AUXYLIUM

GREENSPECTOR
Use Case Study

Fixed an **energy bug**

8-hour autonomy gain

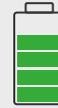**Configuration Optimization & Design**

AUXYLIUM

DGA

Partner : **AtoS**

Activity area :
TIC Solutions

Number of employees :
100 000

Date : **2016**

| RESULTS

⚡ Fixed an **energy bug**

🔋 **8-hour** autonomy gain

👥 Configuration Optimization & Design

| NEED

The DGA had to replace the individual field communications equipment of the deployed armed forces. After choosing the hardware, the DGA also had to develop and install the new native Android software related to these new needs on this hardware («hardened» tablet). ATOS was chosen as the prime contractor for this project.

This critical and demanding project in terms of mobility has been chosen to integrate the approach equipped around Greenspector. Initially, no need related to autonomy problems was identified at this stage of the project.

| METHODOLOGY

GREENSPECTOR – Android mobile domain

Realization of representative scenarios of the actual use and measurement on real material of these scenarios via the tool Greenspector. Training and accompanying team corrections: 2 days.

The test patrimony at the beginning was non-existent and was a prerequisite for the use of the tool to accurately measure consumption on actual use cases.
Initially, the automation of functional tests to **measure resource consumption** allowed **the team to become proficient**

| METHODOLOGY

in the UIAutomator tests and to concentrate on cases representative of field use.

The first energy measurements made it possible to identify an energy bug within the framework of a very consuming loop. The application was functional but heavy treatments were carried out on the network at frequencies that were too high and not grouped together. The teams immediately corrected this energy bug, which saved an hour of autonomy.

The **Greenspector** approach was initially an approach to innovation in development practices. The detection of overconsumption and the planning of the project allowed to pass a production mode in a critical situation (and therefore a stronger adhesion of the approach by the teams).

In parallel with these measurements, additional tests were carried out to **identify the cost of the settings and the design.** For example, the measurement of black or white screen designs allowed to rework the design to **improve the night time consumption.**

In a second step, ATOS was contacted by the DGA on the **strong consumption of the application on a tablet** within the fixed-mode staff. Given the upstream measurement phases, **Greenspector**, through the existing functional tests, **made it possible to measure and make the right observation.** Consumption measures on the command tablet showed **a high consumption of the base of the platform without strong impact of the application** (hardware + OS + services).

Recommendations have been made on the configuration and composition of this base without impact on the mobile application.

| DETAILED RESULTS

In the end, the gains of all the corrections led to a gain of 8 hours of autonomy based on the predominant use tests.

This **avoided the risk of rejection of the application** during the deployment phase. Configuration and design optimizations have been made on the application which also give advice during the use phase.