

## O&M

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### FLUIDIC

Telematic Solutions works in the Vega context, on the ground fluidic system, for 10 years.

Telematic Solutions has been one of the main protagonists of the project, starting from the design and installation phases. Then, the company's presence in the project was consolidated and strengthened, until the management of maintenance and launch campaigns was obtained.

The activity of O&M consists in the management and execution of ordinary and extraordinary maintenance operations of ground fluid systems, in order to keep it in full efficiency through preventive and corrective actions for the launch campaigns.

Telematic Solutions is responsible for developing and implementing maintenance and launch campaign plans, carrying out periodic checks, proposing and making changes and improvements.

The purpose of the ground fluidic systems (gas and liquids) is to provide the launcher with all that it needs for the preparation, lift off and flight phases:

- The on-board tank must be filled with the propellant needed for the launch, a highly dangerous combination of hydrazine and N<sub>2</sub>O<sub>4</sub>, which ensures the power required for the flight phases.

The ground systems ensure the transfer of the propellant in safety conditions, keeping it in the best status of pressure and temperature.

- Solid motors, used for the lift off thrust and the first flight phases, must be kept inert during the ground preparation phase of the launcher.

The use of helium and nitrogen gas, pressurized inside the motors thanks to sophisticated gas pressurization networks, ensures the required safety function.

- The payload inside the fairing, starting from the positioning on the launcher, must be maintained at highly controlled ventilation and temperature conditions.

The ground ventilation network, a combination of fluidic systems and multiple redundant controllers, ensure that the air introduced into the fairing creates a perfect environment for the satellite, in order to position it in orbit in the best conditions of maintenance.

### MECHANICAL





Telematic Solutions has been working in the Vega context in French Guyana for over 10 years. About of mechanical systems, TLSL is responsible for O&M activities, which consist in the management and execution of the ordinary and extraordinary maintenance of the mechanical systems, in order to keep them in full efficiency through preventive and corrective actions for the development of launch campaigns.

TLSL develops and performs the maintenance plans of all mechanical systems (travelling crane, elevating platforms, mobile gantry and mechanical systems for launcher integration), carrying out periodic checks, proposing and making changes and improvements.

Starting from VV05 (June 2015) TLSL is directly involved in the mechanical activities of the launch campaigns which consist of:

- Integration of the 3 solid propellant engines and the liquid propellant 4th stage. The ground systems ensure the correct integration and access of the operators to the engines for the preparation and verification phases.
- Preparation of the MGSE for the positioning of the payload inside the fairing and positioning it on the launcher.
- Installation of the satellite ventilation network.
- Preparation of the launch pad with movement of the 1300 ton mobile gantry.

## ENERGY

With the skills acquired during renewal projects of the launch base called Centre Spatial Guyanais, Telematic Solutions has signed new maintenance contracts with its customer REGULUS.

Every day, we take part in planning and realization of preventive and corrective maintenance actions, on the energy distribution systems on the UPG site.



## SAFETY - SECURITY & LOW CURRENT SYSTEM



Telematic Solutions has the technical and managerial skills to ensure advanced maintenance services for security systems of persons, goods, property and environment.

Withdrawal and fire detection system are maintained using a method based on APSAD certification.

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