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DESIGN OF A METHODOLOGICAL FRAMEWORK TO ASSESS COMMUNITY ACCEPTANCE OF URBAN AIR MOBILITY (UAM): FINDINGS FROM THE DOMINICAN REPUBLIC

(Presented by the Dominican Republic)

EXECUTIVE SUMMARY

This working paper stresses the need for a structured approach to support States in the systematic assessment of community acceptance and intention to use urban air mobility (UAM). Using a model adapted from the unified theory of acceptance and use of technology (UTAUT) framework, the methodology identifies and quantifies the key social factors that influence willingness to use this new transport mode.

A case study conducted in the Dominican Republic validates the practical utility of the model, highlighting performance expectancy, facilitating conditions, social influence, and perceived effort as key dimensions. Both expected benefits and citizen concerns are observed, demonstrating the need to integrate these factors in the early planning stages.

<i>Strategic Goals:</i>	This working paper relates to <i>Every Flight is Safe and Secure and The Economic Development of Air Transport Assures the Delivery of Economic Prosperity and Societal Well-Being for All</i> .
<i>Financial implications:</i>	The activities mentioned in this study note will be subject to the availability of resources from the 2026-2028 Regular Budget, as well as extrabudgetary and/or voluntary contributions.
<i>References:</i>	ICAO Long-Term Vision for the Future of Aviation Resolution A40-27 – <i>Innovation in Aviation</i> A40-WP/14 EX/7 - <i>Innovation in Aviation</i> A41-WP/292-TE/112– <i>Need for Guidelines and Regulatory Framework for Development of Urban Air Mobility/Advanced Air Mobility (UAM/AAM)</i>

¹ English and Spanish versions provided by the Dominican Republic.

1. INTRODUCTION

1.1 Within the context of the ICAO-promoted Aviation Innovation Agenda, urban air mobility (UAM) represents a disruptive opportunity to transform intra-urban connectivity, reducing ground congestion and supporting sustainable urban development.

1.2 ICAO has urged States to adopt a collaborative, evidence-based approach to facilitate the safe and orderly deployment of UAM. This includes not only technical and regulatory frameworks, but also mechanisms to assess and consider public acceptance, a determining factor for the operational viability and social acceptability of these emerging technologies.

1.3 This information paper stresses the need to develop a standardized methodological framework that allows States to systematically assess community acceptance and use of UAM. Based on empirical evidence obtained through the application of the unified theory of acceptance and use of technology (UTAUT) model in the Dominican Republic, the main social factors that influence community acceptance of this new air transport model are identified.

2. DISCUSSION

2.1 The global adoption of UAM technologies, as part of the advanced air mobility (AAM) ecosystem, represents a profound transformation in traditional urban transportation models. This transformation is not only technological or regulatory in nature, but essentially social, as it changes the way communities interact with airspace in their daily environment.

2.2 Aware of this challenge, ICAO has called on States and stakeholders to collaborate in the safe, orderly, and sustainable deployment of these emerging technologies. In this context, regulatory and technical development must be complemented by a socially sensitive approach that allows for understanding, measuring, and anticipating public perception. This perception directly influences public acceptance and, therefore, the viability and sustainability of UAM operations.

2.3 Currently, many States lack standardized tools that allow for scientific and comparative assessment of community acceptance of UAM. The absence of a common methodological approach can lead to social resistance, urban conflicts, regulatory delays, and failures in technology adoption. Given this situation, it is imperative that ICAO lead the design of a global framework that can be adapted by States according to their national contexts.

2.4 Having a validated methodology would allow States to identify the determining factors of acceptance or rejection, apply evidence-based approaches to the design of public policies and communication strategies, anticipate social frictions, and ensure more expeditious and participatory implementation. Furthermore, this approach would help align the deployment of the UAM with the principles of “*No Country Left Behind*”, promoting a just and inclusive transition to innovation.

2.5 Research conducted in urban settings in the Dominican Republic provides a practical example of the value of this type of tool. By applying the UTAUT model and using statistical modeling techniques (SEM, CFA, PA), the main factors influencing UAM acceptance were identified. The results reveal that performance expectancy is the main predictor of intention to use, followed by enabling conditions—such as accessibility, infrastructure, and service availability—and social influence. In contrast, perceived effort was found to be a less important factor, suggesting a low perception of technological or user barriers.

2.6 Additionally, the enabling attributes most valued by potential users were identified, such as travel cost, safety, and journey time. Among non-users, the main concerns centered around noise, privacy, and security.

2.7 These findings confirm the need for ICAO, as the governing body of international civil aviation, to provide States with a methodological framework that allows them to systematically incorporate the social dimension into the planning and regulation of UAM. Only through this integrated approach can we ensure that technological innovation effectively responds to the needs, expectations, and realities of communities.

3. CONCLUSION

3.1 International experience and specialized literature agree that the successful implementation of urban air mobility (UAM) depends not only on technological or regulatory development, but also on informed, authentic, and participatory public acceptance. In this context, the availability of a framework, such as the one based on the unified theory of acceptance and use of technology (UTAUT), allows States to systematically assess the social factors that influence public perceptions and intention to use this new form of transportation.

3.2 The case study conducted in the Dominican Republic confirms the practical applicability of this methodological approach by providing empirical evidence on the benefits expected by citizens, as well as their main concerns. These findings constitute a relevant contribution for decision-makers and support ICAO's call to actively involve society in the safe, inclusive, and sustainable deployment of AAM technologies.

3.3 Finally, adopting approaches that integrate the social dimension into the regulatory, operational, and strategic design of UAM will allow States not only to strengthen the governance of aviation innovation but also to promote equitable, contextualized, and people-centered integration. This will help ensure that the benefits of urban air mobility are distributed fairly, in accordance with national priorities and the aspirations of each community.

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