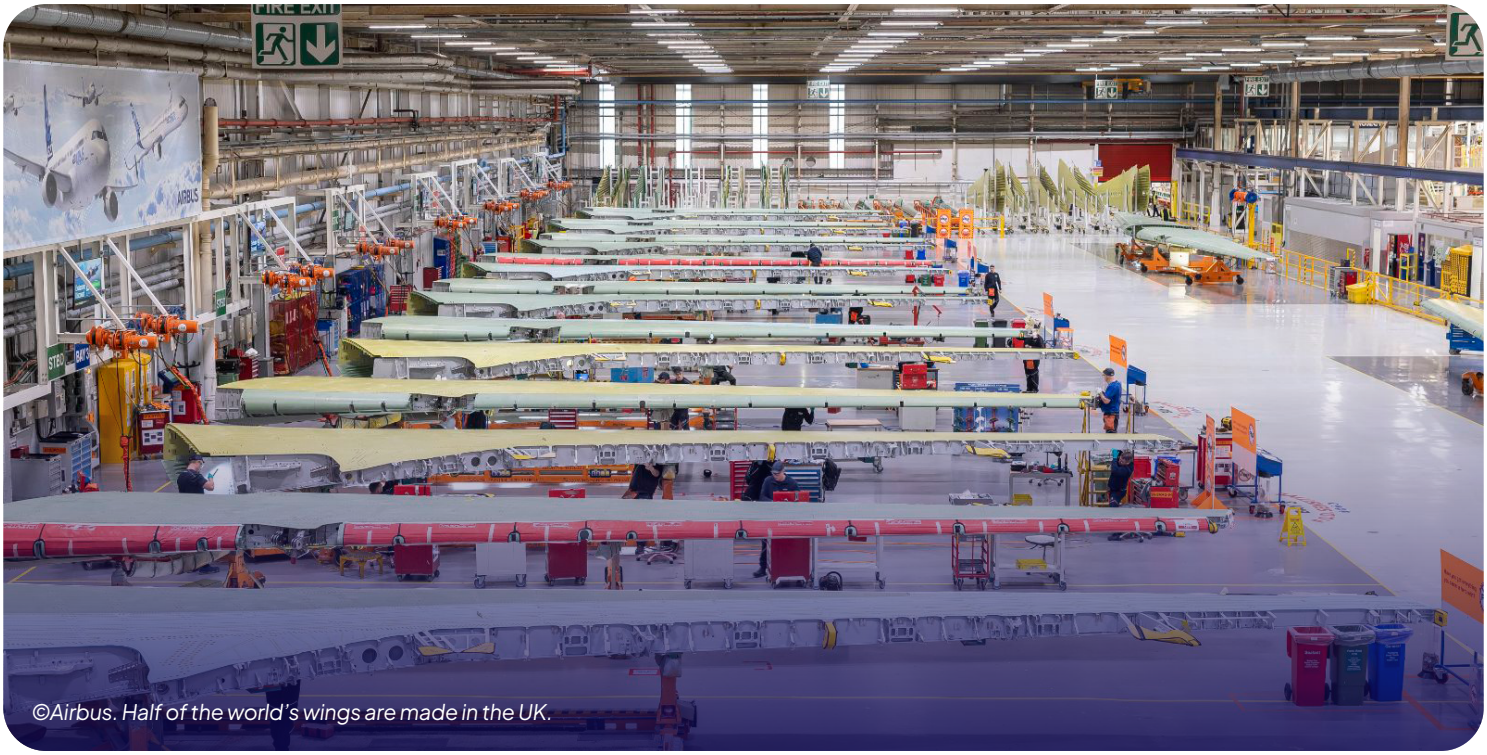
AEROSPACE TECHNOLOGY INSTITUTE

Market Spotlight:

SCALING ASSEMBLY AT RATE

November 2026



©Airbus. Half of the world's wings are made in the UK.

EXECUTIVE SUMMARY

- The global market for assembly is forecast to grow from **$37 billion in 2025** to **$65 billion by 2035**. The market estimate includes aircraft, aerostructure, propulsion and subsystem integration activities identified within the ATI market model.
- The UK has existing strengths in the assembly market. This represents a significant growth opportunity for UK aerospace worth **$8.65 billion by 2050**, over 21% of the *Engineering Growth* ambition.
- To achieve this growth, the UK must develop scalable, integrated and digitally connected assembly systems that deliver future aircraft at the required rate, quality and cost.
- **The five priorities for action and investment are:** demonstrating readiness; building systems integration capability; embedding design for assembly and automation; accelerating collaboration; and enabling digitally connected assembly systems.
- The ATI will drive action through a UK Assembly Plan that aligns industry, government and the research community around investment, capability development and programmes that secure future UK manufacturing workshare.

INTRODUCTION

The Aerospace Technology Institute's (ATI) UK aerospace technology strategy, *Engineering Growth*, identifies assembly as an important opportunity within its ambition to double the value of the UK aerospace sector by 2035 and grow it more than fourfold by 2050.

The UK has an established assembly base across wings, engines, landing gear and aircraft seating, supporting high-value jobs and anchoring important manufacturing capability. These strengths provide a strong foundation, but securing work on next generation aircraft programmes will require the UK to develop competitive, high-rate assembly capability.

Future workshare is not guaranteed. Rival countries are investing in aerospace and their capabilities in assembly are strengthening the competition and increasing the urgency for UK action and investment.

To compete globally, the UK needs scalable, integrated and digitally connected systems that can deliver consistently at the required rate, quality and cost.

Closing this gap will require more than installing automated equipment. Future aircraft must be designed for assembly and automation from the outset, supported by affordable, robust technologies and coordinated change across design, manufacturing and the supply chain.

This Market Spotlight sets out the capabilities and action needed to accelerate adoption, strengthen the UK supply chain and secure a competitive position in the future assembly market.

THE IMPORTANCE OF ASSEMBLY

Assembly spans the full aircraft production process, from fitting individual parts to integrating major components such as wings, engines and landing gear into a complete aircraft. Delivering aircraft reliably at higher production rates depends on accurate, repeatable processes and the timely supply of components.

Assembly is therefore both a high-value activity, accounting for up to 35% of the cost of producing an aircraft, and a strategically important capability with significant technical and industrial barriers to entry.

The production rates required for next generation single-aisle aircraft (NGSA) programmes will exceed what legacy, manually intensive assembly processes can deliver economically. Advanced assembly technologies will therefore need to be integrated and proven at scale well before these programmes enter production. This need for higher-rate, more efficient production is driving the market opportunity for advanced assembly capabilities across the supply chain.

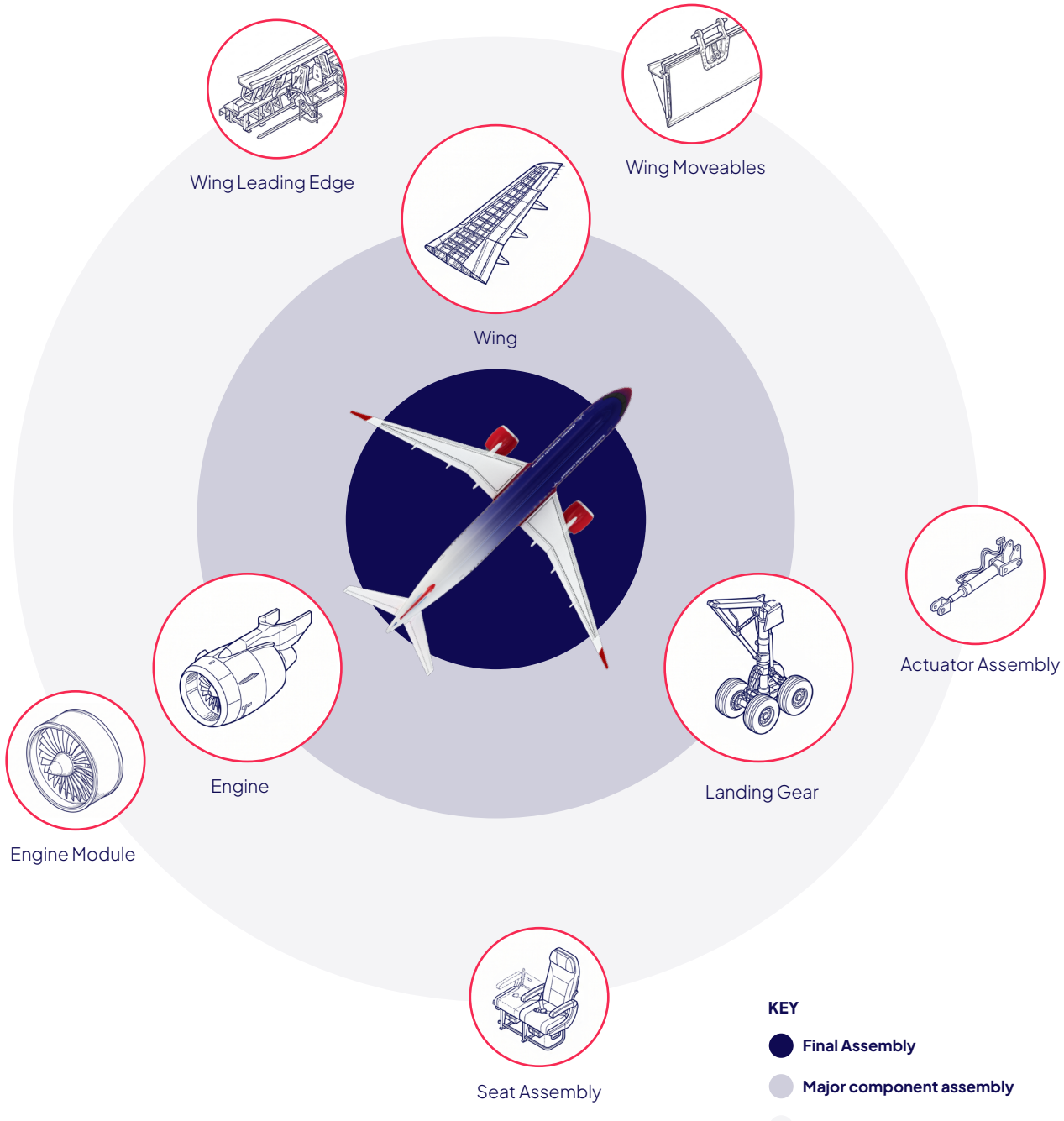


Figure 1: Assembly hierarchy of an aircraft

THE MARKET OPPORTUNITY

The global aerospace assembly market was valued at **$37 billion in 2025** and is forecast to reach **$65 billion by 2035**.

This growth creates a substantial opportunity not only for aircraft and major component manufacturers, but for organisations across the supply chain with the capability to deliver future aircraft at the required rate, quality and cost. While structures and propulsion often attract the headlines, the UK has significant capability across the assembly and integration of fuel, pneumatic, electrical, hydraulic, heat exchanger and cabin systems, creating further opportunities as production rates increase.

The ATI estimates that the addressable UK assembly market for future ultra-efficient platforms could grow to **$4.75 billion by 2035** and **$8.65 billion by 2050**. This represents over **21% of the potential 2050** UK sector value set out in *Engineering Growth*. Realising this opportunity will depend on the UK competing successfully for wing and engine assembly on the next generation of aircraft and developing the supply chain capability needed to support those positions.

This market is currently dominated by Western European, North American and Japanese companies, strongly aligned with the traditional supply chains of both Airbus and Boeing. Smaller, lower-value and more labour-intensive assembly lines have also been established in countries with lower manufacturing labour costs, including India and Malaysia.

Recent aircraft programmes have attracted hundreds of millions, and in some cases billions, of dollars in non-recurring capital investment. Significant investment in China, South Korea and Turkey highlights the increasing global competition for future assembly opportunities and underlines the importance of continued innovation and investment in the UK.



©Rolls-Royce. UltraFan technologies are being developed to power future single-aisle and widebody aircraft.

MAJOR ASSEMBLY IN THE UK

The UK has established strengths in major assemblies of significance for large commercial aircraft. The aerospace sector assembles almost all commercial Airbus wings in Broughton and Belfast, large commercial engines for widebody aircraft at Rolls-Royce in Derby, and landing gear for single-aisle and widebody aircraft at Safran Landing Systems in Gloucester.



Prestwick Aerosystems, Prestwick
A320neo Wing Leading & Trailing Edges, A350XWB Wing Fixed Leading Edge

Airbus, Belfast
A220 Wing Assembly, A220 Mid Fuselage Assembly

Short Brothers, Belfast
Bombardier Challenger & Global Express Fuselage and Horizontal Tailplane Assembly

Collins Aerospace, Kilkeel
Premium-economy & Economy Seating Assembly

Safran Seats, Wales
Premium & First Class Seating Assembly

Airbus, Broughton
A320neo, A330neo & A350 Wing Assembly

Rolls-Royce, Derby
Assembly of Trent 1000, Trent XWB, Trent 7000 Engines

Safran Landing Systems, Gloucester
A320neo, A330neo & A350XWB Landing Gear Assembly

GKN Aerospace, Bristol
A350XWB Wing Fixed Trailing Edge

For the UK, the opportunity is to translate its existing strengths into future manufacturing workshare, high-value jobs and long-term industrial capability.

THE CAPABILITY GAP

Securing future manufacturing workshare will require coordinated investment across the aerospace manufacturing ecosystem. The UK supply chain must be able to integrate, deploy and support advanced industrial systems, including automation equipment, tooling, robotics, metrology systems, software platforms and digital manufacturing infrastructure. This creates the need for facilities that demonstrate readiness before technologies enter production and the need for an integrated supply chain capable of delivering complete assembly systems.

Establishing these next-generation systems is expected to require many billions of dollars of investment and will create opportunities beyond the assembly of aircraft components. These opportunities will span systems integration, equipment provision, maintenance, upgrades, consumables and workforce development.

Countries and companies that develop and deploy these capabilities successfully will be better positioned to secure production of future aircraft and the associated long-term economic value.

As levels of automation increase, the sector will need to develop new skills in digital manufacturing and systems integration, while retaining the engineering expertise, analytical thinking and problem-solving capabilities that underpin aircraft production. The challenge extends beyond installing more automated equipment. Scaling assembly will require coordinated change across aircraft design, measurement, fixturing, upstream component manufacturing and supply chain operations. Companies will also need to adopt new business practices and ways of working, supporting a more productive and highly skilled workforce.

ADDRESSING THE GAP

Engineering Growth identifies assembly as a priority area for UK aerospace growth. Since 2014, government and industry have invested more than £300 million through the ATI Programme in assembly technologies and manufacturing capabilities, including over £172 million in grant funding.

However, realising the economic opportunities associated with forthcoming NGSA programmes, including growth, high-value jobs and more sustainable aviation, will require this investment to be supported by a strategic approach that strengthens capability across the UK aerospace manufacturing supply chain.

The market analysis highlights the capability gaps the UK must close to compete for future assembly work. These findings are reinforced by the ATI's 2025/26 consultation with 23 organisations and more than 70 individuals across aerospace manufacturers at all tiers, industrial integrators and academia.

Together, the analysis and consultation point to five priorities for coordinated industry action:

1. **Demonstrating readiness**
   De-risk the assembly of critical products through pilot lines and pre-production facilities.

2. **Systems integration**
   Create a UK integrated supply chain capable of designing, delivering and supporting complete assembly systems.

3. **Automation capability**
   Embed design-for-assembly and automation principles in future aircraft and manufacturing-system development.

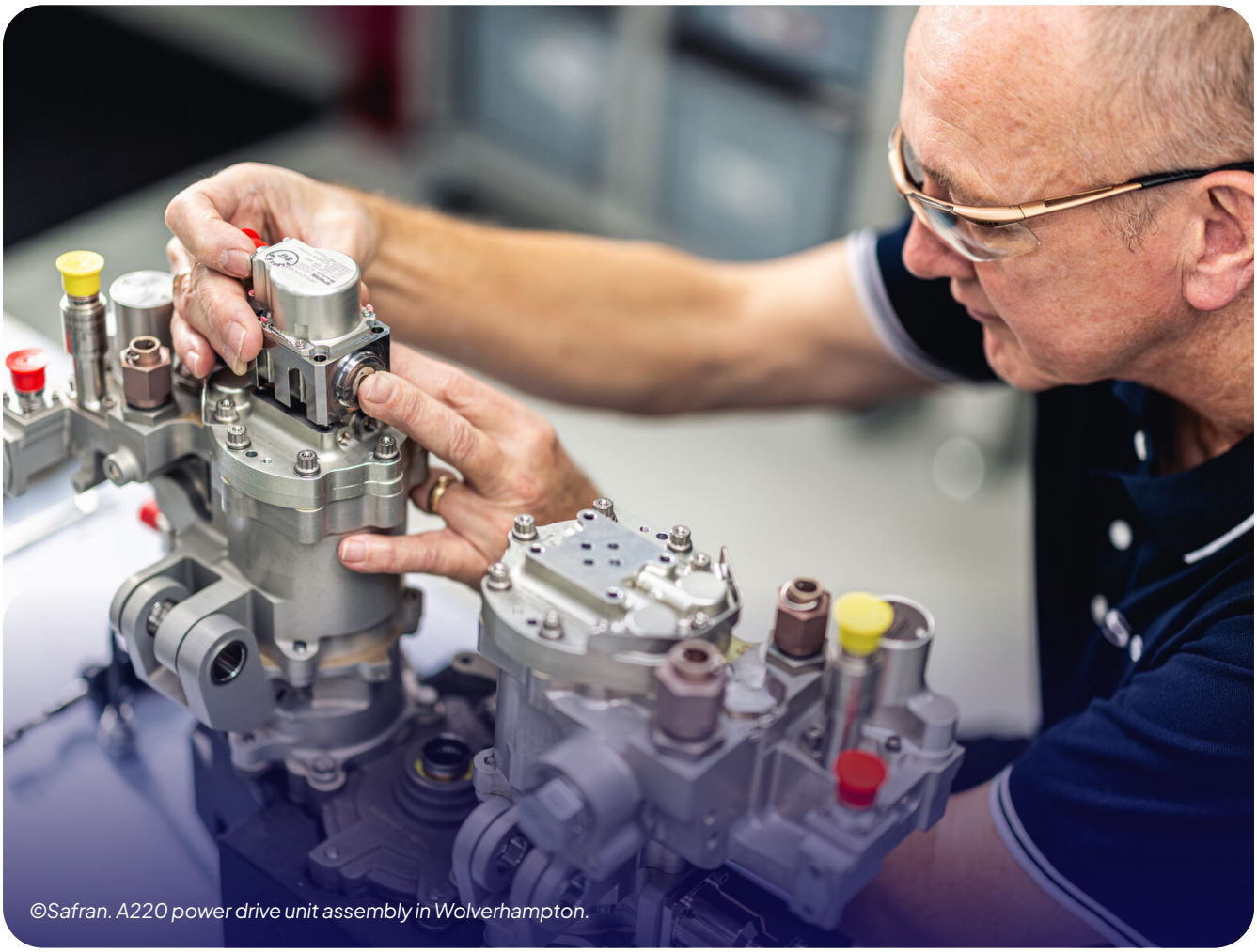
4. **Collaboration**
   Accelerate the deployment of assembly technologies through greater adoption across all tiers of UK and global aerospace supply chains.

5. **Digital capability**
   Enable digitally connected assembly systems that improve productivity, quality and industrial competitiveness.

DELIVERING A COMPETITIVE UK ASSEMBLY PLAN

The five priorities provide the foundation for a UK Assembly Plan to strengthen national capability and help industry compete for work on the next generation of aircraft programmes. The plan will turn the evidence and consultation in this Market Spotlight into coordinated action with industry.

To refine the plan, the ATI is establishing an Assembly Working Group that will bring together subject-matter experts and organisations from aerospace and relevant adjacent sectors. The group will report its initial findings in 2027, informing future activity to strengthen UK aerospace assembly and systems-integration capability.



©Safran. A220 power drive unit assembly in Wolverhampton.

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