

# ATG Europe Company background



# FACTS & FIGURES<sup>(\*)</sup>

**SPACE  
HIGH-TECH  
BIG SCIENCE  
DEFENCE**

**40+** YEARS IN BUSINESS



**430+** STAFF



**€ 6,5 M** EBITDA



**€65 M** NET SALES



(\*) 2024

# OUR INTERNATIONAL PROFILE



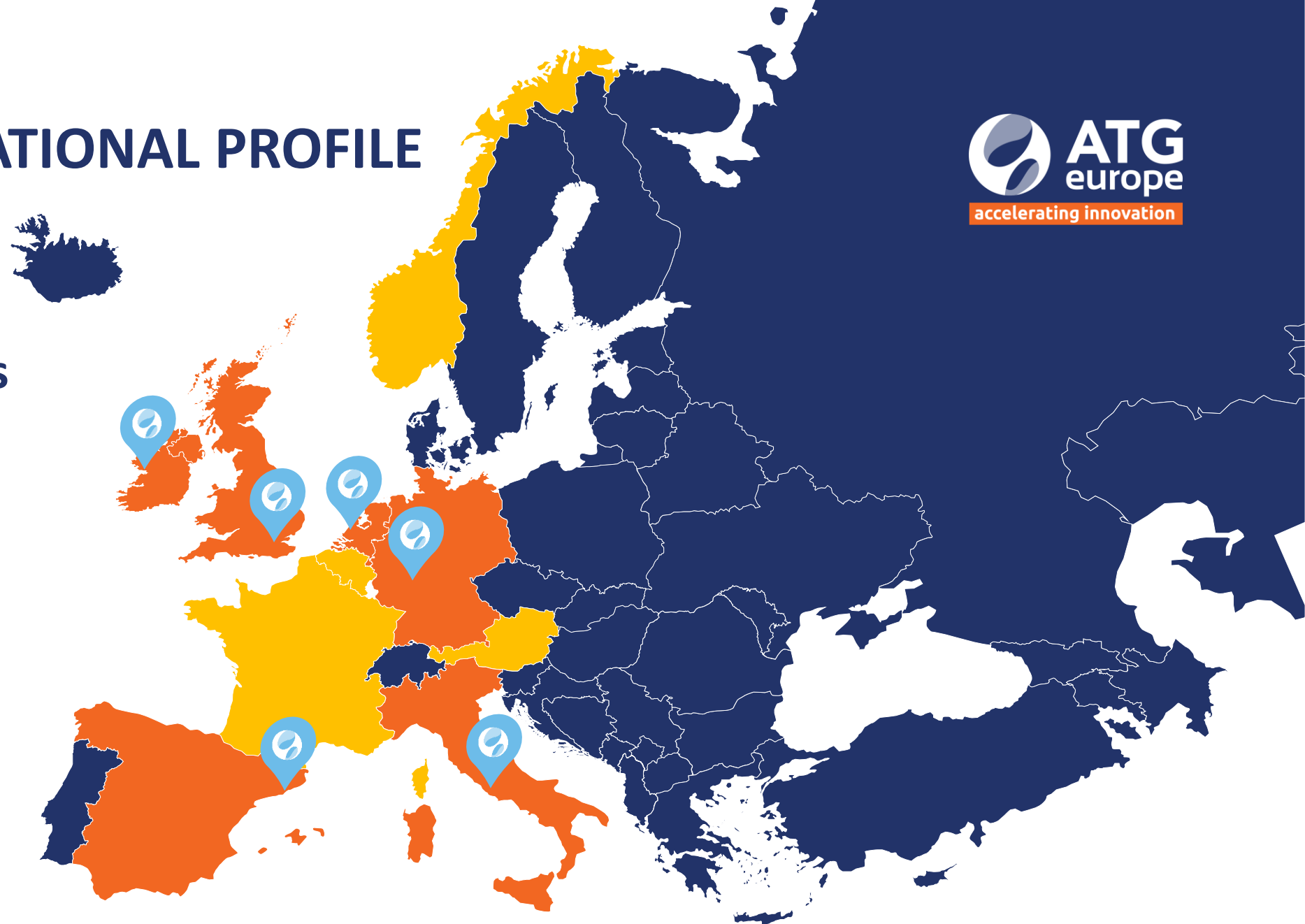
**38 nationalities**

**10 Countries**

**19 Locations**

**6 Companies**

- NL
- DE
- IR
- IT
- ES
- UK



# OUR BUSINESS LINES & KEY COMPETENCES

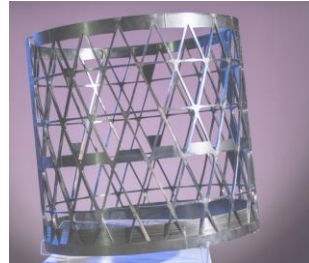
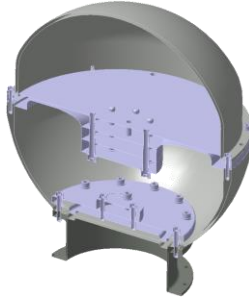
**Professional  
Consultancy**



**IT  
Services**



**ATG Engineering**



**Loan  
Employment**

**Consulting  
Services**

**Managed  
Services**

**EngineeringLab**  
Product  
Development  
-  
Engineering &  
Review services

**CompositesLab**  
Lightweight,  
cost-effective  
composite  
structures;  
ATG-patented

**VirtualLab**  
Engineering and  
Communication  
tools, based on  
VR & AR  
technology

**MediaLab**  
Stunning  
2D & 3D  
visualisations;  
stills & movies

On-Site at customer premises

From ATG premises, or on-site at customer

# CONSULTANCY SERVICES – SPACE ENGINEERING

## SPACE SEGMENT

- Thermal and Mechanical Engineering & Testing
- Environmental Test Engineering & Operations
- AIT and AIV
- Payload engineering and performance
- Product and Quality Assurance
- EEE Components Engineering
- Launch Commissioning & Post Launch support
- System engineering
- EMC/RF Engineering
- Propulsion Test Engineering
- Parts, Material and Processes
- On-Board SW Engineering & Development

## GROUND SEGMENT

- Ground Software Engineering
- GSE Procurement and Development
- Ground Segment Design & Development
- Payload Data Ground Segment Definition & IVV
- Payload Data Simulators
- Payload Data Processing

## IT & PROJECT SUPPORT

- IT & Network Services
- Project Management
- Project Management support
- Scheduling
- Project Controlling
- Communication
- Documentalist
- Business Intelligence

# TECHNICAL REVIEWS

## End-to-end tailored technical reviews

- Covering subsystems, systems, projects, programs (single components, instruments, spacecrafts, constellations).
- According to applicable standards (ECSS, CCSDS, ISO, etc.) and space industry's best practices.
- Tailoring based on stakeholders' inputs (business case, project phase, etc.).
- Fully (vendor/LSI) independent company (same applies to network of partner companies).
- 40+ years of engineering consultancy to ESA and other space industry.
- Full protection for customers' data (Secret level security cleared facility, dedicated IT infrastructure).

## Highly experienced and skilled review teams

EngineeringLab combines its Systems Engineering, Thermal, Structural and Thermo-Elastic core competences with the broader ATG workforce of 200+ engineers and specialists covering almost each technical domain; providing omni-disciplinary Reviews covering entire Missions and Spacecraft

- Efficient collaboration with staff across all ATG Business Units
- Network of senior and highly experienced space programs and project managers (ex-agencies and industry senior managers).
- Extensive network of partner companies for specific additional expertise.

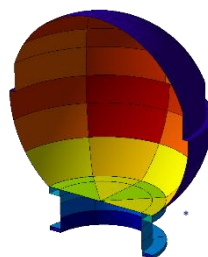


# SPACE ENGINEERING PORTFOLIO

## Thermal design, analysis, testing and realisation

(using ESATAN-TMS, custom in-house tools)

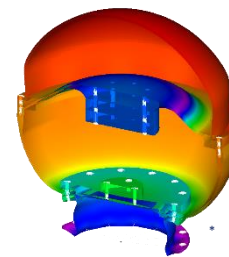
- Satellite bus, payload and components
- Coating, Heater, Radiator and MLI design
- Full lifetime / orbital analysis and optimisation
- Model reduction, model correlation
- Thermal hardware specification, drawing, procurement and inspection
- Thermal Balance / Cycling test execution or support



## Structural design, analysis, testing and realisation

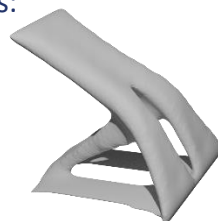
(using FEMAP+ (Msc or NX) Nastran, VA-One, SINAS, custom in-house tools )

- Static & Dynamic loads (Sine, Random, Vibro-Acoustics)
- Buckling & modal assessment and optimisation
- Thermo-elastic + enforced displacements
- Bolted joint modelling, analysis & optimisation
- Model reduction , model correlation
- CAD design, GD&T, manufacturing drawing, manufacturing and inspection management
- Structural test support, evaluation (static and dynamic)



## Multi-disciplinary Design Optimisation

- Design for performance & MAIT for multiple drivers: **Structural, Thermal and Thermo-Elastic**
- Human/manual design and optimisation competence from **decades of experience**
- As well as formal computational **topology, shape and size optimisation**
- Expert design and optimisation of **(payload) structures, flexures, radiators, thermal control products, unit boxes** etc



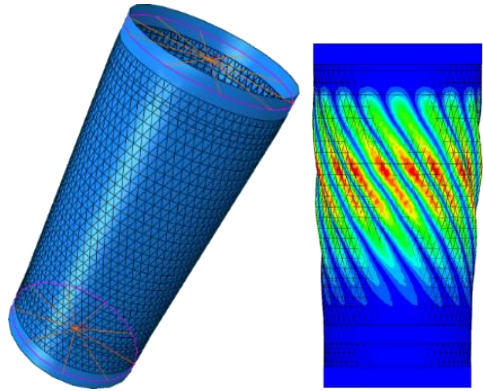
## System Engineering on S/C & P/L products, & Omni-disciplinary Satellite / Mission Reviews

- Overall Design, Development and Verification Planning
- Requirements definition, analysis & optimisation
- Margin philosophy establishment
- Model philosophy establishment
- Verification method trade-off (analysis, testing)
- ECSS compliant reporting
- Milestone review execution / support

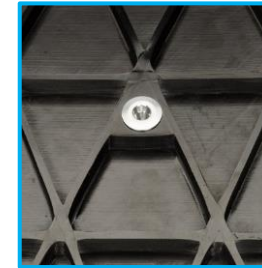


\* The Tank STM design shown in this image was developed under a programme of and funded by the European Space Agency. The view expressed herein can in no way be taken to reflect the official opinion of the European Space Agency.

# ATG COMPOSITE TECHNOLOGY



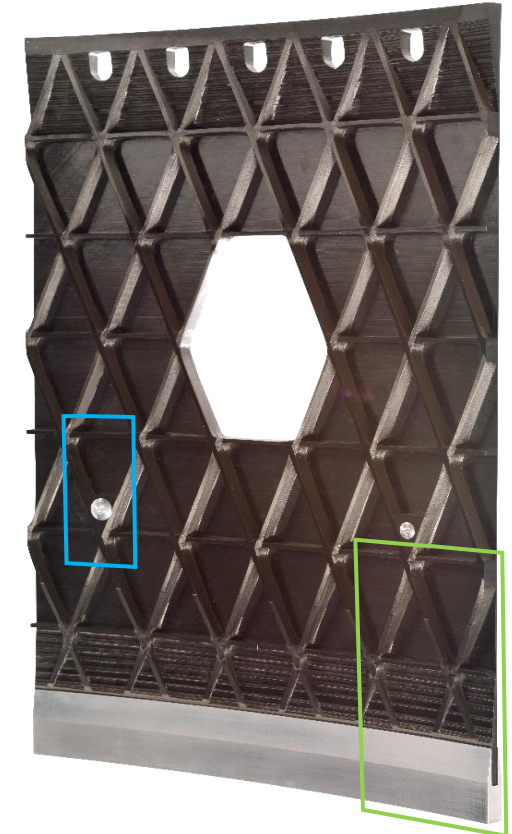
ATG Europe Grid-Stiffened Cylindrical Demonstrator, 2018



On-node in-panel attachment



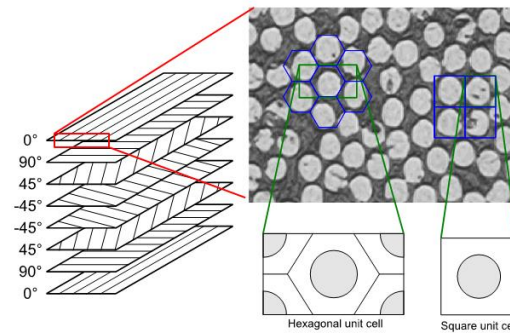
End-of-panel composite/metallic interface attachment



ATG Europe Grid-Stiffened Demonstrator Panel, 2015



Subset of test specimens proven for strength and stiffness



# BACKGROUND AND CHARACTERISTICS



ATG's proprietary and patented technology has been designed to achieve higher performances and reduced cost of manufacturing compared to competing technologies for specific applications.



- Reduction of between 20% and 60% of mass, and beyond for specific applications
- Pre-preg material with uninterrupted fibres at the nodes (~60% volume fraction)

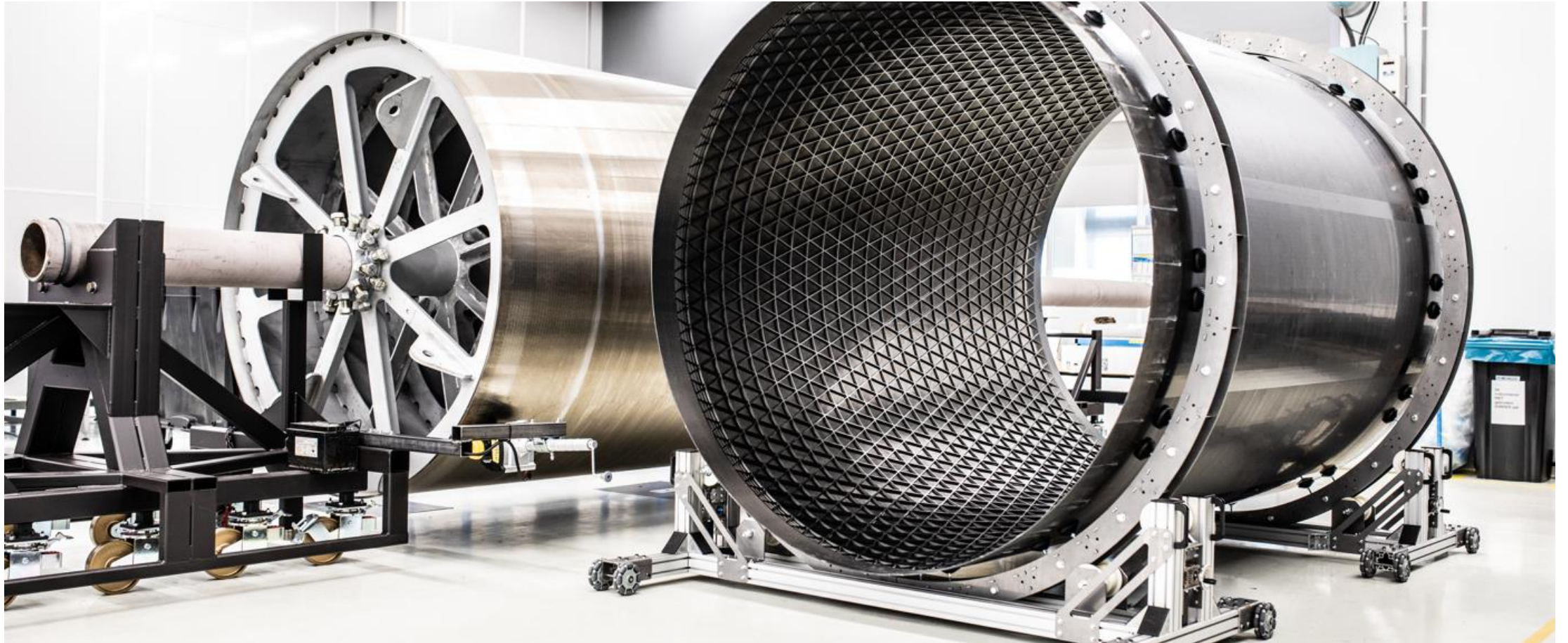


- One-shot manufacturing process: all features are integrated in one go, no need for subsequent manufacturing steps.
- Possibility to reposition attachment points up to days prior to manufacturing, without the need for an extensive manufacturing preparation cycle



- Reduction of up to 30% of manufacturing costs if smartly manufactured

# LATEST DEVELOPMENTS (IN PICTURES)



# VIRTUAL & AUGMENTED REALITY ENGINEERING



- VR Education
- VR Engineering design support
- VR test results visualization
- VR walkthroughs

# ATG MEDIALAB



- More than 20 years' experience in scientific and technological visualisation
- A dedicated team of highly skilled communication content specialists with broad expertise
- Thorough understanding of technical requirements of complex objects
- Use of high-end 3D rendering software and high-performance server cluster
- Long-term work/trust relationships with ESA/ESTEC, ASML and all space LSI

# CONTACT US

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