Q-DAS CAMERA® Concept Case Studies

Standardized Approach but Individual Solutions

Stephan Sprink, Q-DAS® GmbH & Co. KG

The two CAMERA Concept articles "Performance Measurement System for Knowledge Acquisition" (PIQ international issue 2013/2014) and "Standardization Is the Key to Success" (current issue) provided an introduction into the Q-DAS CAMERA® Concept. This PIQ® article describes aspects to be considered while defining and implementing a performance measurement system and offers some examples of case studies.

The Basis Is Proper Planning

The implementation of the Q-DAS CAMERA® Concept starts with a workshop in order to define the future system layout. However, we keep this layout as flexible as possible in order to adapt to future changes in the process and to add extensions later on. The most important aspect of this definition workshop is the detailed description of the processes to which the implementation of the Q-DAS CAMERA® Concept applies. Experienced Q-DAS® employees and customers work together to find a possible solution based on a guideline.

Cornerstones of the process description are information

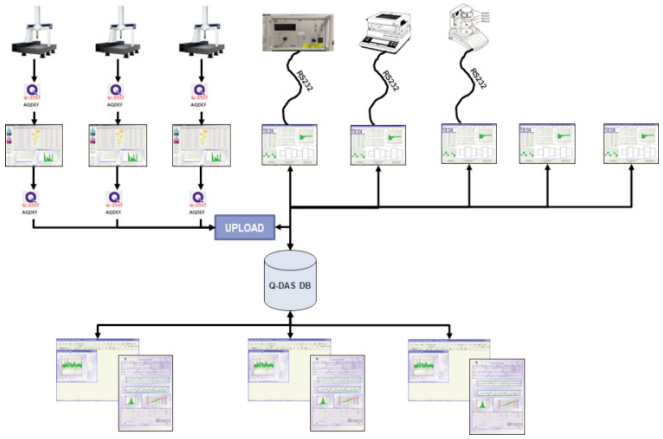


Figure 1: Concept for individual solutions

about the manufacturing structure, e.g. information about production lines, operations, machines and tools, test plan structure (e.g. relating to customers or products) and variable additional information (batches, shifts, cavities, …) that have to be recorded.

The detailed planning follows the process description. You have to define the desired evaluation criteria, i.e. how you want to evaluate which information statistically. Already available data will guide you, e.g. existing reports / evaluations, measurement reports or solutions to be superseded at the customer's.

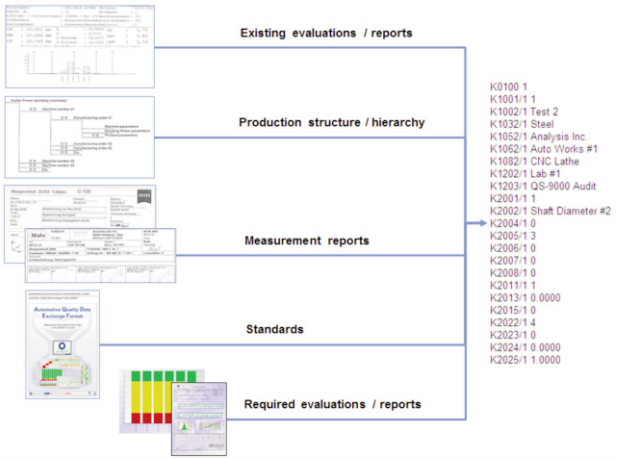


Figure 2: Defining the data structure for the Q-DAS CAMERA® Concept

Already established standards such as AQDEF (Automotive Quality Data Exchange Format) provide helpful information at the conception stage. They help defining the data structure for installing and operating a performance measurement system.

You have to provide the data fields in the Q-DAS® data format; this is the most important basis for operating a performance measurement system and lays the foundation for the configuration of the Q-DAS® system.

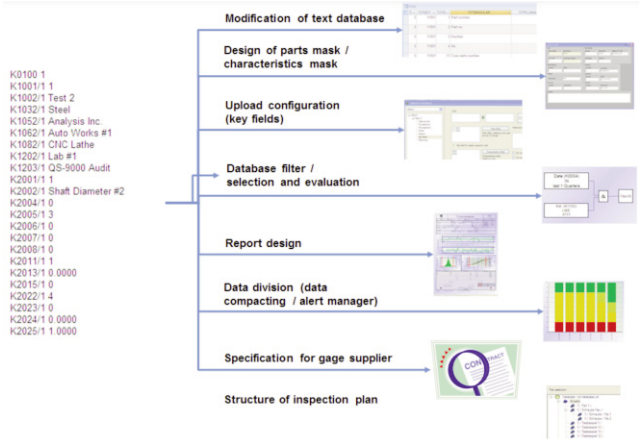


Figure 3: Data format provides the basis for working with the Q-DAS CAMERA® Concept

In order that customers can keep their working language, you adapt the program texts of the graphical user interface to the respective use of language (e.g. part description becomes material description or operation becomes work step). Subsequently, you will find these configurations consistently in all areas of the CAMERA Concept, i.e. in input masks, reports and test planning or in graphics, diagrams and tables showing evaluation results.

While implementing the Q-DAS CAMERA® Concept you also have to clarify the licensing and installation options besides defining the configuration of the performance measurement system. In the first instance, it is about agreements you have to conclude with the IT department of the customer. Every company has an own philosophy that is also represented in the corporate infrastructure (terminal-server solutions, database systems, connection to several locations, operating systems, backup strategy …). The different installation options of the Q-DAS CAMERA® Concept provide solutions realizing a seamless integration into the customer's IT environment.

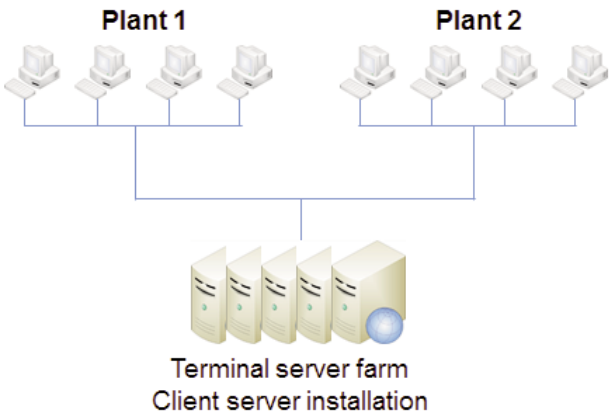


Figure 4: Example of an installation option – solution for several plants with terminal server

Q-DAS CAMERA® Concept – a Tool Box Meeting the Requirements of Different Customers

The following case studies provide examples of how to find solutions for individual customer requirements by applying the components of the Q-DAS CAMERA® Concept. They illustrate customer's benefit.

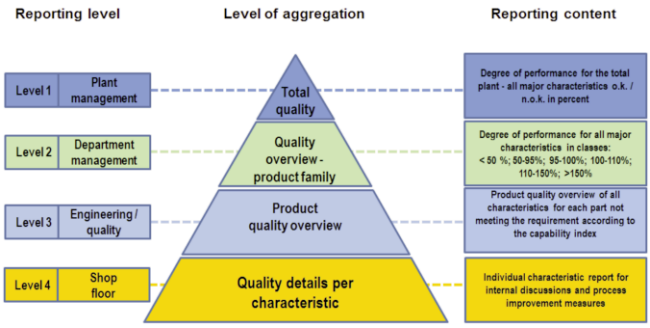
Each case study has the same structure.

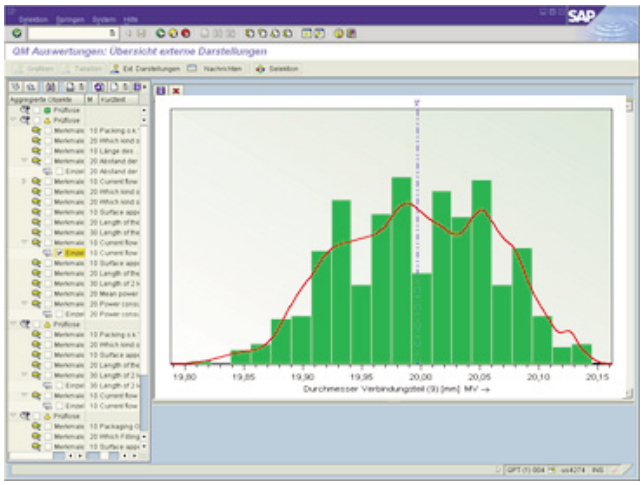
- Customer requirements
- Implementation based on the Q-DAS CAMERA® Concept
- Result of the approach
- Customer's benefit

Case Study 1: Benchmarking

Case Study 2: SAP QM Integration

Customer Requirements

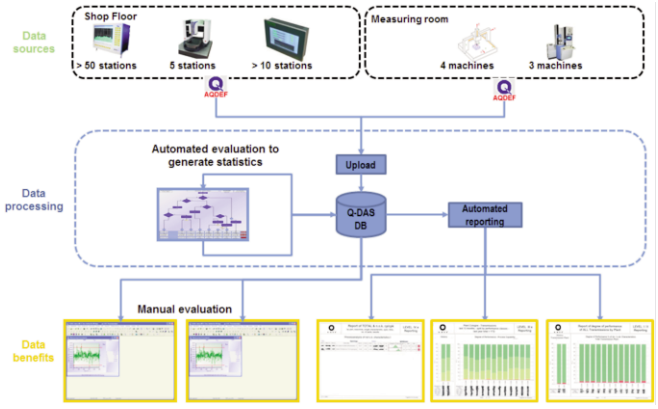


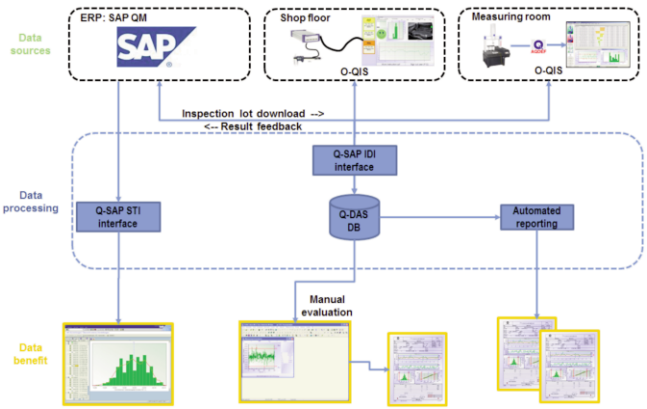


- Automated reporting system
- Information compacting for different recipients
- Display of results as needed
- Evaluation based on uniform statistics
- No manual data processing
- Focus on the most important process and product characteristics

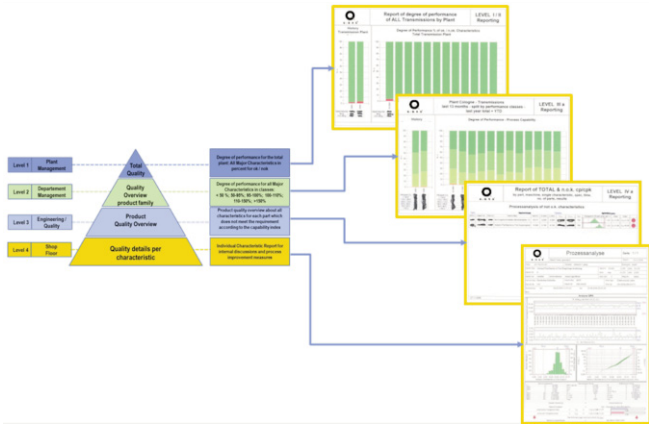
- SAP QM is the leading system
- Test planning and inspection lot creation in SAP QM
- Download inspection lot for data recording in O-QIS
- Data recording in O-QIS according to SAP QM specifications
- Inspection lot completion – O-QIS reports result to SAP QM (usage decision)
- Statistical evaluation based on standards and guidelines

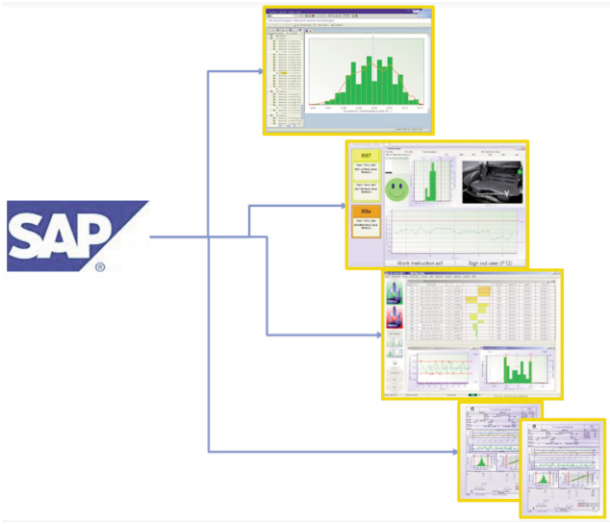
Implementation based on the Q-DAS CAMERA® Concept





Result of the Approach





Customer's Benefit

Cost savings

- Standardized interfaces connecting measuring instruments and SAP QM
- Automatic data connection / no manual processes
- Quick overview of the process
- Operators may take corrective action quickly based on information about the current process status

Confidence and reliability

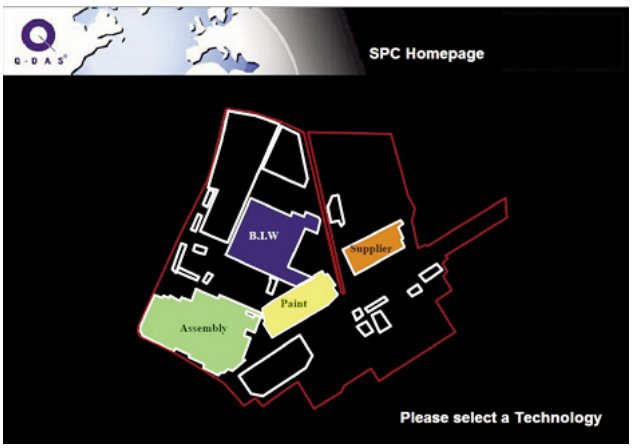
- Validated statistics
- Repeatability of results
- Reproducible processes
- Traceability

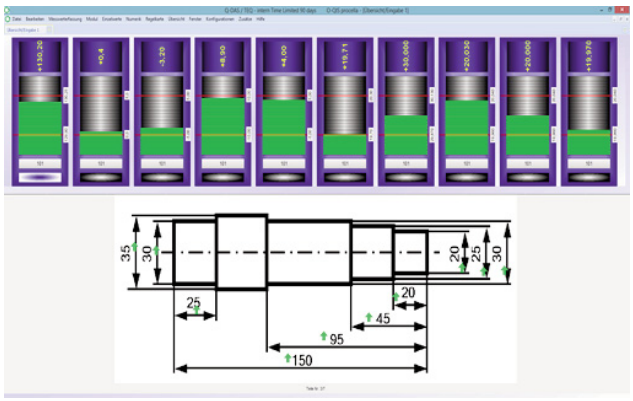
Management is always up to date

Case Study 3: Web Reporting

Case Study 4: Online Monitoring

Customer Requirements

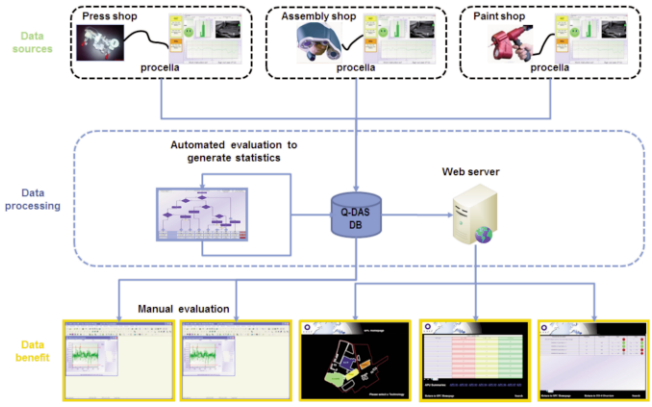


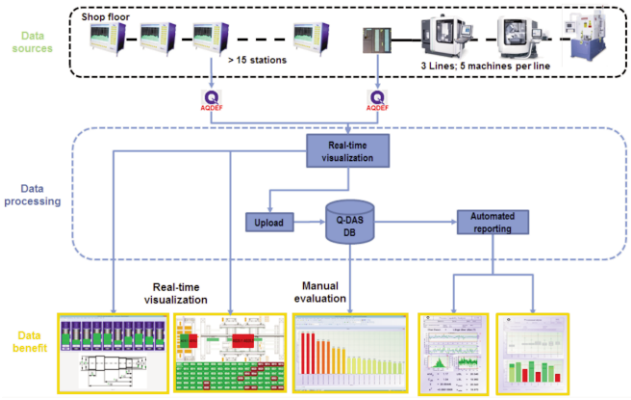


- Plant-wide visualization of statistics
- Adaptable websites on the Internet
- Simple and clear representation, no expert knowledge required to interpret results
- Focus on most important processes
- Management is always up-to-date

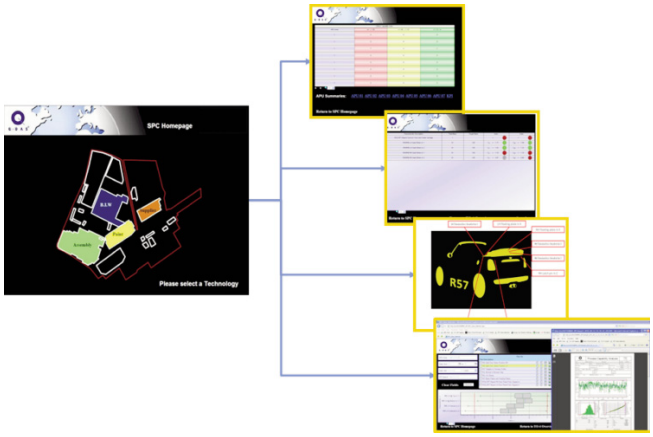
- Local real-time visualization of measurement data on site
- Permanent visualization of data from production lines (process parameters and measured data) including drill-down function
- Automated status reports for the management on a daily basis
- Quick identification of critical processes

Implementation based on the Q-DAS CAMERA® Concept





Result of the Approach



Customer's Benefit

Cost savings

- Standardized interfaces connecting measuring instruments and controls
- Automated data processing / no manual processes
- Quick overview of the process
- Operators may take corrective action quickly based on information about the current process status

Confidence and reliability

- Validated statistics
- Repeatability of results
- Reproducible processes
- Traceability

Management is always up-to-date.