



Challenges to aviation and candidate propulsion solutions

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GKN Aerospace in Numbers

















Our Global Footprint

GKN Aerospace is the world's leading tier one aerospace supplier of systems and components



12 Countries > 32 Sites > One Global Team



Our Unifying Mission:

To be the most Trusted and Sustainable Partner in the Sky





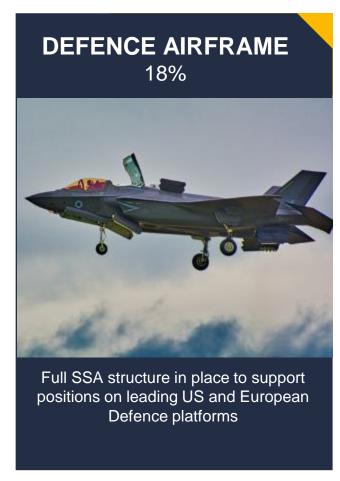
A Focused Business with Three Core Markets

CIVIL AIRFRAME 40% Tier 1 expertise across fuselage, empennage and wing. Lightweight composite and metallic structures,

electrical distribution systems,

transparencies, components.

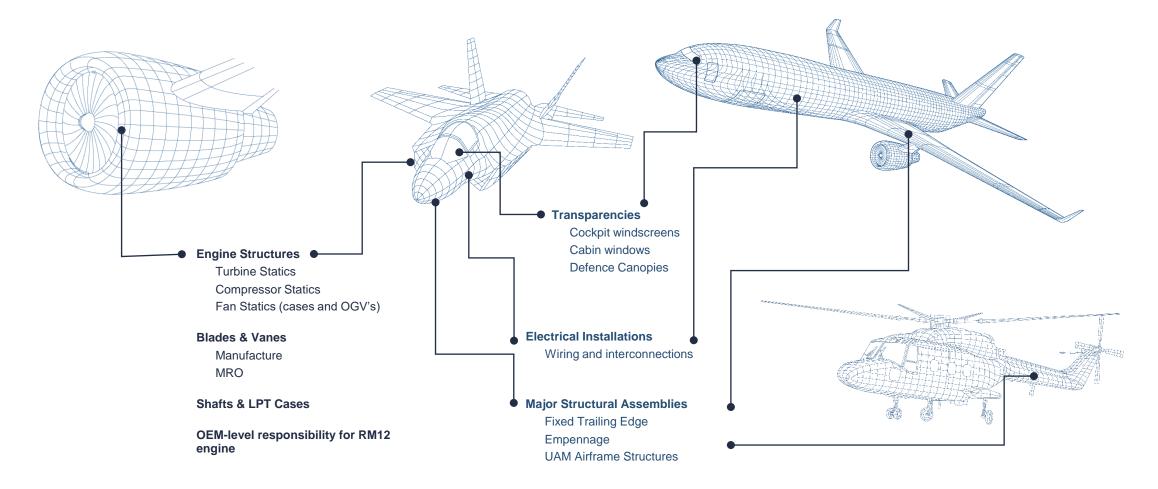




All percentages relate to total company sales at end 2024



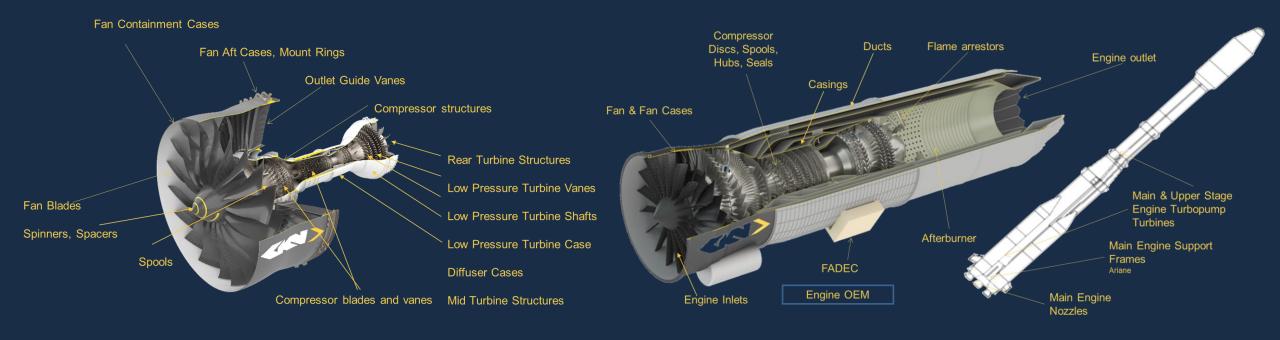
Our Core Technologies





Our Engine products

on 90% of all commercial aircrafts OEM on GRIPEN – RM12 Engine Center of excellence for ARIANE 6





Challenges



Competitiveness

Safety

Environmental Sustainability







Functionality

Challenges to Aerospace

Security of supply



Value chain





Competence

Agility





Safety











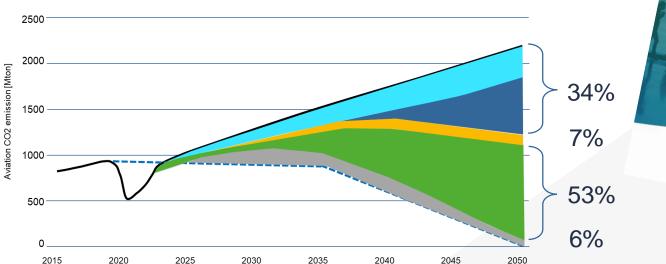




Road to climate neutrality 2050

Multiple solution need to contribute to reach the target of "Net Zero"

> ATAG CO₂ Roadmap, 3.1% CAGR









Latest generation **Products**

Fleet replacement could yield 20-30% CO₂ savings



Disruptive **Technologies**

New engine cycles and novel architectures



ATM and Infrastructure

Operational optimization, flight trajectories and flight formation



Sustainable aviation fuel

SAF can reduce emissions By up to 80% on average during its ful lifecycle

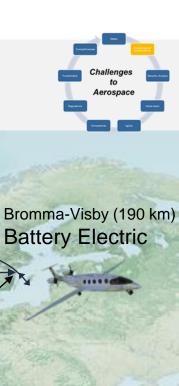


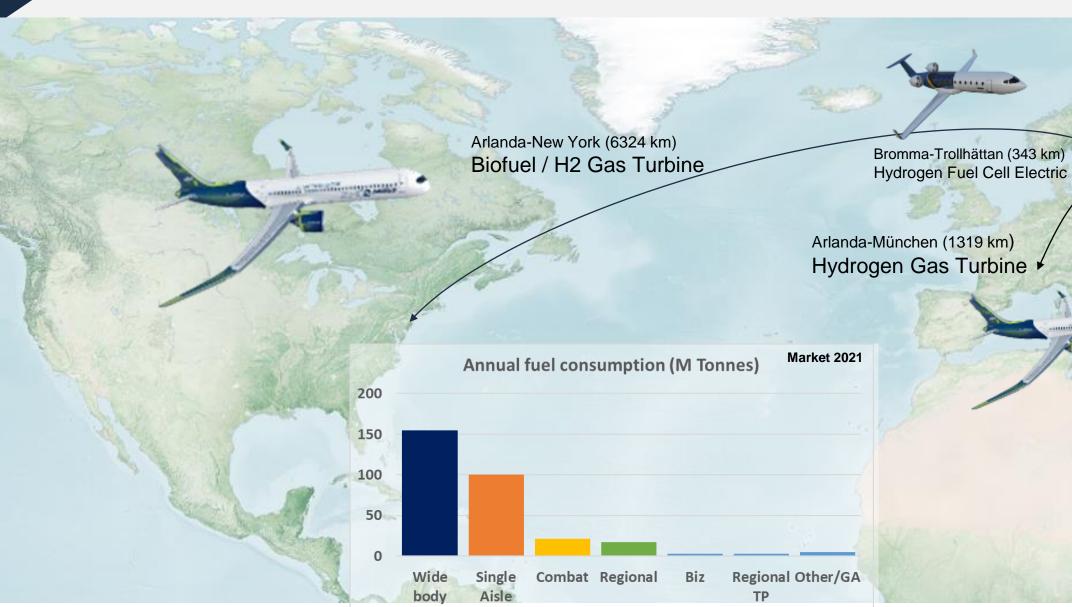
Market-based Measures

Regulatory measures: EU ETS / CORSIA Voluntary measures



Fossil-free aviation in 2050 – one scenario







Securing of supply



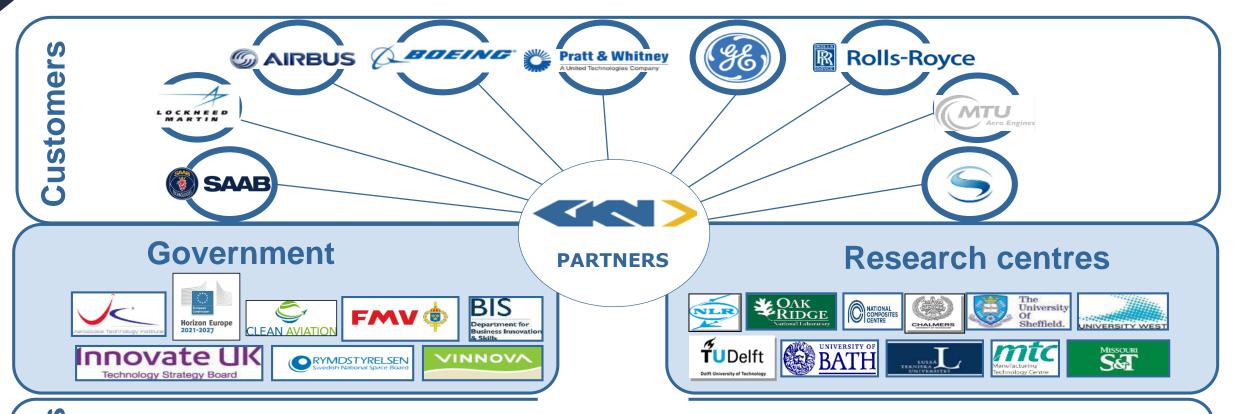


Super Alloys	Casting	Fabrication
Titanium		
Close die	Forging	
Rings		
System	Directed Energy Deposition	
Wire		
System	Laser Powder Bed Fusion	
Powder		



Value Chain





Partners

- 400+ of suppliers for different hard and soft products, material, services and competences
- SME's as well as multi billion \$ companies
- Many times a customer becomes a supplier but in different programs





Agility and inspiring next generation

RM - Alpha
New employees
Experienced mentoring

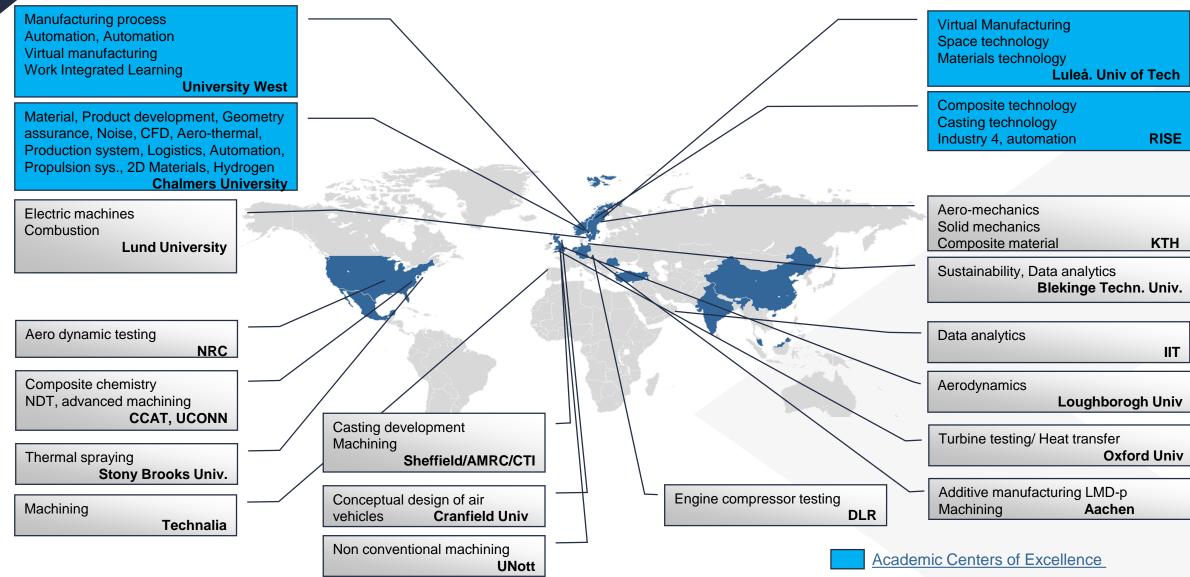
Chalmers
Luleå University of Technology
Linköping University





Competence through our ECO System







Regulation





















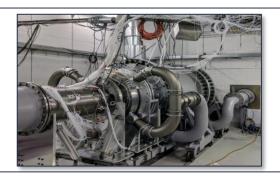
Global Technology Centre





Full scale testing



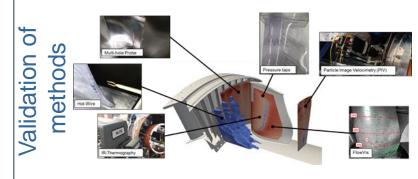


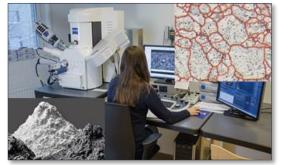
Collaboration

Innovation

PhD projects

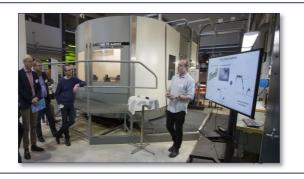
External funding





Advanced manufacturing







Notional Engines

Heat exchangers

Electrification

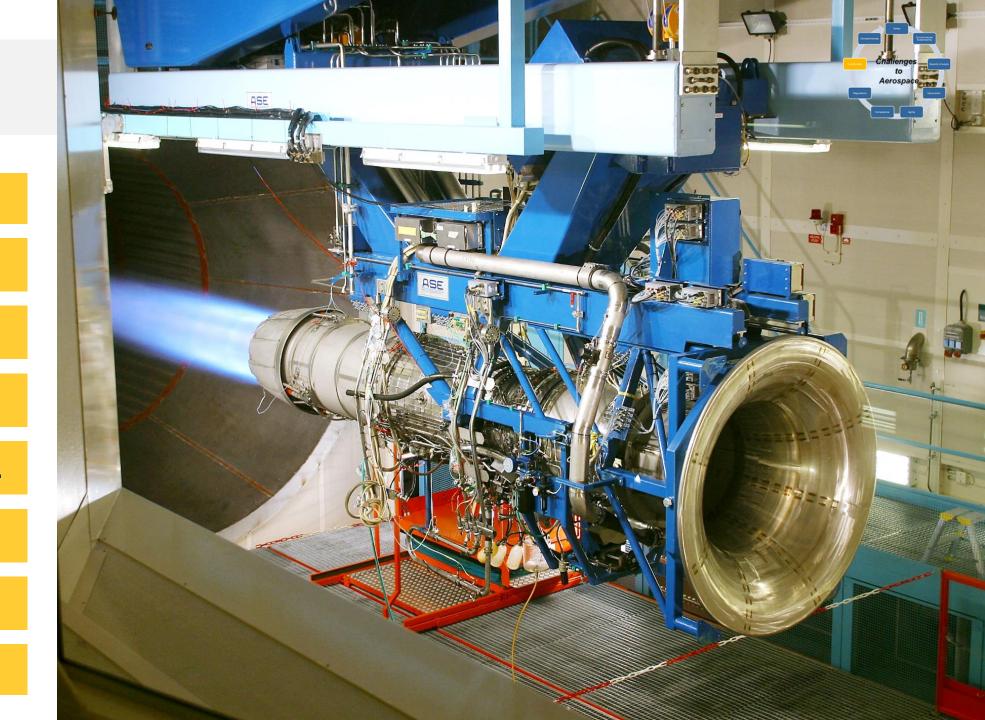
Light Weight

Temperature cap.

Digital threads

Life Tracking

Engine testing





Clean Sky 2 and beyond

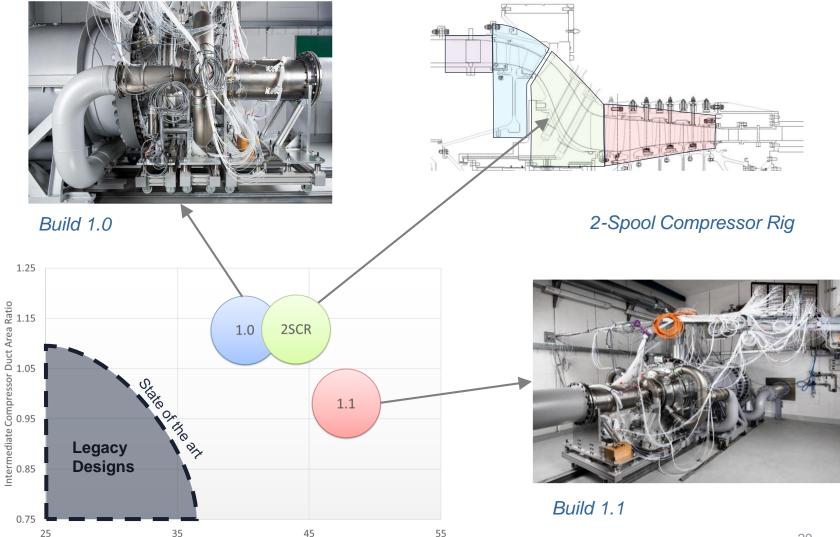


"Pushing the design space for intermediate compressor ducts"









Intermediate Compressor Duct Average Slope



The 2-Spool Compressor Rig (2SCR)



DLR – MTU – GKN test rig control room team









Current Demonstrators

Key Drivers

- Time on wing (Mature technology)
- -20% Fuel consumption (from engines)
 - Bigger fans
 - More electric
 - More cooling
 - Electro fuel (SAF)
 - Light weight design and material
- Engineering efficiency
- Digital thread







First reusable European space rocket to be tested in Kiruna - using engine components from Trollhättan Sweden







Next generation Commercial aircrafts

New engine concepts New engine to wing integration

GKN Aerospace is developing solutions to meet

- New functional requirement
- New legislation
- Lower fuel consumption
- Lower weight
- Less Noise
- Electric integration
- Heat management solutions







Next generation air domain solutions

More Electric Engine

Cooling: Engine Integrated Heat exchangers

Engine Controls

Advanced Engine Cycles

Low Observability

Thrust vectoring

New Manufacturing Processes

Next Gen-Materials

Engine size, volymes and cost

