

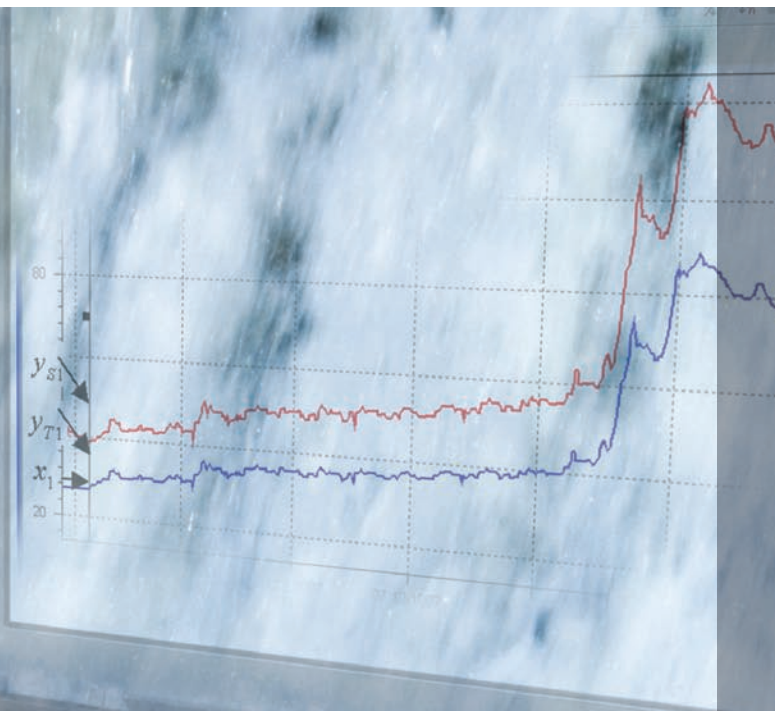
WISKI

WATER RESOURCES MANAGEMENT

# The Water Management Information System WISKI – your complete hydrological workstation.



HYDROLOGICAL MEASURING NETWORKS | METEOROLOGY |  
GROUNDWATER | FLOODING | WATER QUALITY | URBAN HYDROLOGY

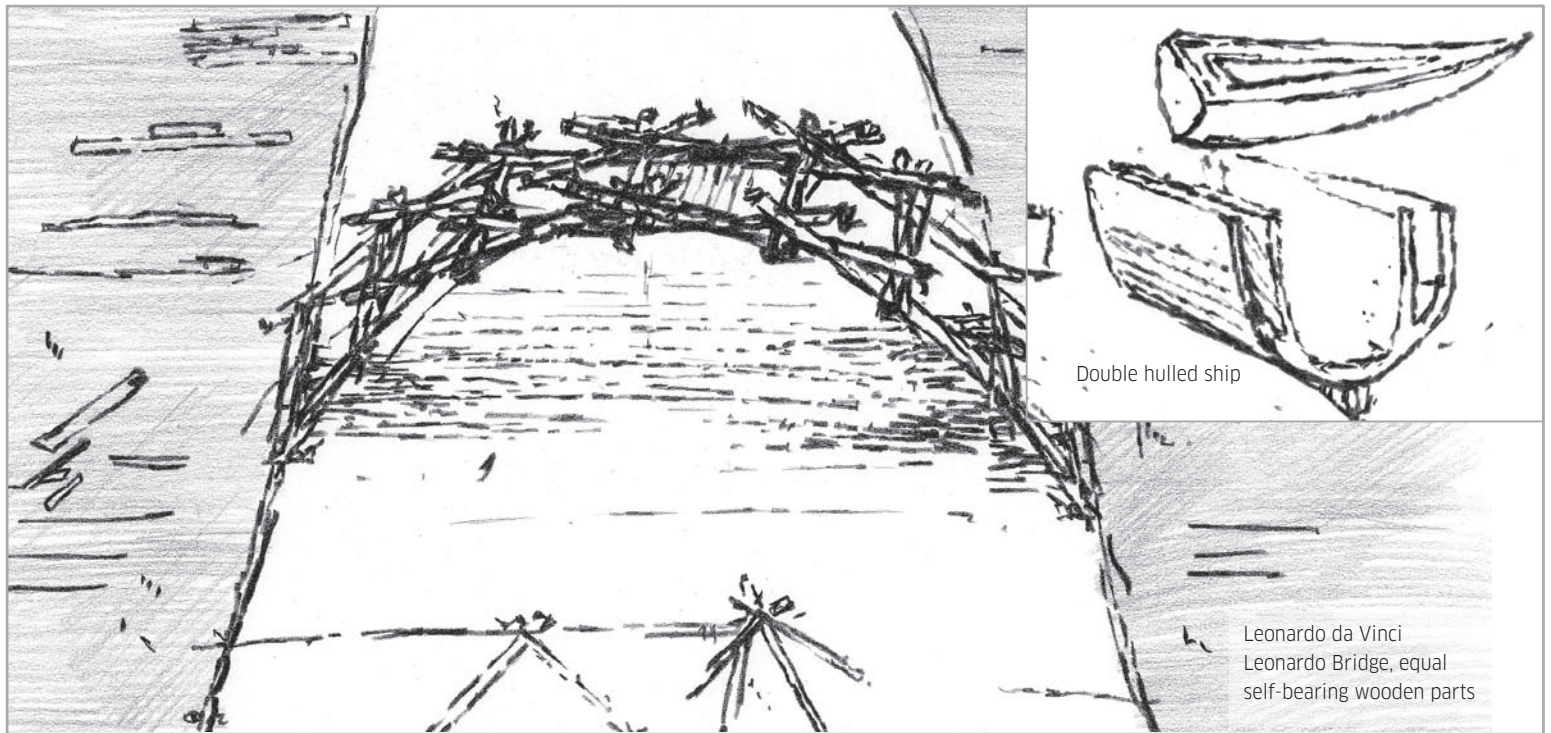


”

It had long since come to my attention  
that people of accomplishment rarely  
sat back and let things happen to them.  
They went out and happened to things.

Leonardo da Vinci | Artist and  
inventor, visionary and engineer

 **KISTERS**  
Pioneering Technologies.



Intelligent - Flexible - Future-proof.  
The water industry relies on WISKI.

Everyday operations at public authorities and private companies demonstrate time and again what really matters when it comes to water industry software: mass data capabilities, performance and efficiency of use must be perfectly combined with one another in order to guarantee reliability and realize full automation potential. These challenges can only be met through the best hydrological and IT knowledge and intensive practical experience - our core competency for over 20 years.

WISKI passes this technological advantage on to our customers. KISTERS delivers more than precisely tailored solutions. Together with our customers, we strive for long term collaborations and partner-

ships built on trust in order to drive the continued development of our products based on immediate needs; for enduring state-of-the-art quality and investment security. Over 250 KISTERS experts have guided projects of all sizes to success together with their customers, and in doing so delivered pioneering technologies and earned outstanding references.

"Pioneering technologies" - the WISKI core includes technologies provided by the KISTERS Time Series Management server (KiTSM), from the KISTERS KiSUITE. 300 customers around the world make KISTERS their all-round partner for highly specialized data management when working with water as a natural resource.

## Water - A life-long passion.

Through drawing and writing, da Vinci studied water tirelessly and passionately, more than any other element over his entire life. His first documented and self-dated (1473) drawing is a river landscape. He first developed a correct understanding of the hydrological cycle based on observation. In his later years, when he rarely painted, he painted the series „Diluvi“, horrific visions of unbridled floods that seized everything in their path.



## TSM inside. - Added value for every WISKI customer.

The management of water as a natural resource is one of the central challenges of our generation. How we act today has consequences for all future generations. Water system states and changes must be traceable, and decisions must be based on facts for future verifiability. Our starting point is to transfer the natural world and its dynamics into a world of data points which can be recalled, transferred, validated and stored in periodic intervals. These points reflect system states and form the basis for analyses and forecasts. The technology is called Time Series Management (TSM), and it provides the backbone of key services for water industry data processing.

We have succeeded in combining interdisciplinary demands on time series processing with regard to:

- Mass data capabilities
- Scalability
- Modular design
- Flexibility to work in diverse specialist areas
- High level of automation
- Reliability, security
- Integration potential
- Broad platform independence
- Redundancy, resilience

in the KISTERS KiSUITE TSM System. KiTSM covers all these demands and, as a shared core-module for all software solutions requiring time series services, and guarantees that the particular demands of the respective application with regards to system performance, time series models, processing models, interfaces,

etc. can be met through simple configuration options. Labor intensive project-specific solutions are no longer an issue. The KiTSM of the future will evolve according to the growing needs of its diverse fields of application, so that all users profit from its development.

Naturally, customer-specific solution requirements extend above and beyond time series management. KISTERS has chosen a component software path for WISKI in order to be able to offer a flexible and powerful comprehensive solution for all task-specific application scenarios, ranging from the responsibility-bearing public authorities to private companies.

Learn more about the WISKI basic functions. Because of our flexible solution concept, they are expandable by special software modules for more demanding applications at any time.



### Measuring network management

Manage your measuring network with WISKI! The configurable hierarchical data model means even complex hydrological networks can be represented with clarity and ease. The

measuring network display can be modified to suit individual requirements by simply defining individual views and attributes.

### Data and time series

WISKI is at home with the diversity of your data and opens the door to a flexible range of applications. Instantaneous and mean values, equidistant and non-equidistant data, whether interpolatable or not – terms such as these are our bread and butter. Data validation and correction is carried out comfortably using graphs and tables. Aggregations and evaluations take place automatically based on the current data stock.

### Calculations and evaluations

Our agents constitute powerful and adjustable algorithms for data calculation and analysis. These agents also create and register specific automatic calculations, data validations and corrections within WISKI. Additionally, they analyze the data using statistical methods and create statistics, data exports and reports as necessary.

### User management

Protect your data and the information you've added! The WISKI User Administration Concept allows you to securely control data access through flexible and highly configurable administrative roles and rights. External access is also subject to your full control. WISKI can be easily integrated into your existing LDAP system.

### The WISKI Explorer

The WISKI Explorer facilitates simple navigation through individual data structures and definitions of your own data trees. You can directly

### Hydrological measuring networks

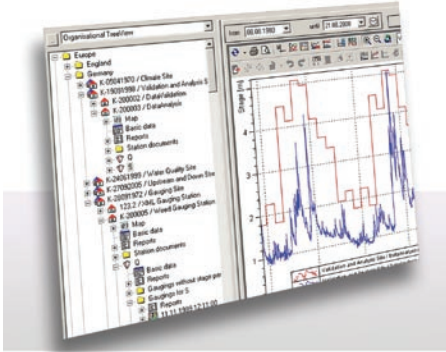
- Process heterogeneous measuring networks (gauge, ultrasound, back-up systems)
- Manufacturer-independent parallel data polling
- Flow measurement and rating curves

### Meteorology

- Management of all relevant parameters (e.g. precipitation, air pressure/temperature/humidity, wind, evaporation)
- Rainstorm evaluation
- Spatial interpolation and areal precipitation

### Groundwater

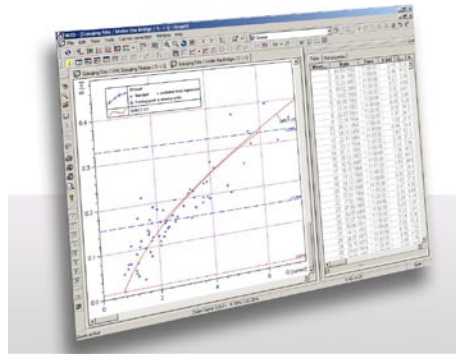
- Management of all relevant parameters (e.g. dip measurement, absolute/relative water level, flow capacities/rates)
- Compare measuring data with surface water and precipitation
- Geohydrological data



a maximum of 255 definable quality flags, and an unlimited amount of standard remarks and comments. With the "Quality Slider" you can exclude any unqualified data from your calculations.

### Flow measurement / rating curves

A local measurement requires global experience. BIBER extends WISKI by adding functions to record and evaluate flow measurements. Use one application to work on regular and irregular cross-sections with current meter, sensor and tracer data. SKED, the KISTERS rating curve editor, offers a diverse range of rating curve types and analysis methods. BIBER and SKED fulfill international standards (e.g. ISO, USGS, British and German Standards). Complex tasks according to the stage-fall method, discharge hysteresis, USGS stage/date shifts or various backwater methods can be solved easily with BIBER and SKED.



### WISKI Web

Share your information using WISKI Web! Three clicks at the most to access maps, time series graphs and tables, meta data, data ex-

ports and reports – WISKI Web publishes your data the way you want, optionally including flood information and alarms. Different solutions for intranets, closed user groups and the general public are available.



### Consulting & Service

The WISKI-Team, with experts in water management and software development, works in close partnership with customers. The Team will work with you during the whole lifecycle of your particular WISKI-solution. Right from the start with intensive consulting: Together with you, we tailor your made-to-measure solution by selecting and configuring the pre-fabricated WISKI-modules. KISTERS provides training and manuals specific to your organization. 24 hour internet support and a telephone hotline are available to help with any issue in your operational business. With our set-screws, 'component software', 'scalability' and 'configuration,' we have pioneered your WISKI for the constant state of change. An additional bonus: KISTERS hosts WISKI user conferences, featuring personal exchanges with specialists from the water industry, in addition to lectures and workshops.

access graphs, tables, reports and evaluations. Key lists and meta data management are completely integrated, and external data sources such as websites can be tied in directly.

### Reporting

Individualized and customer-specific reports are no problem for WISKI. A range of standard reports can be generated immediately. Modifications and custom reports can be created quickly and easily using the straightforward KiBasic scripting language.

### Data transfer and telemetry

WISKI provides comprehensive import and export functionality for time series / recorded value data and meta data. All time series data imports can take place on a continuous and automated or manual basis. Our SODA telemetry system, which consists of special hardware and software for communication tasks, is the ideal platform for remote data transfer.

### Data Quality Code System

Data is more than just data. The WISKI Quality Code System assists you to turn data into information. Manage your data quality with

### Flooding

- Information and alarm management
- Automatic measuring network monitoring
- Notification templates
- Various media (e-mail, fax, telephone, SMS, GSM)

### Water quality

- EU water framework directive
- Import sampling point data from Excel and LIMS
- Threshold and comparison lists
- Graphical presentation of quality data for the general public

### Further fields of application

- Flow measurement
- Rating curves
- Reservoirs
- Urban hydrology
- River catchment management
- Your field of authority

### WISKI – the universal data management system for all water industry tasks

Does your daily work involve managing measuring networks, data capture or evaluation? Do you work with hydrological measuring networks or in the fields of meteorology, groundwater monitoring, flood forecasting and alarming, water quality control, urban hydrology, reservoir operation or dam safety? WISKI can do much more than just support you in your work. In every field of application, unique WISKI technology converts the complexity of hydrological data and tasks into pure efficiency: your workload will fall and quality will rise.

Data capture, processing and archiving – all in one program! The powerful KiTSM time series engine powers all desirable data processing operations in WISKI: automatic plausibility checks and corrections, aggregations, analyses, and forecasts. It forms the processing module of WISKI, uniting all functional logic in a single component. WISKI is capable of rapidly creating easily understandable and useful results in clear graphs, tables and appropriately formatted reports. Particularly careful thought has gone into the user interface for the WISKI presentation module. Time series and meta data are maintained securely in a central database, managed by the WISKI persistency module. Data access from remote workstations

is subject to user management control, safety guaranteed.

The advantages WISKI can offer are clear: a high-performance data management system with broad application flexibility and unlimited scalability combined with security and reliability, state-of-the-art technology and a future proof design. And not to forget the competent and professional advice of our experts from the water industry and software development fields who can ensure your system design, implementation, project management, training, consulting, helpdesk and support continue to run smoothly. Welcome to the WISKI community!

#### THE DATA

##### Data loggers and sensors

Water level, flow, precipitation, etc.

##### Telemetry

Telephone, mobile, satellite, internet, etc.

##### External data sources

Control systems, GIS, databases, internet

##### File import

##### Flow measurement devices

Current meters, sensors, ADCP

##### Manual capture

PDA's and handhelds, web interfaces

##### Historical data

Lists, archives, files, gauge charts

#### THE PROCESSING



#### HANDLED WITH EASE

##### Reports, lists, yearbooks

##### Data forwarding and export

##### Clear data display and processing in graphs and tables

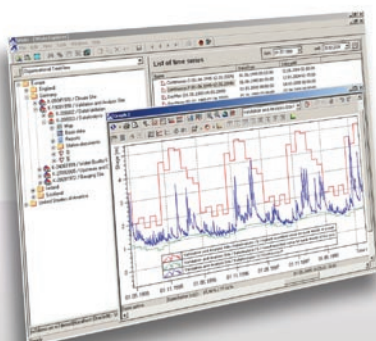
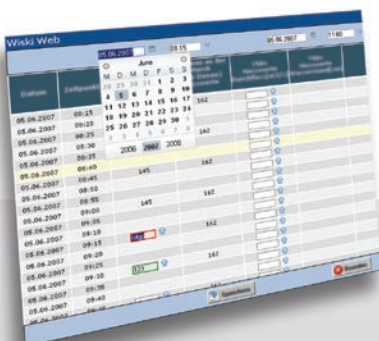
##### Data validation and quality management

##### Alarm management

##### Statistics, measurement values and trend analyses

##### Internet communication public and private

##### River catchment management



” We are really impressed with the WISKI database package from KISTERS.

John Crawford P.E., Section Head Energy Operations Planning  
Manitoba Hydro, Canada

” We have found the Kisters staff that we have worked with helpful, often providing constructive and sometime innovative ideas to resolve issues.

Simon Wood, Water Resources Measurement Team of the Environment Agency of England and Wales  
Technical WISKI Advisor for over 300 users using data from 43.000 stations

” Superior support when you need it!

Peter Hörter, Director of Hydrology at the South-West Waterways and Shipping Directorate of the Federal Institute of Hydrology and the Waterways and Shipping Administration, Mainz, Germany  
WISKI user for over 20 years

More information: [www.kisters.net](http://www.kisters.net)