

## Private LTE networks will form the basis for all future critical operational communications (including critical IOT) for airlines and all vertical sectors

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### Abstract

Converged mobile private networks for operational and business-critical communications are now mandatory to keep pace with the global digitization of vertical sectors. The LTE (private) is a breakthrough and a first step before the 5G revolution and the generalization of IOT on this perimeter. It is the new challenge today for vertical sectors and mainly for Air France KLM to be able to provide the best connectivity with the best SLAs to be as aligned as possible with business needs. After a work since 2012 (date of creation of Association of AGURRE) to obtain Private LTE spectrum for business critical communications, and after a trial at the roissy airport since 2017, Air France received with Aeroport de Paris and Hub One the authorization by Arcep (the French Regulator) to use 40 MHz in the band 38 (2.6 GHz TDD) for 10 years. The deployment of this infrastructure starts in 2020 to finish in 2021. It will be a common RAN sharing deployment with Aeroport de Paris and Hub One and separate LTE cores for each side. It will be the first deployment of the world in this model for an airline in 2 airports (Roissy and Orly) and after this first deployment, all of the actual and segmented (Wifi + Tetra) business critical communications will use this infrastructure (data, voice). We will also implement Video next years to improve more and more the productivity on the ground. In parallel of this deployment, Air France KLM starts discussions with all actors of IOT and also 5G including Air France KLM businesses to lunch POCs on this kind of infrastructure. These technology

developments will enable Air France and KLM to have the most efficient and secure Hubs in the world and the most prepared for the digital revolution taking shape with the 4.0 industries. That includes connected aircraft, predictive maintenance and even the autonomous vehicles of tomorrow.

### Keywords

Configuration Management, Aerospace, Requirements management, Systems Engineering

### Back Ground

With the standardization of features such as MCX (Mission-Critical PTT, Video & Data) services and URLCC (Ultra-Reliable Low-Latency Communications) by the 3GPP, LTE and 5G NR (New Radio) networks are rapidly gaining recognition as an all-inclusive critical communications platform for the delivery of both mission and business critical applications. By providing authority over wireless coverage and capacity, private LTE and 5G networks ensure guaranteed and secure connectivity, while supporting a wide range of applications – ranging from PTT group communications and real-time video delivery to wireless control and automation in industrial environments. Organizations across the critical communications and industrial IoT (Internet of Things) domains – including public safety agencies, militaries, utilities, oil & gas companies, mining groups, railway & port operators, manufacturers and industrial giants – are making sizeable investments in private LTE networks.