



# Shape Quality Leadership

**Industry:** Aerospace & Space Exploration

### Situation:

The James Webb Space Telescope (JWST) programme was initiated to answer fundamental scientific questions regarding the origin, structure, and evolution of the universe. As part of this mission, the European Space Agency (ESA) and NASA commissioned a European consortium of 26 scientific institutions across 10 countries to develop and deliver the Mid Infra-Red Instrument (MIRI).

Within this highly complex international environment, technical excellence alone was insufficient. The programme required strong leadership capable of aligning diverse scientific, engineering and operational cultures under extreme quality and reliability expectations.

### Challenge:

The programme operated within an exceptionally demanding environment characterised by:

- International collaboration across multiple organisations and cultures
- Highly complex technological and scientific requirements
- Extreme operational conditions for space applications
- Zero-tolerance expectations regarding quality and reliability

As European Consortium Product Assurance Manager responsibility included leading the quality assurance strategy for MIRI while providing guidance and alignment across the entire European consortium.

The challenge was not only technical — it required leadership capable of creating trust, collaboration, accountability, and operational alignment across scientific and engineering communities with different priorities, cultures, and working approaches.

### Actions:

- Led the international quality assurance strategy for the MIRI programme within the JWST mission
- Advised the Principal Investigator and consortium partners on strategic quality and operational risk management
- Created alignment between technical requirements, operational realities, and programme objectives
- Strengthened communication and decision-making structures across the institutions
- Supported the validation and qualification of innovative materials and technologies for extreme space conditions
- Embedded a culture of transparency, and collaborative problem-solving

### Results:

- ✓ Successful delivery of all quality-related programme requirements
- ✓ Effective coordination and alignment across a complex international consortium
- ✓ Reliable failure management and validation of technologies designed to operate under extreme space conditions
- ✓ Contribution to one of the most significant scientific programmes of modern space exploration