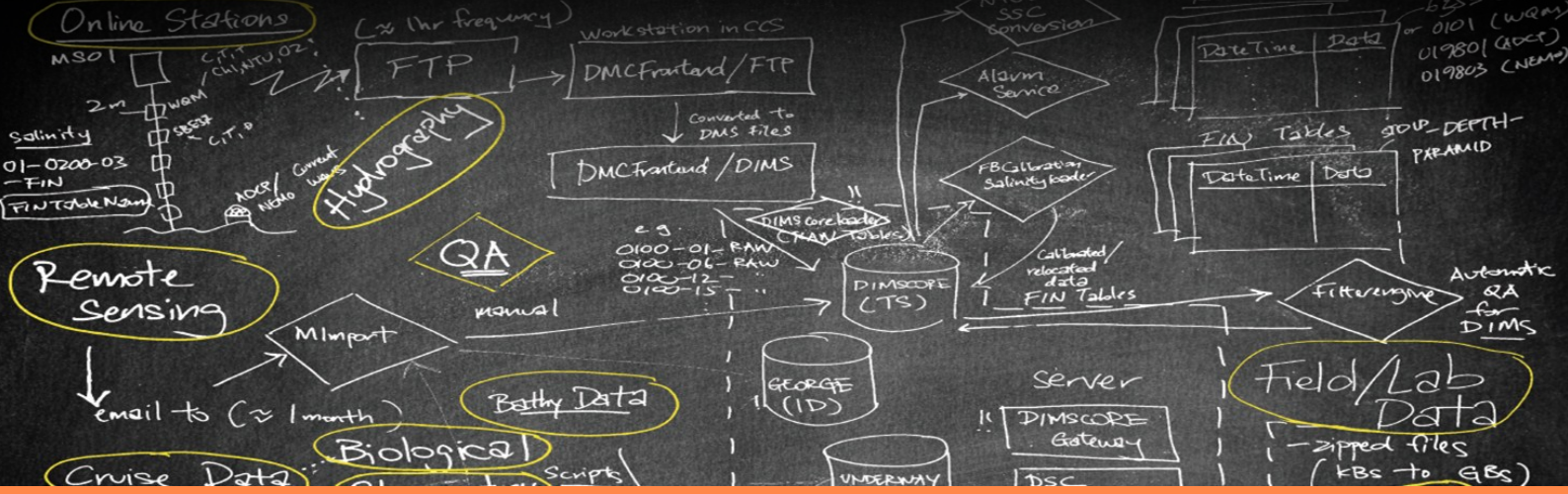


DHI SOLUTION

CUSTOMISED DATA HANDLING CENTRE

Data management made easy

GOOD DATA MANAGEMENT IS A PREREQUISITE FOR SUCCESSFUL PROJECT MANAGEMENT AND RELIABLE DECISION SUPPORT

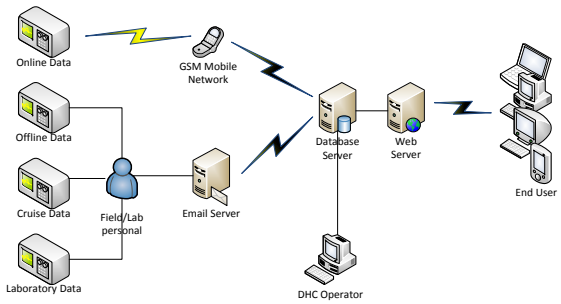
Environmental projects rely on data. Whether small or large, based on desk or field studies – it almost always comes back to data.

However, data have to be properly managed to retrieve the right and maximum amount of information. Well-managed and analysed data help building knowledge and understanding the complexity of natural processes. When handled properly, data become a firm basis for scientifically sound and sustainable decisions.

Well-organised data storage ensures transparency, traceability and reproducibility. In the long run, well-organised data storage with quality assurance standards increases the value of data as they can be easily accessed not only today but also in the future.

THE BENEFITS OF PROPER DATA MANAGEMENT WITH DHI'S TOOLS

DHI's customised Data Handling Centre is a tool to acquire, process, publish, present and manage your data. Fitted to your specific project needs, it thus



Exemplary setup of the data handling infrastructure for project data flow

- *eases your daily work* by providing a data hotel with infrastructure tailor-made for your project,
- *ensures a smooth data flow* from sampling to publication,
- *warrants high data quality* through automatic and manual quality assurance procedures,
- *saves time,* allowing for more effort on data analyses and less effort on data processing and management, and
- *offers data safety* through regular backups and storage tailored to your requirements.

SUMMARY

CLIENT

Port authorities; operators of offshore, nearshore and onshore installations; hydrologists; meteorologists

CHALLENGE

- Data management for monitoring and survey campaigns
- Data quality checks
- Data visualisation and post-processing
- Alerts and alarms for missing and out-of-threshold data
- Easy connection to forecast systems
- Easy access to data for project members

SOLUTION

DHI's customised Data Handling Centre covers all aspects from data acquisition to post-processing and publishing. Its modular structure allows for customised solutions tailored to the client's needs. The Data Handling Centre serves as a central repository, linking up all data sources within a project and allowing project members easy access to quality assured data.

BENEFITS

- Project based web portal for easy data access
- Online data visualisation
- Online data download to various data formats including MIKE DFS formats, ASCII and NetCDFs
- Increased productivity in projects by reducing overhead in data management

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DATA SERVICES

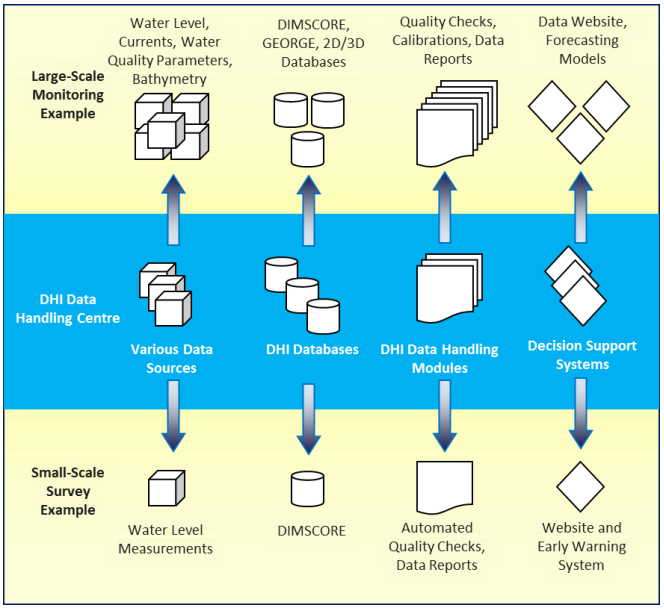
The Data Handling Centre has two main assignments:

- *To host your data:* the Data Handling Centre takes care of the flow of data from the sensors to the end users. It provides high-level quality assurance and ensures easy access to data through automatic procedures and download facilities. Programmes monitor the transmission of data and send out alerts in case of any problems, store the data, provide back-ups and post-processing. The physical installation of sensors and equipment as well as their transmission is taken care of by DHI's Monitoring and Survey Group or trusted subcontractors.
- *To assist you establish in-house data hotels:* thanks to our customisable software components, we can also offer to set up a Data Handling Centre at your selected premises.

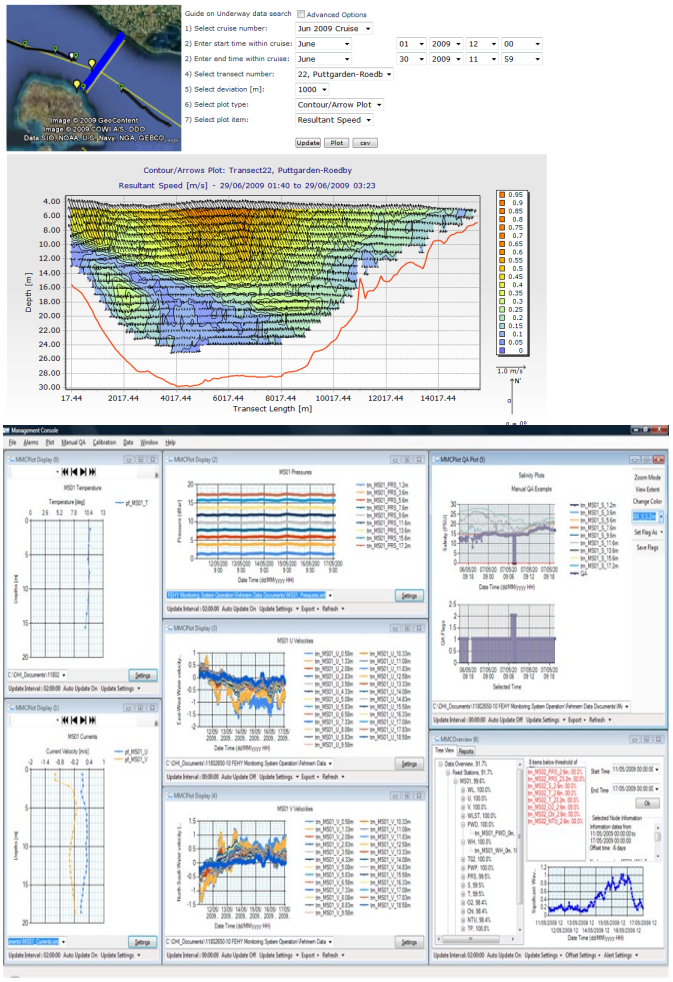
DATA INFRASTRUCTURE: A MODULAR STRUCTURE FOR MAXIMUM FLEXIBILITY

DHI has developed a modular set of infrastructure for managing your data. Customisable components can be arranged to match many data handling needs, ranging from a small scale study to a large scale assessment (e.g. a monitoring campaign consisting of multiple sensors or survey expeditions).

The heart of DHI's Data Handling Centre is a collection of data loaders, databases and data handling programmes. These can be attached to various decision support systems (DSS), thus allowing flexible usage. A small scale application usually uses only a couple of these tools, whereas a large scale application might combine multiple tool components.



Examples of small and large scale projects and the associated software components within DHI's data Handling Centre



Examples of online and offline data visualisation.

Top: Display of a web application, showing vessel tracks on Google Maps and the corresponding vessel towed current transects and sea bed depths.

Bottom: Real-time data transmitted from a variety of sensors. Our system allows a quick and easy view of all data from the sensors and different statistics, such as the quality of the data and the status of data transmission. Data are automatically updated at regular intervals.

DATA VISUALISATION

Data in rows and columns might contain a lot of information. That is, however, not always immediately apparent. Thus, data visualisation is a very important feature in any data analysis. It is also one of the most effective ways to communicate the information to clients, users and a wider public. However, visualisation of data from various data sources can be a difficult and time consuming task – unless you have the right resources.

Using the software components provided by DHI's Data Handling Centre, one can visualise data either on-line or off-line quickly and with ease.

Contact: Data Handling Centre - dhc.dk@dhigroup.com
For more information visit: www.dhigroup.com

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