



DTC Dynamic Test Center AG



Test and analysis data at the touch of a button

The DTC Dynamic Test Center AG is a private company with share capital held by the University of Applied Sciences of the Canton of Berne in Bienne and private firms. Customers primarily come from industry, business, the services sector and the public authorities from across Switzerland. These include vehicle and aircraft manufacturers and suppliers, garage firms, the public sector, insurance companies, the law courts and, unusually for a test center, individual citizens.

The 30-strong team at the DTC Dynamic Test Center in Vauffelin, Switzerland, deals with complex issues concerning active and passive vehicle and aircraft safety, vehicle engineering and accident analysis. The center's employees provide development support and carry out highly specific tests, analysis and training in these fields. DTC's ISO 9001 certified and ISO 17025 accredited facilities can also be used for research and training purposes. "First and foremost, we are a test center, but offer the full range of technical services for the motor and aircraft industries. Our activities are highly diversified," said Marius Bloch, an engineering graduate from the Federal Institute of Technology in Zurich and a test engineer at the DTC. An in-house accident analysis unit produces expert opinions on traffic accidents. Test drives and crash simulations are carried out on three crash installations. Sounds, changes to braking systems, bodywork modifications, bicycles and aircraft seats are all analyzed and tested. Tuned-up cars which require authorization for road use are also sent to the DTC. "We test the modifications to establish, for example, whether the brakes meet the legal requirements and whether the vehicle will function

properly long-term," explained Bloch. He added: "We carry out some of these tests in the laboratory and some on test tracks. If someone has lowered their vehicle or widened the tracking, we test the impact on vehicle dynamics as well as strength." His duties include software implementation as well as performing tests. The company does not have its own IT department.

"It is always better if all data is interlinked. This makes administration clearer and more transparent. It also allows me to see in detail where working hours have been lost or where I have been particularly efficient."

Marius Bloch, test engineer at the DTC

The situation at the outset

When Bloch arrived at the DTC in August 2006, the specifications for a special piece of laboratory management software had just been drawn up. He joined the company just in time to take over the entire implementation process. The company had previously explored various options. It had looked at SAP, but then wondered whether it could find someone to program the software freely from scratch.

Whereas the one option was too extensive and not specific enough – unsuitable and equipped with too many superfluous modules – a development solution appeared much too expensive. Through market screening, the company then came across dacore Datenbanksysteme AG. Its laboratory management software offered the exact modules specifically required for test centers which were individually adapted to user requirements.

The solution

The basic functions include order management, an offer administration tool, a calculation function, test piece management, invoicing and a time recording system. Marius Bloch said: “The process which I have overseen since the end of 2006 has been a long and intense one.”

Implementation lasted a year as the DTC and dacore’s developers adopted a high-precision approach. In June 2010, no. 416 was entered on the so-called WaE list. WaE stands for “wish and error” list which dacore is working through. Lots of items entered were simply requirements which only emerged in the course of implementation, such as the creation of freely definable directory structures for customers for file storage, the extension of order management to include process control functions and area-specific laboratory framework agreements.

After the development of an initial demo-version with basic modules, there were more tests, new versions, further tests and more new versions until a solution was finally produced which met the test center’s requirements precisely. Implementation was staggered and only one area used the software initially. New users were added on a quarterly basis and these were able to benefit from their colleagues’ experience. All DTC employees now work with IDA - the “internal data and order management system.”

Outlook

A digital test equipment management system is currently under consideration. DTC is currently still working with Excel which was previously used for the management of working hours, holiday planning and order updates. The test equipment management module would enable the test equipment used to be digitally assigned to each order directly. The benefit is that the entire history and current operational status of a piece of test equipment could be called up and displayed in detail at the touch of a button. The person carrying out the test would also have a transparent overview of what measurements had been carried out on which test pieces and with which test equipment over the entire test period. A digital link to order management also improves traceability significantly. This kind of data consistency was one of the main objectives of introducing the dacore software. DTC employees today have a single database which enables all data on their tests and analysis through to productivity to be called up at the touch of a button.

dacore services

- Analysis of requirements with the customer
- Drawing-up of specifications
- Development of customized IDA software
 - Prototypes in line with the agreed process steps and critical system components
 - Testing and validation of the prototypes (components)
 - Integration and productive usage
- Client-server solution with Microsoft SQL database 2008 based on a Microsoft Windows network
- Continual optimization and add-ons
- Technical support



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