

SAFRAN ENGINEERING SERVICES AND ARIANEGROUP

ARIANE 5 AND 6

AREAS OF EXPERTISE AND KEY SKILLS:

MECHANICAL:

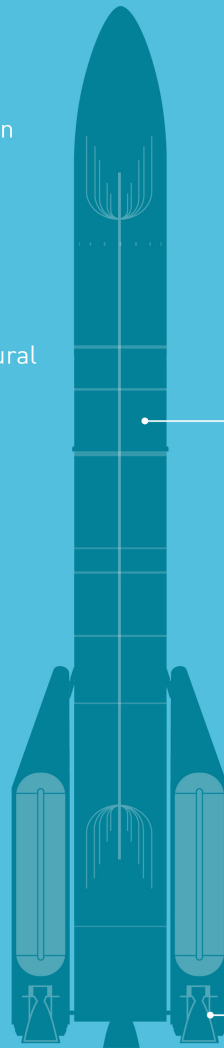
- Definition: modeling, computer-aided design (CAD) and design analysis
- Design: implementation of the evidence documentary database, series monitoring, flight and test operation
- Mechanical, thermal, thermomechanical and aerodynamic calculations
- Development of elastomeric, thermostructural materials
- Dynamic calculations, service life, fatigue, propagation of cracks
- Two-phase calculations
- Engine performance calculations

ELECTRICAL:

- Electrical architecture
- Electrical definition (wiring diagrams, functional diagrams, summary plans, etc.)
- Overhaul of electrical harnesses

METHODS:

- Creation / modification of manufacturing and inspection ranges
- Field audits
- Recommendations for improvements
- Lean projects
- Involvement in qualifying special processes
- Industrial validation file
- Selection and deployment of connected tools



SOFTWARE:

SPACE SECURITY:

- Image processing
- Satellite tracking
- Command-control system (Python language)
- Preventive maintenance
- Database specification
- IT development (Java 8, JavaFx, Python)

ARIANE 6:

- Equipment test (rocket stages, powering up of various systems, electrovalves, etc.)
- Creation of functional blocks with Proview (open source)

ON EQUIPMENT:



Electrical harnesses



Nozzle tip and solid and liquid propulsion



Nozzle tips of civilian and military engines (from production of composite materials to final assembly of nozzle tip)



High and low-pressure lines and turbo pumps

**MORE THAN 30 EMPLOYEES
OF SAFRAN ENGINEERING SERVICES
IN FRANCE & GERMANY WORKING ON THESE PROGRAMS**

FRANCE:

NORMANDIE
Vernon

ÎLE DE FRANCE
Les Mureaux

NOUVELLE AQUITAINE
Bordeaux Le Haillan
Saint Médard en Jalles

OCCITANIE
Toulouse Blagnac

GERMANY:
Hamburg