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BDLI input on the new EU aviation strategy

Europe's aviation strategy must be an industrial,
technological and sovereignty strategy



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The BDLI expressly welcomes the European Commission’s initiative to develop a new European aviation strategy. In view of geopolitical shifts, increasing global competition, growing security challenges and the transition to climate-neutral aviation, a strategic reorientation of Europe in the aviation sector is urgently needed.

Today, the aviation sector is simultaneously facing several profound transformation processes: decarbonisation, digitalisation, geopolitical realignment, technological disruption and increasing global competitive pressure are intertwined and are fundamentally changing the industry’s operating environment. The coming years will therefore be decisive in determining whether Europe can maintain its global leadership in the aviation industry or will gradually lose its industrial, technological and strategic capabilities.

From the BDLI’s perspective, however, the European debate to date has fallen short. The discussion has so far been conducted predominantly from the perspective of transport, consumer and airline policy. Aspects relating to industrial, technological and innovation policy, on the other hand, have not yet been given sufficient consideration. Yet the European aviation industry in particular is a strategic core sector for Europe’s competitiveness, technological sovereignty, capacity for innovation and ability to act in the field of security policy.

The new EU aviation strategy must therefore also be explicitly understood as a European industrial, innovation and technology strategy.

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The aviation industry as a key strategic sector for Europe

The European aviation industry is one of the few sectors in which Europe is a global technological leader. It uniquely combines highly complex system integration, cutting-edge research, industrial scalability and safety-critical technologies. At the same time, it creates high-quality industrial jobs along highly integrated European value chains and generates significant export and innovation momentum for the entire economic area.

The sector exemplifies Europe's ability to assume global industrial leadership roles. However, this position is by no means permanently secure. Other major economic regions have long been pursuing comprehensive industrial policy strategies for their aviation sectors, backed by massive public investment, strategic procurement, export promotion, raw materials policy and technological support.

Europe must therefore not take its industrial leadership for granted. The loss of technological capabilities, industrial capacity or critical supply chain expertise would be virtually irreversible in the long term.

Germany plays a central role within this European ecosystem. The German aerospace

industry is characterised in particular by its strong network of small and medium-sized suppliers, its industrial depth and its technological expertise in numerous key areas – ranging from structural and materials technologies, through engines and their components and integrated systems, to cabin, avionics, production and digitalisation technologies.

The European aviation strategy should explicitly recognise this industrial base as a strategic asset for Europe and strengthen it in a targeted manner. It should be developed and implemented in close cooperation with the aviation industry.

Technological sovereignty requires industrial capabilities

The debate on technological sovereignty often remains abstract. In reality, however, technological sovereignty requires concrete industrial capabilities: research, development, certification, production, scaling, maintenance and further development must remain possible in Europe.

Technological leadership does not arise solely in the laboratory. What is crucial is the ability to implement new technologies industrially and translate them into marketable products via resilient supply chains. It is precisely here that Europe is coming under increasing pressure.

The European aviation industry is today heavily dependent on global supply chains – including for raw materials, semiconductors, speciality materials and individual key components. At the same time, geopolitical risks, export restrictions and dependencies in critical technologies are on the rise.

The new EU aviation strategy should therefore make the development of resilient and competitive European supply chains a central strategic objective.

This applies in particular to:

- critical raw materials,
- special alloys,
- titanium and composite materials,
- semiconductors and power electronics,
- hydrogen and energy technologies,
- digital infrastructure,
- and industrial production capacities.

The European supply industry, which is characterised by a high proportion of small and medium-sized enterprises, is in particular need of targeted support in the areas of transformation, scaling, digitalisation and investment.

The next generation of aircraft will determine Europe's industrial future

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The development of the next generation of more efficient, low-emission or climate-neutral aircraft will be a key industrial policy decision for the coming decades. It will determine not only future market shares, but also cross-generational industrial value creation, technological leadership and Europe's strategic autonomy as a whole.

For Germany, it is crucial that substantial industrial responsibility, value creation and systems expertise are maintained and expanded in Europe and in Germany as a business location.

The European aviation strategy should therefore explicitly set out the objective of

- to secure the complete development of the next generation of aircraft in Europe,
- to strengthen key European technologies in a targeted manner,
- build industrial scaling capacities,
- and to retain strategically relevant shares of value creation in Europe in the long term.

At the same time, the Maintenance, Repair and Overhaul (MRO) sector is gaining considerable strategic importance. Maintenance, repair and modernisation capacities are an essential component of industrial sovereignty, resilience and security of supply.

The European aviation strategy should therefore specifically:

- strengthen European MRO capacities,
- promote the digitalisation and automation of maintenance processes,
- support data-driven and predictive maintenance technologies,
- and safeguard industrial capabilities for the long-term use, modernisation and resilience of existing fleets.

In doing so, European policy must not limit itself solely to research funding. Rather, the decisive factor will be how successfully Europe organises the industrial implementation, production and market launch of new technologies.

Strengthening research, demonstration and industrialisation across the entire innovation chain

The transformation of aviation will only succeed if Europe massively steps up its research, innovation and industrialisation efforts.

The BDLI therefore expressly supports the idea of a European ‘Smart and Clean Aviation Moonshot’, which encompasses the entire innovation chain, from basic research through demonstration to industrial scaling and market launch.

An integrated approach across all Technology Readiness Levels (TRL) is particularly important here. Europe has excellent research ecosystems and strong industrial players, but often fails when it comes to scaling up and the industrial implementation of new technologies.

The following are therefore necessary:

- European research budgets that can be planned for the long term and are significantly increased,
- the expansion of demonstrator programmes,
- greater support for industrial upscaling,
- accelerated certification processes,
- better integration of research, production and market launch,
- and an innovation-friendly regulatory framework.

Proven instruments such as Clean Aviation and SESAR should therefore not only be continued but significantly strengthened. At the same time, Europe needs better coordination between research funding, industrial policy, infrastructure development and market incentives.

Europe is home to renowned, globally active OEMs in the fields of aircraft, propulsion and systems. Nevertheless, greater attention should also be paid to the involvement of small and medium-sized enterprises. Europe’s aviation SMEs are a key driver of innovation and, at the same time, are particularly affected by transformation costs, funding gaps and regulatory complexity.



Ensuring climate neutrality and competitiveness together

The European aviation industry is firmly committed to the goal of climate-neutral aviation by 2050. However, this goal can only be achieved if climate policy, industrial policy and international competitiveness are considered together in a coherent and realistic manner.

By international standards, Europe pursues particularly ambitious regulatory targets. At the same time, European manufacturers are in direct competition with players from regions with significantly lower regulatory burdens and, in some cases, massive state support.

European regulation must therefore not lead to carbon leakage, industrial relocation or strategic dependencies. Climate protection can only be successful in the long term if Europe simultaneously maintains its industrial strength.

This applies in particular to the current design of ReFuelEU Aviation and the EU ETS. European aviation policy must integrate climate protection and international competitiveness more closely. Otherwise, there is a risk of traffic being diverted via non-European hubs, carbon leakage, and the loss of industrial value creation and connectivity in Europe.

The EU should therefore actively use the review process established in ReFuelEU Aviation to correct distortions of competition and ensure an international level playing field. In particular, instruments that can offset the competitive disadvantages faced by European airlines and hubs should be examined, such as market-based carbon offset mechanisms, a 'book and claim' system for all fuel users, and bio- and e-SAF or comparable approaches to prevent carbon leakage.

At the same time, Europe should strengthen its commitment to globally harmonised climate protection measures within the framework of the ICAO and, in particular, to the further development of CORSIA. In the long term, sustainable climate protection in aviation can only be effectively implemented on a global scale.

Extending the EU ETS to intercontinental flights, as well as introducing additional European or national kerosene taxes, would, on the other hand, cause significant competitive disadvantages for European companies due to trade-related retaliatory measures and should be ruled out.

This requires:

- massive investment in more efficient and lower-emission technologies such as ultra-efficient propulsion technologies and hydrogen and electrification technologies,
- an accelerated and investment-secure roll-out of SAF,
- competitive energy prices,
- technology-neutral regulatory frameworks,
- global regulatory compatibility,
- and a pragmatic and innovation-oriented regulatory approach.

Furthermore, significant portions of European ETS and innovation funds should be specifically allocated to aviation technologies, industrial transformation and production capacities.

Strategically securing the roll-out of SAF and hydrogen

The ramp-up of sustainable aviation fuels (SAF) is a key prerequisite for the decarbonisation of aviation. However, Europe requires significantly better investment and regulatory conditions along the entire value chain to achieve this.

In particular, the following are required:

- long-term, reliable investment conditions for SAF production facilities,
- a technology-neutral regulatory framework for bio-based and electricity-based SAF,
- the expansion of internationally competitive production capacities within and outside Europe,
- the establishment of global import partnerships for renewable energy sources and SAF,
- market-based support instruments to ensure the ramp-up,
- as well as pragmatic and internationally compatible sustainability and certification rules.

At the same time, Europe should actively promote the development of a hydrogen ecosystem for aviation.

This includes, in particular:

- hydrogen production and import capacities,
- transport and storage infrastructure,
- connecting airports to European hydrogen networks,
- refuelling infrastructure at airports,
- as well as competitive energy prices for industrial applications.

The European aviation strategy should explicitly define the development of an integrated European energy and hydrogen infrastructure as a key project in industrial and technology policy.

Competitive European air transport as a prerequisite for industrial strength

A high-performing European aviation industry also requires competitive European air transport. International connectivity is a key location factor for industry, exports, innovation and investment in Europe.

The European aviation strategy should therefore explicitly recognise the importance of competitive operating conditions for airlines, airports and air transport service providers.

These include, in particular:

- internationally competitive government-imposed location costs,
- efficient aviation security and air traffic control structures,
- a competitive regulatory framework,

- the avoidance of special European charges that lack global connectivity,
- and the safeguarding of efficient European hubs.

For Germany, as a federally organised industrial location, strong air transport links remain of strategic importance, even beyond individual major hubs.

Closer integration of civil and military aviation

The European aviation strategy should take much greater account of the close integration of civil and military technologies.

Many key technological developments in civil aviation are historically based on military innovation programmes or have direct dual-use relevance.

This applies in particular to:

- materials,
- sensor technology,
- AI and digitalisation technologies,
- propulsion systems,
- autonomous systems,
- cybersecurity,
- as well as production and manufacturing technologies.

Furthermore, autonomous and unmanned aerial systems, AI-supported command and control architectures, sensor fusion, and resilient communication and data infrastructures are becoming increasingly important in both civil and military contexts.

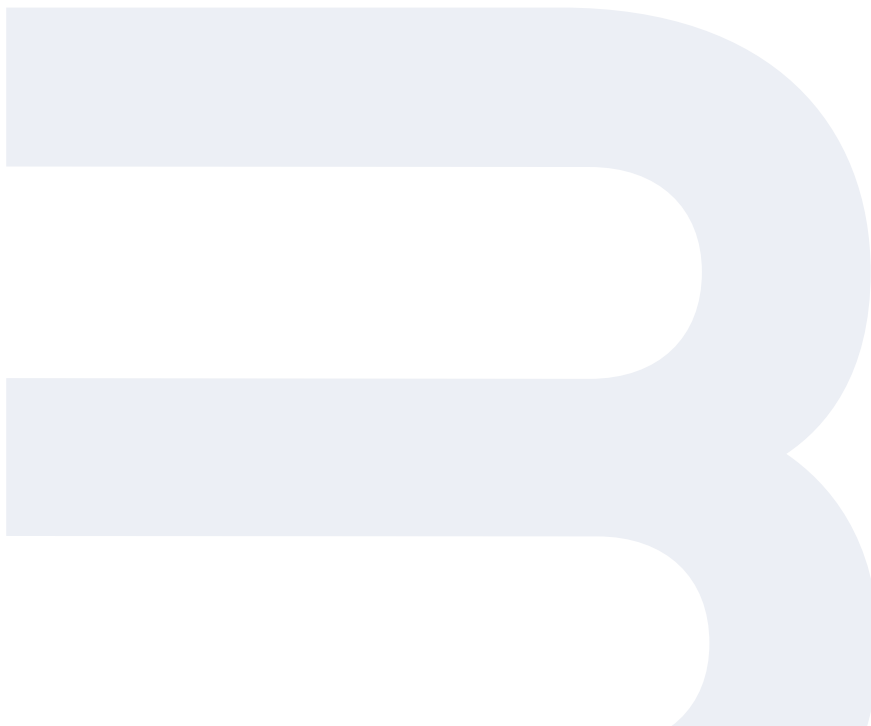
Europe should therefore specifically develop expertise in the areas of:

- autonomous aviation systems,
- drone and counter-UAS technologies,
- AI-based mission and assistance systems,
- resilient data and communication architectures,
- as well as digital and cyber-resilient aviation systems

and ensure their industrial viability.

A successful European aviation industry will therefore continue to require a strong military aviation base in the future. Programmes such as FCAS are not only relevant to security policy, but are also crucial to Europe's long-term industrial innovation and technological leadership.

The new European aviation strategy should therefore integrate civil and military innovation policy more closely and systematically exploit synergies.



Reducing bureaucracy and speeding up procedures as a competitive factor

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Europe has high regulatory standards and globally recognised safety and certification systems. At the same time, regulatory complexity, approval times and administrative burdens are constantly increasing.

However, particularly in a phase of profound technological transformation, speed and scalability are becoming decisive competitive factors.

The European aviation strategy should therefore explicitly, and in compliance with the prescribed safety standards:

- faster certification and approval procedures, innovation-friendly regulatory processes,
- greater digitalisation of administration,
- as well as a reduction in unnecessary reporting obligations and bureaucratic burdens.

Certification and approval procedures must be significantly accelerated, particularly for future technologies such as hydrogen, hybridisation, electrification, autonomous systems and AI-based applications.

To achieve this, Europe needs:

- faster and more digitalised procedures at EASA and national authorities, as well as sufficient resources for EASA,
- regulatory sandboxes and demonstration areas for new technologies,
- greater harmonisation of technical requirements,
- and a consistent avoidance of additional European or national special regulations ('gold plating').

Aviation as part of European resilience and strategic capacity to act

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The past few years of crisis, if nothing else, have shown that aviation is far more than just a matter of transport policy. The sector is part of Europe's critical infrastructure and is of central importance for economic resilience, defence capability, civil protection, security of supply and technological capacity to act.

The European aviation strategy should therefore explicitly define aviation as a strategic component of European sovereignty.

This applies in particular to:

- core industrial capabilities,
- resilient supply chains,
- digital sovereignty,
- cybersecurity,
- European production capacities,
- access to critical raw materials,
- and Europe's ability to independently develop, certify and produce future aviation systems.

Priorities from the BDLI's perspective

The new European aviation strategy should, in particular, set the following industrial policy priorities:

- Recognition of the aerospace industry as a strategic core sector for Europe,
- Development of a realistic European industrial and technology strategy for all aviation segments in close consultation with the industry,
- Strengthening European aerospace research across the entire TRL chain,
- Significant expansion of European research and innovation budgets,
- Securing and expanding European supply chains and production capacities whilst maintaining the pan-European aviation ecosystem,
- Targeted support for small and medium-sized suppliers,
- improved framework conditions for the industrialisation and scaling of new technologies,
- expedited certification and approval procedures,
- competitive regulatory frameworks,
- greater integration of civil and military aviation technologies,
- European coordination on critical raw materials and key technologies,
- accelerated development of SAF, hydrogen and energy infrastructure,
- ensuring competitive European air transport and international connectivity,
- preventing carbon leakage and competition-distorting regulation,
- strengthening globally compatible climate protection instruments,
- building resilient European energy, hydrogen and SAF value chains,
- Strengthening European MRO and maintenance capabilities,
- Developing European expertise in autonomous aviation systems and dual-use technologies,
- accelerated certification and scaling of new aviation technologies,
- and a consistent reduction in European bureaucracy without additional regulatory burdens.

The new EU aviation strategy should not only support Europe in achieving its climate targets, but also expand and thereby secure in the long term Europe's industrial leadership, technological sovereignty, capacity for innovation and economic strength.

About the aerospace industry

The German aerospace industry, represented by the BDLI e.V., is an integral part of the European aerospace industry. As a key strategic industry, the sector plays a decisive role in the technological and economic sovereignty of the European Union. It promotes economic growth, technological innovation and international connectivity. In Germany alone, the industry contributes significantly to GDP with over 120,000 employees and an annual turnover of over 52 billion euros.

Over the decades, Europe has worked together with industry, member states and the European Union to achieve a leading position in the aerospace industry. This must be maintained and further expanded in the face of international competition. In view of far-reaching technological, political and industrial changes, this requires sustained investment in research and innovation.

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