CONNECTED SOLUTIONS

FOR SUSTAINABLE REGIONS

www.sev-e.com

SEVe

GROUPE RAGNI

SEVe

A RAGNI GROUP COMPANY

The Ragni Group is a French group specialising in the design and production of mains-powered and solar public lighting solutions and the provision of connected technologies for regional use.

Its aim? To place its expertise at the disposal of local authorities in the quest for optimisation thanks to an innovative range of smart and connected public lighting products and services. Benefiting from its parent company Ragni's one hundred years of experience, the group is known for the complete control of its value chain combined with its strong customer support culture.

With Thierry Suzanne, the co-founder of the subsidiary, the Ragni Group decided to create a new entity: SEVe, a mission driven company with strong values, committed to environmental, digital and social transitions for towns and villages.

GROUPE RAGNI

01 Lighting

02 Water

03 Mobility

04 Environment

05 Energy

06 Public buildings

We choose our partners based on their respect for our sustainable commitments. Our sensors are carefully selected using standards-based criteria, in line with the challenges facing this innovative, evolving and responsible sector.

All exchanges of data are secure and comply with ISO 27001 standards.

01

LIGHTING

MAINS-POWERED, SOLAR, CONNECTED

Public lighting lies at the heart of the challenge of energy reduction. A central focus for local authorities is the efficiency and optimisation of their lighting and a key component of their economic and environmental transitions.
As a vital tool in optimising resources, we use technologies that ensure fair and appropriate management in interaction with the user.

Challenges

- PROGRAMMING
- SUPERVISION
- OPTIMISATION

Effectively supervising public lighting, rapidly detecting problems and monitoring the intensity of systems.
Smart, remote management for sustainable energy efficiency, optimised maintenance and satisfied users.

SEV© Connect

Platform

- Creation and definition of each user's role
- Specific information displayed for each type of user
- Specific dedicated features, including the ability of emergency teams to override lighting levels
- Secure data displayed by zone for restricted accesses
- Mains-powered and solar lights, VMS (variable message signs) and floodlights

Programming lights

SEV© Connect offers users the opportunity to control lighting (ON/OFF and power reduction profile). Each individual node or node groups can be controlled via a standard or customised switching profile. Profiles are created with the aid of the profile editor, which is designed to make creation quick, accurate and intuitive.

- 4 profiles per cluster, each profile can have **up to 5 different luminosity thresholds**
- **Sunset / Sunrise times** downloaded automatically when the installation location is entered
- Creation of simple and intuitive **timetables**
- Creation of **3 standard weeks** per light cluster, and management of **3 exceptions** per year and per cluster
- A dedicated programming interface for **solar lights**

Supervising the system

The system receives operating data from sensors installed in cabinets and/or on lights, in order to supervise, repair or optimise their use. Energy and operational optimisation form the core of the **SEV© Connect** solution.

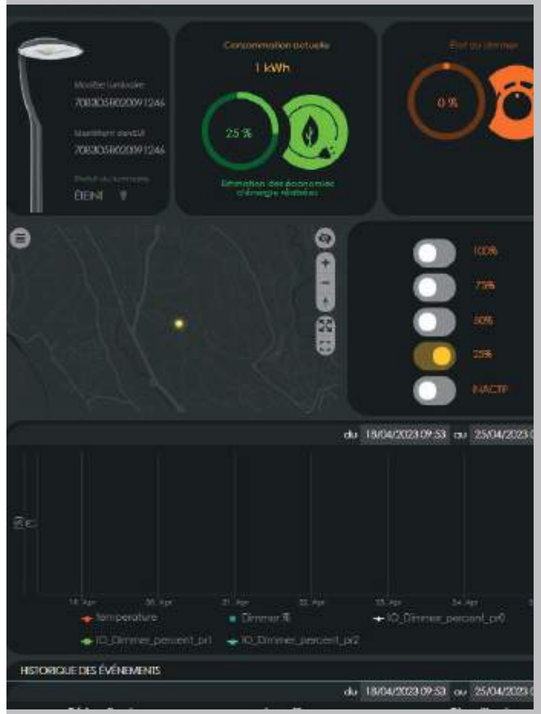
Examples of information that is available:

- Inventory in the event of a fault: light model, installation date, location, driver and LED PCB reference, etc.
- Cabinet operating information: consumption / profile and history / fault history, etc.
- Light operating information: D4i standard information or equivalent / fault history / real-time light status, etc.

Operational and energy optimisation

The collection of data and its interpretation allows the system to identify the causes of faults and to send qualified and precise error notifications to the maintenance teams identified in the system. The solution and the expertise of SEV© teams also enables regions to be guided towards sustainable energy optimisation, tailored to each project.

- **Evaluation and analysis of the system**
- **Potential additional savings based on the specific constraints of each project**
- **Maintenance savings (accurate fault detection and synchronised deployment of maintenance actions)**
- **Reduced need for night shifts**
- **Preventive maintenance**
- **Troubleshooting**



Products

- In the cabinet or at the lighting point
- Mains-powered or solar
- New or existing projects
- Zhaga / NEMA or without a standard socket
- Multi-technology
- Customisation of interfaces
- Easy to add new sensors / new uses

CAREFULLY CONSIDERED AND SUSTAINABLE LIGHTING, OPTIMISED OPERATION AND MAINTENANCE

LoRaWAN® technology
From the cabinet
At the lighting point

LTE-M technology

DigiMesh® technology

Provision of services

Start-up +

INDEPENDENCE

Technical support
Incident reports
IT after-sales service
...

Independence +

DEVELOPMENT

Energy recovery
Advice
Half-yearly monitoring
...

Development +

OPTIMISATION

Response management
Advice
Visit from a technician
...

	START-UP	INDEPENDENCE	DEVELOPMENT	OPTIMISATION
Declaration of sensors in the computer server	✓	✓	✓	✓
Initial network configuration	✓	✓	✓	✓
SEV© technician present during installation	✓	✓	✓	✓
Access to the SEV© Connect platform	✓	✓	✓	✓
Functional warranty for the communication network		✓	✓	✓
Detection and reporting of incidents affecting the communication network		✓	✓	✓
Alerting the client of an incident		✓	✓	✓
Sending information to our IT after-sales service		✓	✓	✓
Resolution and intervention report		✓	✓	✓
SEV© technical support		Email	Email telephone	Email telephone priority access
Analysis and provision of an energy efficiency report		Quarterly	Monthly	Monthly
Follow-up appointment		Annual	Half-yearly	Quarterly
Detection and reporting of physical incidents affecting the network			✓	✓
Advice on the optimum configurations of sensor profiles			✓	✓
Energy recovery			✓	✓
Adaptation of sensor settings to suit the client's wishes			✓	✓
Response management with the client's technical team				✓
Visit from an SEV© technician				✓
Operational optimisation				✓

02

WATER

Combating climate change is based, in large part, on the intelligent management of water, intended to both conserve the resource and refresh regions.
According to the report produced by the observatory on public water and sanitation services, 937 million m^3 are lost every year. Therefore, the issue of detecting and managing leaks on our networks is a major concern.
The smart city of the future will be one that succeeds in combining eco-friendly town planning and intelligent resource management with a good quality of life for its residents.

Challenges

While the world's need for water is constantly increasing, the resource itself is shrinking.
Preserving the quantity and the quality of this scarce resource is a major challenge. Local authorities are now responsible for managing the issues of recurrent droughts by ensuring there is sufficient fresh water for the population.

- NETWORK SUPERVISION
- MONITORING RIVERS AND STREAMS
- WATERING

SEVEe Connect

Platform

- Consumption analysis
- Reading meters
- Leak detection

- Water quality
- Risk assessment (droughts, floods)

- Remote management, adaptation of scenarios in line with the constraints encountered
- Activated depending on the weather forecast
- Humidity level, activation of watering only if necessary by optimising the quantity
- Adaptation of the watering profile in line with the items watered

Products

- High-quality, responsible and sustainable infrastructures for residents
- Optimisation of the region's operational functioning
- Management of health risks
- Designed and assembled within the European Union
- Flexible installation to fit into any environment
- Simple configuration

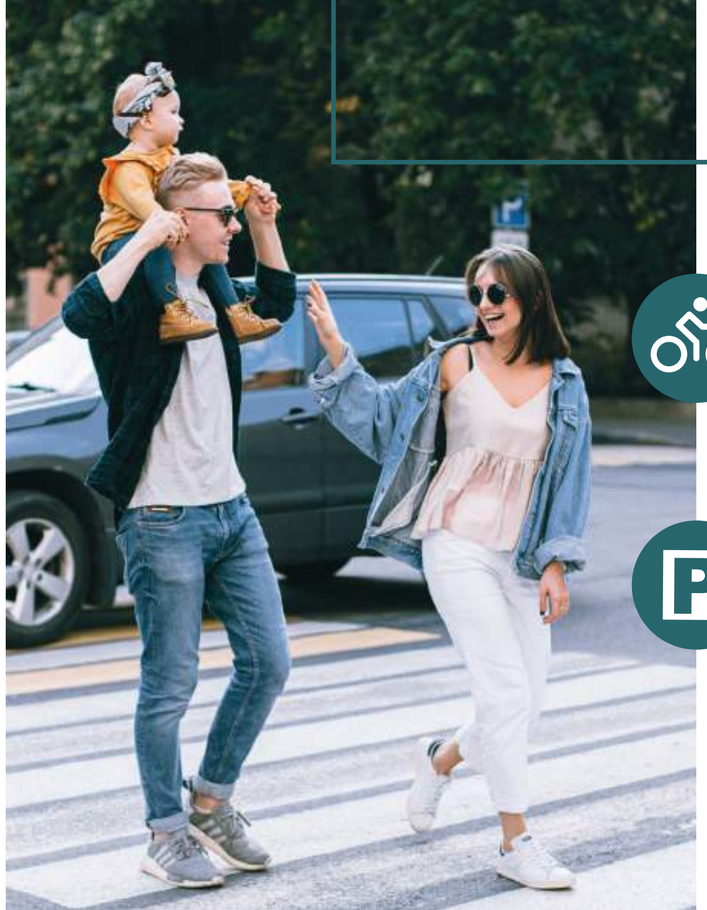
CAREFUL USE OF WATER WITHIN THE REGION

LoRaWAN® technology

03

MOBILITY

Smart mobility needs to be sustainable and to use all the existing tools to offer its users the best experience while reducing the environmental impact.
It meets user's individual and collective needs in terms of accessibility, soft mobility, parking, safety, etc.
It is connected, multimodal, green, soft, covers traffic issues, adapts to the city and offers users high added value.



Challenges

TRAFFIC MANAGEMENT

Optimising traffic management and identifying suitable alternative solutions (anticipating risks of congestion and redirecting drivers, analysing pedestrian or cyclist traffic, etc.).

PARKING

Having accurate, real-time information, in order to guarantee optimum management of car parking and maximising traffic flow.

SEVE Connect

Platform

- Detection and counting of vehicles / pedestrians / objects
- Speed estimation
- Monitoring cycle lanes
- Monitoring traffic light queues
- Detection of traffic jams
- Alert for vehicles travelling the wrong way
- Classification of vehicles by type

- Categorisation of vehicles
- Detection of empty/occupied spaces in all types of parking zones (linear, angled, squares, etc.)
- Monitoring temporary/obstructive/prohibited parking with an alert system
- Occupancy rate

Products

- Adaptability to all types of existing infrastructures and systems
- Easy installation - Simple administrative procedures
- Compliant with General Data Protection Regulations (GDPR)
- Rapid return on investment
- remote scalability by means of automatic updates, allowing new features to be added without replacing hardware
- Sharing of sensors for multiple uses, in order to limit the number of products deployed

DESIGNED AND ASSEMBLED IN UE

4G

Ethernet

Fibre optic

ENVIRONMENT

04

Pollution, noise, odour, pressure, humidity, etc. Monitoring the environment means taking care of residents and making your region a safer and healthier place using our real-time environmental intelligence monitoring solutions.

Challenges

AIR QUALITY

Providing advanced environmental and situational intelligence, in order to improve air quality, as well as health.

WASTE MANAGEMENT

Reducing the environmental footprint of cities, decreasing the volume of waste, increasing sorting and recycling rates, limiting the energy needed to collect waste, etc.

SEVe Connect

Platform

- Detection of gaseous air pollutants (NO_2, O_3, etc.)
- Quantification of particles and allergens
- Incorporation of meteorological data
- Detection of health risks associated with pollution
- Monitoring of noise and odour levels

- Bin filling levels and alerts when the predetermined filling level is reached
- Location
- Optimisation of collection routes
- Detection of obstacles on roads or pavements

Products

IMPROVING THE QUALITY OF LIFE FOR RESIDENTS

- Optimisation of the region's operational functioning
- Designed and assembled in France
- Sharing of sensors for multiple uses, in order to limit the number of products deployed
- Flexible installation to fit into any environment
- Simple configuration
- Data available for circulation to residents

05 ENERGY

Thanks to technological developments, we are now better able to control and optimise our resources. Reducing energy use is one of the priorities for smart cities, which inevitably includes the incorporation of renewable and local energies,
with the focus on distribution networks, charging stations and solar power generation.

Challenges

Controlling energy use, real-time monitoring and analysis and adopting appropriate solutions to meet the needs of regions.

- POWER DISTRIBUTION NETWORKS
- ELECTRIC CHARGING STATIONS
- SOLAR POWER

SEVeConnect

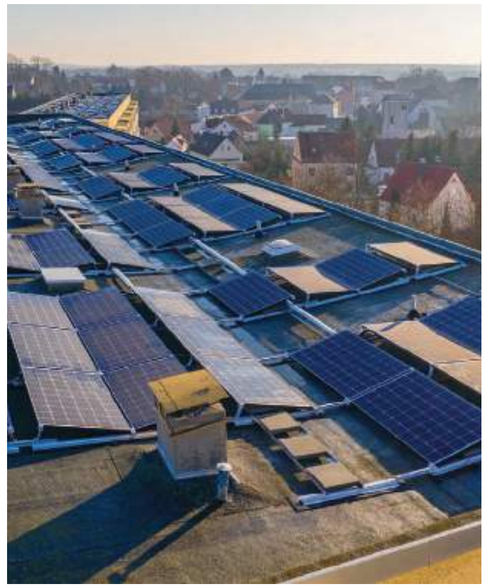
Platform

- High Voltage Substation
- Medium Voltage Substation
- Line losses
- Cable theft

- Real-time operating status and receipt of fault alerts
- Charge operating statistics

- Daily / weekly / monthly generation statistics and comparison with previous data
- Alerts if a generation fault is detected

Products



- Optimisation of the region's operational functioning
- Optimised energy use within the region
- Designed and assembled within the European Union
- Flexible installation to fit into any environment
- Simple configuration

GUARANTEED ACCESS TO RELIABLE AND RESPONSIBLE ENERGY

LoRaWAN® technology

Ethernet

Fibre optic

06 PUBLIC BUILDINGS

Nowadays, buildings include more and more technologies, to the point that we now talk about smart or intelligent buildings. Stadiums, schools/colleges and town/city halls can now offer a whole array of services. Buildings are no longer a product, they are living and evolving entities, offering new capabilities that benefit all their users, managers and the planet.

Challenges

AIR QUALITY / TEMPERATURE / BUILDING MANAGEMENT / LIGHTING / LEAK DETECTION

Regardless of a region's issues, the optimisation of smart buildings is functional on many levels: the relationship between users, their health, their safety, environmental impact, energy expenditure and management costs.

SEVEO Connect

Platform

- Quantification of gaseous pollutants, ultra fine particles and allergens
- Access to containment, viral health, standard of living and odour indices
- Control of ventilation and air filtration systems

- Programming
- Remote management
- Temperature measurement
- Adaptation of scenarios in line with the days of the week
- Air-conditioning

- Open door detection
- Counting of people/management of entries and exits
- Optimisation of operation

- Calendar programming or real-time management
- Creation of scenarios
- Remote management

- Water, gas
- Reading meters

Products

- Centralised, optimised and simplified management of your property portfolio
- High-quality, responsible and sustainable infrastructures for residents
- Sharing of sensors for multiple uses, in order to limit the number of products deployed
- Designed and assembled within the European Union
- Flexible installation to fit into any environment
- Simple configuration

OPTIMISATION OF YOUR REGION'S OPERATIONAL FUNCTIONING

LoRaWAN® technology

Ethernet

Fibre optic

4G

An approach
«security by design»
to ensure optimal security
from design to operational
maintenance of the solution.

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SEV©

GROUPE RAGNI

A simple and intuitive
SOFTWARE
to manage your smart territories and harness real-time data.

SENSOR
for every use case, regardless of the communication protocol.

A modular
SERVICE
offering to construct and deploy your infrastructure according to your needs.

entreprise À MISSION

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