



SAFEST

Smart Avionics for Flight Termination System



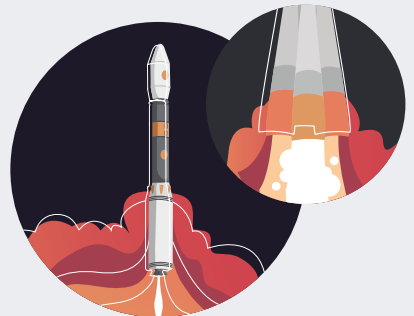
Introducing the Autonomous Flight Termination Unit

Space launchers are equipped with **safety systems** that support the ground center to track and monitor the launcher status. All these systems rely on **human intervention**.

If a **critical issue** is detected (e.g., the rocket veering off course, or an engine failure), the ground team sends a command to the launcher to initiate an **abort sequence**.

Why use AFTU

At SAFEST we have developed an **Autonomous Flight Termination Unit (AFTU)**, transferring **safety operations** from the ground to the launcher itself. **On board the vehicle**, the AFTU makes flight termination decisions by processing dedicated mission rules.



Reduction of launch costs:

- Radar stations
- Less equipment
- Neutralization antennas
- Telemetry down-link no longer critical



Improving launch capacity:

- Flexibility in launch locations
- Launch cadence increase
- Operational range increase



Elimination of human factors:

- Reaction times
- No human decision making errors



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101082662



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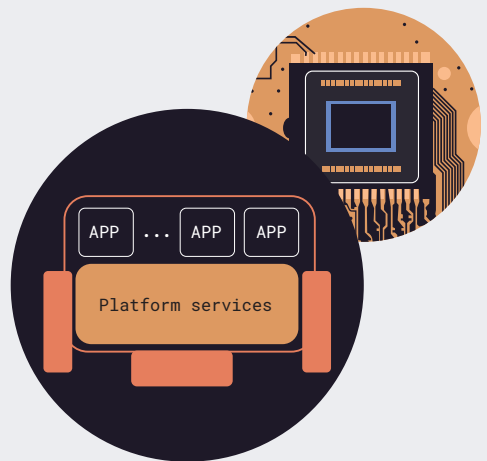
Introducing MIA, a sMART Integrated Avionics platform

In the space industry, it's been a common practice to create **new software** for nearly **every mission**. This happens because each mission often has unique requirements and custom interfaces, leading to ad hoc

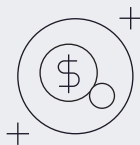
software with huge component interdependence. Unfortunately, this approach makes it challenging or even **impossible to reuse** software from one mission to the next.

Why use MIA

At SAFEST we developed a **sMART Integrated Avionics** (MIA) platform that offers a flexible solution with a layered architecture of software components. This approach makes it easier to adapt and **re-use software** items from mission to mission. The MIA platform presents a **standardized common interface** for application developers, making mission apps more portable and flexible.



Reuse software from mission to mission



Reduce the costs



Faster app development time



Rapid testing and prototyping



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