

SOFREL water network product portfolio

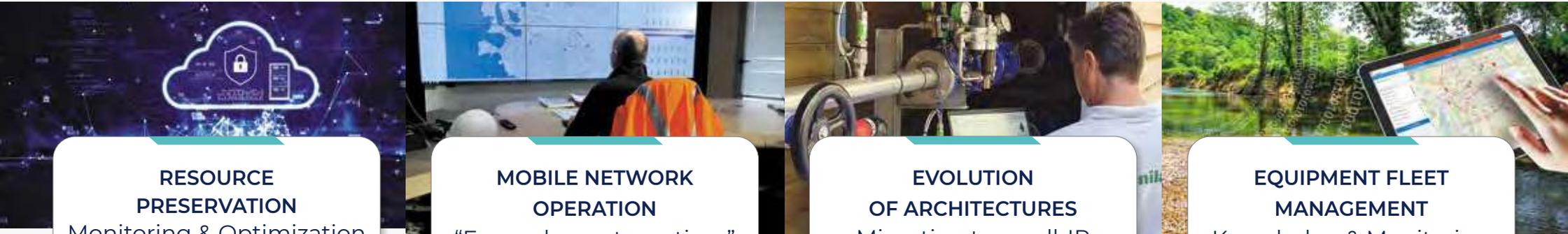
Connected equipment for water networks



ISSUES AND CHALLENGES FACING WATER OPERATORS

The water supply is a major challenge for our planet

Water networks are rich ecosystems that need to be monitored and automated to protect our natural resources



RESOURCE PRESERVATION

Monitoring & Optimization



Reducing potable water losses



Controlling and limiting wastewater discharges



Reducing energy consumption at sites



Reducing travel and the carbon footprint

MOBILE NETWORK OPERATION

“Everywhere at any time”



4G communication and web server



Equipment management



Alarm management



Business data analysis

EVOLUTION OF ARCHITECTURES

Migration to an all-IP environment



Redefining historical telemetry architectures



New deployment and hosting possibilities for business applications



Cybersecurity requirements and implementation

EQUIPMENT FLEET MANAGEMENT

Knowledge & Monitoring



Challenges in effectively monitoring and tracking equipment fleet status



Software updates needed for deploying new software versions and applying the latest security patches

THE BENEFITS OF LACROIX REMOTE MANAGEMENT SOLUTIONS

Our commitment:

The best technology at the service of the environment

REDUCE COSTS



Reduce routine visits and meter reading rounds

Optimize the operation of electrical components (pumps, motors, etc.) so that they run during the most economical billing periods

Facilitate maintenance by continuously monitoring the operation of your installations

Optimize travel and operating costs

SECURE YOUR FACILITIES



Receive alerts about any network failures 24/7

Have a **permanent overview** of all your operations

Save all operating data

Monitor and secure access points

PROTECT THE ENVIRONMENT



Check for any discharge **into the natural environment**

Reduce **energy consumption**

Promote the development of **renewable energy**

Save on **natural resources** (reducing leaks, etc.)

Prevent risks (flooding, pollution, etc.)

IMPROVE YOUR SERVICE



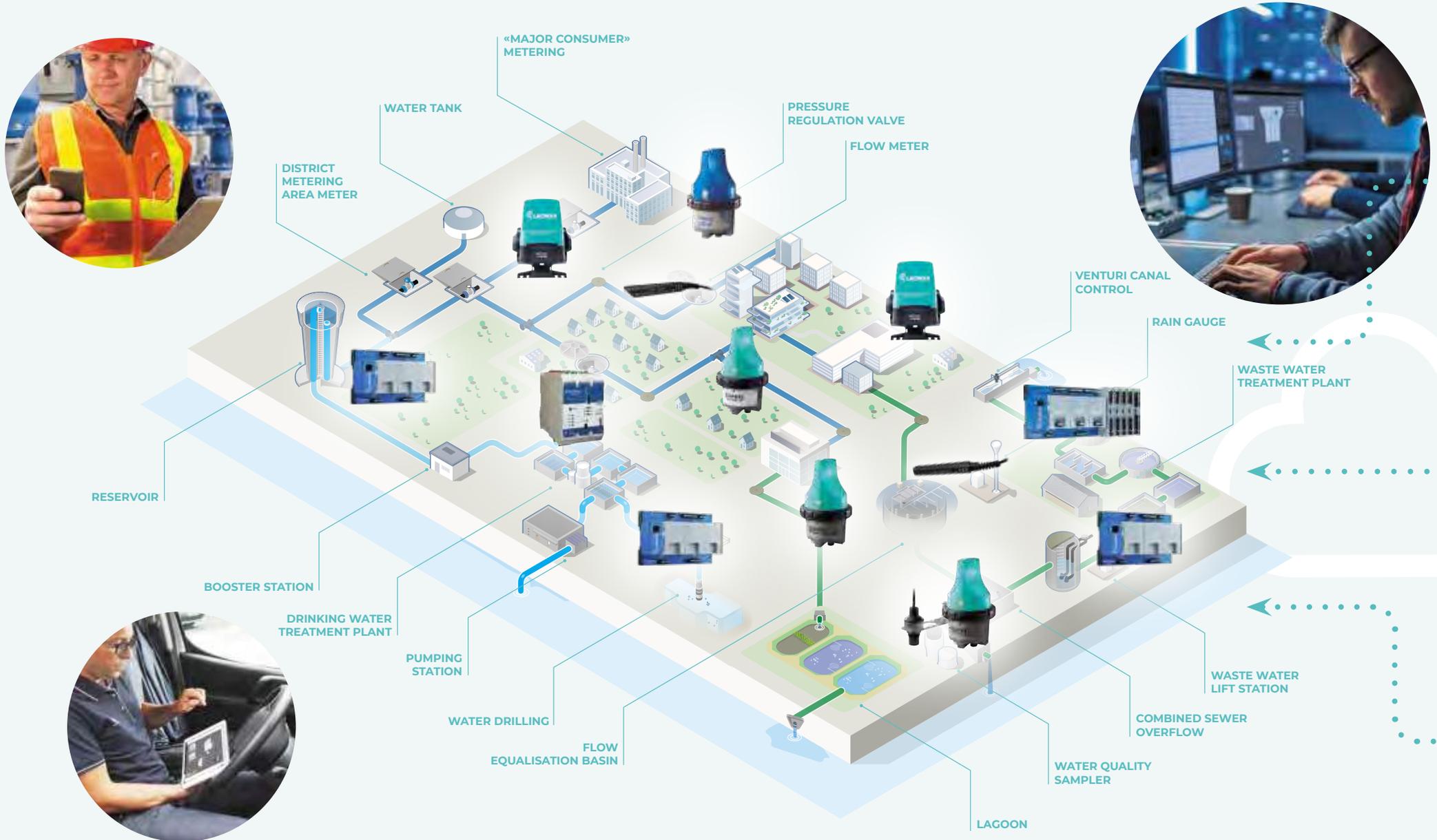
Be **immediately** alerted in the event of a breakdown, allowing you to act quickly

Anticipate wear-related problems by monitoring equipment run times

Have back-up automation systems available in the event of equipment failure

Ensure continuity of service to your customers

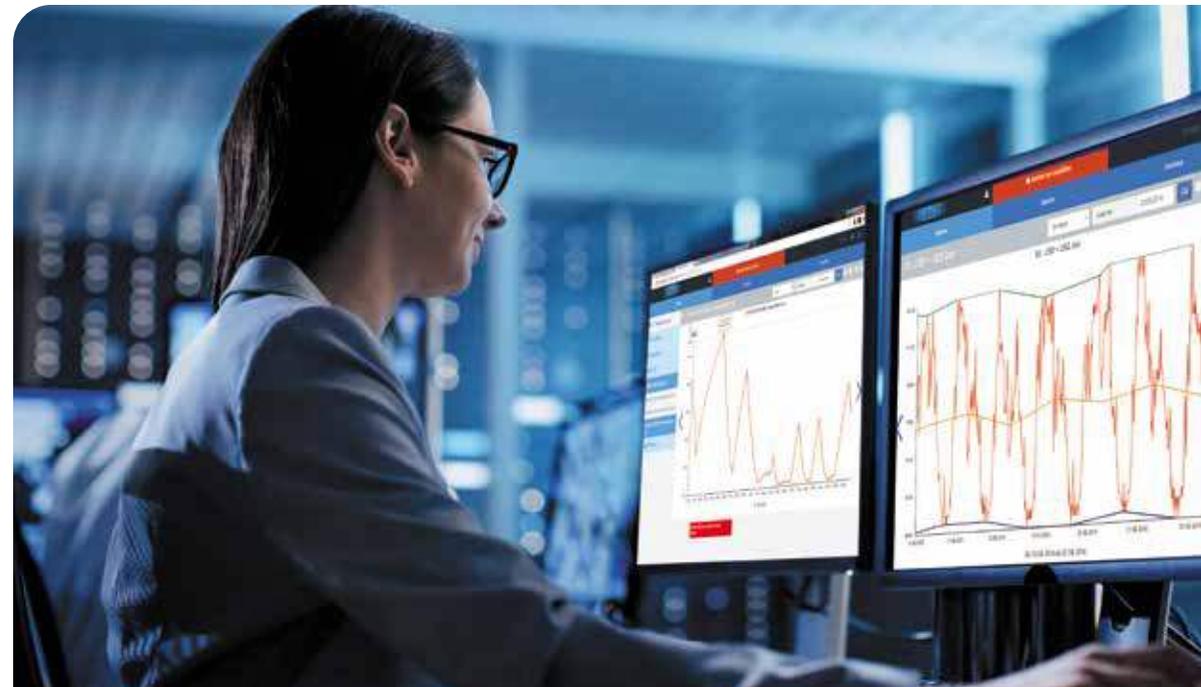
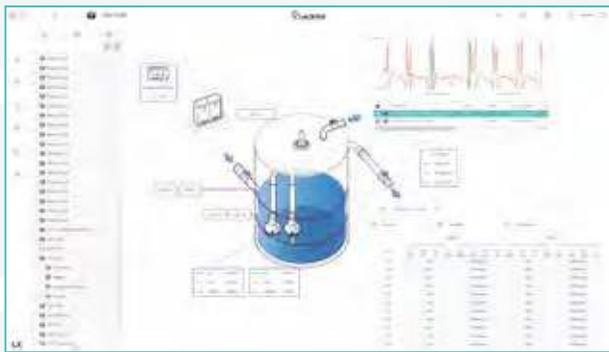
IIOT EQUIPMENT FOR THE SMART ENVIRONMENT





REMOTE, MONITORING AND CENTRALIZED MANAGEMENT OF HYDRAULIC INSTALLATIONS

- ▾ Alarm Management
- ▾ Remote Control
- ▾ Data Recording
- ▾ Supervision
- ▾ Data Analytics
- ▾ Predictive Action



SOFREL Remote Terminal Units



SOFREL S4W

Advanced cybersecurity and smart RTU for water networks utilities

- Remote management, archiving and balance sheets
- Integrated communication interface
- Graphical “Wastewater lift station”
- Integrated HTML5 web server
- Integrated mimics diagram editor
- Integrated automation
- Communication media redundancy
- Inter-site M2M communication
- Advanced ecosystem for cybersecurity



SOFREL YDRIX

State-of-the-art RTU for monitoring and process control of water facilities

- Remote management and archiving
- Integrated communication interface
- DNP3 & IEC compliant
- Dedicated water features
- Integrated automation
- Communication media redundancy
- Inter-site M2M communication
- Cybersecurity



S4W ECOSYSTEM: SECURE AND EASY TO MANAGE

SOFREL SG4000

- Secure GPRS communication between SOFREL telemetry and SCADA devices
- Creation of a VPN
- IP address distribution



SOFREL LX CONNECT

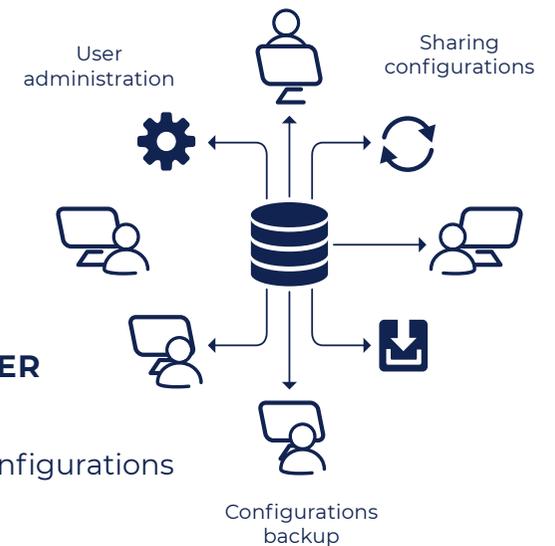
IIoT PLATFORM ensuring the complete management of SOFREL S4W RTUs

- Cybersecurity Automation: Automated and LogUp data loggers renewal of S4 certificates and the ecosystem, streamlining cybersecurity processes
- Automated fleet management: equipment version tracking and mass deployment of the latest software versions and security patches



SOFREL S4 MANAGER

- User management
- Saving and sharing configurations of SOFREL S4W



SOFREL LogUp: A SIMPLE, OPTIMAL, AND CYBER-SECURE SOLUTION



SOFREL LOGUP

A response to your challenges in an increasingly constrained environment

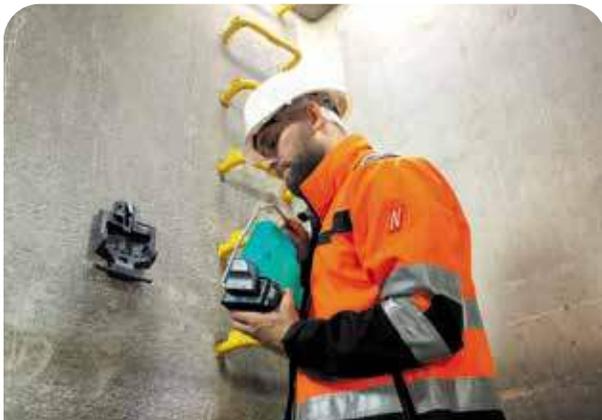
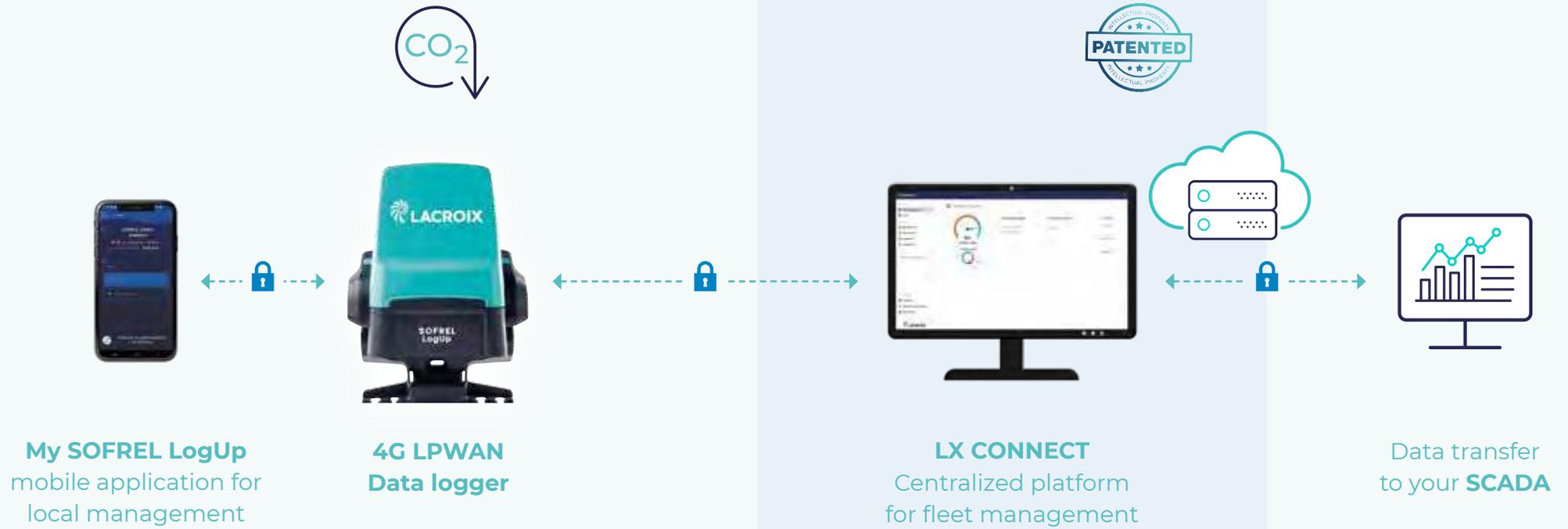
- ▾ **Eco-designed, robust, and compact** data logger
- ▾ **Remote-upgradable software**, business functions, and AI & DI packs
- ▾ Automated **cybersecurity compliant with IEC 62443**
- ▾ **Centralized management** of devices and users
- ▾ **Remote configuration modifications**
- ▾ Dashboards for **fleet performance monitoring**
- ▾ **Enhanced sealing & long-life internal battery**

LX CONNECT

IIoT PLATFORM ensuring the complete management of SOFREL LogUp

- LX CONNECT centralization platform for remote fleet management and automated network cybersecurity

SOFREL LogUp: FOR MONITORING WATER NETWORKS AND ISOLATED SITES



IEC 62443
Solution built following the specifications of the standard



IIOT DATA LOGGERS FOR MONITORING OF DRINKING WATER NETWORKS

SOFREL LS10

Remote meter reading and district metering

- Index reading and network district metering
- Remote metering for “major consumers”
- District Metering Area
- Detecting metering anomalies
- Leak detection
- Flowrate calculation



SOFREL LS42

Remote meter reading and pressure monitoring

- Index reading and network district metering
- Remote metering for “major consumers”
- District Metering Area
- Detecting metering anomalies
- Flowrate calculation and leak detection
- Pressure measurement and monitoring
- Quality settings control



SOFREL LS-P

Pressure measurement and monitoring

- Monitoring of Pressure Reduction Valves, stabilisers and regulator operations
- Measuring and monitoring the level of service quality (pressure)





SOFREL LS-Flow

Remote reading of flow meters and District Metering Area

- Electromagnetic flow meter remote reading and diagnostics
- Flow and pressure monitoring
- Leak detection
- Monitoring of “major consumers” flow
- District Metering Area



SOFREL OPENSSENSOR LP

Remote flow meters and Modbus instrumentation

- Communication via RS-485 Modbus RTU link with flow meters and measurement, up to 8 sensors
- Remote power supply 0.8W max at 5V or 12V or inhibited at 0V as required
- Remote reading of meters or interconnection meters
- Pressure monitoring



SOFREL LS-V

Pressure management and regulation

- Monitoring of Pressure Reduction Valves, stabilisers and regulator operations
- Measuring and monitoring the level of service quality (pressure)
- Programmed control of a two-stage control valve



SOFREL LT42

Continuous diagnosis and monitoring of water quality

- Detection of overflows in Combined Sewer Overflow
- Calculation and recording of evacuated flows and volumes
- Control of an autonomous sampler
- Rain intensity calculation
- Detection of polluting incidents



SOFREL OPENSSENSOR HP WITH US SENSOR

Level measurement and instrumentation monitoring ModBus

- Communication via RS-485 link Modbus RTU with instrumentation, up to 8 sensors
- Level measurement by sensor Ultrasonic
- Remote power supply 2W at 12V or 20V
- Self-monitoring and permanent diagnostics of wastewater networks





SOFREL LT-US

Overflow and flow monitoring by ultrasound probe

- Level measurement by ultrasound probe
- Detection of overflows in Combined Sewer Overflow
- Calculation and recording of evacuated volumes
- Control of an autonomous sampler
- Rain intensity calculation



SOFREL LT-US ATEX

Overflow and flow monitoring in explosive atmospheres

- Level measurement by ultrasound probe
- Detection of overflows in Combined Sewer Overflows
- Calculation and recording of evacuated volumes
- Installation in ATEX zones



DATA CENTRALISATION, ARCHIVING AND MANAGEMENT

LACROIX's digital offering for water network performance

LX CONNECT

IIoT platform for centralized management of local SOFREL S4W RTUs, LogUp data logger fleet and cybersecurity automation



LX SCADA

LACROIX full-web and interoperable supervision solution for controlling and monitoring SOFREL or third-party telemetry equipment networks



SOFREL OPC UA/DA

Server compliant with OPC UA or DA standards for communication and data exchange with industrial supervisors and hypervision solutions



SOFREL FR4000

Communication interface between SOFREL telemetry equipment and industrial supervisor or SOFREL PCWin2 SCADA central station2



SOFREL WEB LS

Secure Cloud solution for hosting, centralizing and utilizing data from SOFREL data loggers

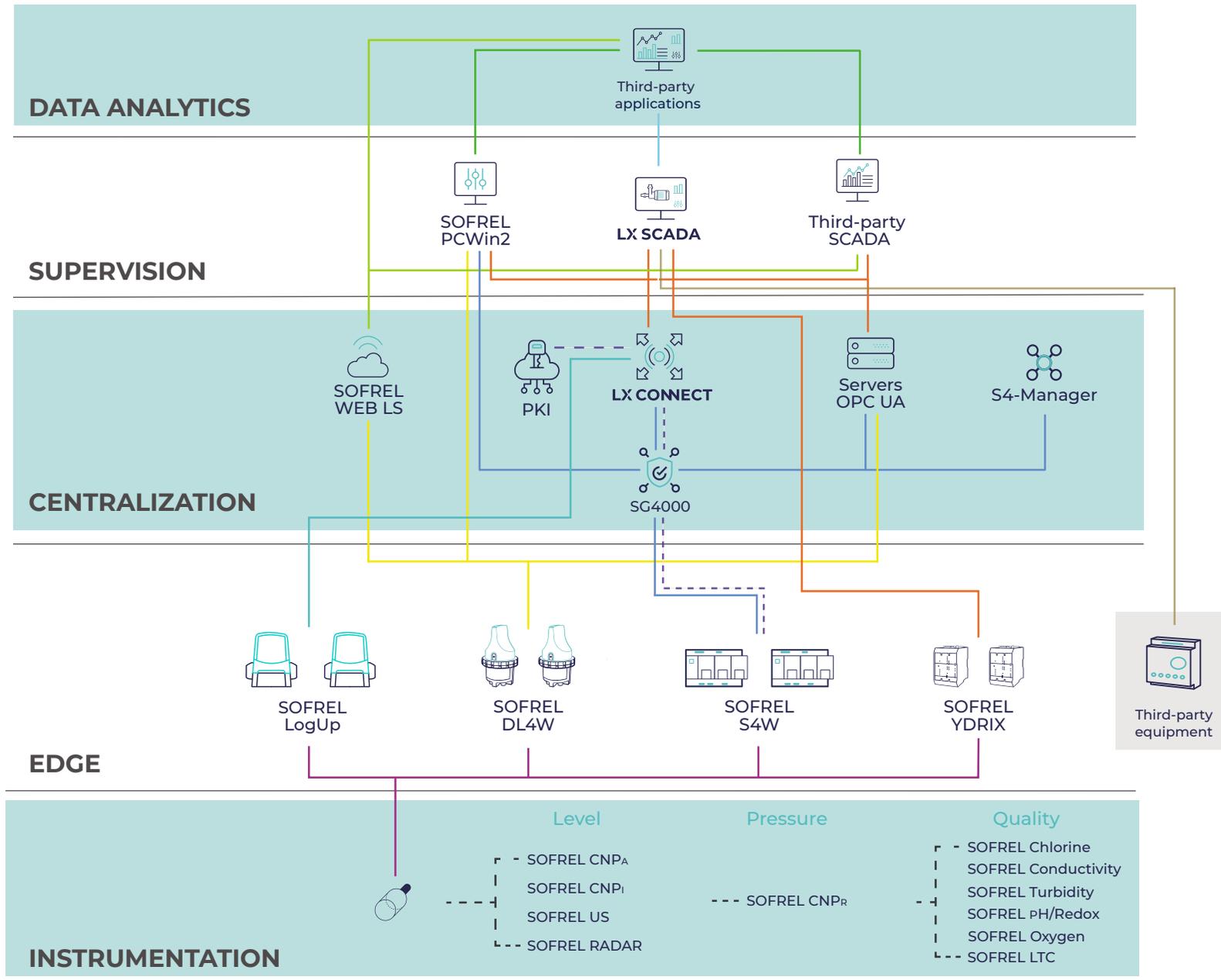


SOFREL PCWin2

SCADA central station for data management from SOFREL RTU and data loggers



LACROIX SOLUTIONS FOR WATER NETWORK PERFORMANCE



INSTRUMENTATION FOR WATER NETWORK MONITORING

LEVEL MEASUREMENT

- **SOFREL CNPI**
Submersive sensor for drinking water level measurement



- **SOFREL CNPA**
Submersive sensor with a ceramic membrane for waste water level measurement



- **SOFREL CSV**
Overflow detection sensor



- **SOFREL RADAR**
Radar sensor for non-contact level measurement



PRESSURE MEASUREMENT

- **SOFREL CNPr**
Stainless steel pressure sensor



QUALITY MEASUREMENT

- **SOFREL Chlorine**
Online chlorine measurement solution in the drinking water distribution network



- **SOFREL LTC**
Measurement of groundwater level and quality



- **SOFREL TURBIDITY**
Measurement of turbidity in wastewater and natural waters



- **SOFREL CONDUCTIVITY**
Measurement of conductivity in wastewater and natural waters



- **SOFREL PH/REDOX/T°**
Measurement of pH, redox, and temperature in wastewater and natural waters



- **SOFREL OXYGEN**
Measurement of dissolved oxygen in wastewater and in the waters natural



ACCESSORIES AND EXTERNAL COMPONENTS

HMI PC PANEL AND DISPLAYS

- Display of data points on cabinet front panel
- Interactive graphical display
- Easy to install



PROTECTIVE DEVICES

- Power supply surge arresters
- Analogue input surge arresters
- Communication media surge arresters



ACTUATOR/SOLENOID

- Pressure Regulation Valve control
- Very low energy consumption



ACCESS CONTROL

- Access identification and traceability
- Identification of persons
- Access management



COMMUNICATION

- External GSM/GPRS modem
- Radio transmitter/receiver with or without licence
- Omnidirectional and directional antennas



POWER SUPPLY

- Power supply units and energy converters
- Emergency batteries for remote terminal units
- Lithium batteries for data loggers



ACCESSORIES

- Wall bracket and deflector for LT-US probe
- Lock code and activation code for data loggers
- Watertight connection kits



PROJECT FEASIBILITY STUDY AND FOLLOW-UP

- Dedicated technical sales service for project feasibility studies
- In-depth research to find the most suitable solutions
- Customisation of offers according to your desired applications
- Advice for the implementation and running of the proposed products



TRAINING

- Approved training organisation
- Experienced team of trainers
- Training sessions available in France and abroad
- More than 800 trainees are welcomed each year for training sessions of 2 to 5 days and limited to a maximum of 8 participants
- Training programmes and timetables available at www.lacroix-sofrel.com



AFTER-SALES SERVICE

- 3-year warranty on all products
- Returning products to our After-Sales Service department is made easy with the anomaly description sheet which can be downloaded on the website.
- Your product is examined within 48 hours by After-Sales Service technicians
- Your product will then be replaced or repaired depending on the problem encountered
- Traceability of all maintenance interventions

START-UP ASSISTANCE

- Start-up assistance for telemetry and SCADA equipment
- Call-out service available for assistance in configuring a telemetry and SCADA network
- A set-up service by a LACROIX Sofrel technician or one of our certified partners is available





FREE HOTLINE



+33 (0)2 99 04 89 00

A team of specialised technicians with perfect knowledge of the constraints of the field and all LACROIX Sofrel products

We are **always on-hand** to respond to any incident or question

Remote connection possible to carry out **remote diagnostics**

More than 90% of calls to the Hotline are **resolved directly and quickly** by phone

CONNECTED
TECHNOLOGIES
FOR **SMARTER**
WATER &
ENERGY



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