

AERO EDIH

Final project report

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Formal project summary for the EU portal

Aero EDIH – EDIH for Digital Transformation of the Aviation and Aerospace Industry

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Formal project summary

Aero EDIH – EDIH for Digital Transformation of the Aviation and Aerospace Industry was established to accelerate the digital and green transformation of aerospace-related industries, with a particular focus on SMEs, regional airports and public sector organisations. The project was implemented under the Digital Europe Programme as a specialised European Digital Innovation Hub serving the aviation, aerospace and emerging lower-airspace economy. Its mission was to help organisations adopt and apply advanced digital technologies such as artificial intelligence, high-performance computing, cybersecurity, simulation, digital airspace management and advanced digital skills in ways that reduce investment risk, increase digital maturity and strengthen European competitiveness.

The starting point for Aero EDIH was the recognition that aviation and aerospace are entering a structural transformation driven by electrification, automation, advanced air mobility, unmanned aerial systems, digital air corridors and U-space. The Description of Action framed the lower airspace as an under-utilised societal asset with the potential to improve mobility, strengthen regional connectivity and enable more sustainable transport of people, goods and data. It also identified the need for close interaction between industry, academia, public entities, municipalities and regions in order to make this transformation safe, competitive and socially beneficial. Aero EDIH was therefore designed as a multiplier of European digital capabilities, combining sector-specific aerospace knowledge with access to testing, training, investment support and innovation ecosystems.

During the project period, Aero EDIH developed and operated a service portfolio structured around the four core EDIH service areas: Testing before Investing, Support to Find Investments, Training and Skills Development, and Networking and Access to Innovation Ecosystems. The services were delivered through a user journey that assessed user needs and digital maturity, matched each organisation with relevant support, mobilised expertise from the consortium and wider ecosystem, and documented outcomes and follow-up needs. This approach allowed Aero EDIH to provide tailored support to companies and public sector actors whose challenges were often highly specialised, technically complex and closely linked to regulation, safety, infrastructure and market adoption.

Operational progress and platform development

A central result of the project was the establishment of Aero EDIH as an operational and recognised innovation support platform for aerospace-related digital transformation. The mid-term review confirmed that the project was progressing on schedule, that the platform was operational, that the service catalogue was robust, and that project management had remained effective despite organisational changes. The review also noted that Aero EDIH had demonstrated its capacity to meet key milestones and was particularly benefiting SMEs in the aerospace sector. Dissemination and communication efforts towards SMEs, regional airports and public services were highlighted as strong, with the project actively showcasing its capabilities, success stories and ecosystem role.

The project generated a broad portfolio of practical use cases and success stories across the lower-airspace economy. These included support for regional airports, drone technology companies, public authorities, municipalities, research infrastructure providers and service companies working with advanced air mobility, UAS operations, artificial intelligence, simulation and sensor-based data collection. The cases demonstrate that Aero EDIH did not remain at a general advisory level, but helped users test, validate and improve concrete technologies, operational concepts and business-critical capabilities.

Examples of results and success stories

Several success stories focused on safer and more scalable drone operations. Aero EDIH supported the establishment of a UAS zone and droneport field test in Skellefteå, helping create a regulatory and operational pathway for beyond-visual-line-of-sight operations and validating the droneport as a test environment for industry and research. Other cases addressed safety-critical technical challenges, including lightweight avionics for sub-250 g drones, “land into wind” emergency landing procedures for fixed-wing UAVs, acoustic drone detection for airspace awareness, and U-space simulations for healthcare logistics and municipal airspace planning. Together, these activities strengthened the practical readiness of companies and public actors to operate in an increasingly digitalised and regulated lower-airspace environment.

Aero EDIH also supported the development of advanced AI and data-driven capabilities. Examples include synthetic data generation for AI-based anomaly detection in drone-mounted camera systems, multimodal airborne data collection for an urban digital twin in Norrköping, and AI-assisted close-to-ground navigation for forestry drones. These projects demonstrate the value of combining real-world testing with simulation, sensor fusion, machine learning and domain expertise. They also show how aerospace-related digital technologies can create benefits beyond aviation itself, including climate adaptation, public safety, sustainable forestry, infrastructure inspection and emergency response. The project contributed to regional and societal resilience by working with regional airports and public sector actors. The VR training project for Swedish regional airports showed how immersive digital tools can help maintain emergency-response competence while reducing cost, travel and environmental impact. The Region 10 and Region Skåne simulation activities helped municipalities and regions understand how drones could support healthcare logistics, rural service provision and future U-space implementation. These examples are important because they connect advanced digital aviation technologies with concrete societal needs, particularly in sparsely populated or infrastructure-constrained regions.

Policy contribution and expected impact

The project contributed to European policy priorities by supporting SME competitiveness, digital transformation, sustainable mobility, the European Green Deal and the development of a safer and more innovation-friendly lower-airspace ecosystem. It also contributed to the Digital Europe Programme’s objective of strengthening European Digital Innovation Hubs as local access points to advanced digital capabilities and Europe-wide expertise. The hub’s work on AI, cybersecurity, simulation, data-driven operations, advanced air mobility and drone systems is directly aligned with Europe’s need for competitive, secure and sustainable digital industries.

Aero EDIH’s impact can be seen in three connected dimensions. First, it increased the ability of SMEs and public organisations to test and validate digital technologies before making larger investments. Second, it strengthened the innovation ecosystem by connecting companies, airports, research organisations, municipalities, regulators and technology providers. Third, it created practical knowledge about how lower-airspace technologies can be implemented safely, sustainably and in line with European policy priorities.

The environmental impact is primarily indirect, through the improved capacity of supported users to develop and deploy greener products, services and operational models. Aero EDIH helped users explore digital and electric mobility solutions, optimise drone and UAV operations, reduce resource use, improve infrastructure monitoring and support more sustainable forestry, logistics and public service delivery.

Lessons learned and corrective actions

The project generated important operational lessons. The mid-term review noted delays in some areas, particularly field testing, validation, investment support and training services, and recommended stronger KPI monitoring, improved documentation, clearer financial reporting and more systematic tracking of dissemination and conversion from outreach to service uptake. Aero EDIH responded by

strengthening monitoring, clarifying service delivery processes and increasing focus on practical outcomes.

These lessons are valuable for the future development of specialised EDIHs, especially those operating in highly regulated and emerging technology domains. They underline the importance of combining sector expertise with agile service delivery, active stakeholder management, early regulatory engagement and continuous tracking of user outcomes.

Overall conclusion and continuation potential

Overall, Aero EDIH has demonstrated that a specialised EDIH can act as an effective bridge between European digital capabilities and a fast-changing sector with high societal relevance. By combining testing, training, ecosystem mobilisation and targeted expert support, the project helped users reduce technical, regulatory and investment uncertainty. It supported early-stage innovation, accelerated market readiness, improved operational safety and increased awareness of the opportunities and challenges linked to drones, advanced air mobility, U-space and digital aviation.

The project has laid a strong foundation for continued work beyond the initial implementation period. The success stories show demand from SMEs, airports, municipalities and regional actors for applied support in areas such as BVLOS readiness, digital twins, AI-enabled autonomy, drone logistics, acoustic monitoring, VR training, precision forestry and safety validation. These are all areas where Europe needs strong innovation capacity, trusted test environments and coordinated public-private collaboration. Aero EDIH is therefore well-positioned to continue contributing to the competitiveness, resilience and sustainability of the European aerospace and lower-airspace economy.

Optional shorter version for a character-limited portal field

Aero EDIH was established as a specialised European Digital Innovation Hub to accelerate the digital and green transformation of the aviation, aerospace and emerging lower-airspace economy. The project supported SMEs, regional airports and public sector organisations through Testing before Investing, Training and Skills Development, Support to Find Investments, and Networking and Access to Innovation Ecosystems. Its core focus was the practical adoption of advanced digital technologies such as AI, high-performance computing, cybersecurity, simulation, U-space, digital twins and autonomous drone systems.

During the project, Aero EDIH became an operational innovation support platform connecting industry, academia, public authorities, municipalities and regional actors. The project helped users reduce technical and investment risks, increase digital maturity and validate concrete solutions in areas such as BVLOS drone operations, UAS zones, droneport testing, AI-based anomaly detection, acoustic drone detection, VR training for airports, precision forestry, U-space simulation, digital twins and safety-critical UAV functions.

The project contributed to European policy priorities by supporting SME competitiveness, digital transformation, sustainable mobility, the European Green Deal and the development of a safer and more innovation-friendly lower-airspace ecosystem. It also generated lessons on KPI monitoring, service delivery, stakeholder coordination and the importance of practical test environments in regulated technology domains. Aero EDIH has laid a strong foundation for continued European collaboration and for the future deployment of safe, sustainable and digitally enabled aviation and drone services.