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U-Space ConOps Implementation in Malaysia

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Abstract

The U-Space concept of operations (ConOps) framework is crucial for ensuring safe, secure, and efficient unmanned aerial system (UAS) operations in low-altitude airspace. EASA has developed regulations and guidelines for U-Space implementation in Europe, and Malaysia has expressed interest in developing its own U-Space ConOps. In conjunction with this situation, this research paper explores the performance of U-Space ConOps in Malaysia based on EASA regulations to identify potential challenges and opportunities and provide recommendations for overcoming these challenges. The analysis focuses on the regulatory framework, technical requirements, and operational concepts for U-Space implementation in Malaysia. In general, the safe and effective operation of unmanned aerial vehicles (UAVs), their incorporation into the national airspace, and the support of economic development and technological advancement are all made possible by implementing U-Space ConOps. This study will benefit all policymakers, regulators, and industry stakeholders in Malaysia and other countries considering adopting U-Space frameworks for safe and efficient UAS integration. Overall, it is concluded that the U-Space implementation plan for Malaysia provides a comprehensive roadmap for integrating UAVs into the nation's airspace, emphasizing enhanced management, safety, and stakeholder engagement to position Malaysia as a leader in commercial and industrial UAV utilization. © 2024 The Aeronautical and Astronautical Society of the Republic of China. All rights reserved.

Author Keywords

ConOps; U-Space; UAV; Urban air mobility; UTM

Index Keywords

Accident prevention, Antennas, Laws and legislation, Unmanned aerial vehicles (UAV); Aerial vehicle, Concepts of operations, Malaysia, Space concept, U-space, Unmanned aerial systems, Unmanned aerial vehicle, Urban air, Urban air mobility, UTM; Air mobility

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