



MONITORING & MAINTENANCE





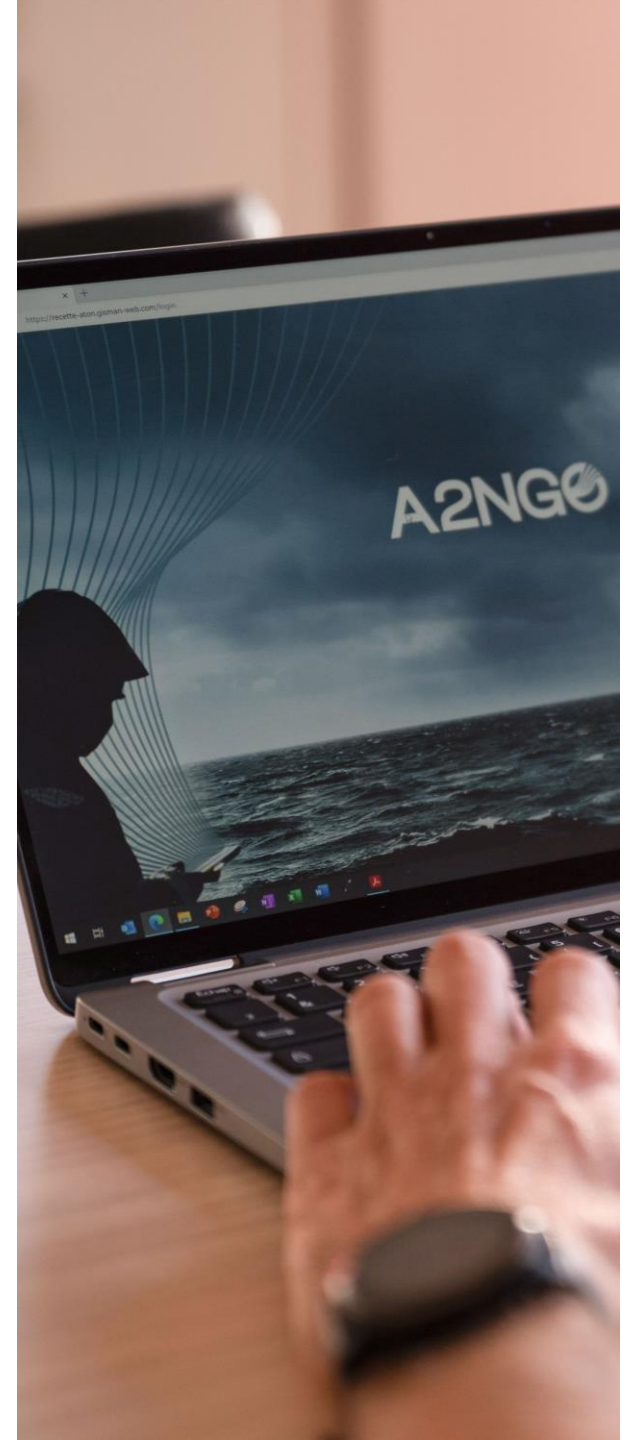
A2NGO

KEEP IN CONTROL!

Connectivity to enhance your user experience

A2NGO

- Lanterns equipped with the **A2NGO** system capture operating and location information,
- Lanterns equipped with the **A2NGO** system transmit this information, in viewable form, to the dedicated **GISMAN** web portal, which is capable of storing this data,
- Lanterns equipped with the **A2NGO** trigger alarms if the information gathered so requires,
- The communication network is **M2M** (machine to machine),
- Data transmission and storage is cyber-secure.





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KEEP IN CONTROL!

**2 FUNCTIONS ACCESSIBLE VIA OUR
SECURE CYBER WEB PORTAL**

A2NGO

----- ● **MONITORING APPLICATION**

Monitor your assets (AtoN) remotely, in real time
and at lower cost

----- ● **MAINTENANCE APPLICATION**

Optimise the availability of your assets (AtoN) by
centrally managing the maintenance of your
beaconing system



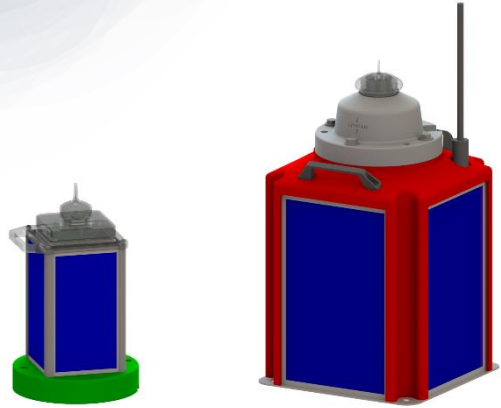


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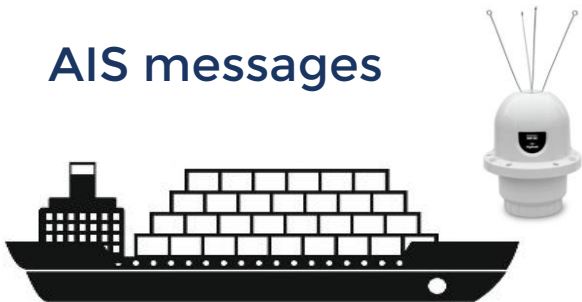
MONITORING

A2NGO Monitoring

Connected lanterns



AIS messages



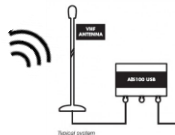
Communication systems



BLUETOOTH



SAT / GSM / SIGFOX



A2NGO AIS RELAY

WEB Server



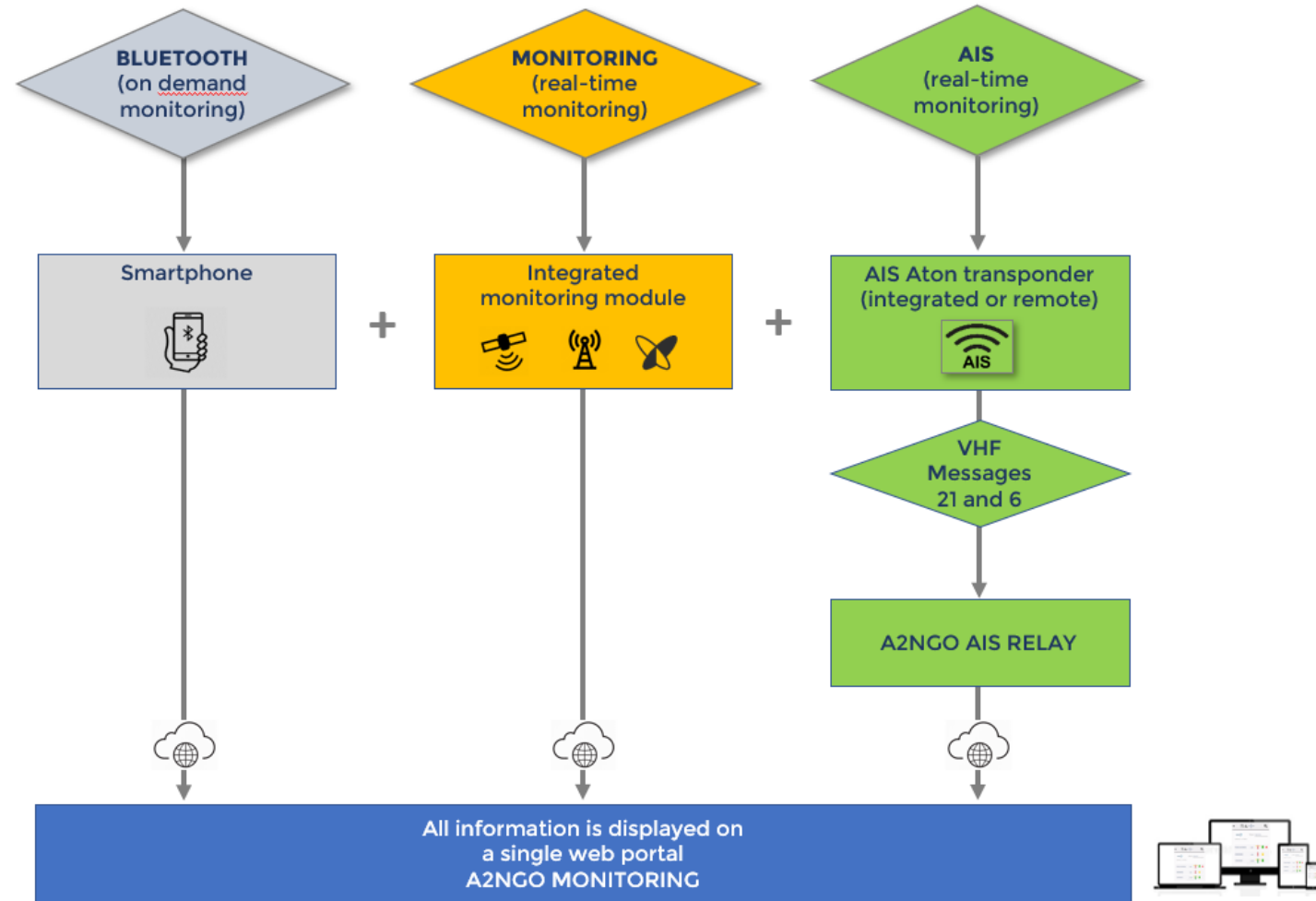
WEB
PORTAL GISMAN



- ✓ ATON STATUS
- ✓ ALARMS (LANTERN FAILURE/
OFF POSITION)
- ✓ VESSEL TRAFFIC MONITORING
(with AIS)

A2NGO MONITORING

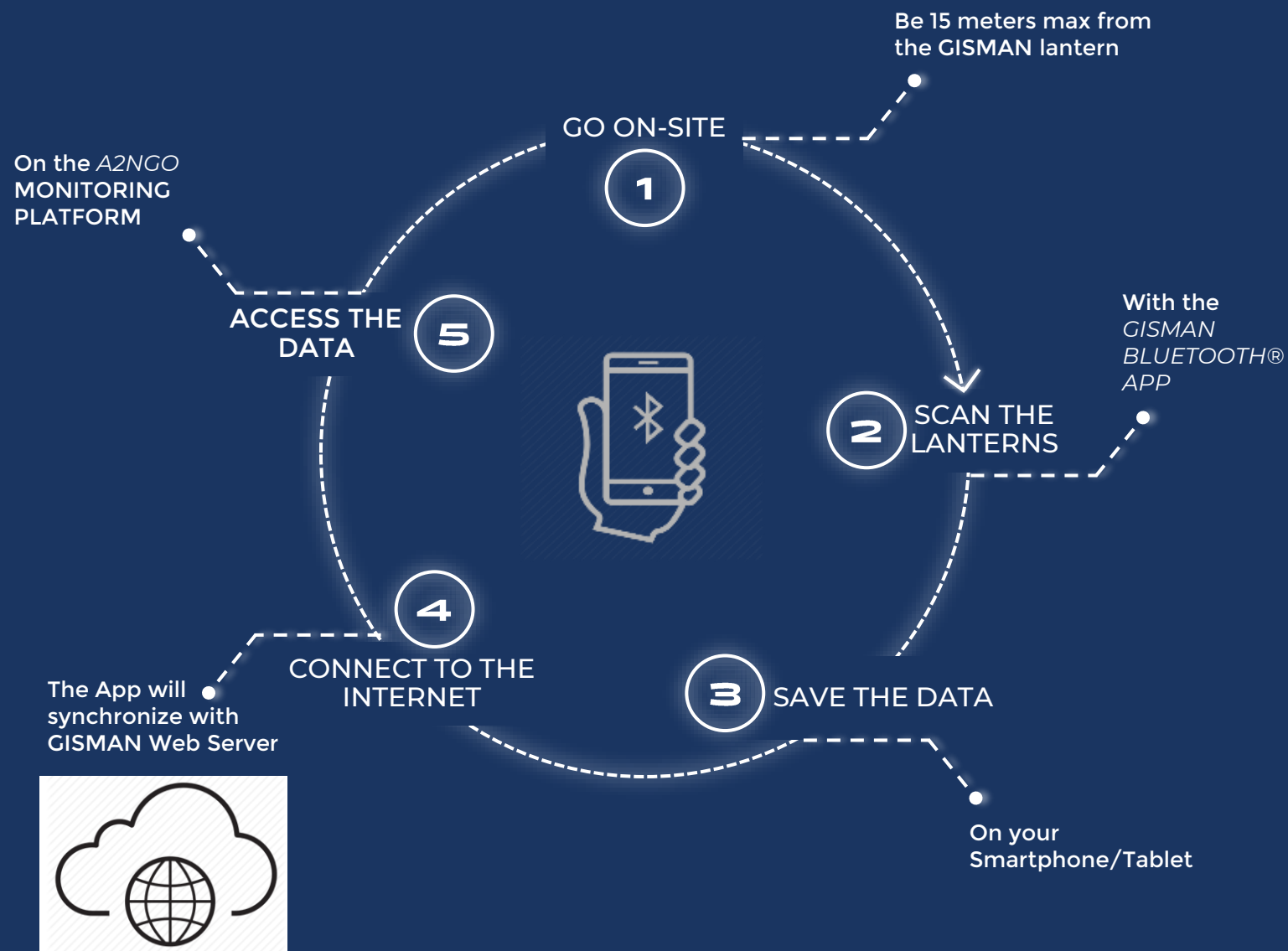
3 COMMUNICATION MODES

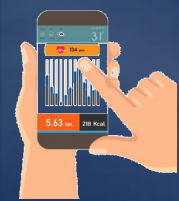


A2NGO MONITORING

via BLUETOOTH®
CONNECTIVITY

On Demand Monitoring



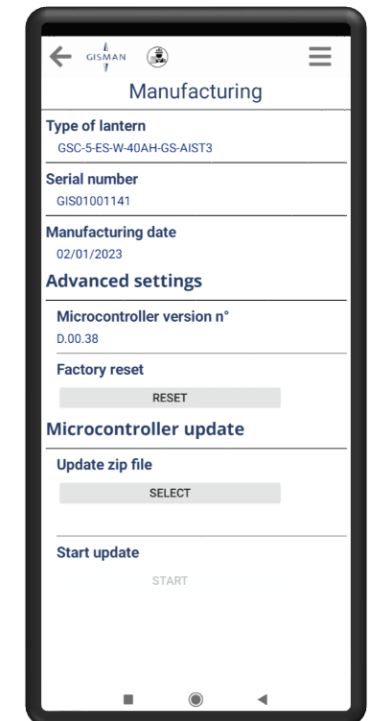
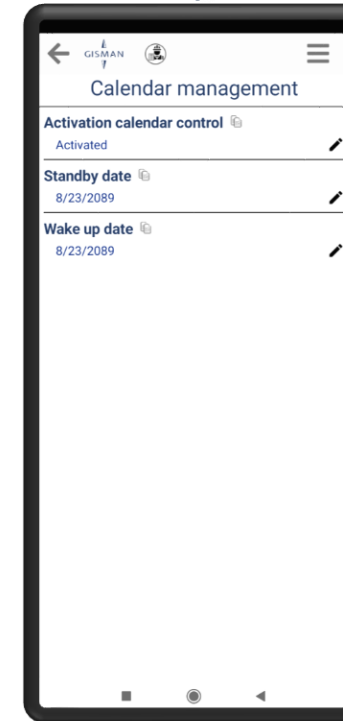
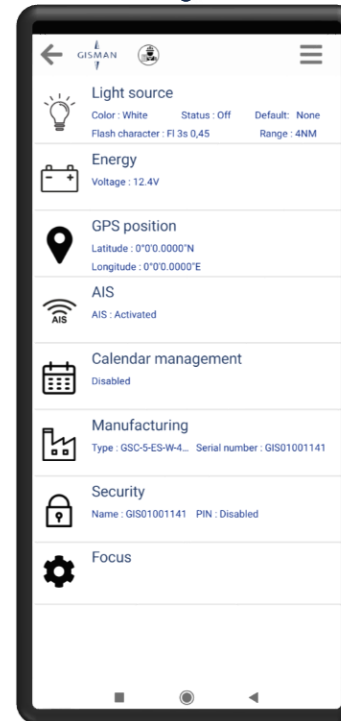


GISMAN
Bluetooth®

A2NGO MONITORING with Gisman bluetooth®

Access to and recording of lantern
parameters during on-site inspections

Available in French, English, Spanish and Portuguese





A2NGO MONITORING

By satellite, gsm or Sigfox

Remote access,

Real-time alarms



A CHOICE OF 3 COMMUNICATING MODULES

Satellite (IRIDIUM)  

GSM (SIM card) 

SIGFOX (IoT if coverage available) 



SECURE ACCESS THROUGH A DEDICATED WEB PORTAL

Real-time status and operating history of lanterns

Cyber-secure system



USER EXPERIENCE MADE EASY

Multi-user

Multi-product

Multi-site

A2NGO MONITORING *by AIS transponder (VHF)* *Type 1 or type 3*

Lanterns parameters and vessel traffic

Real time alarms



DATA EXCHANGE VIA AN AIS TRANSPONDER IS BASED ON WELL-DEFINED MESSAGES

Message 21 used for the identification & location of the Navigation Aid and the status (on/off) of the lantern)

Message 6 used for remote monitoring of a Navigation Aid



THE A2NGO AIS RELAY STATION IS AN INTUITIVE SOLUTION FOR RECEIVING AND SENDING DATA RECEIVED FROM THE AIS

PC/Server with VHF aerial

Web-connected (WIFI or LAN)

Receives, encapsulates and transmits AIS messages received under VHF coverage to the GISMAN web server



A2NGO WEB PORTAL WITH RECORD & REPLAY FUNCTIONS

View AIS data

Record AIS data

Replay AIS data

A2NGO MONITORING

Matrix of available solutions

		Communication Network	Receiving Frequency	Cost	Deph of Data
	Bluetooth	Via internet from a smartphone	After each visit	0	+++
	Satellite	Satellite network	1 to 2 times a day	++	++
	GSM	Local mobile network (Requires SIM DATA)	1 to 2 times a day	+++	++
	Sigfox	SigFox network	1 to 2 times a day	+	+
	AIS	Via VHF (Requires A2NGO AIS Relay)	Every 3 minutes	0	+

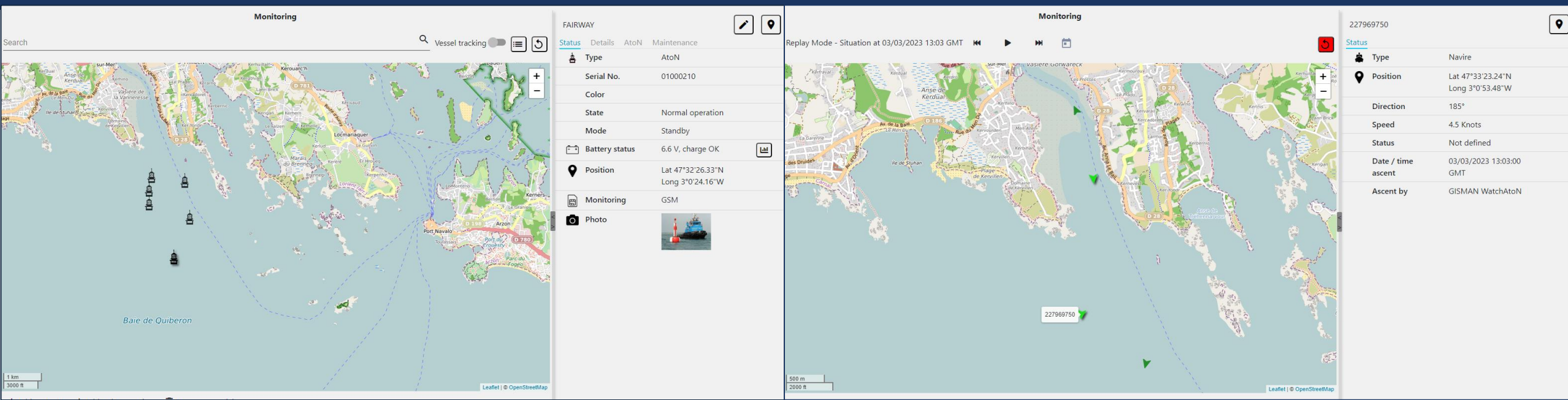
A2NGO MONITORING

A wide range of
available data

Monitoring data	BLUETOOTH	SAT	GSM	SFOX	AIS
Operating mode	X	X	X	X	
Autonomy management function enabled	X	X	X	X	
Light source status	X	X	X	X	X
Light source fault	X	X	X	X	X
Charging fault	X	X	X	X	
Off-position fault	X	X	X	X	
Battery voltage	X	X	X	X	X
GPS coordinates	X	X	X	X	X
Reference GPS coordinates	X	X	X		
Off-position radius	X	X	X		X
Last day to night and night to day passage	X	X	X		
Night range/intensity	X	X	X		
Programmed flash character - night	X	X	X		
Day range/intensity	X	X	X		
Programmed flash character - day	X	X	X		
Calendar management enabled	X	X	X		
Wake-up date	X	X	X		
Standby date	X	X	X		

A2NGO MONITORING

Data display on the web portal



Monitoring AtoN

Vessel Traffic (AIS)

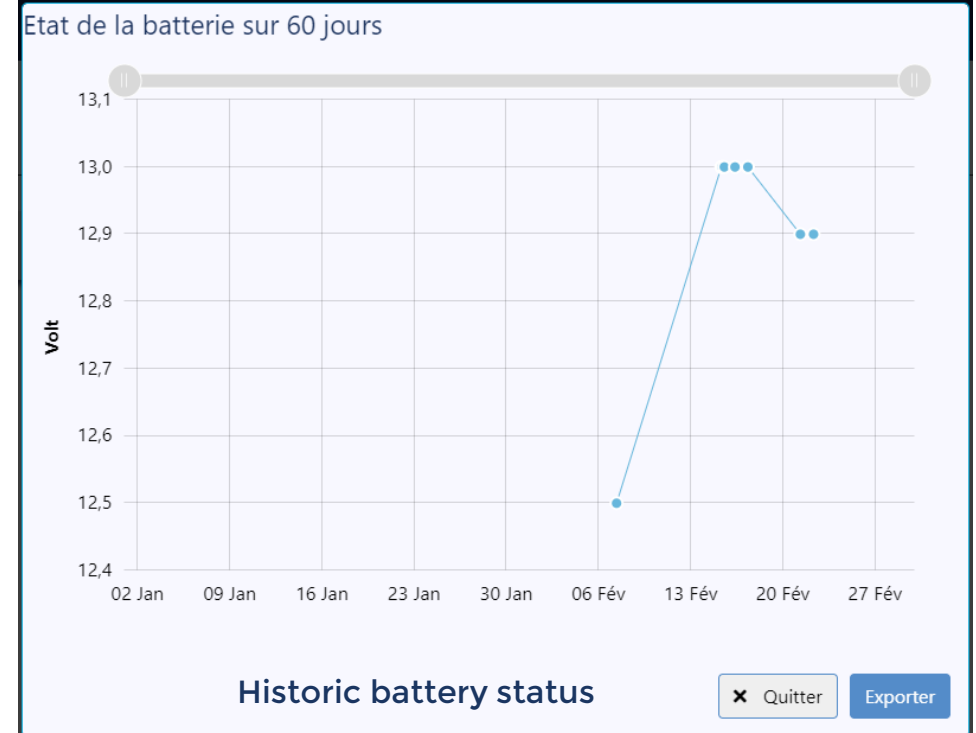
A2NGO MONITORING

Data display on the web portal

FAIRWAY	
Status	Details AtoN Maintenance
Light signal	
Color	Red
Mode	Standby
Status	Off
Night flashing character	54 - Fl 3s 0,45 - 15%
Day flashing character	54 - Fl 3s 0,45 - 15%
Offset synchro	0 s
Night range	2 Nm
Day range	0.1 Nm
Measured current	0 A
Temperature	22 °C
Thermal management: intensity	100 %
Min. temp. over 24h	22 °C
Max. temp. over 24h	22 °C
Average temp. over 24h	22 °C
Power management:	100 %

FAIRWAY	
Status	Details AtoN Maintenance
Commissioned on	02/01/2023
Latitude	47°32'26.33"N
Longitude	3°0'24.16"W
Availability rate	---
Support	
Product	---
Type	Bouée Acier
Remark	No product reference
Light signal	
Product	GSC-S-MONIT
Type	Self-contained Lantern
Serial No.	01000210
Commissioning	09/01/2023
No radio aid	
Monitoring module	
Product	GSC-S-MONIT
Type	Self-contained Lantern
Serial No.	01000210
Monitoring type	Cellular - GSM

AtoN downloaded data





A2NGO

MAINTENANCE



A2NGO

KEEP IN CONTROL!

A maintenance management platform to
optimise AtoN serviceability

A2NGO

PLATFORM OBJECTIVES

**Guarantee an equipment availability rate in line with
AISM recommendations**

Reduce maintenance costs

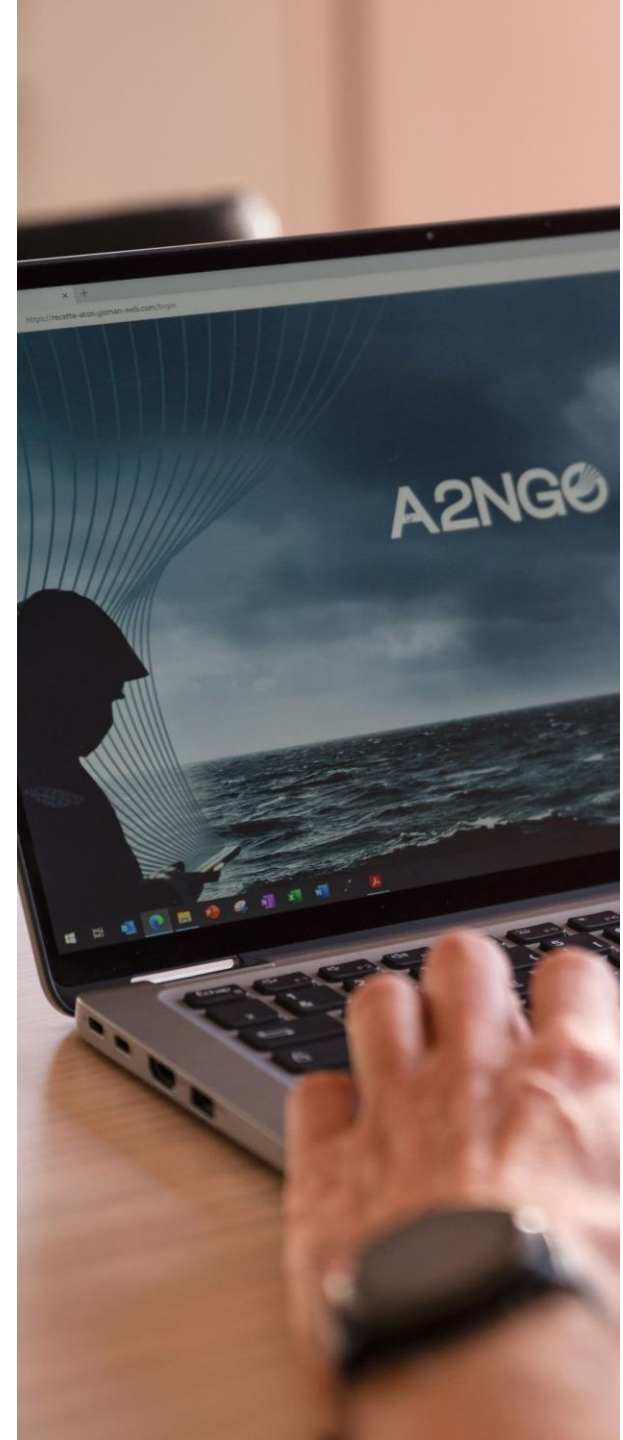
KEY FEATURES

**Plan and manage your preventive and corrective
maintenance operations**

Manage spare parts and human resources

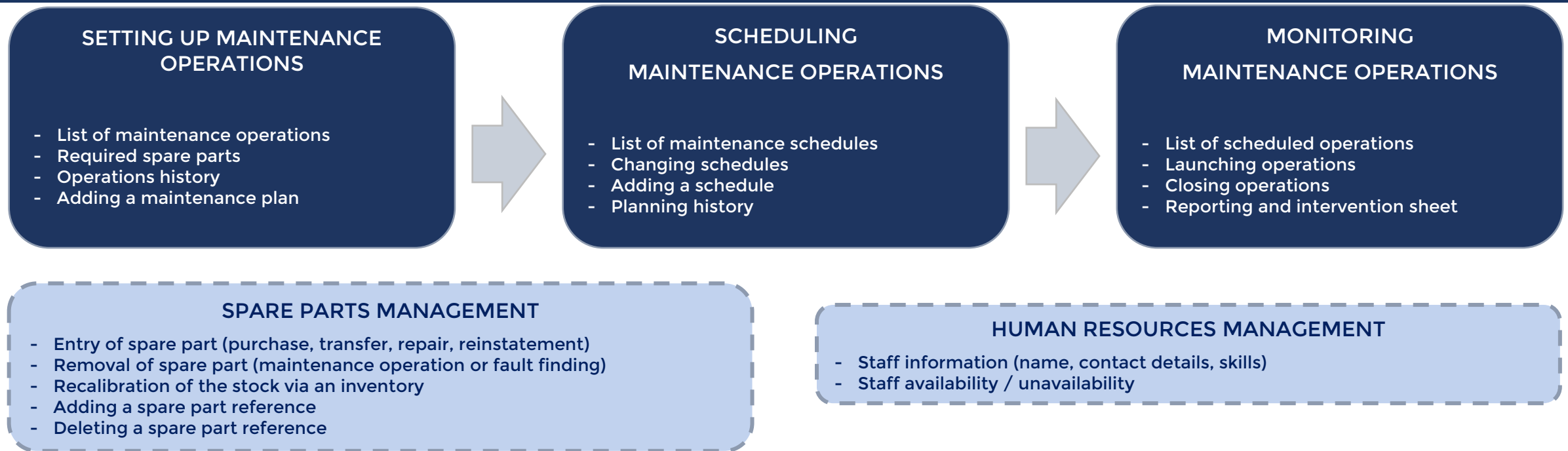
Manage maintenance for all manufacturer AtoN

**Interfaces with the Maintenance and Monitoring
application**



A2NGO MAINTENANCE

Integrated management tool





ASK FOR A DEMO



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