ADVANCED AIR MOBILITY DISCUSSION PAPER 4

Security Measures at Vertiports

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Executive summary

The dialogue between Advanced Air Mobility (AAM) stakeholders and regulators, particularly the European Commission and Member States, is pivotal in ensuring that security measures are both effective and aligned with the unique needs of the AAM sector. By fostering a shared understanding of AAM use cases and the specific vulnerabilities they entail, this collaborative approach can enhance the adaptability and effectiveness of security frameworks based on their respective risk portfolio. Ultimately, sustained regulatory dialogue is essential to realizing the vision of a safe, secure, and thriving AAM ecosystem, where security measures support, rather than hinder, innovation and growth.

Background

As the Advanced Air Mobility (AAM) sector evolves, creating a dynamic and diverse ecosystem of vertiports and eVTOL operations, it becomes increasingly crucial to ensure that security measures are not only effective but also aligned with the varied operational and business needs of this emerging field. Central to achieving this alignment is the role of regulatory frameworks, such as Commission Regulation (EU) 1254/2009 setting criteria to allow Member States to derogate from the common basic standards on civil aviation security and to adopt alternative security measures, which provides a basis for adapting security measures to specific operational contexts, particularly for aircraft with a Maximum Take Off Weight (MTOW) of less than 15,000 kg. This position paper underscores the importance of engaging in comprehensive discussions with regulators, including the European Commission and Member States, to foster a mutual understanding of AAM use cases and how security requirements should be tailored to the unique challenges they may create but also to avoid imposing unnecessary measures on operations that may not differ radically from long established models (e.g. heliports and helicopter transfer).

Regulatory Flexibility

Regulatory flexibility, as envisaged by Regulation 1254/2009, allows for the implementation of security measures that are tailored to the specific needs and risk profiles of AAM operations. However, the effectiveness of this regulatory approach is contingent upon a shared understanding among all stakeholders—regulators, vertiport operators, AAM service providers, and security technology developers—of the AAM ecosystem's operational realities and potential vulnerabilities.

Ensuring a Unified Understanding of AAM Use Cases

The diversity of AAM use cases, ranging from urban passenger transport to remote cargo delivery, introduces a spectrum of security challenges and vulnerabilities that, amongst others, will also be contingent on the location of the vertiport. Discussions with regulators, including the European Commission and Member States, are essential to ensure that the regulatory framework is responsive to these challenges. Such dialogue can facilitate:

1. **Clarity on Operational Contexts**: Ensuring that regulators fully understand the operational contexts of AAM.
2. **Clarity on Business Contexts**: Develop a common understanding of how different security models may support or impede the viability of the intended AAM operations and support a risk-based approach rather than prescriptive security measures.
3. **Identification of Specific Vulnerabilities**: Collaboratively identifying the unique vulnerabilities associated with different AAM use cases, including potential threats to VTOL aircraft (both physical and cyber related), integrity of the security status throughout the flight, integrity of the One Stop Security arrangements in place.
4. **Adaptive Regulatory Responses**: if considered necessary, developing regulatory responses that are both adaptive and proactive (while remaining proportional and risk based), ensuring that security measures can evolve in tandem with AAM-specific emerging threats and technological advancements in the AAM sector.

Enhancing Regulatory Dialogue

To maximize the benefits of regulatory flexibility and ensure the effective implementation of appropriate and sustainable security measures, we recommend:

1. **Regular Stakeholder Engagement**: Establish regular forums for dialogue between AAM stakeholders and regulators to discuss evolving AAM use cases, share insights on emerging vulnerabilities, and update regulatory approaches accordingly.
2. **Joint Risk Assessment Initiatives**: Collaborate on joint risk assessment initiatives that leverage the expertise of both the AAM industry and regulatory bodies, aiming to create a comprehensive risk profile for AAM operations.
3. **Guidance and Framework Development**: Work together to develop guidance documents and frameworks that detail best practices for implementing risk-based, adaptable security measures across various AAM use cases.
4. **Transparency and Information Sharing**: Encourage transparency and the sharing of information on security incidents, trends, and innovative security solutions within the AAM ecosystem, fostering a culture of continuous improvement and resilience against threats.
5. **Harmonisation across Member States:** Although Member States may be allowed to derogate from the common basic standards on civil aviation security and to adopt alternative security measures, AAM operators who pursue their businesses in more than one Member State will benefit greatly from harmonised security standards.

6. **Global Harmonisation**: The regulatory dialogue needs to consider international best and actual practices including comparable modes of transport (e.g. heliport operations). Designers and developers of vertiports and AAM operators who are likely to pursue their businesses in more than one jurisdiction, will benefit from a globally harmonised regulatory framework.