



## Interaction of Q-DAS® Software Products and MES Solutions

*The market requirements for software products are changing. Current trends show that companies demand a uniform and universal solution leading to transparent products and processes. Companies may reach this target by providing operators in the shop floor with real-time visualizations including the required details and offering compact and clear summary of information to the management. The contents to be processed are quality-related statistics and graphics as well as information on the status and workload of the processes or production facilities.*

*Q-DAS® software products focus on the display and evaluation of quality information in industrial production and processes. A MES (manufacturing execution system) offers solutions for a transparent and flexible visualization and planning of manufacturing processes reaching from the order to the finished product. Integrating both systems provides each company with a universal and value-added solution.*

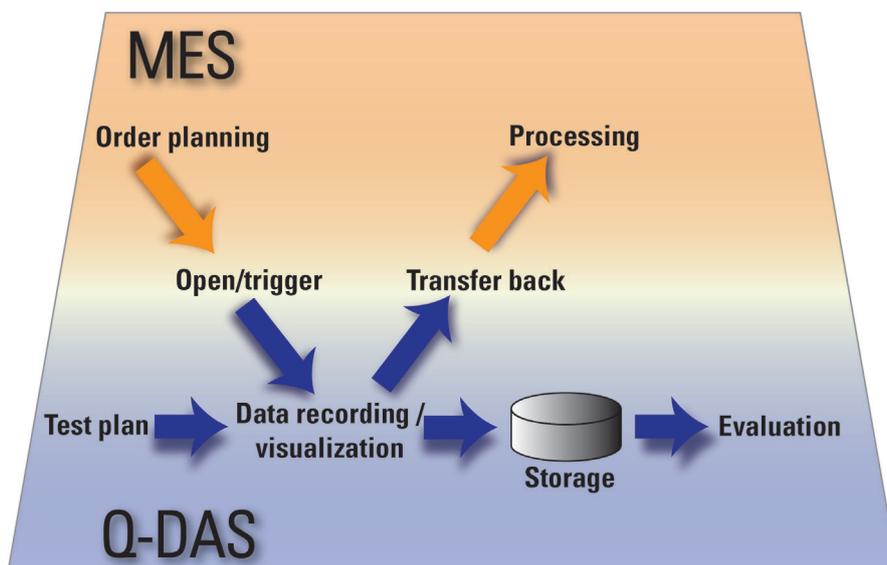
### Approach to the Integration of Both Systems

Our customers apply Q-DAS® software products as integrated solutions (CAMERA Concept) but also as individual installations. Since our products are widely used, they often have to interact with MES solutions of different providers. This situation demands flexibility and openness of the Q-DAS® company in order to offer the best possible solution to joint customers. The AQDEF data format (Q-DAS® ASCII transfer format) and the Q-DAS® Statistical Server already provide the basis for the interaction of both systems in the most flexible way.

The following section presents different approaches. Various requirements and tasks distinguish these approaches. Does the MES solution already include the recording of quality data? And would you like the system to evaluate quality data and process data?

### Recording and Evaluation of Data by Using Q-DAS®

Q-DAS® products provide test plans for the recording of quality data in this approach.



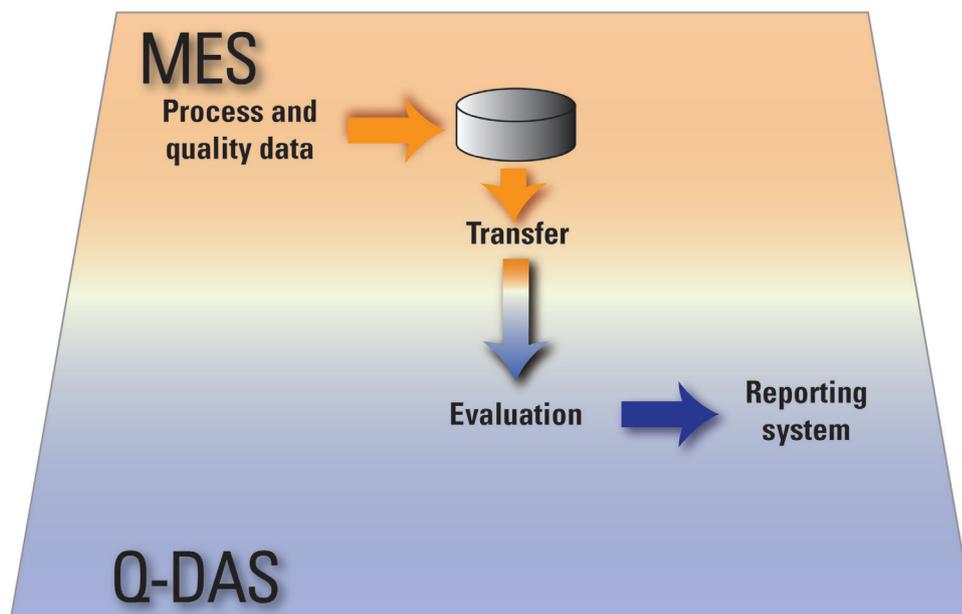
The MES system always contains the current status of each machine, i.e. the current order of the machine or operation and the required quantity to be produced. When a company has to conduct a quality inspection for n parts produced, the MES opens procella<sup>®</sup> and passes the header data specific to this order to the Q-DAS<sup>®</sup> product. procella<sup>®</sup> now runs automatically in the foreground. Based on the passed header data, the program loads the required test plan and takes over additional data for data recording. procella<sup>®</sup> carries out the inspection (including the respective alarm monitoring, additional display of historical values for trend identification, etc.). After completing the inspection, procella<sup>®</sup> provides the MES with the current status (alarms) and the manufacturing execution system runs in the foreground again. The MES is able to react to the alarm message accordingly, e.g. it sorts out a defective part.

Quality data are permanently available in the Q-DAS<sup>®</sup> environment and can be evaluated in qs-STAT<sup>®</sup>.

### ● Recording Process and Quality Data in the MES (Version A)

The MES can also record quality data. However, the MES requires the corresponding test planning. Now the MES transfers quality data together with process data to the Q-DAS<sup>®</sup> products.

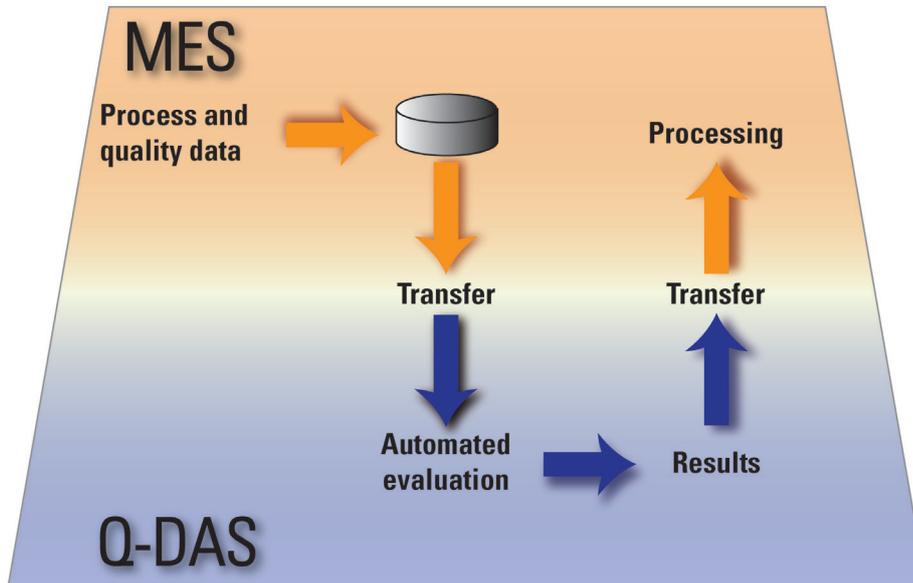
This approach does not transfer statistical evaluation results back to the MES. The MES is responsible for the entire data storage and data management. It feeds data into the Q-DAS<sup>®</sup> software products for detailed evaluation.



### ● Recording Process and Quality Data in the MES (Version B)

Even in case of this version, the MES is responsible for the planning and data storage. The MES automatically provides the data to Q-DAS<sup>®</sup> software products for evaluation.

After the transfer of data is completed, Q-DAS<sup>®</sup> products evaluate these data automatically. Depending on the desired evaluation, the MES creates data packages and transfers them, e.g. a package for each order, product or period. After completing the evaluation, Q-DAS<sup>®</sup> products provide the statistics to the MES for further data processing. Meanwhile, the Q-DAS<sup>®</sup> software products are running in the background as a “black box“. The MES triggers them and they transfer their evaluation results to this system, e.g. numerical results, reports or even graphics. The MES always stores these results.



These three approaches only require minimum effort and are quick and easy to implement. Depending on customer requirements and the scope of the desired solution, there are further options to realize the interaction between Q-DAS® products and MES solutions.



Q-DAS GmbH  
Eisleber Str. 2  
69469 Weinheim / Germany  
+ 49 6201 3941-0

Interested in this topic?  
[www.q-das.de](http://www.q-das.de)  
Contact the author  
[stephan.sprink@q-das.de](mailto:stephan.sprink@q-das.de)