



At a Glance.

Test Processes efficient and reliable

Automotive Competence

Test stations, test stands, large test rigs or large-scale test fields are altogether key components in developing vehicles. The vehicles are bound to meet the latest requirements on efficiency, amenities, environmental friendliness, protection of resources and technology. As a result, the complexity of validation processes including all tests and/or simulation stages increases continuously.

Considering the test context in looking at test data is indispensable in order to link the data to background information and - in further consequence - to generate new knowledge. So, tests should not be considered as isolated elements, but as constituents of a holistic approach to an enterprise-wide process.

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SOFTWARE & SYSTEMS

Test Process Management

The support of test processes has to cover the entire phases from receiving and accepting a test request with its test specifications, on to planning and setting up the test, executing the test through to managing the result data, creating reports and sharing the results. The system employed must allow for modifications and changes at any stage while ensuring traceability and integrity at all times.

In every phase, data from the preceding phase is used and new information is generated. Also, interfaces to systems already in place have to be considered. This includes interfaces to test automation and measurement systems, just like interfaces to Requirements Management or Enterprise Resource Planning. Especially in the analysis of measurements specific tools and procedures need to be addressed and integrated into the workflows.

Proven Platforms to build Test IT Solutions on

Werum identifies, parameterizes and configures the needed basic functions in accordance with the customer's specific requirements. They are combined to create a platform-based solution which is complemented by project-specific adjustments. So users get the best of both worlds. On the one hand, Werum offers standardized platforms with HyperTest and WTCS. Their distinguishing features are utmost stability and a wide range of functionalities while being widespread and easy to maintain. On the other hand, users also benefit from the advantages of a customized solution that has been tailored to their specific needs.



At a Glance

WTCS meets Data and Information Management

The solutions implemented by Werum range from measuring systems for vehicle components, for example, to wind tunnel control systems and control units for rocket engine test beds. The basic functions of our platforms WTCS (Werum Testbed Control System) and HyperTest comprise data recording and distribution, test bench automation, test bench control systems as well as data and information management.

Werum provides integrated solutions for test process management including real-time systems for data acquisition and control of complex test environments. In other words, we support all levels and steps in translating measurement into knowledge.

Companies measure and acquire ever growing quantities of data within ever shorter periods of time and are forced to record growing numbers of parameters. To keep the data understandable and interpretable, an increased number of additional information is needed – like the characteristics and types of sensors used, the test procedures applied, the configuration of the unit under test or the relevance of the individual measurement to the overall project.

Powerful data management solutions ensure that all data are searchable without any delay and stay identifiable in their context. And this is exactly the purpose Werum has developed the HyperTest platform for.

Features & Benefits

Our solutions are deployed at various customers from different branches of the automotive industry. Some of their distinguishing features are:

- Incorporation of various subsystems of the wind tunnel
- Homogeneous control environment for the subsystems
- User-friendly editors to parameterize the systems for the measuring and testing tasks at hand
- Test sequence control to make sure the defined tests run in a coordinated way and all connected systems interact properly
- Recording of all necessary configuration/operation details and measured values for subsequent test evaluation
- Visualization and storage of data
- Increased efficiency through rule-based process support
- Channeling of information and access control based on rights & roles management
- Assistance of service and support tasks with immediately available context information
- Reduced retrieval and access times due to sophisticated search functionality
- Context-related linking of associated information like standards or regulations to measurements



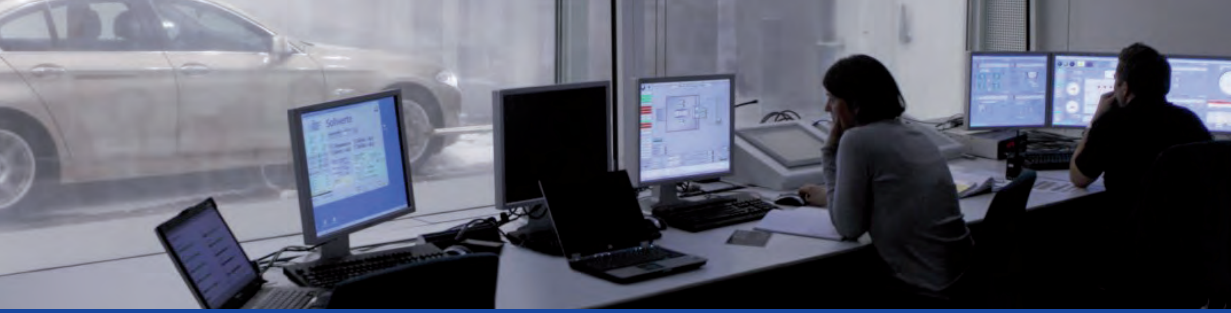
*Wind Tunnel Center
in Ingolstadt/Germany
Source: Audi AG*

Test Processes efficient and reliable

Vehicles and their components are becoming increasingly complex. Consequently, increasing amounts of data are generated in the course of development. And for globally operating enterprises it is crucial that the data and information are available and accessible throughout the whole enterprise with all its locations.

Test Process Management by Werum supports the automotive industry in handling this deluge of data. Werum's test data management systems form the infrastructure to efficiently manage, distribute and archive measurement, test and control data. Moreover, the data are kept available for further analysis - regardless of where they were actually created and stored.

Our solutions are based on established platforms while complemented by specifically customized functions. Werum has a long and proven record in the industry and many international car manufacturers are ranking among our customers. We have successfully implemented numerous projects for a large variety of wind tunnels, test stands and test fields and cooperate in consortiums where suitable.



*Control room of BMW's EVZ, Munich
Source: BMW AG*

Solutions designed and implemented by Werum

- Data management for a brake booster test stand
- Universal measuring system for mechanical component test benches
- Supervisory control systems for several wind tunnels and climate test chambers
- Test management in wind tunnels
- Test data management in vehicle testing
- Measuring equipment management / asset management
- Instrumentation setup management

About Werum Software & Systems

With a workforce of over 100, Werum Software & Systems AG is one of the largest employers for IT professionals in the region of Lueneburg, Northern Germany. For more than 45 years we have been implementing sophisticated software and systems for a worldwide base of customers, among them many renowned companies from the automotive and aerospace industry as well as scientific institutions and public authorities.

Our activities focus on the support of customer-specific processes in the core areas of test data and information management, earth observation, eGovernment and enterprise information management. The software solutions are based on platforms specially developed for these areas.

Diversity, reliability, flexibility and fairness are part of our philosophy and create the basis for sustainable customer relations. We offer our international customers well-founded application know-how and the knowledge and experience gained in many years of implementing most diverse projects and IT solutions. Already in the run-up to project implementation we assist them in advisory capacity with regard to any IT-related aspects of the specific task setting. Long-term maintenance and care services for the solutions supplied are a matter of course for us.

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