

## WATER NETWORK MANAGEMENT

*Real-time monitoring and proactive decision making*

*PROVIDING CLEAN WATER TO MORE THAN 100 MILLION HOMES*

7T  
is becoming

Schneider  
Electric

A close-up photograph of clear water being poured from a tap into a glass. The water is captured in motion, creating a dynamic stream and splashing as it fills the glass. The background is a soft, out-of-focus blue.

**AQUIS  
PUTS YOU  
IN CONTROL!**

# A Challenging Future

Without real-time intelligence about operational performance, network status, and customer demand, water utilities face the challenge of reacting swiftly to any change in these conditions.

Water utilities also experience the challenge of deteriorating water quality due to aging distribution piping and depleting water sources.

Many have invested significantly in SCADA systems which allow for partial monitoring of the network, but don't offer the option of proactively simulating impacts on the distribution network.

Most water utilities have only 20% of their investment placed in the actual plant. The remaining 80% is placed in the distribution network. And most water utilities have little or no idea of what happens to the water once it leaves the waterworks.

Regulatory standards are becoming more and more challenging to live up to and require extensive documentation – even contingency plans for the unexpected. Another major challenge is Non-Revenue Water (NRW), which has a negative financial impact on water utilities, water resources and subsequently on the quality of the water itself.

## Protect your investment with AQUIS

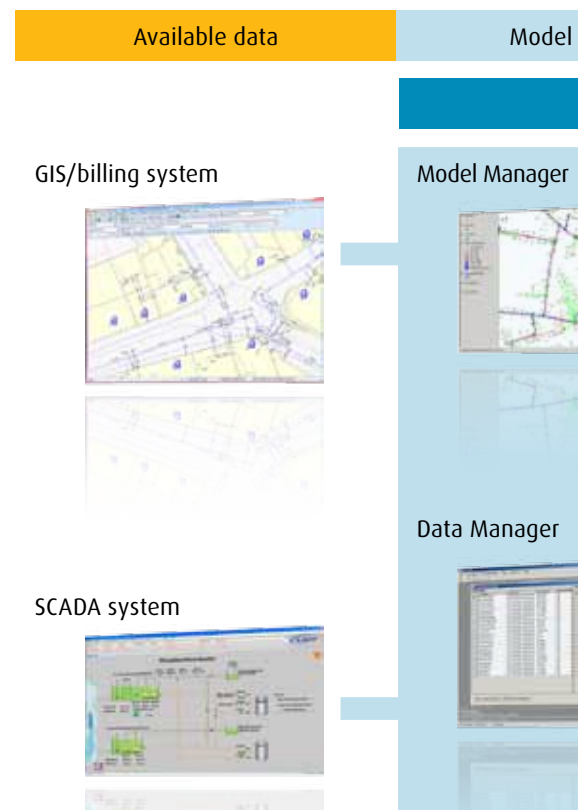
- Uses real-time data
- Easy integration
- Intuitive, easy-to-learn user interface
- Easy conversion from other modeling tools

## AQUIS can help you confront those challenges

AQUIS is a hydraulic modeling tool which simulates the flow and pressure in your distribution network. Unlike other tools, AQUIS uses real-time data to analyze and track the current situation enabling operators to make better and smarter decisions and to optimize production and enhance your bottom line.

AQUIS integrates easily and cost effectively with any set of open applications, and is supported by our extensive knowledge and experience in Water Network Management (WNM).

To help you maintain the desired water quality, AQUIS tracks the water through its entire network and gives you an at-a-glance overview of the chemical composition, age, taste and odor.



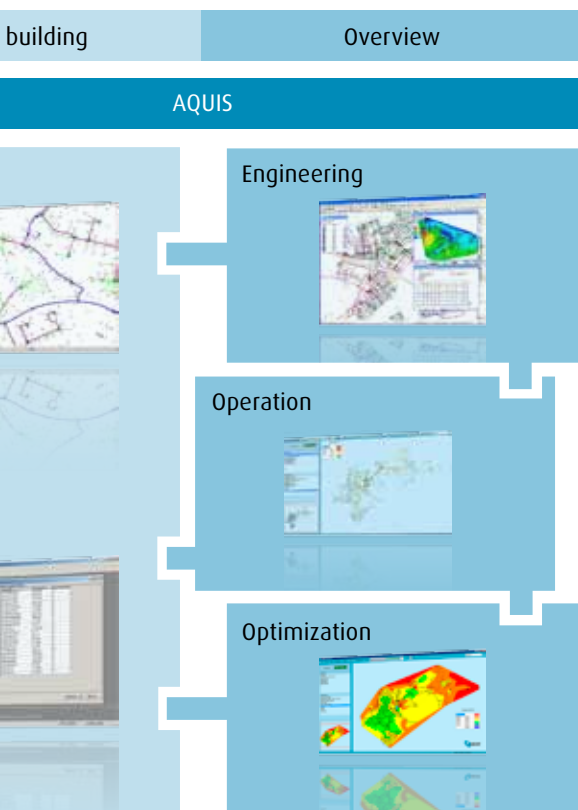
*Data from the SCADA system is easily imported and validated for use in AQUIS through Data Manager*

# Improved Network Overview

AQUIS empowers you by providing an effective and comprehensive overview of your entire network and operation.

Real-time SCADA data transforms the AQUIS model from a static planning tool into a dynamic decision making tool, integrated in your day-to-day operation and with instant, clearly identified benefits and economic advantages.

*What previously took man-months is now possible to finalize within hours. Once you have fed your data into Model Manager (the model building tool), the model is automatically generated.*



## How does it work?

An intuitive button interface lets you scroll back and forth and obtain data for pressure, flow and water quality at any given time - in the past, now or in the future, anywhere in the network.

Real-time data from the SCADA system is fed into the AQUIS model. It's possible to combine this with weather forecast data. This lets you predict future consumption – even during periods of changeable or extreme weather conditions.

AQUIS allows you to view different areas, sections, zones and even details of the network. You can easily simulate interventions such as opening or closing of valves, or starting or stopping of pumps, and assess their impact on consumer supply.

## The click of a mouse does it all

The various types of users can have their user interface customized to suit their individual needs and requirements.

All staff has information at their fingertips to provide instant answers to any enquiry.

### Proven solution, proven results

- Improves service and reduces operating costs
- On average, our customers have reduced NRW by 30%
- More than 20 years of experience in WNM
- ROI in less than 18 months

# AQUIS – The Intuitive Operating Tool for

With AQUIS, you can unleash the potential of every employee in the utility to serve your customers better.

You can design your network to meet future demands, avoid bottlenecks and comply with regulations. And at the same time as optimizing your investment, you are improving service, increasing customer satisfaction and reducing operating costs.

Staff can click on any object in the network to check data such as water pressure at a specific location and can give instant answers to customer enquiries. Alarm set points for all parameters can be configured.

Like GPS automobile navigation, AQUIS will immediately advise you of future problems in the network, no matter which turn you take.

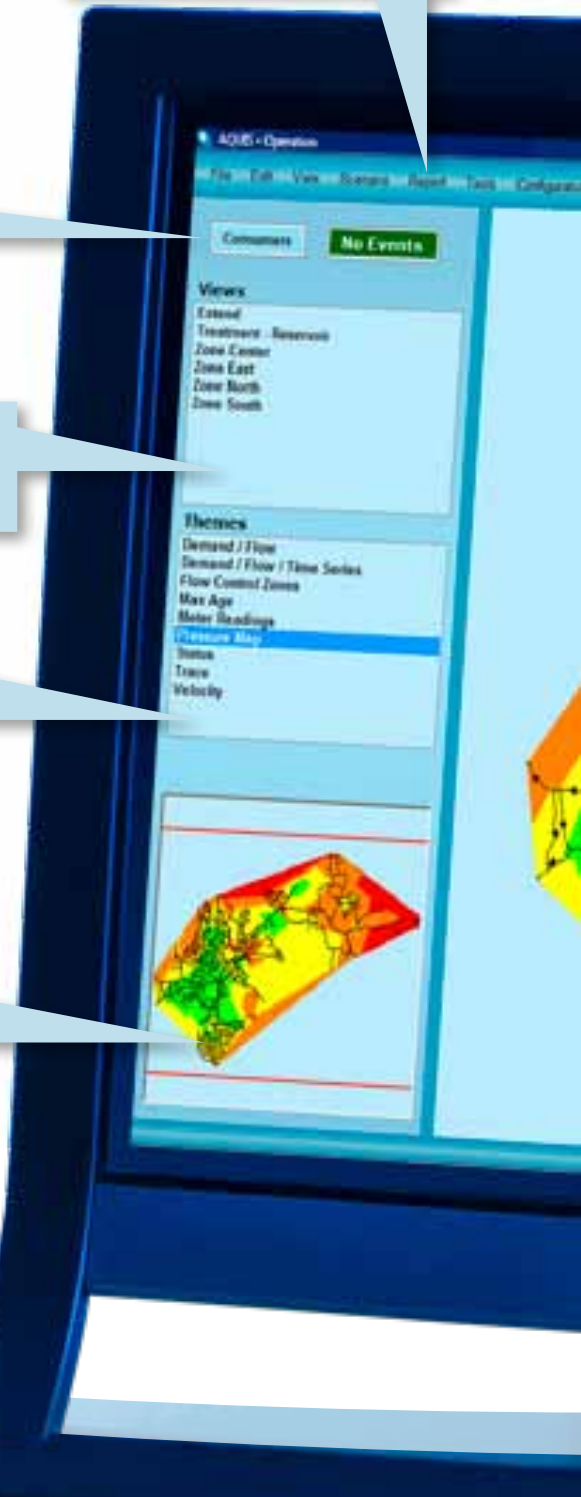
**Menu access** to advanced functionality such as reporting etc.

**Visual notification** of alarms and events. Alarm set points for all parameters can be configured.

**Quickly toggle** between different areas of your network.

**Quickly toggle** between what you want to monitor – pressure, consumption, water age, etc.

**Bird's eye view** allows for quick maneuvering and overview.



# Managing your Water Supply Network

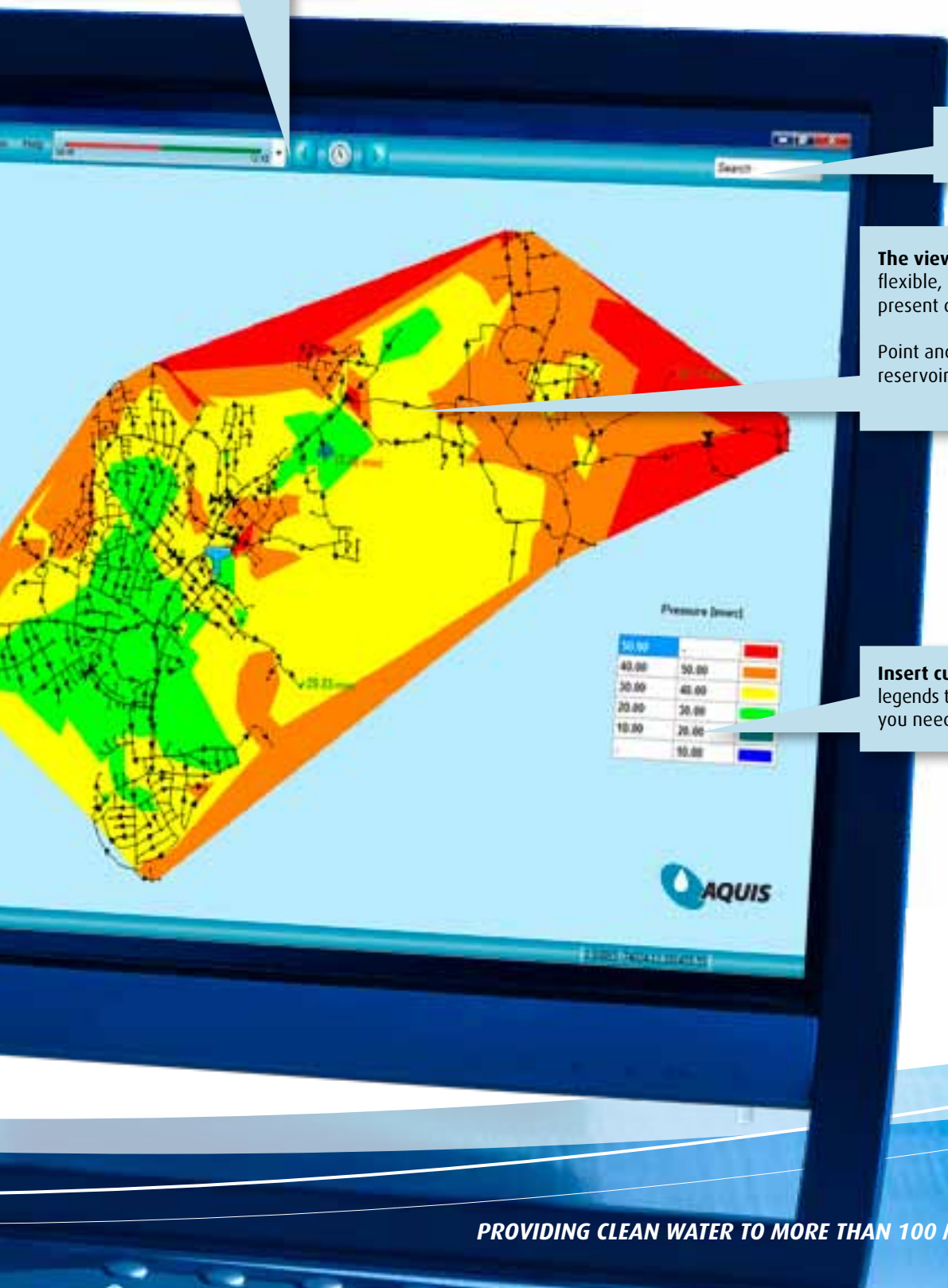
**View data** from the past, the present or the future. View slide show.

**Search** for objects in your model.

**The view of your network** is fully flexible, easy to navigate and can present data in any way you like.

Point and click to access data from reservoirs, junctions, valves, etc.

**Insert custom objects** such as legends to give you the information you need, when you need it.



50.00	-	Red
40.00	50.00	Orange
30.00	40.00	Yellow
20.00	30.00	Green
10.00	20.00	Dark Green
	10.00	Blue

# Software that Fits your Business, not the

## Consumers

### EASY ACCESS TO INFORMATION

- Empowered by easy access to information via web
- Informed about any planned interruptions or irregularities in delivery

## Control Room

### QUICK AND EASY ACCESS TO DATA

- Knowledge is stored in a network
- At-a-glance overview of current operational status for effective decision making
- Easy leakage supervision

## Call Center

### INCREASED CUSTOMER SATISFACTION

- Easy access to consumer data and geography improves handling and logging of complaints
- Display of planned changes, maintenance, etc. provides prompt and accurate information for consumers



## Consultant Specialist

### THE BEST ADVICE

- Comprehensive documentation gives a basis for accurate calculation rather than trial and error
- The correct valves can be closed and optimal pipe dimensioning assessed

## Management

### OVERVIEW AND ACTIONABLE INSIGHT

- Provides the full picture
- Instant view of supply and quality
- Better understanding of the network permits more qualified decisions

# Other way Around

## Field Service

### ALWAYS ON...

- Overview of current operational status assists planning and testing
- Automatic customer notification saves time

## Engineering and Planning

### SAVE TIME

- New piping can be accurately dimensioned
- More effective planning can be achieved in connection with rerouting and service work
- Optimized contingency planning

## Add-on modules for further optimization

AQUIS is the basis for achieving the full overview of your network, but we also offer a number of features and modules which enable you to achieve further savings on both operating costs and capital investments.

### LEAK DETECTION

To ensure that you will quickly detect new leaks in your distribution network, AQUIS provides you with the most robust and reliable detection methods: Integrated Flow Measurement (IFM) and Night Line Measurement (NLM). Both use SCADA data directly. Zones with leaks are identified by the leak detection system, an alarm is forwarded to the SCADA system, and action can be taken immediately.

### PUMP OPTIMIZATION

Helps you determine how the pumps in a distribution/transmission network should operate at any given time in order to minimize the total pumping and energy costs for the network, while still supplying sufficient water to consumers. By combining pump efficiency, energy costs and water consumption, AQUIS Pump Optimization can give savings of up to 20% of the pumping costs.

### PRODUCTION OPTIMIZATION

Combines knowledge about the water producers within the network with hydraulic constraints and water supply. Subsequently, the most economical way of operating the utility can be identified leading to significant cost reductions.

### PRESSURE OPTIMIZATION

Automatically combines the information from the SCADA system and the model to provide advice for optimal pressure operation of the network. Any reduction of pressure in the distribution network will have immediate and significant impact on the leakage and burst rate in the network.

# For a Cleaner Tomorrow

## **AQUIS support from 7-Technologies**

Armed with practical experience and in-depth knowledge of our software, our engineers provide assistance in case of problems while implementing or running our software.

Our annual customer surveys rate our support function as superior in its class. Additional information can be found on our website under Frequently Asked Questions (FAQ).

## **About 7-Technologies**

7-Technologies was founded in 1984 and is an independent software company with a strong track record of profitable growth. Through our philosophy of overview and actionable insight, we provide Water Network Management solutions for any kind of water utility, any type of user, and any budget.

Our business is built on a strategy whereby software is sold and implemented by a network of more than 200 global partners and system integrators, or is sold directly to the water utility.

Our software solutions ensure reliability, efficiency and cost reduction for our clients, and we serve customers around the globe.

The original AQUIS software solution has been on the market since 1987. AQUIS is in daily operation in more than 1500 cities and supplies clean water to more than 100 million homes.

*7-Technologies has offices in North America, Europe and Asia.*

