

Issy-les-Moulineaux, 4 June 2019

At the 98th Astee Conference, organised jointly in Saumur, Saur presents its latest innovations to tackle regional water issues.

Artificial intelligence, connected objects, intelligent networks – a range of technologies are on display in a Pure Innovation showroom at the Saur CPO (operational control centre) where they are being presented to delegates from Astee (the scientific and technical association for water and the environment), who have gathered for their 98th conference in Saumur from 4 to 6 June.

Created in 1905, Astee is the leading association for water professionals. Each year, it invites its members to come together to consider issues relating to water preservation, innovations in drinking water and wastewater treatment and solutions relating to the energy transition. From 4 to 6 June, nearly 500 delegates will gather at the Fontevraud Abbey to take part in talks and visit the region's emblematic technical sites.

CPO presents innovations addressing water issues

On 5 June, delegates and Saur's guests will be able to attend a presentation of the major innovations implemented by the Group to make drinking water and wastewater services even more efficient. This Pure Innovation showroom (*see details below*) has been set up within the Saumur CPO, the regional water "control tower" where 100 Saur experts work each day. This provides a fantastic way to round off the European Sustainable Development Week (ESDW).

Franck Cadoret, Saur's regional director, says: *"We wanted to hold this conference in Saumur for several reasons: to show the excellence of Saumur's water service, to share with the profession the cutting-edge innovations and technologies driving the water sector for the benefit of the end consumer, as well as to bring to life the ecosystem of partners and contractors that supports us year-round and which ultimately benefits from this event and its 500 delegates."*

PURE INNOVATION : NOS SOLUTIONS AU SERVICE DE L'EAU



Issue 1: protecting regions' aquifers and boreholes

Developed by imaGeau (a Saur subsidiary), the EMI web solution anticipates risks linked to water production from groundwater (drought/scarcity, excessive exploitation of boreholes, environmental pollution, saltwater intrusion, etc.). EMI offers a map view of four key indicators: vulnerability to drought, yield reduction, quality criteria frequently observed in groundwater, and energy consumption. The principle of EMI is to enable a very in-depth analysis of aggregated data and provide an interpretation to guide the local authority's response.

Issue 2: ensuring that water is safe

CarboPlus, a patented Saur process, removes micropollutants at a very low cost by adsorbing them using activated carbon. Neither concentrated nor transformed into toxic by-products, they are permanently removed from the water, without the risk of uncontrolled discharge. Used as a refining treatment, CarboPlus offers a proven response to the elimination of phytosanitary products (pesticides, weed killers, etc.) and medicinal residues (anti-epileptic drugs, hormones, anti-anxiety medication, etc.).

Issue 3: ensuring that water is sanitary

The Calcycle unit, the result of a technological partnership with the Dutch company Brabant Water, is installed upstream of the existing treatment system in order to obtain a final water hardness value of 25°F. Hard water does not pose a health risk, but causes problems in terms of the maintenance and durability of pipelines and fire hydrants and, for the consumer, premature wear to equipment, purchase of expensive maintenance products, higher energy consumption, risks of leakage, irritation of sensitive skin, etc.

Issue 4: coordinating the ongoing sanitation audit (collection, treatment and discharge)

With the Diag 20/20 solution, Saur offers a comprehensive risk management approach to meet the 2015 regulatory requirements. Its objectives include securing the functioning of the networks (parasitic water, overflows, H₂S, corrosion or obstruction, etc.), monitoring the treatment quality of water treatment plants (pollutant loads, energy assessment, consumption of treatment products, management of sludge and by-products, unpleasant smells, etc.), protecting the natural environment (discharge quality, stormwater compliance, presence of micropollutants, crisis management, etc.).

Issue 5: optimising energy consumption and production from renewable resources

Making installations more energy efficient using artificial intelligence

Saur is designing and testing machine learning models in order to automate and simplify analysis of the operating data from its production facilities and make use of predictive models to conduct its operations more efficiently. To boost this commitment, Saur supplements its internal resources (data scientists, experts and operational staff) with an ecosystem of start-ups offering innovative solutions in the field of reduction in energy consumption and energy efficiency (Qualisteo, Energism, Metron, etc.).

Transforming sludge recovered from wastewater treatment plants into electricity

Saur has developed a sludge methanisation solution for large plants or combined with organic waste for smaller plants (co-digestion). Saur is harnessing the potential for organic waste recovery by designing a low-cost digester. The biogas produced is injected into the mains gas network.

Issue 6: digitising the customer relationship and offering new services

Saur is developing an enriched experience for the consumer across all channels, reinforced by proactive communications by email, SMS and social networks (meter reading date, scheduled work on the network, etc.). In parallel, Saur offers personalised and segmented services in real time, including control and monitoring of consumption, alerts in the event of overconsumption, etc.

Issue 7: managing water with predictive models

Saur uses machine learning algorithms, fed by a mass of historical data, which evaluate and configure themselves autonomously to minimise the average forecast error. For pipelines (material, past incidents, diameter, age, road traffic, etc.), the model learns from their "history" in order to associate certain combinations of conditions with a probability of major leaks in a chosen time interval. This allows renewals to be prioritised and improves the management efficiency of assets. The algorithms are also used to forecast volumes consumed or distributed, monitor water losses and optimise pumping.

Issue 8: improving the performance of drinking water systems and reducing leakage

Saur stands out for its network management policy, based on the combined implementation of technological innovations in permanent liaison with its CPO expertise. The Rézo+ expert solution is based on four key pillars: appraisal (establishment of a smart network and analyses by our experts), measurement (metering of distributed volumes and night flow-rates, listening to networks via technologies such as EAR2® from Saint-Lizaigne or Smartball® from Xylem), coordination (interpretation of data collected at the CPO for rapid decision-making), extending lifespan (prioritisation of investments in terms of maintenance and renewal). In addition to research on the ground, Saur is experimenting with aerial identification of leaks using satellite and drone images.

Issue 9: sharing information and tracking contract data in real time

Saur offers local authorities access to CPO Online, its interface for real-time monitoring of contract performance and operational and consumer data. CPO Online supplies and interprets key data, including volumes distributed, maintenance work, changes in the number of customer complaints, mapping, performance reporting, etc. It also helps local authorities to make investment decisions, following data analysis by our experts and cross-referencing it against external databases. This web interface, accessible 24 hours a day, is secure and can be customised according to the requirements of local authorities and technicians.

AT THE HEART OF THE INNOVATION POLICY THE CPO, THE NERVE CENTRE FOR THE CONTROL AND MANAGEMENT OF COMMUNITY WATER AND SANITATION SERVICES.

As a pioneer in smart technologies for the water sector, in 2007 Saur created the CPO, a melting pot of innovations revolutionising the business approach by providing local authorities with a comprehensive real-time overview of the service within their region. In order to sustainably improve the service, the CPO combines the leading market technologies with expertise capable of identifying malfunctions and risks and optimising use of operating data. The CPO is therefore able to offer the most relevant optimisations and help local authorities to plan their investments in the most cost-efficient way.



SAUR – at the heart of innovation

30
tests pilotes ou
POC par an avec
des partenaires
externes

Plus de **200**
startup évaluées
depuis la mise
en place de l'activité
d'open innovation

150
projets par an
d'innovations au
service de l'eau

About Saur: *As a longstanding water services leader, SAUR serves local authorities and industrial companies in the successful implementation of development projects in water supply and treatment, environmental services (engineering, infrastructure services). SAUR worldwide: presence Saudi Arabia, Scotland, Spain, Poland. 2018 key figures: EUR 1.36 billion Group net revenue, 7,000 local authorities contracted, 9,000 employees and 12 million consumers in France and worldwide.*

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