




The 7 Most Frequent Errors in Performance Quality Systems






The creation of a performance quality system for the quality evaluation in the industrial production requires an exact planning. Practical experience has shown that data recording and data storage make up more than 80 % of the overall effort. Once the information has been structured and stored correctly it is relatively easy to use the quality information for calculations.

To create an efficient performance quality system and to maintain it continuously, Q-DAS® has developed the Q-DAS CAMERA® Concept. It provides help and tools for all elements of the system reaching from data recording and data visualization, to data management, to data evaluation, to the creation and distribution of reports and finally to data storage.




The tables below inform about the most frequent risks and weaknesses when creating a performance quality system or when using characteristics in the quality evaluation. The entries tell about possible consequences but also about solutions.




Error	There are no definitions of characteristics or validated calculation methods. Multiple tools are used to determine characteristics under different conditions. The preparation of characteristics becomes notably user-dependent and is hardly protected from manipulations.
	
Consequence	The characteristics are incomparable which leads to more or less skepticism. The results represent the facts that are supposed to be the same although they are based on different basic conditions. There is the risk of intentional manipulations or manipulations that happen by accident. This might also lead to misinterpretations and wrong decisions.
	
Solution	Appropriate characteristics must be clearly defined (reference size, calculation formula, etc.). Due to the concept of evaluation strategies, qs-STAT® guarantees a validated data evaluation and calculation of characteristics. The procedure is transparent and does not depend of the user because it is set globally and cannot be changed.
	




Error	The results are processed numerically in measurement reports filling pages. They do not take into account the requirements of different kinds of users completely.
	
Consequence	The reader has to identify the basic conclusion himself which is quite time-consuming. The system becomes less useful and loses its acceptance by the user.
	
Solution	Distinctive graphics direct the attention to the essential. Reports and graphical displays adapted to user requirements provide crucial information to the respective user. The conclusion is clear, understandable and straightforward. All the Q-DAS® products offer extensive configuration possibilities to user groups and single users. In addition, the Form Designer provides an outstanding tool for the creation of individual report templates.
	

The 7 Most Frequent Errors in Performance Quality Systems






Error		Characteristics are not understandable to anybody. The target group-oriented communication and transparency of the results are restricted. Insufficient trainings make the use of characteristics less valuable for users.
		
Consequence		Users do not get the desired benefit and efficiency of the performance quality system. Because of quality deficits, they are likely to draw the wrong conclusions from the results.
		
Solution		Specific qualification measures cater for a better understanding and interpretation of characteristics. Q-DAS® provides approved methodological and technical expertise for the application, installation and configuration of the software tools. This combination provides a solid basis for efficient trainings.
		




Error		The data access is complicated. You might need to merge different data sources manually. In case of different data formats, it might not even be possible. The data management is unstructured and cannot handle the arising data volume. There is no well-defined data archiving concept.
		
Consequence		The characteristics are not up-to-date and are often hardly available. The evaluation is quite time-consuming and cannot be automated using a standard procedure. The system performance suffers from an inappropriate data management concept.
		
Solution		The Q-DAS® ASCII Transfer Format or the Automotive Data Exchange Format (AQDEF) are widely-used standard data formats. On the basis of these formats, it is easy to realize a well-structured data management and to merge locally recorded data. The data compression and archiving functions of the M-QIS software package make a data management possible that adapts to the respective data volume.
		




Error		The insufficient data quality leads to the fact that relevant information for a clear and correct allocation of the data is missing or incomplete.
		
Consequence		The characteristics do not or only conditionally lead to a conclusion. Since the important facts are hardly described, there is a lack of acceptance.
		
Solution		When you create the concept of a performance quality system, you need to specify the desired evaluation strategies, selections and reports for all required data. Every recording system has to support the mandatory fields in order to mark measurement values clearly and to ensure universal traceability. Q-DAS® offers data field workshops when new customers implement the Q-DAS CAMERA® Concept.
		

The 7 Most Frequent Errors in Performance Quality Systems



Error		The required data basis is difficult to include. Missing interface standards lead to extensive and expensive extra solutions or data conversions. No measurement process acceptance test was conducted.
		
Consequence		“Uncertain“ measurements and test processes cannot ensure the required data quality and question the whole performance quality system. Individual solutions for the data output require a lot of support and are not flexible enough to integrate a system. The costs outweigh the benefits permanently.
		
Solution		Plan and specify system interfaces, the data output and data transfer at an early stage. The Q-DAS® ASCII Transfer Format or the Automotive Data Exchange Format (AQDEF) is widely-used standard data formats. By means of process acceptances, release and monitor the test processes regularly. Q-DAS® offers the required methodological consulting service and training as well as the required software tool solara®. solara® supports all current standards and guidelines in Capability and Measurement Uncertainty Studies.
		

Error		The introduction and maintenance of the performance quality system is time-consuming. Some system components are incompatible (interfaces) because of missing standards. This fact leads to new problems causing further delays. The system maintenance becomes difficult and the effort is incalculable.
		
Consequence		The intended time frame for the implementation of the performance quality system cannot be maintained. The demand for resources becomes incalculable and endangers the project.
		
Solution		The Q-DAS CAMERA® Concept provides coordinated standard tools. Due to its high flexibility, you can meet customer requirements without additional programming. Since the interfaces (e.g. AQDEF) are well-defined, external systems can be quickly interfaced. It is easy to plan the installation, configuration and startup. The system is implemented in a relatively short period of time. You also gain advantages in the maintenance of the system.
		

Error		The aim and the complexity of the performance quality system are not clearly defined. Users are not well-informed about them.
		
Consequence		The performance quality system is seen as a monitoring system. More and more users try to manipulate it. The intended signaling of improvement potential is disregarded. The efficiency of the system is endangered.
		
Solution		Select the members of the project team carefully. Involve the respective workers in time. You can use their experiences in implementing a performance quality system and reduce their skepticism or calm their fears.
		

The 7 Most Frequent Errors in Performance Quality Systems



Many of the errors listed above can be avoided by using Q-DAS® CAMERA Concept.

Here you can find more information about Performance Quality Systems:

- [Book: Performance Quality System for the Quality Evaluation in the Industrial Production](#)
- [AQDEF – Automotive Quality Data Exchange Format](#)
- [Seminars](#)
- [Hotline](#)