The new Delphin Data Center – Connecting measurement technology worldwide

For years, measurement technology was a stand-alone system. Machines and plants were not connected to each other and barely provided options for combined data analysis. Data export and synchronisation was often manual requiring a lot of effort, or not possible at all. Establishing complex interrelationships and interactions, e.g. for intelligent condition monitoring, was therefore often not cost-effective.

But these problems have become a thing of the past. The future of measurement technology lies in connecting decentralised data sources, synchronised analysis and location-independent data access.

The new Delphin Data Center connects plants, machinery and test stands worldwide. The age, location and interfaces of the different types of data sources have become irrelevant. From a single supplier, the Delphin Data Center performs every task related to centralised measurement data management, from distributed and source-independent data acquisition, loss-free compression, pre-processing and storage through to instant worldwide access to current and historical measurement data.

State-of-the-art 64-bit architecture and high-performance data storage in a binary measurement database enable the Delphin Data Center to process up to 100 million measurement values per second for high performance even in the most complex measurement tasks.

Connectivity at field and sensor levels, as well as at any business level, is easy. The Delphin Data Center provides both SQL and OPC UA client interfaces, greatly simplifying communications with ERP and MES systems as well as with the cloud. The Delphin Data Center also has numerous other interfaces such as OPC DA, Modbus TCP, ASCII DLL and API. The new Python interface enables measurement data to be controlled and read out using the popular programming language.

The Delphin Data Center is available not only for Windows but also for Linux systems enabling any set-up to be realised, e.g. with a NAS drive as a central server.

The Delphin Data Center can be used wherever measurement data requires networking and collective analysis. For example, data from basic product test benches through to highly complex R&D test benches for gas turbines with in excess of 20,000 measurement channels. Or data from a facility monitoring system in a small production hall through to the monitoring of pumps, lifts, conveyor belts or any other assets located anywhere around the world. Or data from road testing through to field test facilities. There are no limits to the range of potential applications.

The Delphin Data Center is ideal for realising new and forward-looking business models, as the following "condition monitoring as a service" example illustrates:

Many machine and plant manufacturers want to give customers added value by supplying their products with pre-installed measurement technology for continuous condition monitoring.

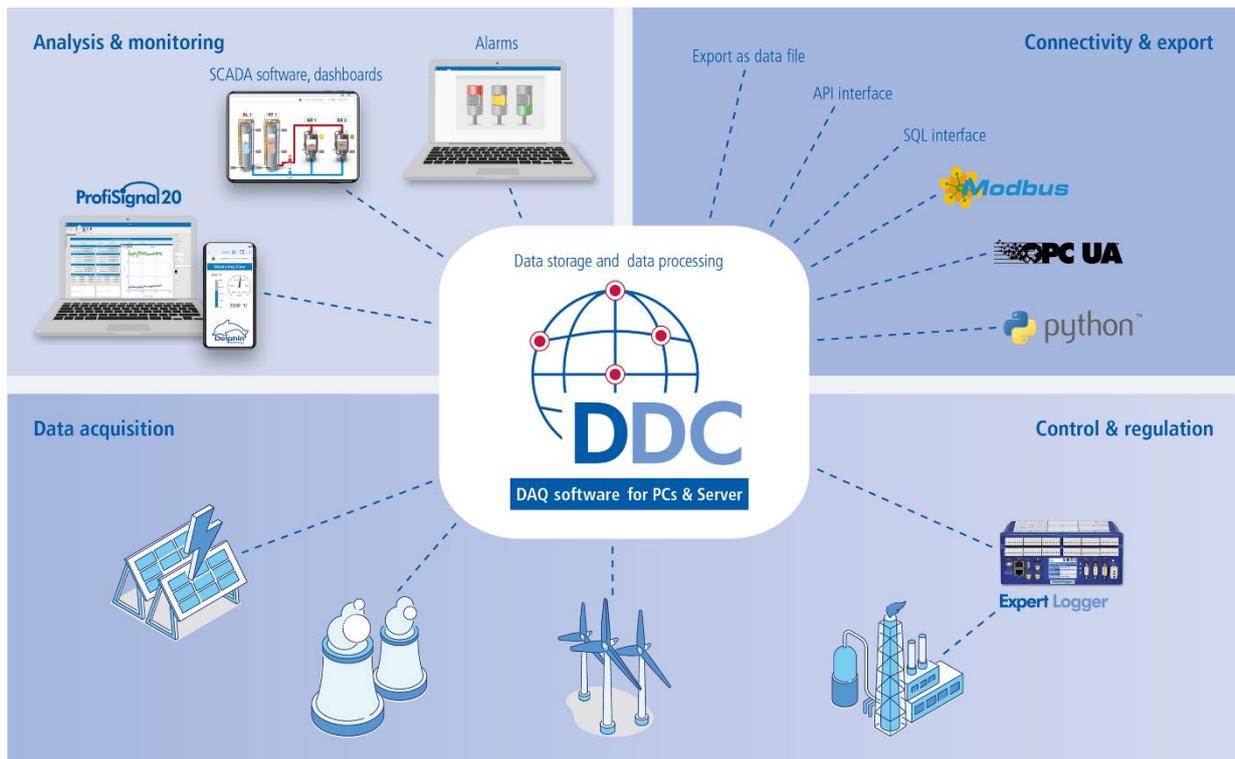But often more is needed. Customers also want to access their machines or systems from any location and get specific recommendations as directly as possible on upcoming maintenance or servicing work.

The new Delphin Data Center is the perfect solution for such set-ups. It functions as a "data hub" where all measured data from around the world is collected and analysed before it is finally made available to the end customer, including any recommendations for action. User selective access rights always ensure that customers access only the data for their systems. Data integrity is also always guaranteed through SSL-encrypted transmission.

"Condition Monitoring as a Service". A construction machinery manufacturer is providing condition monitoring as an additional service, thus creating significant added value for its customers. The solution has been implemented with intelligent ICA systems from Delphin for data acquisition, central measurement data management using the Delphin Data Center, and ProfiSignal 20 for location- and platform-independent visualisation.

The Delphin Data Center is the hub for decentralised networked measurement technology projects and performs all central measurement data management tasks - from source-independent data acquisition, loss-free compression, pre-processing and storage to instant worldwide access to current and historical measurement data.