

Modern Field Communication Project

“Provision reliable front-line communication technology to improve safety of our staff and the community anywhere, anytime across Queensland.”

Frequently Asked Questions

Question	Answer
Are any other agencies (state or interstate) using the proposed technology already?	The Queensland Ambulance Service (QAS) and the Queensland Police Services (QPS) along with several interstate agencies are already using many of the technology components. This includes the 'in-Vehicle Communication' concept and Satellite communications. Additionally, QFES is undertaking a Proof of Concept (PoC) to identify which aspects of the solution best integrate with and support our current systems and future operating processes.
Are we adding or replacing technology on the trucks?	The aim of the In-Vehicle Communication Hub is to enhance communication for QFES's frontline staff. While QFES will be adding equipment onto their appliances, such as a satellite dishes, QFES will likely replace the current portable and mobile (in-vehicle) radios with alternate devices that will support communications over the mobile phone, P25 Trunking and satellite networks.
How much equipment will be fitted into a vehicle?	QFES will consider fit outs in accordance with the capability requirements of each vehicle. Considerations will be given to the geography and the availability of mobile phone coverage in the area. For example, for vehicles in urban areas rarely used for operations, basic mobile phone connectivity is considered, while satellite technology may be prioritised for vehicles located in remote rural areas.
How do we ensure business continuity?	QFES aims to equip appliances with inbuilt redundancy with multiple communication pathways. This will provide connectivity redundancy using satellite and mobile phone (LTE) network technologies alongside radio communications.
What is the hand-held range with the in-vehicle communications hub?	The range of radio communications depends on the communication mechanism and the environment that is being used. Traditional radio includes both UHF & VHF, including Citizen Band (CB). Radio signals are attenuated or blocked due to the physics of radio wave propagation. Atmospheric conditions, radio background noise, topography, types of vegetation, smoke, building design and construction materials can all influence a radio's signal strength (distance) and audio clarity. This is normal behaviour for all radio communication devices and is not limited to fire and emergency situations. Please note, no radio network provides 100% coverage in all situations.
How user-friendly will the new handsets be?	QFES hopes to implement a handset, where users are only required to choose a channel, while the 'backend' of the solution will automatically select the best communication pathway (e.g., radio, mobile or satellite). As the handsets have not yet been chosen, we are unable to advise how easy they will be to use. QFES has taken on learnings from the GWN implementation. While some staff may find the new handsets easy to use, others may need some additional support. QFES aims to tailor the training to different needs.
How will training be conducted?	We are yet to fully understand the full training implications of this new technology. QFES aims to tailor the training to different needs. Multiple training methods will be considered and may include face-to-face, online or self-paced training. Where required and feasible, repetition training will be considered.

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How will users be able to communicate with Queensland Parks and Wildlife Service?	Queensland Parks and Wildlife Service (QPWS) are buying a similar solution to QFES. QFES is working closely with QPWS to identify a solution that enables effective inter-agency communication. QFES aims to ensure staff can find the right channels quickly allowing for communications on the same communication pathway with our support agencies.
How does QFES intends to maintain interoperability and connectivity with other agencies?	The new devices will have many options including Hi-band VHF, Citizen Band (CB), UHF and even marine band VHF. While this sounds complex, QFES is aiming to simplify this for end users, so they can easily select the appropriate channel. Radio will remain a primary interoperability medium going forward through use of multi-band radios.
What is covered in the Proof of Concept & In-Field Testing, and when does it happen?	<p>The technical Proof of Concept (PoC) will commence from April/May 2024 and is anticipated to run through till the end of 2024. Timeframes are dependent on the procurement and delivery of the communications equipment and associated systems required for the PoC.</p> <p>The PoC will focus on key technical aspects of the solution. QFES plans to test how the new equipment will connect to existing systems and equipment, and how the systems perform and interact. Specifically, this technical PoC will focus on features and functions related to network connectivity, data flows, and integration with other systems for end-to-end testing. QFES is also keen to identify any potential limitations of the technology.</p>
Are you conducting emissions testing?	QFES will be conducting Radio Frequency (RF) emissions testing as part of the Proof of Concept (PoC) to ensure compliance to emission standards.
Is satellite technology going to be affected by carbon in the air?	Operational smoke testing will also be part of the technical Proof of Concept. Some previous tests have shown positive results through light smoke. However, it is expected that connectivity through the satellite link is likely to decrease the denser the smoke gets. QFES acknowledges that, like all radio signals, satellite will degrade through carbon dense smoke.
How will QFES address the impacts of losing power during incidents and events?	QFES is looking at a solution that enables the use of multiple communication pathways. In the event, where power outages affect mobile phone or radio networks, satellite connectivity will be enabled. QFES is also considering to harden the mobile phone network by providing extra generators to support ongoing mobile phone tower operations.
What is QFES's plan for all the Primary Producer (PP) Brigades that have slip-ons and trailers?	QFES is looking for an appropriate radio-based solution that meets the practical and local needs for Primary Producer Brigades. It may not be feasible for QFES to install the same type of equipment on the vehicles of PP Brigades. QFES will be considering the options to utilise Citizen Band (CB) radio channels that focus on a more localised solution. Security also plays a factor in what options can be provided. The technical Proof of Concept will provide further insights on how QFES can provision a technology that meets the PP Brigade requirements.
Will the brigades have their own dedicated channel?	There are approximately 1400 brigades, and it would be unlikely for each brigade to have their own channel due to capacity constraints. QFES has yet to establish the future channel plan layout for the new equipment.

Contact and Information

If you have any further questions, please contact the Modern Field Communications Project team on ModernField.CommunicationsProject@qfes.qld.gov.au. Alternatively, visit the QFES Gateway Intranet (only accessible to QFES staff and volunteers) for more information about the project.

