THE 5 C'S OF RADIO COMMUNICATIONS

Despite the surge in smartphone use in the workplace, two-way radios have remained the dominant technology for push-to-talk communications, this is particularly apparent when you consider the many hundreds or thousands of workers at an airport. Why is this? Two-way radios are designed for the job. Not only are they rugged and durable, with extremely long battery life and loud, clear audio but they also offer a secure and reliable network in a time when we are facing the need for heightened security and communication simply cannot fail.

From check-in desks through to security, boarding gates and the runway themselves your users may work in high noise environments, on extended shifts, outdoors in the hot and cold, or in dangerous environments that require intrinsically safe devices.

Different use cases may require devices that can be used with gloves, include displays or operate hands free. Supervisors may not carry a radio but need to interoperate with radio users from a smartphone. Purpose- built radios designed for specific use cases can meet all of these needs balancing the practicalities of sometimes harsh working environments with the need for a sleek design for passenger-facing employees. From extra loud speakers, noise-canceling microphones, glove friendly ergonomics, extreme temperature ratings, purpose built accessories, intrinsically safe models to integrated smartphone PTT applications such as WAVE PTT that ensures individuals and teams are connected regardless of the device they are using.

> **Airports are a major economic sector in Europe generating** ✈ **4.1%** **OF THE GROSS DOMESTIC PRODUCT (GDP)** **of Europe and employing 12.3 million people…**

InterVISTAS, Economic Impact of European Airports, January 2015

The 5 Cs are the basics of what makes Professional Mobile Radio (PMR) such a widely-used communications tool, with more than 40 million two-way radios in use globally.

Coverage - designed to meet specific requirements, whether it is a single terminal or a multi site airport facility encompassing offsite parking, aeroplane hangars and maintenance facilities as well as multiple passenger and cargo terminals and on to the runways.

Capacity - engineered to address peak usage, using dedicated licensed spectrum and right-sized to each airport's specific needs – so calls always get through.

Cost - predictable costs, with no additional airtime fees like those associated with commercial mobile phone networks.

Control - high degree of control over system requirements, design, priorities, security, and operation – allowing a system to be configured for a specific use case.

Capabilities - features and capabilities that enable safety and productivity for users such as location services, added encryption/security, text messaging, telemetry, radio programming and other enhanced features.

Efficiency and Productivity Capabilities (data applications)

Modern, IP-enabled digital radio systems offer data capabilities. Radio systems might not offer broadband data speeds, but they allow you to deliver data services within your custom designed coverage area, with the capacity you need, without facing additional data airtime cost and give you exactly the control you need. So with data capabilities, what more can you do?

- Query databases, identify (price, inventory, licensing), stock codes, (price, inventory, licensing)
- Monitor biometric data such as the heart rate of workers, by connecting sensors to radios via Bluetooth
- Send status alerts, call outs and text messages (free form and one-touch canned messaging)
- Coordinate work order tickets for example sending aircraft engineers or cleaning services to a plane immediately after it has touched down to ensure fast turnaround times
- Keep track of your staff and assets using locations services (such as GPS outdoors, Bluetooth locations sensors indoors)
- Set up telemetry and SCADA to let your machines talk to each other to maintain everyday operations and quickly identify security breaches
- Manage your fleet of radios over-the-air

Secure Communication Capabilities

Security is a big topic these days, especially for airports. With PMR you control who can listen to your voice and data traffic. In addition there are many security features to secure your voice and data traffic, from business level secure voice encryption to government certified end-to-end encryption with features such as over-the-air encryption key management in TETRA systems. Trusted by tactical teams and government organisations, TETRA secures the most sensitive data.

Safety and Reliability Capabilities

In terms of safety, PMR really shines with its heritage in public safety communications and features like: prioritisation to clear communications channels during emergencies, dedicated emergency buttons on radios to call for help and man-down and lone-worker features to keep your workforce safe.

To be safe, your communications must be reliable. Your calls need to always get through so there are features built in to make sure calls are prioritised and radio traffic is load balanced. In case of a mobile network overload, you need to be sure your staff will be able communicate on their radio network or in direct mode. Systems can be designed to be resilient from redundant backhaul links at remote radio sites to redundant system controllers and back-up power. Plus radio always has the fall-back of direct mode/simplex/talkaround operation so communications can occur directly between radios in a peer to peer fashion without the need for infrastructure.

For more information on our communication solutions
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