

thewatersupplyintegratedsolution  
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## overview

Keeping a Water Supply Service operating is a complex activity that implies a constant monitoring and the management of a great deal of instrumentation, structures and plants. Ensuring the users a quality service requires great efficiency. Nevertheless, this is the only way of also guaranteeing an adequate profit for the Company.

The complexity of the management of an Integrated Water Supply Service is not only due to difficult technical operation and maintenance activities but also to the procedures that rule the Quality and Safety processes.

Human resources are mainly responsible for an overall improvement of the efficiency; they should be employed according to specific operational procedures, supported by simple but modern tools.

At the moment, the paperwork activities still weigh upon this complex organization, resulting in delays and errors due to manual data entry, even though a great deal of economic resources have been invested in software solutions, specifically developed to meet these requirements.

The aim of this document on the Water Supply Integrated Solution is to show how the organization of the data flow can be greatly improved, eliminating the misalignment of the information, strongly reducing the diseconomies due to a poor availability of the data and achieving instead a ready data availability either in the operating field or in the central offices.

The main objective is a more efficient and profitable *on condition* maintenance, which is the dream of every person responsible for operation and maintenance of more or less complex systems..

## our answer

Thanks to the international context in which it operates and to the frequent exchange of experiences with other Partners working in different fields, **Our Company** is able to offer highly reliable and tried and tested solutions.

During the last ten years, we have identified many operational elements which prevent the personnel in charge of operation and maintenance activities from achieving optimum efficiency and a correct exploitation of the plants.

Nowadays, in collaboration with our Customers, we are able to study and develop up-to-date and successful operational procedures, that can get round many of these adverse factors thanks to the introduction of *automatic identification* technologies: standard or tailor-made solutions, based on flexibility, simplicity and speed of the management and maintenance operations. The use of these technologies will also ensure that the plants, and/or some of their components, have a tag attached to them on which the data which can unmistakably identify them are stored. A brief summary of the last performed operations, which can be used as a *help on line*, is also recorded on the tag. This system allows to trace at any time who did what and when, bypassing the bottleneck of manual data entry.



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### Thewatersupplyintegratedsolution

The solution proposed by **Our Company** can be successfully employed in a large number of maintenance applications regarding water supply and treatment plants and equipment. For example:

Control of equipment status (water purification plants, sewage or industrial wastewater treatment plants, wastewater lift station, water-supply systems)

The person in charge of maintenance activities is generally required to produce an identification sheet for almost all the components - it is compulsory for the most critical ones - also containing the report of the operations performed on them. According to our procedure, the operator who is performing a check or any other maintenance operation on a single device in the field should read from the **Smart Point®** tag the record of the last operations performed on it using a hand-held computer or a laptop and should act accordingly. Therefore, the performed activities have to be recorded on the local memory rather than on a paper form. When back in the main office, the operator should upload the data on the central database using a hand-held device, thus automatically producing the report of the performed activities.

#### Calibration of Measuring Instruments

The company responsible for the maintenance activities is periodically bound to check and, when necessary, calibrate the measuring instruments, certifying that the maintenance activity has been performed producing some paper documentation. Many software applications have been designed in order to manage this sort of activities. However, software bugs often affect the instrument's traceability, due to the vulnerability of the tags on which its identification code has been recorded. This can cause some inconveniences, especially where many instruments of the same kind are found.

Thank to its simplicity, flexibility and ruggedness, **Smart Point®** allows the operator to quickly and efficiently trace the instrument and to know who performed the check, what maintenance activities have been performed on it and when. It will be simple to schedule the controls and to automatically exchange data with the software already in use thanks to the flexibility of our technology which is able to interface with any kind of software, without facing unsustainable costs. Once the control, the calibration and/or the maintenance activity have been performed, the operator will update the information on the **Smart Point®** tag through a simple writing operation.

#### Drawing water samples for testing

The collecting locations of the water samples have to be univocally mapped with the aid of **Smart Point®**, recording their identification code on the tag. According to the organization process, the operator who draws the water sample reads and transfers the code of the location, the date and time of the drawing on another **Smart Point®** tag attached onto the relevant test tube.

This process certifies the drawing of the sample and simplifies the management activities of the analysis laboratory.

### therevolutionarytechnology

**Smart Point®** is an extremely miniaturized Eeprom memory, encased in a stainless steel case, which is able to store up to 488 characters. It can read and write data through an electronic contact pen that serves as an interface. Thanks to its resistant external cover, the **Smart Point®** can operate in highly demanding operational conditions. Its main technical characteristics are:

- Practically unlimited cycles of reading and writing operations;
- Capacity of storing data for more than 100 years (at +25°C) (renewable);
- Operating at extreme thermal conditions (both low and high temperatures);
- Very high level of data security;
- Operational software interfaceable with any other operational platform;
- High resistance to mechanical shocks.

The main advantages offered by **Smart Point®** are:

- An efficient and economical process control;
- The availability of information almost in real time both in the field and in the central maintenance system;
- Overall reduction of the paperwork with a consequent decrease of costs, reduction of errors due to double transcriptions and data entry;
- Quick, constant and efficient updating of the database;
- Guarantee of an effective fault detection and consequent recovery of the costs due to emergency interventions.



**Smart Point® SA**

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