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THE RESILIENT PERFORMANCE OF A MULTIPLE REMOTE TOWER CENTRE: SUSTAINING VIRTUAL OPERATIONS

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Abstract
Multiple remote tower operations are a significant element of the future Air Traffic Management (ATM) system. Single-Mode-of-operation remote towers have been deployed and are operational. The pace of deployment of single-mode-of-operation remote towers is set to increase. There are potential benefits that can be derived from this mode of operation, Multiple Remote Tower Operations holds the potential to realise operating and service provision efficiencies.

A study of the resilient properties of a hypothesised Remote Tower Centre Work system was undertaken, utilising a resilience engineering assessment method derived in research undertaken within the SESAR programme

RE5 examined multiple-mode-of-operation ATS provision for five airfields of varying density of traffic and disparate traffic characteristics are combined into one Remote Tower Centre.

For RE5, a number of assumptions were made about the social organisation of the RTC that were elicited from the participant in the research. This includes the establishment of a supervisory role and specific roles and functions for work system actors, three remote tower modules.

The Resilience Engineering Assessment developed by SESAR under SESAR P.16.06.1b was used. This method emphasises a systemic approach to understanding the work system in the current operation as well as in assessing the work system's properties in the future as change is implemented.

The study concluded that to realise the potential of resilient performance in an RTC the ability to access the sources of resilience in an RE5 RTC requires new capabilities that support timely recognition of the need to reconfigure RTMs and be able to do so effectively.

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