



Where innovation meets sustainability

Be Wireless Solutions at a glance

WHO WE ARE

Be Wireless Solutions is an IoT/AI expertise and solution provider helping companies monitoring and optimizing their electricity, water, fuel, and gas consumptions.

Be Wireless Solutions is your ally to successful implementation of IoT/AI projects, cost reduction, emissions avoidance, and carbon footprint enhancement.

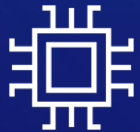
Be Wireless Solution operates in several countries in 4 continents through its entities in France, Tunisia, Bahrain and Mauritania



BWS OFFERING

► BWS PLATFORM ◀

A Solution to **monitor all your resources consumption** using BWS platform, Hardware, connectivity, and Data intelligence



Hardware



Services



SAAS acces



Customized features

Be Wireless Solutions is **Hardware agnostic** using either internally manufactured devices or other best-in class hardware.

Be Wireless Solutions is also **connectivity agnostic**. We select the connectivity options that suit best the customer characteristics and use case

Be Wireless Solutions offers complementary **customized services**, hardware and connectivity.

► IOT / AI EXPERTISE ◀

A **highly qualified team** covering mechanical, hardware, embedded software, web development and Data Analysis



IoT / AI Developments

BWS PLATFORM

BWS Platform is a comprehensive, all-in-one platform that allows **monitoring of resources saving initiatives** through the combination of solutions enabling users to:

- Access resources consumption **real-time** information as well as unlimited historical data
- Benefit from **data analysis**
- Receive **alerts** if pre-established thresholds are exceeded
- Detect **energy-intensive equipment** as well as **leaks** and **fraud**
- Produce AI generated **hints and recommendations** to reduce consumption levels
- **Predict** maintenance
- Activate or deactivate equipment remotely according to scenarios
- Provide precise tracking of **resources saving initiatives**
- Calculate **environmental footprint** in connection with resources consumption



TRACTION

► OPERATIONS ◀

Successful deployments in various industries in Europe, Africa and Middle-East



France



Mauritania



Bahrain



Switzerland



Tunisia



Qatar



United States



Senegal



Morocco

► TRUST ◀

Client satisfaction as a main driver



-3% churn



+ 150%
YoY basis in connected
objects



► IMPACT ◀

Reduction of consumption in the range of 10-40% in several use cases



Optimization of routes



AI Recommendations



Detection of leaks
(fuel, water)



Smart Lighting

23800 tons

CO₂ emissions avoided in 2024

3,3 billions

Data points collected

+ 35 000

Devices deployed

+ 170

Customers across 4 continents

8 years

Of R&D

+40

Engineers



BWS platform distinctive features

AI-POWERED RECOMMENDATIONS

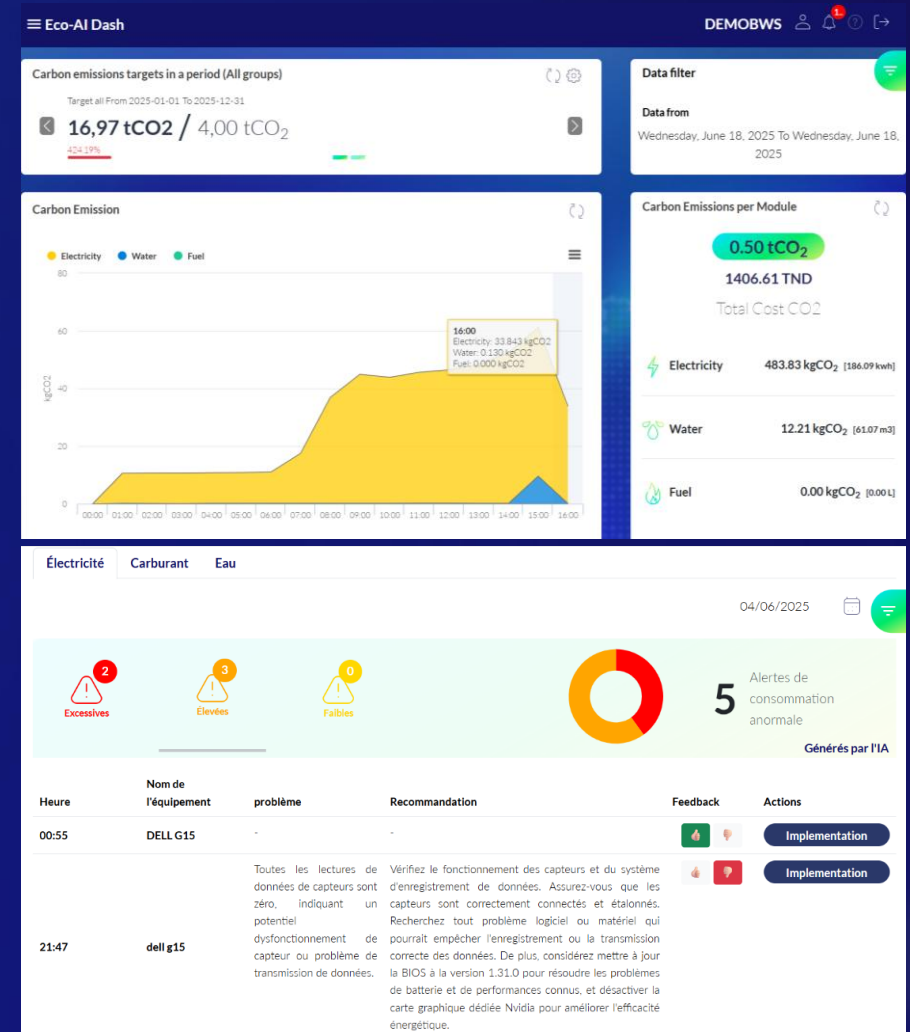
The **Eco-AI Dash** is a strategic feature that **tracks, analyzes**, and **optimizes CO₂ emissions** from **electricity, water, and fuel consumption**.

It compares actual emissions to defined targets, providing visual indicators to assess gaps and prioritize adjustments.

Artificial Intelligence (AI) can immediately identify energy-intensive equipment and consumption **anomalies, leaks** and **fraud**.

It generates **personalized recommendations** to optimize the use of electricity, water, fuel, and gas. These recommendations can be implemented on the platform and their impact is measured and tracked;

The impact of the recommendations is used to better train the AI framework.



INSTANT AUDITOR

The **instant auditor** enables **real-time analysis** to **detect** potential anomalies and assess corrective actions impact.

Audit task configuration allows to create tailored audit scenarios and schedule audits according to user's needs,

It enhances accuracy and quality of **personalized AI-driven recommendations** for optimizing resource usage.

The screenshot displays the BWS Instant Auditor interface. The top navigation bar includes the BWS logo, 'Instant Auditor', and user controls. The left sidebar lists various dashboards: Eco-AI Dash, Henhouse Dash, Greenhouse Dash, Data Visualization, and Data Analysis. The main content area is titled 'New space audit' and includes a form to create a new audit with fields for 'Audit title', 'Space', 'From', and 'To'. Below the form is a table titled 'Rapport d'audit espace (Audit 1)' showing audit actions for a TV Samsung. The 'Résultats' section displays four summary boxes: 'Conso. totale' (17.517 KWh), 'Conso. max' (3.793 KWh), 'Conso. min' (2.476 KWh), and 'Conso. moy / H' (2.919 KWh). Below these are two charts: 'Consommation' (a bar chart) and 'TV Samsung' (a line chart). The 'Analyse' section provides a detailed report on energy consumption, including AI-generated recommendations for energy savings. The bottom left sidebar lists settings: Categories of goods, Alert settings, AI Settings, Invoice Settings, Carbone Periods, and Carbone Groups.

New space audit

Audit title * Space * From * To *

Name is required

+ Add action on equip.

Save Close

Rapport d'audit espace (Audit 1)

Espace : 1er étage

Période d'exécution : Du 2024-09-19 à 08:00 jusqu'au 2024-09-19 à 13:00

Description : test audit

Action	Equipement	De	Au
En veille	TV Samsung	2024-09-19 08:00	2024-09-19 10:00
Allumé	TV Samsung	2024-09-19 11:30	2024-09-19 13:00
Marche	TV Samsung	2024-09-19 10:00	2024-09-19 11:30

Résultats

Conso. totale	Conso. max	Conso. min	Conso. moy / H
17.517 KWh	3.793 KWh	2.476 KWh	2.919 KWh

2024-09-19 De 07:00 à 08:00 2024-09-19 De 12:00 à 13:00

Consommation

TV Samsung

Analyse

The global report on the listed equipment, based on their energy consumption, presents a detailed analysis of the different devices' energy needs, taking into account the available information during the considered period. In general, the table showing the equipment indicates that the average consumption is relatively low, which suggests reduced energy usage. Here's a more detailed analysis of each device, as well as a series of recommendations for energy savings for each. Computers and laptops are essential devices in our daily lives, but also major consumers of energy. To efficiently reduce their energy needs, it is recommended to use a USB charger for mobile devices and regularly update the operating system of computers to improve efficiency. Televisions are an important source of energy consumption in our home, but with an energy-saving solution, they become more cost-effective. By using a charger and adjusting the screen brightness, we can reduce their energy consumption. Air conditioning units are essential for our comfort and well-being, but they consume a significant amount of energy. Installing air conditioning units that draw in outside air and using energy-efficient solutions like horizontal ventilation fans can reduce the energy load. Mobile phones are another important source of energy consumption, but with an energy-recycling system and rechargeable battery, their use becomes more economical. By using a USB charger and adjusting the device's settings, we can reduce energy consumption. Lighting is also an important source of energy consumption, but with energy-efficient solutions like LED bulbs, its usage becomes more cost-effective. Using energy-efficient lights and adjusting the brightness levels can reduce energy consumption. In conclusion, the table presented presents a detailed analysis of the listed equipment based on their energy consumption. The recommendations for energy savings mentioned for each device are important to reduce energy load and improve efficiency in our use of energy.

Generated by AI

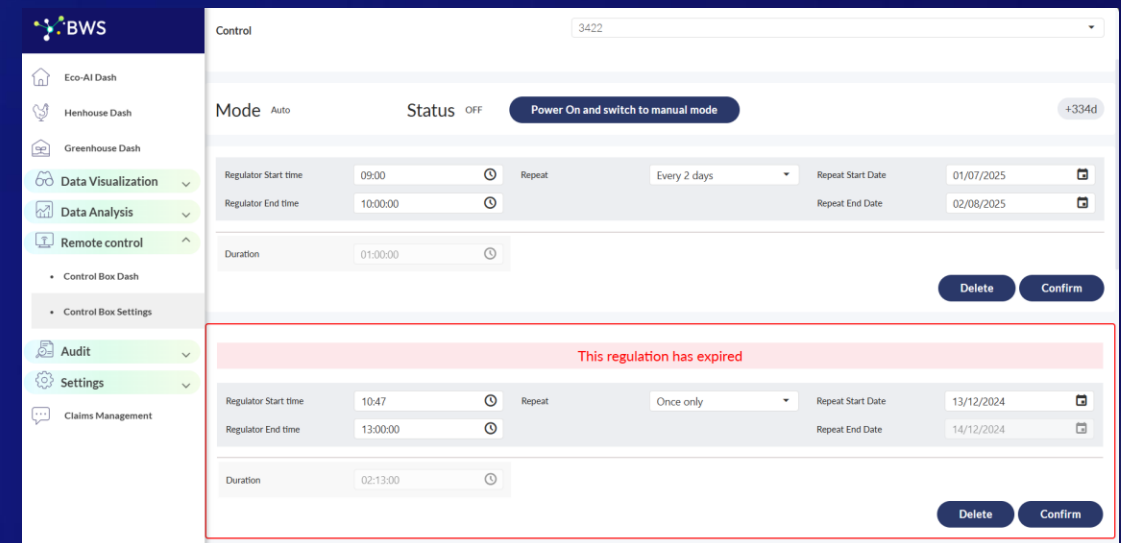
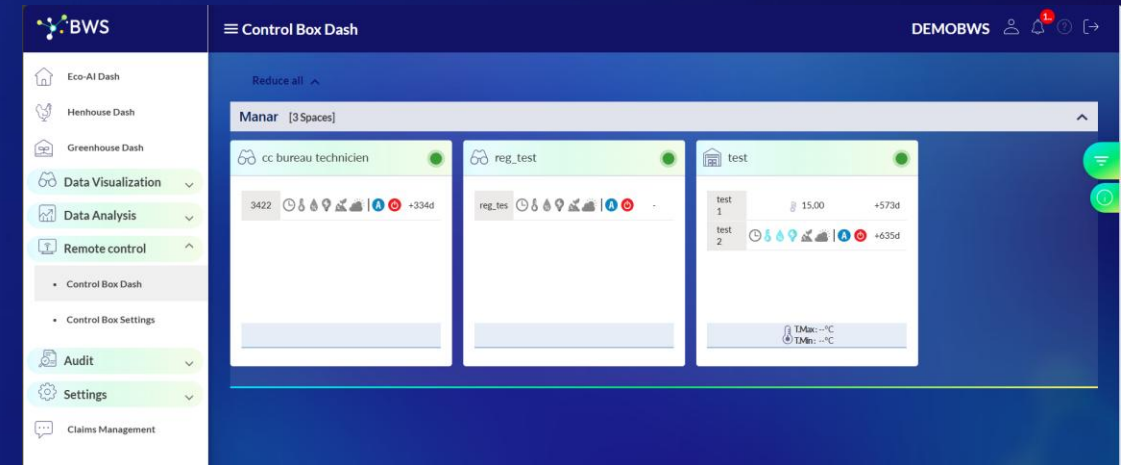
EQUIPMENT REMOTE CONTROL

BWS Platform enables the **configuration**, **monitoring**, and **management** of devices and equipment **remotely**.

No need for physical access.

BWS Platform allows the set up of automated actions based on **predefined thresholds** for electrical, water, or fuel consumption.

Several scenarios can be implemented concomitantly



Saving energy

ENERGY SAVING – CHALLENGES AND RESPONSES

Overconsumption of energy

Inefficient equipment or suboptimal behaviours.

Lack of visibility

Insufficient data on consumption and emissions.

Environmental impact

Lack of monitoring of the actual reduction of the carbon footprint.

Non-compliance

Risks related to not meeting standards.

Automatic alerts

Notifications in case of deviations or anomalies, with customizable configuration.

Smart dashboards

Clear visualization of energy data (consumption, CO₂ emissions), comparison between periods.

Advanced CO₂ emissions monitoring

Real-time analysis and visualization of emissions, comparison with targets.

Customized reports

Generation of detailed reports, simulation of energy costs.

ENERGY SAVING – REAL TIME AND HISTORICAL DATA VISUALISATION

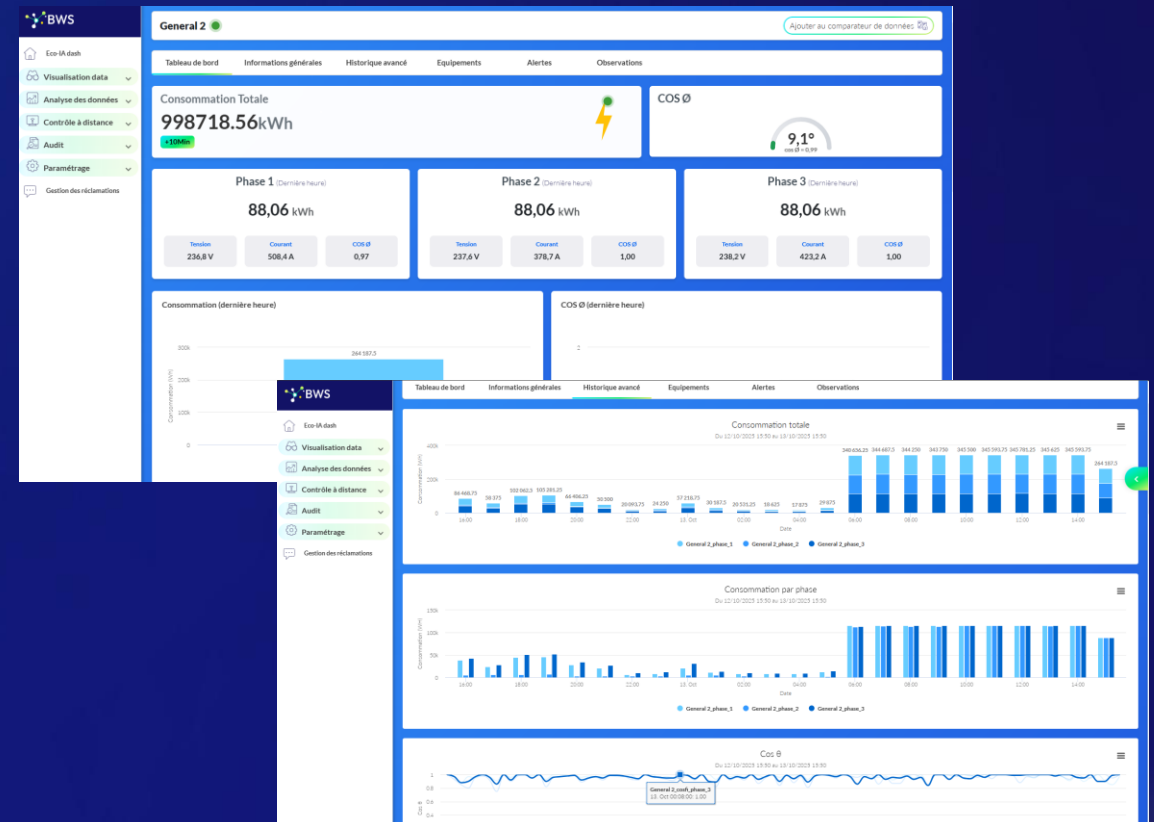
BWS Platform provides **detailed visual monitoring** of **electrical consumption** by **customizable zones**.

It enables precise anomaly detection, thereby optimizing energy efficiency.

Accurate tracking of total and **per-phase consumption** (Kwh) with **imbalance identification** through colour coding.

Consumption **by phase** and **power factor ($\cos \phi$)** with visual indicators.

Voltage and current per phase: updated measurements to monitor network stability and efficiency.

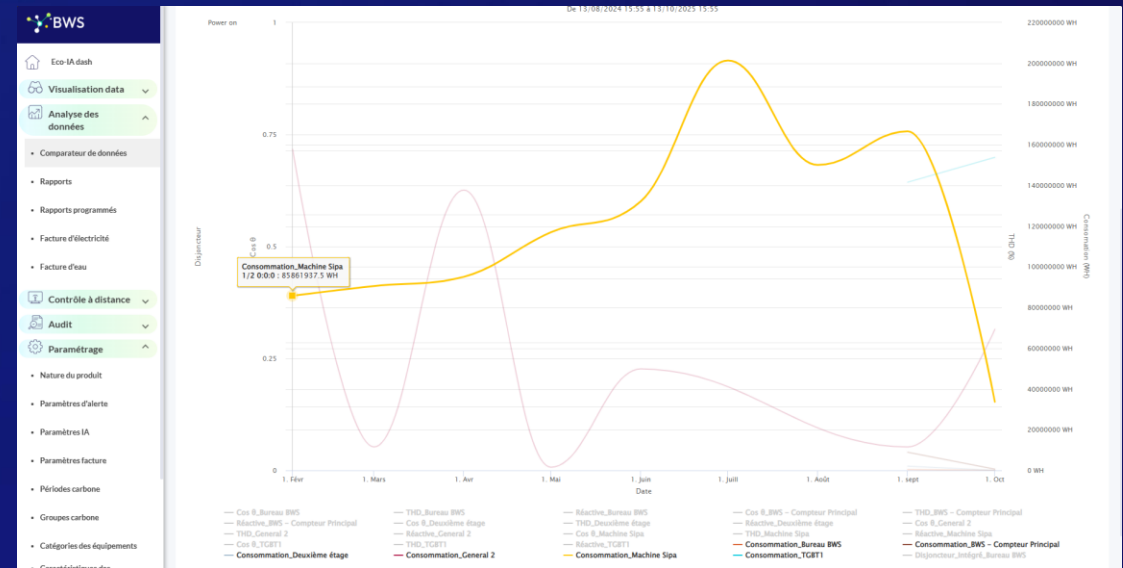


ENERGY SAVING – DATA ANALYSIS

Data comparator: comparison of **energy consumption**, **THD**, and **power factor ($\cos \phi$)** based on various criteria (groups, periods, phases, sensors).

Group/period comparison: visualization of **consumption differences** over different periods to detect and understand **anomalies** and **inefficiencies**.

Unified phases: verification of load balance to ensure stable distribution.

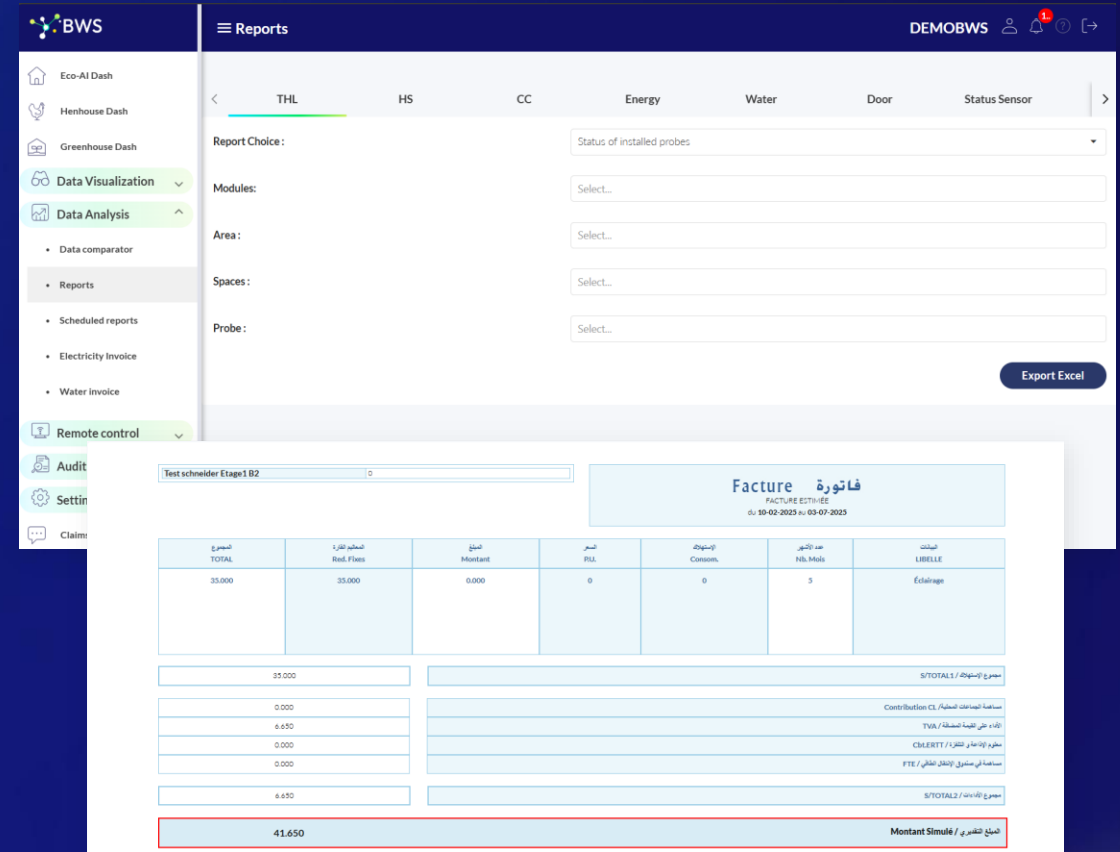


ENERGY SAVING – REPORTING

Energy reports: creation of **customizable reports** to analyse electrical performance, with export options in Excel or PDF.

Scheduled reports: **automated sending** of reports at defined intervals, with options to modify or cancel.

Electricity invoice simulator: forecasting electricity costs and identifying optimization opportunities, configurable according to your electricity supplier criteria.



Facture
FACTURE ESTH-EE
du 30-02-2023 au 03-03-2023

المبلغ	المبلغ	المبلغ	المبلغ	المبلغ	المبلغ	المبلغ
TOTAL	Red. Fines	Montant	Red. Fines	Consum.	Red. Fines	Red. Fines
35.000	35.000	0.000	0	0	5	Eclairage
35.000						S/TOTAL1 / مجموع الاستهلاك
0.000						Contribution CL / مساهمة الخدمات العامة
6.650						TVA / ضريبة القيمة المضافة
0.000						CHERTT / ضريبة المبيعات
0.000						FTE / ضريبة المبيعات
6.650						S/TOTAL2 / مجموع الضرائب
41.650						Montant Simulé / المبلغ التقديري

Saving fuel

FUEL SAVING – CHALLENGES AND RESPONSES

Fuel cost & reactive maintenance

Fuel price fluctuations and costly repairs due to unplanned maintenance.

Lack of safety

High risks requiring policies and training.

Productivity

Underutilization of data, leading to limited performance.

Lack of flexibility

Rigid solutions that make it difficult to scale with the business.

Fuel optimization & proactive maintenance

Cost reduction through route optimization, behaviour monitoring, and scheduled maintenance.

Improved productivity

Task automation and detailed reports to support decision-making.

Safety & compliance

Monitoring of risky behaviours and adherence to regulations.

Flexibility & scalability

Modular tools and analytics to adapt the fleet to evolving needs.

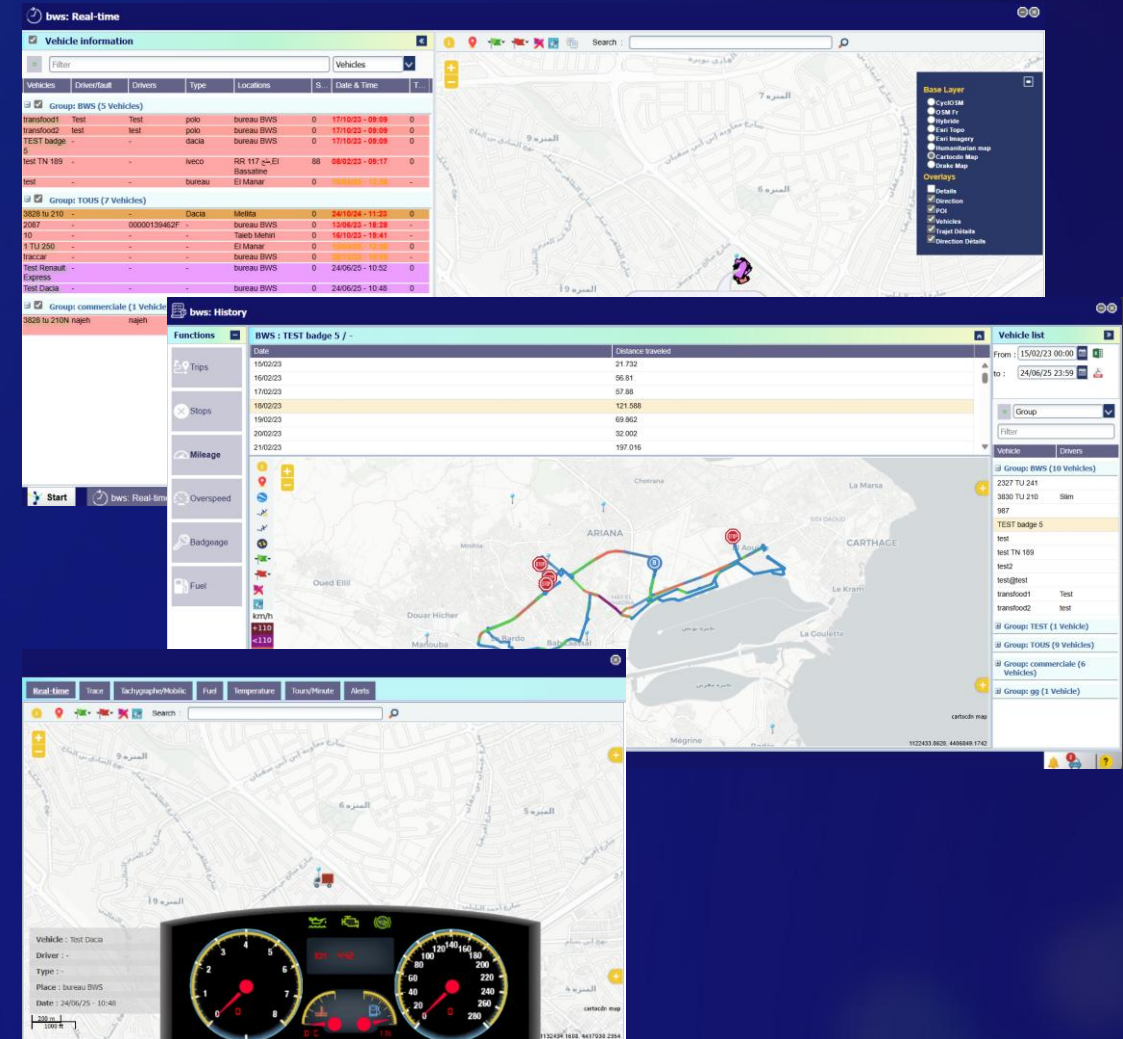
FUEL SAVING – INSTANT TRACKING

Instant tracking of fleet activity, including:

- Precise geographic location
- Vehicle identification
- Timestamp of the last data transmission
- Speed and engine activity
- Direction of travel
- Driver identification

Complete traceability of vehicles through a record of fleet activity over the entire operational period including:

- Detailed list of trips and recording of typical routes
- Stops and identification of new points of interest
- Mileage and zone exits
- Driving quality and alert history



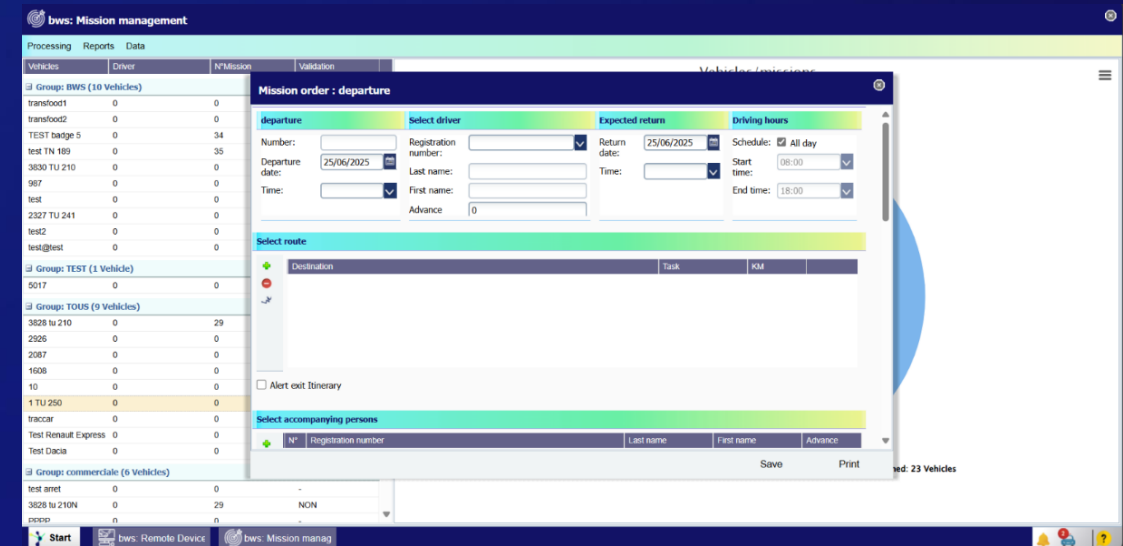
FUEL SAVING – MISSION MANAGEMENT

The "Mission management" interface enables tracking and execution of missions.

Users can create missions, monitor their progress through graphical displays, and schedule alerts to notify of any anomalies.

Reporting includes:

- Mission processing
- Mission alerts
- Mission history by driver

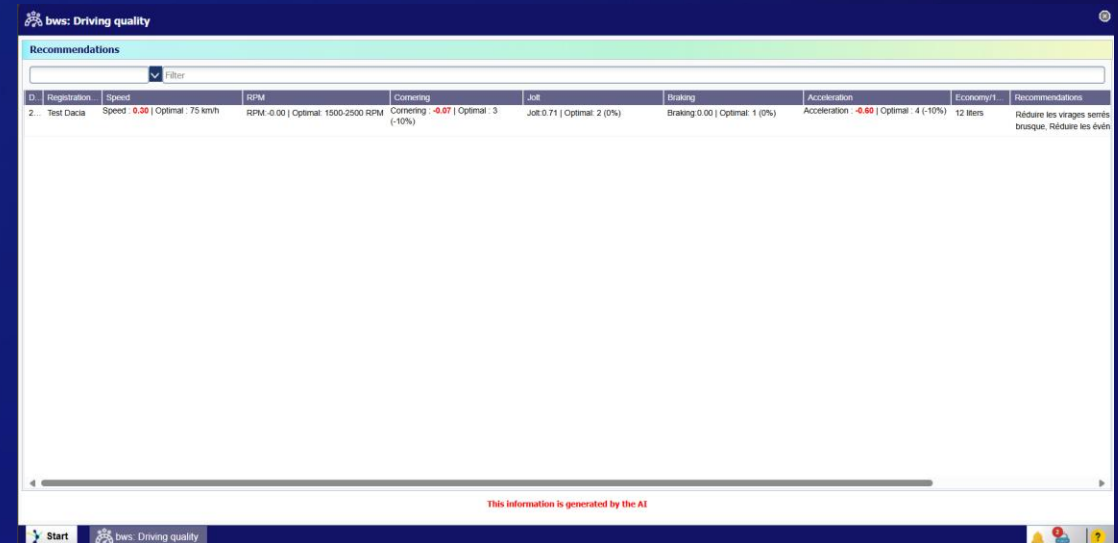


FUEL SAVING – DRIVING BEHAVIOUR

The platform includes a **driver evaluation** module that analyses speed, engine RPM, cornering quality, jolts, accelerations and braking.

The '**Driving behaviour**' module uses this same data for **vehicle-level analysis**, applying multiple regression to identify the impact of each parameter on fuel consumption.

AI determines the optimal values of key factors and generates **personalized recommendations** for fuel-efficient driving.



The screenshot displays the 'bws: Driving quality' application. It features a 'Recommendations' section with a table of driving metrics. The table has columns for various parameters and their optimal values. The data row shows values for Speed, RPM, Cornering, Jolt, Braking, Acceleration, and Economy, along with a recommendation to reduce sharp turns and events.

ID	Registration	Speed	RPM	Cornering	Jolt	Braking	Acceleration	Economy	Recommendations
2...	Test Dacia	Speed 0.30 Optimal: 75 km/h	RPM: 0.00 Optimal: 1500-2500 RPM	Cornering -0.07 Optimal: 3 (-10%)	Jolt 0.71 Optimal: 2 (0%)	Braking 0.00 Optimal: 1 (0%)	Acceleration -0.60 Optimal: 4 (-10%)	12 liters	Réduire les virages serrés brusque, Réduire les événements

This information is generated by the AI

Saving water

WATER SAVING – CHALLENGES AND RESPONSES

Water consumption & excessive bills

Difficulty controlling and optimizing water usage.

Water losses

Undetected leaks, fraud, and meter tampering.

Lack of visibility

No real-time data on consumption.

Budget management

Challenges in forecasting costs and optimizing water-related budgets.



Anomaly detection

Identification of leaks, fraud, and tampering with alerts.

Control units

Ability to remotely start or stop water supply.

Intelligent dashboard

Real-time consumption and cost saving opportunities detection.

Reports & forecasts

Generation of detailed reports and water bill forecasts.

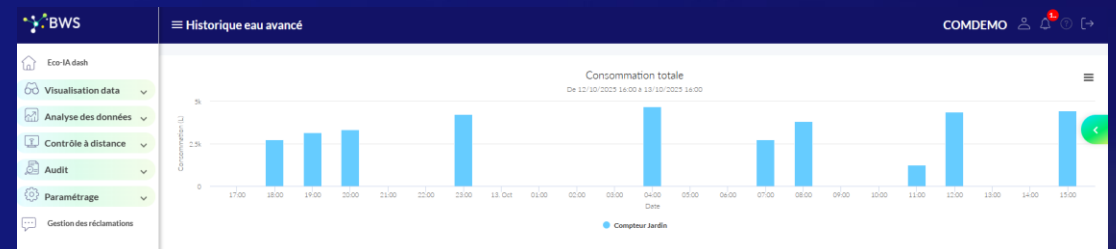
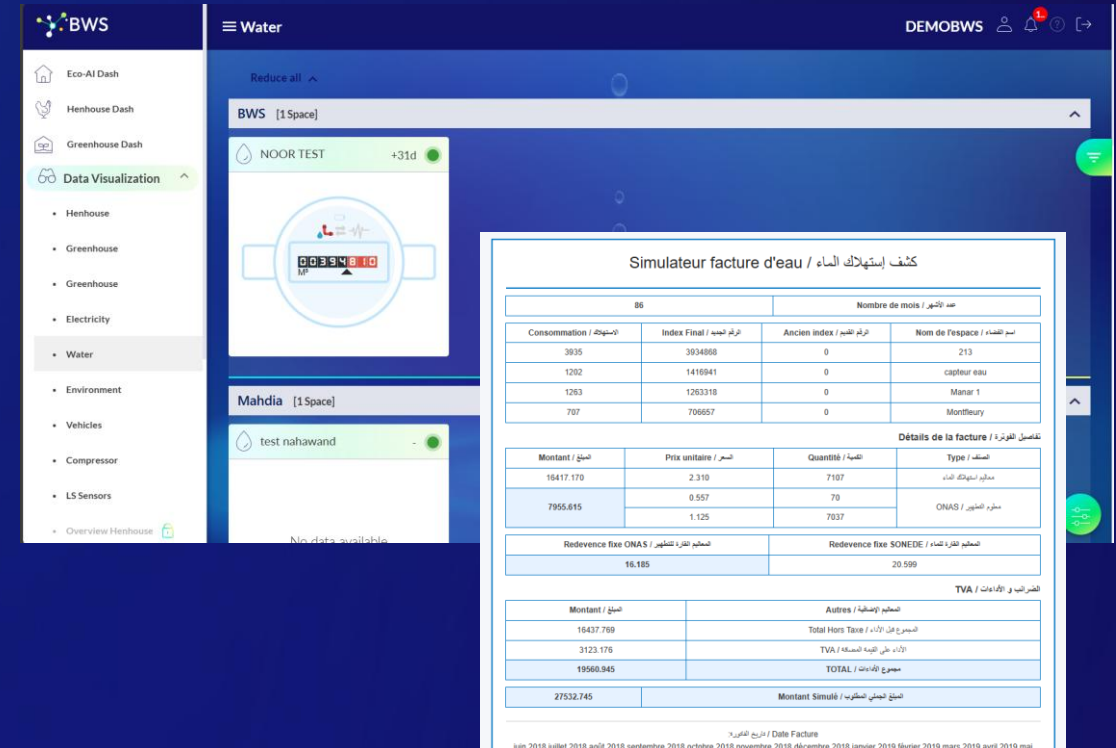
WATER SAVING – LEAK DETECTION

BWS Platform enables **monitoring of the water consumption in real time basis**

BWS Platform provides alerts in the event of **leak detection**.

It allows precise and detailed monitoring of water consumption and analysis of daily usage.

BWS Platform allows also **consumption trends** analysis.



Use cases

Use case – IoT expertise

Cla-Val / 1500+ Employees

Worldwide leading manufacturer of automatic control valves

Context: The Saudi National Water Company (NWC) has undertaken a critical project aimed at enhancing water flow control systems used in cooling pilgrims' rooms using Cla-Val's state-of-the-art electro valves.

Challenge: Despite the capabilities of Cla-Val loggers, their current methods of transmitting data to the client's servers—via FTP or HTTP over the public internet—have raised significant security concerns.

BWS Added Value: To address these concerns, Be Wireless Solutions developed a more secure and robust solution: implementing an MQTT (Message Queuing Telemetry Transport) network. By replacing FTP and HTTP with MQTT, the system not only improved security but also enhanced efficiency by establishing a direct, encrypted communication channel. This solution aligns with NWC's commitment to safeguarding critical operational data while maintaining seamless functionality.

Result: Cla-Val closed its deal with NWC, the biggest in the last decade.

Continuous Impact: Cla-Val and Be Wireless Solutions have built since then an ongoing partnership for more than three years. Cla-Val empowered its portfolio by 3 new products.



“

We are collaborating within the framework of a **strategic technological partnership** with BWS, which has provided us with its **solutions** and the **expertise of its teams**. Their **decisive commitment** and their ability to **quickly find innovative IoT technical solutions** have enabled us to meet our commitments to our customers and consolidate our position in the market.

Hugo Van Buel
Claval, Managing Director Europe

Use case – IoT expertise

FlowCon / 150+ employees

European specialist in energy efficient dynamic balancing in HVAC

Context: FlowCon invented the PICV concept (Pressure Independent Control Valve concept). FlowCon holds the largest install-base of dynamic pressure independent valves with more than 10 million valves in operation in over 60 countries around the world.

Challenge: The FlowCon PICV product ensures flow adjustment relative to an initially wired setpoint. This product includes an electric motor that performs movement actions and provides position feedback. FlowCon needed to redesign its hardware in order to optimize its cost.

BWS Added Value: Be Wireless Solutions suggested a new design for the PICV product without altering its needs, functionalities, and technical characteristics.

Result: 35% reduction in the product cost.

Continuous Impact: FlowCon and Be Wireless Solutions has signed a strategic partnership to prototype and manufacture the FlowCon PICV product. FlowCon started the redesign of 2 other products in its portfolio.



“

Working with BWS allowed us to explore **new opportunities** in terms of **cost optimization** of our products.

I appreciate the **multidisciplinary expertise** of the team and its **commitment** to **reaching the objectives** that we have set together.

Gitte Pedersen
FlowCon, R&D Manager

Use case – Energy saving

SBF Group / 1000+ employees

Continental leader in Construction and Public Works

Context: SBF Group is a major international player in the construction sector. It presents a cluster of construction companies grouped around buildings & public works, special foundations, quarry operations, real estate development and prefabricated system solutions.

Challenge: SBF needed to review its resources costs in its premises and on its construction sites.

BWS Added Value: SBF started using BWS Platform to monitor its energy and water consumptions in part of its premises in Tunis since 2023.

Result: 18% reduction in the energy cost.

Continuous Impact: Given the positive impact of the BWS Solution it has decided to implement it in all its sites in Tunis and in Sfax.



“

We've been using BWS's energy monitoring solution for nearly three years now — and it's helped us cut our energy bills by around 18%.

Said Mziou
SBF Group, Energy Management
System Manager

Use case – Water saving

SCG / 200+ employees

Major Tunisian actor in the cement industry

Context: SCG specializes in the manufacturing of binders (Cement and artificial lime) since 1977. It is part of SECIL, a Portuguese group present in eight countries.

Challenge: SCG encountered two problems. The first was high water consumption. The second was the desire to automate water pumping to fill the water tanks.

BWS Added Value: On top of implementing BWS platform and water metering devices, Be Wireless Solutions has developed a tailored solution to automate and optimize water pumping.

Result: Reduction in water consumption and in travel costs.

Continuous Impact: BWS is integrated in the SCG continuous improvement approach.



“

We use the BWS application to monitor our plant's water consumption in real time, strengthening our control over water resources. Remotely controlling tank filling has reduced unnecessary travel, improving efficiency, safety, and production continuity. BWS is thus fully integrated into our optimization and continuous improvement approach.

Hamdi Louhichi,
SCG, Methods Office Preparer

Use case – Fuel saving

LTM / 200+ employees

Major player in last-mile delivery in France

Context: LTM is a European player offering to more than 5m customers a range of logistics and transport services, often tailored to specific industries. These services include road transport, logistics management, customer support, and handling of sensitive or high-value goods.

Challenge: LTM experienced and increase in its fuel consumption cost. Besides the company wanted to have a fleet management solution taking into account the specificities of its business and operations.

BWS Added Value: Be Wireless Solutions developed new features and new modules specifically for LTM allowing the company to enhance the control of its fleet and reduce its costs.

Result: More than 15% of reduction in fuel consumption.

Continuous Impact: Continuous improvement of the platform.



“

Our collaboration with BWS has allowed us not only to ensure rigorous monitoring of our fleet and reduce the associated fuel consumption, but also to customize our fleet management to take into account the specificities of our business.

The technical expertise, responsiveness, and commitment of the BWS team have been remarkable.

Mourad Abadi,
LTM, Founder

Referenced offer



Showcases solution providers driving the ecological, energy, and digital transition.



Promotes the development of responsible, ethical, and sovereign AI.



Recognized as one of the 17 French Tech capitals, fueling innovation and entrepreneurship.



Highlights solution providers advancing the shift to greener, more sustainable energy.

Certified commitments

A proven dedication to excellence that guarantees quality, sustainability, and safety for all our clients.



Contact us to co-design your next AI/IoT
sustainability solution.

Be Wireless, Be In!

 Be Wireless Solutions  Be Wireless Solutions

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