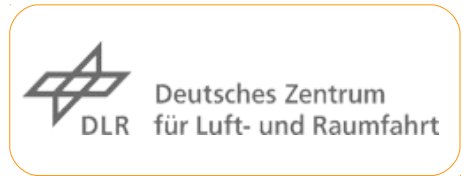


ENDLESS SPACE

Measurement data and test equipment without restrictions
at the DLR – Deutsches Zentrum für Luft und Raumfahrt



Picture: Source DLR ©

The DLR is the national Research Center of Germany regarding aerospace. Its wide research and development in aerospace, power, traffic and safety are tied into national and international cooperations.

In addition to its own research, DLR, as a space agency, is responsible for the planning and implementation of German space activities on behalf of the Federal Government. In addition, DLR acts as the umbrella organization for the nationally largest project carrier.

The DLR employs about 8,000 people in its 16 locations in Cologne (headquarters), Augsburg, Berlin, Bonn, Braunschweig, Bremen, Göttingen, Hamburg, Jülich, Lampoldshausen, Neustrelitz, Oberpfaffenhofen, Stade, Stuttgart, Trauen and Weilheim. DLR maintains offices in Brussels, Paris, Tokyo and Washington D.C.

[<http://www.dlr.de>]

One of the main tasks of DLR is the production and testing of new substances for the aerospace industry in order to make air transport more efficient, environment friendly and sustainable.

For the development of new fiber composites their properties have to be tested and the results have to be retained. The properties, e.g. the mechanical and thermal behavior are determined using a wide range of testing equipment and machines. The characteristic values obtained must be recorded in conjunction with the measuring and test equipment used and their calibration in order to ensure the reliability of the test results. This is the basis for the comparison and the reproducibility of individual measurement data and results.

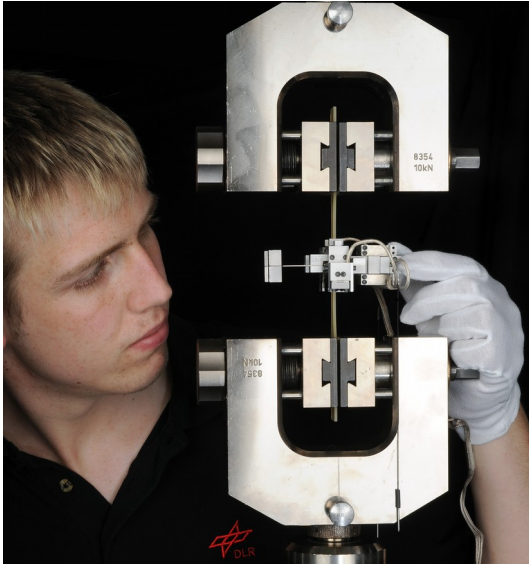
All data and documents, such as the results of the tests, test logs and test descriptions, have been documented in central folder structures and assigned to the employees with access rights.

Requirements

The new system is designed to ensure secure storage of data and documents. A good searchability must be available for all values that are entered into the system for the individual test series. In addition to their own series of experiments, the data from external test results, e.g. from data sheets and from the literature into the system, in order to compare these directly in evaluations and queries.

DLR wanted to transfer parts of the project into its own instructions, so it had to be found a system that provided a high user-friendliness and was so freely designed, so that changes in the sources could be made any time.

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Picture: Source DLR ©

"The flexibility of the LIMBAS framework greatly impressed us. We have considered many other "out of the box" systems, but found none so convincing as LIMBAS.

LIMBAS adapts to our processes, not vice versa. This is very important in the field of research. Our processes are adjusted to the needs of highly varied tests, therefore the software must be flexible enough to reliably function in all of these tests irrespective of their differences. As far as it is possible, we are happy to manage the software development ourselves at DLR which makes things more flexible and responsive. Nevertheless, we are very glad to have found a reliable partner in LIMBAS, who supports us in this respect and competently handles further development steps which we are unable to deal with ourselves. We are very pleased that LIMBAS can do this for us. We attach great importance to the constant professionalism and the good accessibility of LIMBAS Supports."

*Dipl.-Ing. Marcus Kubicka,
Project Management, Institute FA,
DLR Braunschweig.
(translated by LIMBAS)*

Solution

After comparing many different software, the DLR decided on LIMBAS. The open source framework met their expectations perfectly. Also, the LIMBAS licensing model was convincing, since it provides a basic license with an open user administration. This gets rid of individual expensive user licenses, as well as the administrative effort to maintain and manage the user licenses in a large company.

For the first installation of LIMBAS – Basic System, the DLR used the Remote – Installation Service by LIMBAS GmbH. At the request of DLR we joined for the further process of development. DLR devoted itself to the development of the processes within the new solution and the LIMBAS GmbH contributed to the core developments required that had to be anchored.

The core of the implementation was the creation and implementation of the database layout of the measurement data and test equipment management in order to record the characteristics of various test series. The results of the measuring and testing machines are transferred to LIMBAS via a LIMBAS interface.

In order to ensure the storage of individual documents within the corresponding data set, a document management system was implemented in the solution. For example, each record is associated with the related documents.

Productive Use

The reliability of the measurement data and test equipment management has been guaranteed since the use of LIMBAS. It is possible at any time to easily search for different characteristic values and to evaluate these by means of queries and to compare them with each other.

LIMBAS integrated user and rights management ensures that measured values and data can only be viewed, changed and deleted by authorized users.

Future visions with LIMBAS

LIMBAS is first used within the previously used measurement data and test equipment management. Due to its flexibility and expandability, the system is to be further expanded in order to provide more functionality and to be able to carry out further tasks at the institute in the future.

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