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SAFETY

ICAO RPAS Introduction

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INTRODUCTION

- ❑ One of the aspects that I continue to find impressive is how fast these unmanned aviation activities and capabilities have evolved.
- ❑ When we think about today's drone capabilities and those being developed, whether they are cargo deliveries, humanitarian operations, UAS traffic management or urban air mobility, it is inspiring to see how far this industry has advanced in such a short period.
- ❑ This incredible expansion would not have been possible without the active participation of industry, in all its forms, academia, international organizations and States who have all joined together to address the challenges that inevitably arise when we work to standardize and optimize such rapidly developing innovations.
- ❑ Given the speed of these development activities and the number of stakeholders involved, ICAO's mission to ensure global harmonization of the various solutions being explored is more important than ever.
- ❑ I'm sure by now we've all seen renderings of industry visions of package delivery drones flying in and around cities, and electric vertical takeoff and landing (eVTOL) aircraft carrying passengers above congested roads. But if these concepts or something similar to them are eventually to become a safe, efficient and responsive reality, we have a tremendous amount of work ahead of us.
- ❑ This will include the development or adaptation of numerous regulations, validated technical solutions, development of new guidance material for the various sectors of the industry and the provision of the training required to ensure such capabilities are deployed safely.



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- ❑ In the last three years, ICAO has held the 13th Air Navigation Conference and the 40th Session of the Assembly. These were both critical events where ICAO's 193 Member States and a large number of international organizations worked to establish a set of high-level recommendations regarding ICAO's future work and the worldwide policy and priorities of the Organization for the upcoming triennium – that we are now in midst of (2020 to 2022).
- ❑ The topics of UAS, UTM and RPAS featured prominently at both events and resulted in a renewed call for ICAO to continue its leadership role in developing Standards to be translated into national regulations, operational solutions and guidance materials. These provisions are urgently needed to support the safe and coordinated integration of unmanned aviation activities, UAS traffic management and urban/advanced air mobility.
- ❑ The 39th Session of the ICAO Assembly had previously expressed broad support for the Organization to exercise a leadership role in the development of standards and guidance material for the harmonization of regulations on UAS that remain outside of the international instrument flight rules (IFR) framework. As such, work has been underway on UTM, on UAS model regulations for national implementation, as well as on guidance material for humanitarian UAS operational authorizations.



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- ❑ Firstly, ICAO continues to “look outside the box” with regards to finding innovative solutions for the UTM construct.
- ❑ While recognizing the need to integrate these new services with traditional aviation, the environment where UTM will be operating and most of the aircraft within those environments will decidedly not be traditional. New technologies are being introduced that provide for new solutions to be considered for this rapidly evolving segment of the aviation sector.
- ❑ Among the deliverables resulting from this work is the publication of key UTM guidance material in ICAO’s Common Framework with Core Principles for Global Harmonization.
- ❑ This UTM Framework was a direct result of the submissions and presentations provided by States, industry, international organizations and academia during the first three DRONE ENABLE symposia.



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- ❑ ICAO has also developed and published model UAS regulations for domestic use which provide a template for those States needing regulations for the safe operation of unmanned aircraft that do not undergo the traditional aviation certification processes.
- ❑ Thirdly, ICAO has brought together lessons learned and best practices from Member States, international organizations and the humanitarian industry, as related to UAS operations for humanitarian aid as well as emergency response purposes.
- ❑ The resulting guidance material will streamline the consideration and authorization of life-saving operations, and with particular focus on responding to contingency and emergency situations.
- ❑ Lastly, ICAO continues its development of Standards and Recommend Practices (SARPs), procedures and guidance material, so as to facilitate the integration of RPAS into international IFR operations in controlled airspace.



RPAS ICAO TEAM



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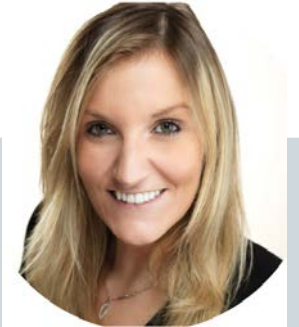
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