Software for Water Management
The performance of a software solution is critical for the efficiency of authorities and the profitability of companies in the water management sector. With quality, performance and utilization efficiency, it provides decision-makers with the best support for everyday operation.

We successfully specialize in supporting authorities and companies in the control and handling of their technical and communication processes, and supply much more than just a custom-fit solution. Together with our clients, we strive for long-term cooperation and a trust-based partnership to ensure a continuous development of our solutions as based on immediate needs, and for lasting state-of-the-art quality and security of investment.

Our water management solutions contain the proven time series management, advanced software technology and a deep understanding of applications and markets. The solutions are used worldwide by hundreds of customers with thousands of licenses, amongst other purposes for surface and groundwater monitoring, meteorology, flood forecasting, reservoir operation and safety, water quality and urban drainage.
When it comes to logging, processing, analysing and publishing data from hydrological monitoring networks, the effective and intelligent support offered by a specialized software solution delivers decisive advantages. KISTERS provides you with an information system that fully meets all requirements for processing and analyzing data in hydrological measurement networks, and it helps you meet any legal requirements.

The scope of application includes surface waters management (rivers, lakes, reservoirs) in connection with water supply, hydropower generation, flood protection and the public use of water bodies (waterway infrastructure, inland shipping traffic even in extreme situations, etc.), groundwater monitoring, hydrometeorology and urban hydrology. Measurement data from the various observation areas are collectively analyzed and thus provide a holistic representation of the water body.

Water Quality & Ecology

Only a holistic view of the water volume combined with the quality of the water makes it possible to ensure a good overall state of the water, as is desired since the introduction of the European Water Framework Directive 2000/60/EC, and which also affects our water supply, health, agriculture, biodiversity, ecosystems and many other areas of life.

This is where the integrated KISTERS solution comes into play: It manages the water volume as well as physico-chemical and biological data in a single database. The combined analysis of all data provides new valuable insights.

This way, the KISTERS water solution generates bathing water reports in accordance with the specifications of the European Environment Agency (EEA) in order to report to the Water Information System for Europe (WISE), which is mandatory in all EU member states.

Merely being satisfied with our established software solutions for water management and industry was not enough for us. Through ongoing development and close client contact, we make our software products grow along with the market and client requirements.
Urban Water Management

Effective urban water management is based on the joint observation of precipitation, runoff, percolation, mixed water treatment, sewage treatment plants and water bodies. The utility of the data collected increases if software employed can jointly process and analyze heterogeneous data. With the database-driven KISTERS water solution, the complex requirements in the construction, operational management and optimization of urban hydrological measuring networks become manageable. Water supply and sewage disposal companies can identify interdependences and potentials that could benefit the company and the environment.

KISTERS contributes its long-standing experience and know-how in measurement data & time series to the DWA Working Group ES-1.9 „Measurement data in drainage systems“ and supports, amongst other things, the development of data sheets for the hands-on support of drainage system operators.
Meteorology

Meteorological data are the basis for information and warning systems used in urban water management, agriculture, flood protection, transportation, infrastructure, tourism and energy. In general, in-situ precipitation measuring stations record temperatures at different altitudes above and below ground, air pressure, relative humidity, wind speed and direction, precipitation and radiation. The software-related coupling with remote monitoring data from weather radars and predictive models creates optimized systems that provide reliable information on the precipitation and runoff situations in a given catchment area, and offer earlier warnings for flood forecasting, thereby ensuring an improved flood protective factor, crop protection and also agricultural optimisation.

With the KISTERS water solution, you can validate the data and calculate derived variables and final data products gained by cross-validating rain gauge and radar data, and from rainfall calculations per catchment area including a determination of the return periods or the totals formations per pixel.

Groundwater

The observation of groundwater levels and properties guarantees the long-term monitoring and utilization of reserves. Several responsible parties and interested institutions are often involved in the collection of measurement and analysis data, for example water suppliers, airports, landfill operators, as well as state and lower water authorities. The KISTERS water solution as a central measurement data management system combines all heterogeneous data and provides a complete picture of the physical and chemical state of the groundwater reservoirs.

The KISTERS water solution not only manages large data sets (several hundred to several thousand groundwater measuring points and wells) but also creates statistical analyses (groundwater extraction statistics, sampling analysis, etc.) and provides data for groundwater models and calculations for more individual tasks.
Agriculture & Irrigation

The complex interdependences and risks of agricultural irrigation require an optimized management of the used water quantity and quality. The continuous monitoring of water being pumped from the water bodies along with a continuous logging of meteorological data requires a professional and reliable data management system. Data recorded continuously over long periods, often several years, and evaluated using software exhibits trends in terms of water body changes and of its temperature and radiation history, which can serve as a basis to prepare management plans. The software determines the optimal irrigation and takes into account changes of the water body, evaporation, erosion and last but not least, energy use.

Measuring & Telemetry

Stationary in situ monitoring networks - for example, in the fields of (urban) hydrology and meteorology - can be set up with the KISTERS telemetry solution. The system consisting of hardware and software is universally suitable for all areas of application. The logged heterogeneous data are unified and made available to the KISTERS water software for further processing. The solution is manufacturer independent and operates on all communication channels from the modem to TCP/IP. Upon request, we also provide the appropriate hardware to build a monitoring network.

Customer satisfaction is very important to us. Long-term customer relationships go without saying at KISTERS. Finding joint optimal solutions is the key to our success.

Maritime Solutions

Mastering the tides and their effects can only be achieved with constant software-based monitoring and analysis of tidal, water level and flow data. KISTERS water solution supports you with the identification and description of the navigability and the flow behavior of tidal waters, in the deduction of recommended actions for low tide and high tide, when specifying access times for ports or in the determination of the entry of sea water into fresh water (water quality).
Cloud Services & Data Centres

The KISTERS water solution is optionally available for „rent“ as a SaaS solution. This is particularly attractive for small and medium-sized enterprises, universities, research institutes and engineering firms. The software can be rented for use to a specific extent - for certain applications, projects or on a continuous basis with reasonable monthly use fees. You receive the individually required functions and the desired level of support without paying fees for unused parts of the software.

Consultancy, Training & Service

The KISTERS team with experts from the water management and IT industries support the entire life cycle of your water solution right from the beginning with extensive consulting. We select the ready-made standard modules to build and configure the exact solution that fits your business needs. Training offers and manuals tailored to your organization, round-the-clock internet support and a telephone hotline all serve to help you with any operational issues. Another benefit: the WISKI User Conference, during which discussions with specialists are the focus besides lectures and workshops.
About KISTERS

KISTERS is a group of IT companies with 500+ employees, headquarters in Aachen, Germany, and numerous national and international subsidiaries. KISTERS offers leading software solutions for the sustainable management of water, energy and air. Expertise, commitment and sector experience make KISTERS a much sought-after partner. KISTERS’ Global Water Solution is a framework for building efficient customer solutions based on modern technology and in-depth understanding of application areas and markets. Solutions include, among others, surface and ground water monitoring, meteorology, water quality and urban drainage deployed at hundreds of customer sites with many thousands of licenses worldwide.