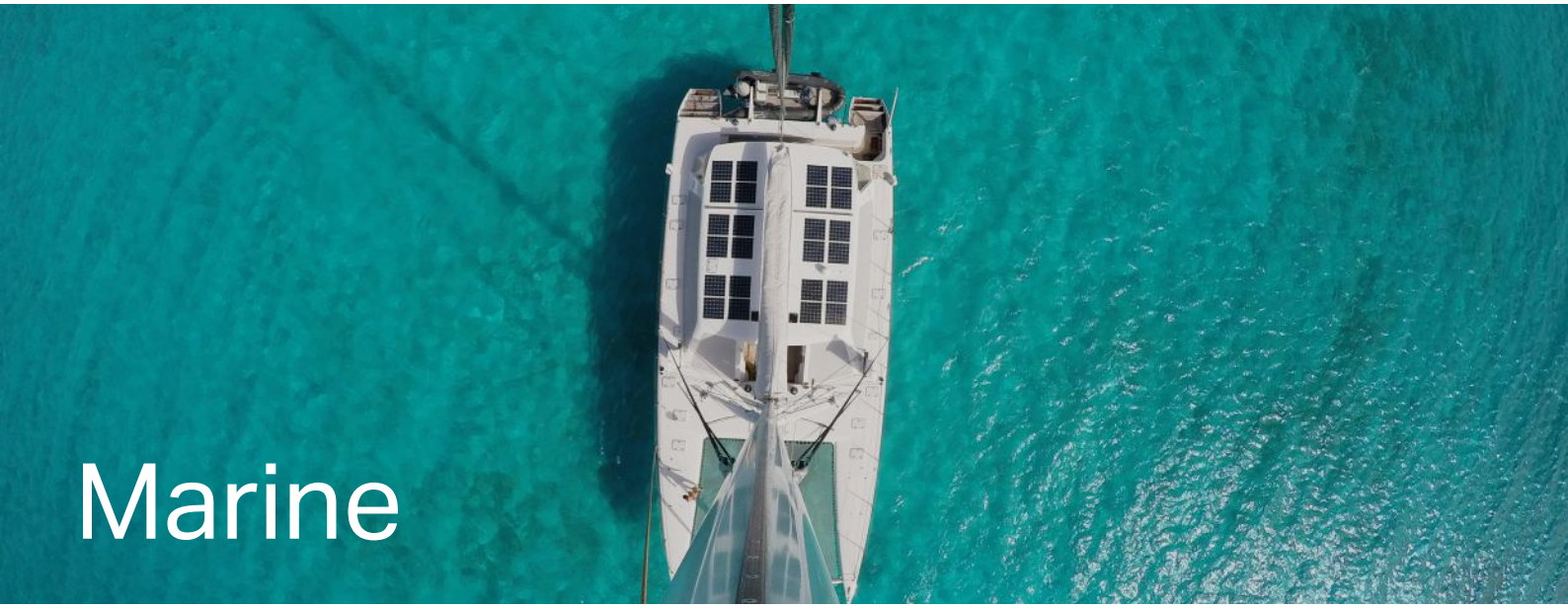


Marine

THE CLIENT

Solbian is an Italian company founded in 2006 by Giovanni Soldini and Marco Bianucci (Italy's foremost sailor and an accomplished physicist) with the challenge (successfully won) of **bringing photovoltaics to racing sailboats**; and it has since grown, driving forward the technological **development of both the new type of photovoltaic module and the control electronics**.

THE CHALLENGE

Meteca was asked to implement a IoT remote monitoring and control system for managing and optimising utilities in pleasure boats.

Although Solbian had been a pioneer and remained an excellence in its field, in recent years some competing companies taking advantage of **technological innovation** in electronic innovation and the IoT boom, had started to steal market share from them and detach themselves in terms of sales volumes and, in perspective, of prestige in the industry.

Solbian's management realised that they needed to offer customers a broader type of control experience on their boat, including **remote control, and no longer limited to the energy produced by the solar panels.**

PREVIOUS TECHNOLOGY

20%	24/7	20%
Low energy consumption	Boat status monitoring	Increase in battery life

THE SOLUTION

Meteca designed, developed and produced an IoT kit consisting of control unit and sensor nodes for monitoring and managing utilities in pleasure boats.

IOT KIT

Control Unit + Sensor Nodes

Powered by:
Briki MBC-WB with Wi-Fi / BT-BLE
Briki MBC-LR with LoRa SubGHz connectivity
Briki MBC-CELL with 3G/4G connectivity

Webpanel (cloud)

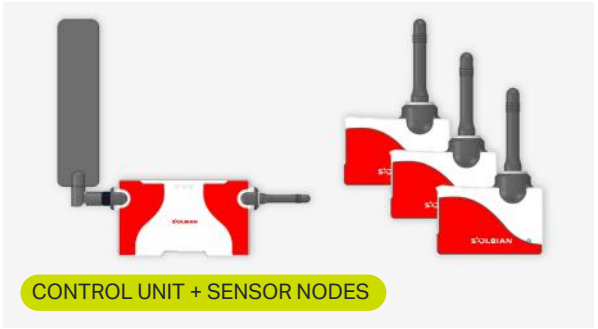
Both the control unit and the nodes make use of Briki® technology, and in particular the control unit mounts all 3 Briki modules: the MBC-WB with Wi-Fi/BT-BLE on board, the MBC-CELL with 3G/4G connectivity and MBC-LR with LoRa SubGHz connectivity, while the nodes mount the Briki MBC-LR with LoRa SubGHz connectivity.

The sensor nodes communicate with the control unit via the MBC-LR's SubGHz protocol, which is present on both. Then the control unit via the MBC-WB Wi-Fi technology exposes the web interface that shows the nodes' status in real time and allows their control, while when the user is away from the system, the control unit triggers the MBC-CELL's 3G/4G interface that allows remote monitoring and control.

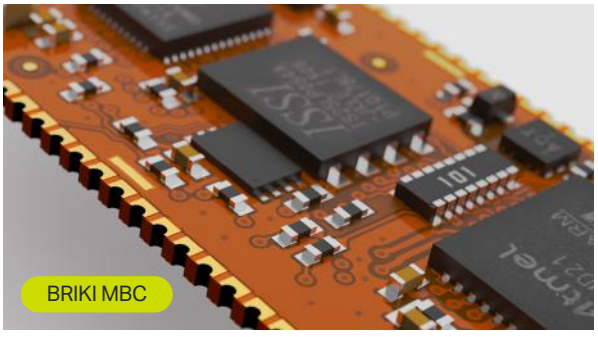
By using different kinds of sensors, **the kit is able, for example, to detect and manage the energy produced by Solbian's solar panels, or to monitor elements such as the opening and closing of portholes, the presence of water in the bilge or the presence of smoke or fire on board.**

In addition to sensors, actuators can be used to enable either the activation of devices for corrective action (e.g. fire-fighting systems are activated in the event of smoke or flame), and/or specific fault alarms that are sent to the user in different ways, depending on where they are (whether on the boat or remotely).

A web interface is available to users when they are near the system, and a cloud dashboard when they are remotely connected.



CONTROL UNIT + SENSOR NODES



BRIKI MBC

WEBPANEL (CLOUD)

THE RESULTS

Solbian's enhanced efficiency through Meteca solution

Thanks to the new IoT kit, Solbian was finally able to offer its customers **24-hours monitoring** of the vessel's utilities, remote or otherwise.

With **malfunction alarms**, the user gets the possibility to **intervene promptly in case of problems**, and avoid serious damage to the vessel or even prevent breakdowns thanks to predictive mantainance.

The solution devised by Meteca allows a **20% lower energy consumption**, compared to an equivalent Bluetooth solution, and at the same time a greater operating range compared to a Wi-Fi/Bluetooth only solution.

In conclusion, Solbian's customers gained optimised consumption **for greater sustainability, together with increased safety and comfort on board**.

BENEFITS

Advantages you get with Meteca

- Support in defining the best technological solution
- Hardware design
- HMI Design
- Prototyping
- Error correction of the first prototyping phase
- Design-for-manufacturing realisation
- User Interface (Webpanel)
- Field testing and on-going corrections
- Dedicated and continuous technical support
- Assembly and product testing during the MP phase

METECA COMPANY

Meteca is a swiss company that provides unique electronic tools and support for the development of tangible Internet of Things solutions.

Take your company to the next level, whatever your industry, with an excellent travelling companion. With our innovative Briki technology, we offer you complete and continuous support to achieve your goals with your IoT project.

BEGIN YOUR JOURNEY

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