspection requests by email and automatically reminds you about overdue inspection equipment as well as taking on several other functions. In a similar way in which the PMV module is used to improve inspection planning, it also uses the document inheritance technique. Each piece of inspection equipment can have corresponding standards added and allocated to it.

> Order management

Open or unprocessed inspection orders are displayed in one task list. You can differentiate between in house test centres and external calibration firms. Delivery note issue for calibration of inspection equipment through accredited firms is supported.



igs PMV provides a quick overview of all inspection equipment available for use and the inspection capacity.

Highlights > iqs PMV

- > Calibration with corresponding evaluation
- > Secure certification through complete inspection equipment history
- > Inspection tasks allocation via email including integrated reminder system
- > Inspection equipment organisation in different views
- > Management of gauges against filed standards
- > Conforms to QS9000 standards (MSA)
- > Determination of capability index cg, cgk, R&R
- > Representations of the total scatter range with or without user influence

- > Graphical inspection notes
- > Unilateral and calculated characteristics (formula editor)
- > Integrated inspection equipment capability (PMF)
- > Stability test
- > Efficient management of inspection equipment and inspection standards, fixtures and inspection statuses
- Inspection process capability
- > Assistant for automatic identification of inspection equipment due
- > New inspection equipment is checked for operational integrity - if necessary a complaint will be automatically triggered

- > Versioned inspection planning
- > Inspection equipment cost analysis
- > Order processing including delivery note issue for calibration
- > Procedure for preventing the occurrence of overdue inspection equipment (escalation model)
- > Investigates measurement inaccuracy including the influence of temperature

iqs PMV notably improves the quality process via the link to other iqs modules e.g.

> iqs SPC → iqs PP/CP → iqs WE/WA → iqs ISIR



Eliminating tool bottlenecks

igs WZI simplifies tool ordering

TOOL INFORMATION SYSTEM

> On-time tool ordering

The iqs tool information system (WZI) takes over a specific aspect crucial to production - the status of a tool. iqs WZI identifies capacity limits and determines the necessary ordering time for capacity and replacement tools. Capacity bottlenecks and error prone production from worn out tools are actively avoided. Furthermore via iqs WZI the necessary time for tool maintenance can be planned. Tool specific data is maintained in the system and can be called up at any time giving you a complete tool history.

> Extensive tool administration

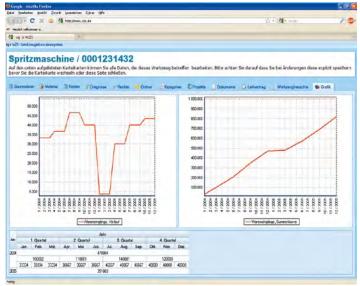
The tool administration contains all customer, supplier and tool specific data for example: master data, the number of tools, tool property, compartment number of the tools, tool costs and follow up costs, tool change actions for different variants, annual capacities, setup time, usage of the tool and replenishment time for a follow on tool.

> Quantity and supplier queries

The cyclical determination of current plan values and the scheduling with extrapolated data allows you to determine the ordering time of the follow on tool. The iqs WZI contains a service for the paper free, cyclical queries on tool data by supplier with automatic transfer of the supplier information into WZI.

> Event mail and reminder

In the event of passing a deadline for capacity and replacement tools, overrunning the service life or amortisation, then the persons in charge will receive a corresponding information note by email.



igs WZI identifies tool capacity limits and determines the necessary ordering time for capacity and replacement tools.

Highlights > iqs WZI

- > Early warning of tool capacity limits, overrunning of service life and payment deadlines (compares planning with reality)
- > Cyclical monitoring of tool data from suppliers (Planned values and actual supplier values)
- > Extrapolation and observation of re-ordering time for follow on tools
- > Tool data transferable via interface with supplier system
- > Determines ordering times and informs those responsible in time

- > Automatic warning via email if for example the monthly capacity on total production of a tool has overrun
- > Helps with tool design (Quantity/Cavity)
- > Ample time for tool maintenance and repair – eliminates capacity bottlenecks
- > Manage events per tool (e.g. maintenance)
- > Interface for PPS system for transfer of orders or supplier quantities
- > Extensive evaluation of suppliers, parts, tools, materials, groups etc.

- > Event mail and reminder
- > Stores quantity of parts if a part needs multiple tools; warning if exceeds 100 percent limit
- > Full tool history
- > Browser based use
- > Cost control at tool level

Here for you

Individually tailored training and consulting



> Easy to learn, quick to use

Software from iqs has been designed so that users can quickly and efficiently get to grips with it. Nevertheless the better the user knows the features and possibilities of the software, the greater the usefulness of the product to the firm. That is why we offer various training courses where we cover structure and content as well as gearing the training to user specific standards, wishes and situations.

> Training at iqs

The advantage of software training here at iqs' premises is that each participant has access to an individual PC. Additionally each participant is free to fully concentrate on the learning as there is no possibility for the daily demands of work to interrupt them.

Speak to us as we are happy to discuss which of our training packages best suits your individual needs.

> Consulting

igs delivers more than CAQ software - we also offer consulting. Long before a CAQ system is implemented or expanded at your premises, you can benefit from our knowledge and experience. Speak to us - we are happy to help.

> Advanced Training

Change is continuous. That is why we place great importance on further training so that our employees are always up to date in the latest knowledge in order to benefit our customers.

> Our goal

Innovative software development takes place through close co-operation with our users. Not only do we grow with our customers but we learn from them - another reason why it is important for us to have successful long term partnerships with our customers.

What we offer you

- Consultation and product presentation at your premises
- Our iqs project team will draw up and design a tailor made solution for your company
- > Software installation by one of our iqs engineers
- > Your personal iqs project leader will take care of you from the first minute through to the software implementation

- > Fast reacting telephone hotline
- > Wide ranging system maintenance with remote access maintenance service
- Constant product improvements and further development
- > Individual training for your specific problems, training for all employees, key user training and "train the trainer"
- > Full support for network and database management
- > Training at our training centre with multimedia, business orientated methods and didactics



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