



DHI CASE STORY

DATA MANAGEMENT MADE EASY

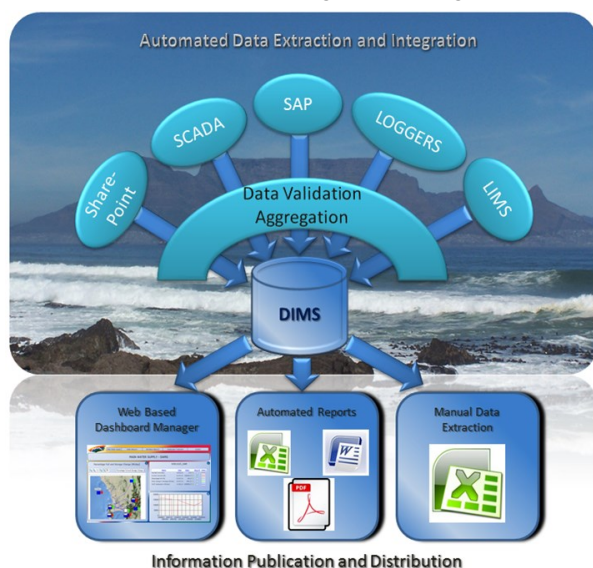
Getting a tight grip on Cape Town's water system

Cape Town's water system was hard to control, with plenty of data available but hardly accessible. DHI established a Dynamic Integrated Monitoring System (DIMS), providing managers with fast and easy access to all necessary information regarding water quality, supply, sewage collection and treatment and disposal.

More than 130 reservoirs, almost 700 pump station, 17 600 kilometres of pipes and 13 water treatment plants providing 330 000 Megalitres of water per year – no wonder that the water distribution network of Cape Town sometimes left it's operators confused. Moreover, up to 25 % of the water produced is lost from the system due to e.g. leakage, theft or inaccurate metering. Even though within the World Bank Recommendations for maximum water losses, this is a major problem for a city with limited water supply.

The first step in addressing these problems was to get a clear idea of where the water flows and where it goes – i.e. to establish a sound water balance. Even though the Water Authorities in Cape Town had access to vast amounts of raw data on their pipe network, these data were a digital mess and hardly accessible - being tucked away in different databases and differing formats.

A system was needed that extracts the right data to a central point and generates the information that is meaningful to managers.



The city of Cape Town and DHI developed an advanced DIMS that seamlessly integrates data from a wide range of databases and makes these data easily accessible through various channels and in tailor-made formats.

SUMMARY

CLIENT

City of Cape Town, South Africa

CHALLENGE

Set up a timely and sufficient access to information regarding the water distribution system.

SOLUTION

A web-based Data Management System generates the key information and displays it on-line or in reports.

VALUE

- Improved information translates into improved decisions
- Better management of the local water system
- Automation of reports saves time and helps reduce errors

LOCATION / COUNTRY

Cape Town, South Africa



● Webbased Information Management System

The city of Cape Town is home to 3.4 million inhabitants, that all rely on its precious water resources. Diligent water management therefore is a must. DHI's DIMS displays the overall water supply and wastewater situation in real time, giving a clear overview of the situation and thereby facilitating well-founded operational decisions.

ONE SYSTEM FOR ALL DATA

With the assistance of DHI, the City of Cape Town together with the Department of Water Affairs therefore developed a new real time web-based information system that potentially gives access to all relevant information for managing, operating and optimizing the city's water supply resources. Applying DHI's solution software, a so called Dynamic Integrated Monitoring System (DIMS) and a Dashboard Manager (DBM) were set up. These systems collect data from various sources, e.g. the main water supply, the water network, the sanitation network as well as wastewater treatment. The data are then condensed and displayed in an easily manageable system with the help of photos, maps and graphs (see http://www.youtube.com/watch?v=ICaFBKcToc8&feature=mfu_in_order&list=UL).

"Some managers were a bit suspicious in the start – but as soon as they saw the first live web-pages, their commitment increased dramatically", explains Andrew Pott, director of DHI South Africa." As a result, a very close collaboration between DHI and its client allowed providing a product exactly meeting the client's needs and demands." Moreover, the new system revealed weak points of Cape Town's water management system, like local deficits in the quantity and quality of data.

SAFETY, MONEY, TIME

Thanks to the improved information system, Cape Town's managers can now make their decisions in a more confident and timeous manner. The inhabitants of Cape Town profit

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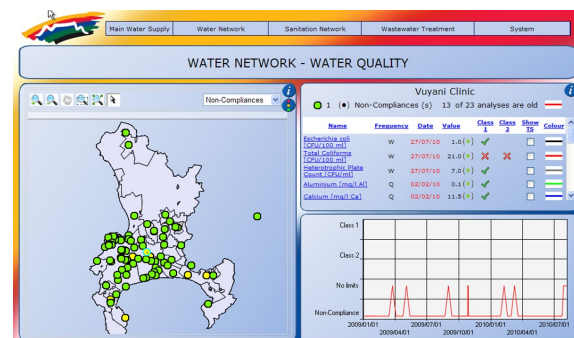
“ We expect to save a considerable amount of water, time and money every year. “

Jaco de Bruyn—City of Cape Town's Water Sanitation Department

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from a reliable early warning system and improved handling of e.g. leakages, saving considerable amounts of water, time and money. Moreover, the new system allows the automated compilation of reports, saving the time and nerves of managers as well as other staff and thus making staff more productive.

"The system provides easy access to information and promises to help our staff get a better overview and to focus their efforts", says Jaco de Bruyn, head of Water Services Development Planning in the City of Cape Town. "We now have a valuable tool for operating as well as managing our water in the City of Cape Town, comprising the entire value chain."



User interface of DHI's water management system. Numerous menus offer information on the water balance, water quality, status of dams, wastewater quality compliance, etc. The current pane displays various water quality parameters within the water network, such as the number of coliform bacteria, aluminium concentration and others.