

PE1804/F

Think Research Ltd submission of 20 October 2020

Think Research is a specialist Air Traffic Management (ATM) consultancy working to help implement new technologies and concepts internationally. We have been central to the development of the Remote/Digital Tower concept with our involvement beginning over 10 years ago in the European Commission Single European Sky Remote and Virtual Tower project. Our work has included developing the initial concepts of single airport, multiple airport and contingency modes of remote tower operations. Think was the principal author of the EUROCAE¹ ED240 European standard document for Remote Tower visual systems and are taking a leading role in the CANSO² Smart Digital Towers Task Force where we are the principal author of the emerging guidelines for Digital Tower implementation. We have supported numerous ATC providers and international airports in their Remote Tower implementation projects.

We are aware of the detail of Petition PE1804 and would like to note our disagreement with the petition. Specifically, we take issue with the assertion that the use of Remote Tower technologies within the ATMS plan would in any way reduce safety, either for passengers or remote communities.

Think has led many real-time simulations of Remote Tower solutions covering a range of airports, traffic levels and emergency scenarios. These simulations have included assessing the ability of Air Traffic Controllers (ATCOs) to safely handle traffic under a range of (possible, but highly unlikely) Remote Tower failure modes such as full or partial camera failures or increased latency of camera updates due to communications failures. In all cases traffic has been handled efficiently and safely. Our work supported the industry safety assessment for Remote Towers.

Remote Towers have already been safely implemented in similar remote operating environments to those in which HIAL is expecting to deploy the technology. In Sweden, such operations have been conducted since April 2015, and they are now operating four airports remotely with more being planned. A remote tower solution is already operating at Jersey Airport in the Channel Islands providing an essential contingency facility with the ability to allow the airport to operate unaffected in the event of problems in the main tower building. Traffic levels at Jersey are in advance of those at any of the HIAL airports, demonstrating that the technology can safely scale to meet HIALs future growth needs. Many other implementations are actively progressing and will be operational in advance of that being developed by HIAL (see <https://think.aero/insights/resources/remote-and-digital-tower-operations/> for a full map of current and planned deployments).

The evidence from the range of Remote Tower solutions already implemented and operational since early 2015 is that they are safe, cost effective and reliable. Issues such as the robustness of the communications infrastructure, the ability of camera solutions to work in high winds and the accuracy of remote weather monitoring facilities are purely engineering challenges that have been demonstrated to be

¹ European Organisation for Civil Aviation Equipment – the industry equipment standards body.

² Civil Air Navigation Services Organisation – the industry trade association for air traffic control.

addressable. Furthermore, the UK Civil Aviation Authority (CAA), the industry's specialist regulatory would not allow HIAL to implement a solution that it could not demonstrably prove to be safe. The CAA already have an approach to the approval of Remote Towers established³ and are applying it at Cranfield Airport in the UK. Therefore, safety concerns regarding commercial aviation operations are unfounded.

We believe that the Committee should remove consideration of safety issues related to the planned ATMS project from its considerations. The evidence of Remote Tower implementations already conducted weighs heavily against the argument that they are not safe. There is nothing particularly unique about the HIAL airports operating environment that has not been encountered elsewhere, or which cannot be addressed through good engineering design within the ATMS activities. Furthermore, the UK CAA would not allow HIAL to develop and implement an unsafe solution.

We would also caution that certain other claims made within the petition are factually incorrect regarding the limitations of Remote Tower solutions.

We offer no comment on the merits of the other economic or social arguments put forward in the petition, but the safety concerns are not justified. No one is concerned about the safety of air traffic control services provided to aircraft far over the North Atlantic from the Prestwick centre and similarly no one should be concerned about the future safety of aircraft on approach to Benbecula controlled from Inverness.

If we can be of any further assistance to the Committee in terms of provision of information please do not hesitate to get in contact.

³ <http://publicapps.caa.co.uk/docs/33/RemoteTowersPolicyStatementV2.pdf>