

Advanced Air Mobility, eVTOL Development and the Industrial Policy Challenge: Introductory Note to the TH500 Presentation

The TH500 presentation introduces a project situated within one of the most technically ambitious areas of contemporary aviation: electric vertical take-off and landing aircraft, commonly referred to as eVTOL aircraft. Presented by Tesla Helicopters in partnership with IKM Laktaši, the project is centred on the TH500 concept, which is described as an innovative and economical route toward electric flight. The presentation places particular emphasis on a new-generation NEXTGEN AC motor, possible use in eVTOL and UAV platforms, modular rotor configurations, and the development of both cargo and piloted versions of the aircraft. The proposed specifications include an aluminium construction, capacity for four persons and 100 kg of cargo, a maximum take-off weight of 1,200 kg, a 500 kW motor, a modular 4/6/8 rotor design, a ballistic recovery system, one hour of hovering or four hours of cruising autonomy, and a cruising speed of 160 km/h. The project roadmap presented by the team runs from the definition and testing of the propulsion group between 2021 and 2024, through the production of a one-third-scale model in 2025/2026, testing of an unmanned cargo model in 2027, and a commercial phase with development of a crewed version in 2028. The investment phases are presented as EUR 460,000 for the scaled transport eVTOL and EUR 2 million for the piloted eVTOL. These elements are important for understanding the ambition of the project, but they should be read as project-side representations and development targets rather than independently verified technical or certification outcomes.

The broader relevance of the TH500 project lies in the emergence of advanced air mobility as a new technological and industrial field. The European Commission describes Innovative Air Mobility and aerial drone operations as a domain bringing together new technologies, aircraft and operations, covering the movement of passengers and cargo through urban, regional and international air mobility with manned and unmanned eVTOL aircraft, as well as drone-enabled operations such as inspection, mapping and deliveries. The Commission's Drone Strategy 2.0, adopted in 2022, sets out a European vision to unlock new aerial services and support drone research and production, while ensuring that the ecosystem develops in a safe, efficient and sustainable manner. This gives projects such as TH500 a wider policy context. They are not simply isolated product-development proposals. They belong to a rapidly evolving aviation

field in which electrification, digitalisation, autonomy, lightweight design, propulsion efficiency, airspace integration and regulatory innovation are converging.

For Bosnia and Herzegovina, such a project is relevant for a reason that goes beyond the aircraft itself. It points to the possibility of moving from conventional industrial activity toward higher-technology manufacturing, engineering design, propulsion development, testing, certification preparation and intellectual-property generation. In policy terms, this is exactly the type of shift often discussed under the headings of industrial upgrading, innovation-driven entrepreneurship and integration into higher-value production systems. The OECD's 2025 assessment of Bosnia and Herzegovina's reform agenda for private sector development identifies access to finance, innovation policy, business registration, licensing, transparency, and stronger alignment between vocational education and private-sector needs as central issues for the country's private-sector development. A technically demanding aerospace project touches all of these areas. It requires not only an investor, but a functioning innovation environment: engineering skills, testing capacity, standards literacy, regulatory competence, intellectual-property management, supplier reliability and access to phased risk capital.

At the same time, eVTOL development is a demanding sector in which ambition must be assessed against certification realities. The European Commission's Drone Strategy 2.0 notes that first Innovative Air Mobility operations are expected to be conducted with manned eVTOL aircraft, while similar platforms may later become remotely piloted and eventually autonomous. It also stresses the need for rules addressing certification, operational requirements, vertiports and integration into U-space and air traffic management. This is highly relevant to the TH500 presentation, which refers to commercial readiness and verification according to EASA standards. Such wording should be treated carefully. EASA certification is not a general quality label. It is a formal and rigorous process involving design requirements, means of compliance, testing, documentation, organisational capacity and regulatory oversight. The regulatory pathway itself is therefore one of the main risk factors in any eVTOL investment proposition. EASA's Special Condition for small-category VTOL-capable aircraft makes this point concrete. The Special Condition applies to aircraft with a passenger seating configuration of nine or fewer and a maximum certified take-off mass of 5,700 kg or less. It distinguishes between "Enhanced" and "Basic" certification categories, with aircraft intended for commercial passenger transport or operations over congested areas needing the more demanding Enhanced category. It also requires compliance through means of compliance accepted by EASA and covers matters such as flight envelope, mass and centre of gravity, performance data, take-off performance, climb requirements, icing conditions, emergency egress and other safety-critical

design areas. Therefore, for a project such as TH500, the transition from concept, drawings and scaled model to certified market-ready aircraft is not a simple engineering continuation. It is a major certification campaign.

This is not to diminish the importance of the proposal. On the contrary, it clarifies why the project is interesting from a proceedings perspective. Early-stage technology projects are valuable precisely because they reveal the frontier between invention, engineering, regulation and market formation. In the case of eVTOL aircraft, the market is still emerging and several of its core conditions remain unsettled. WIPO's review of urban air mobility notes that development and certification of eVTOLs are complex and require significant investment, while technical challenges remain in battery technology, flight safety, noise reduction, range, payload capacity, infrastructure, and air traffic management. These are not peripheral questions. They determine whether a concept can become a reliable aircraft, whether that aircraft can be operated safely and economically, and whether a market can absorb it.

The TH500 concept also raises an important question about the distinction between cargo, unmanned and passenger applications. The presentation's roadmap gives priority to a scaled transport eVTOL and an unmanned cargo model before a piloted version. That sequencing is commercially and technically understandable. Cargo and unmanned applications may provide an earlier testbed for propulsion, control, flight stability, power management and operational experience before entering the more demanding passenger-carrying domain. The broader advanced air mobility literature similarly recognises that passenger, cargo, emergency services, disaster relief, inspection, logistics and other professional applications may develop at different speeds and under different regulatory conditions. A 2024 white paper on advanced air mobility identifies safety, regulation, airspace management, security, environmental impacts, infrastructure, workforce, economic development and public acceptance as enabling or limiting factors. These considerations are directly relevant to the TH500 proposal. An aircraft concept cannot be separated from the operational ecosystem in which it would fly.

For an FDI-oriented discussion, the key point is that TH500 should not be treated as a conventional capital project. It is better understood as a staged technology-development investment. The difference matters. A conventional investment may be evaluated mainly through construction cost, production capacity, market demand and projected revenue. A staged technology project requires milestone-based assessment: proof of propulsion performance, scaled prototype testing, flight-control validation, battery and power-management verification, safety case development, intellectual-property position, supplier chain readiness, engagement with aviation authorities, production capability and eventual certification plan. The

presentation's two investment phases, EUR 460,000 for the scaled transport eVTOL and EUR 2 million for the piloted eVTOL, may therefore be read as development stages rather than as complete market-entry financing. This is a more credible way to frame the project in a proceedings publication.

The skills dimension is equally important. The European Commission's Drone Strategy 2.0 stresses that the development of this sector requires new skills and competences, including drone specialists, remote pilots, VTOL aircraft pilots, operators' personnel and regulatory expertise. It also calls for education and training programmes specific to drone technologies, regulatory frameworks and the development of related mobility planning. This is highly relevant for Bosnia and Herzegovina. The country has an engineering and manufacturing tradition, but advanced air mobility requires a more specialised knowledge base: electric propulsion, structural analysis, avionics, control software, batteries, systems integration, airworthiness, testing protocols and certification documentation. The TH500 team presentation already identifies expertise in mechanical construction, structural analysis, energy assemblies, electronic assemblies, intellectual property, geoinformation systems, electromechanical components, software testing and batteries. That breadth is positive, but the sector's requirements also suggest the need for deeper links with universities, technical schools, aviation regulators and potential European partners.

There is also a policy question concerning dual-use capability. The European Commission notes that many critical drone technologies for security and defence increasingly originate in the civilian domain and use components of a dual-use nature. It identifies areas such as flight-control systems, cyber-secure datalinks, resilient navigation, detect-and-avoid systems, electrical and hybrid propulsion, batteries, power management, autonomous flight and mission management systems as strategic technology building blocks. The TH500 concept, particularly in its cargo UAV and eVTOL versions, naturally enters this wider dual-use discussion. That does not mean the project should be framed as a defence project. It means that its technologies sit in a field where civil, emergency, logistics, security and potentially defence-related applications overlap. For policymakers and investors, this reinforces the need for careful governance of intellectual property, export controls, regulatory compliance and end-use considerations.

The presentation that follows should therefore be read as an early-stage aerospace innovation proposal, not as a mature aircraft programme. Its value for the proceedings lies in showing how entrepreneurs and technical teams in Bosnia and Herzegovina are attempting to enter a high-technology domain associated with electric propulsion, advanced aviation and new forms of

mobility. It also shows the scale of the challenge. In this field, success depends on more than engineering creativity. It depends on staged financing, regulatory literacy, demonstrable safety, test infrastructure, workforce depth, and the ability to align with European aviation standards. If these conditions can be developed, projects such as TH500 may contribute to the broader conversation on how Bosnia and Herzegovina can position itself in specialised, technology-intensive sectors. If they cannot, the risk is that technically interesting concepts remain trapped between prototype ambition and certification reality.

In that sense, the TH500 presentation is useful precisely because it opens a serious discussion. It suggests a possible direction for industrial upgrading, but it also makes visible the gap between invention and certified aviation product. For a proceedings issue dedicated to business environment, investments, trade and partnerships, that is a valuable theme. It reminds readers that FDI is not only about attracting capital into existing sectors. It may also be about building the institutional, technical and regulatory conditions that allow local innovation to mature into investable, internationally credible industrial capability.

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