

BAPCO



The Annual Event

7-8 MARCH 2023

Coventry Building Society Arena

Emergency Services Applications for 5G Private Networks

Andrew Carter

Group Technical Specialist – Wireless Technologies

Telent Technologies Ltd.

[BAPCO-SHOW.CO.UK](https://www.bapco-show.co.uk)



[BAPCOEvent](#)

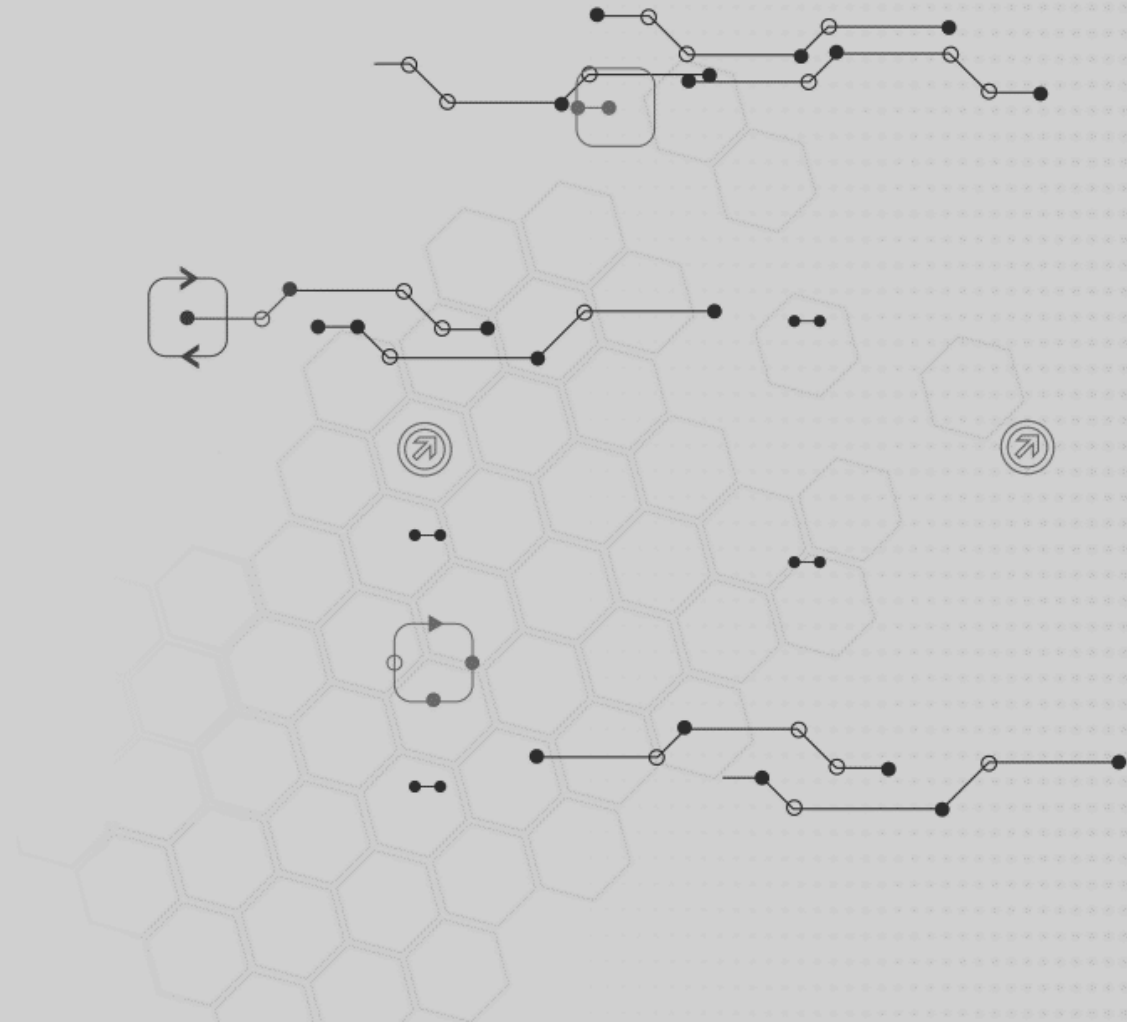


[BAPCO Annual Event](#)



Introduction

- Private Mobile Networking
- Key Applications on 5G
- Tactical Bubble



Technology Solutions for Emergency Services

Design, build, support & manage critical communication solutions

- Mission critical focus
- Nationwide field force
- 40+ operational locations
- Large scale programmes
- Secure, high quality solutions
- Strategic technology partnerships
- Financially Secure



ESN & Vehicle Connectivity Services



Mobile Data Terminals



Control Rooms (C&C/ICCS)



Station End and Resource Alerting



Networks and Security Management



Applications Management



Cloud Data Centres and Desktops



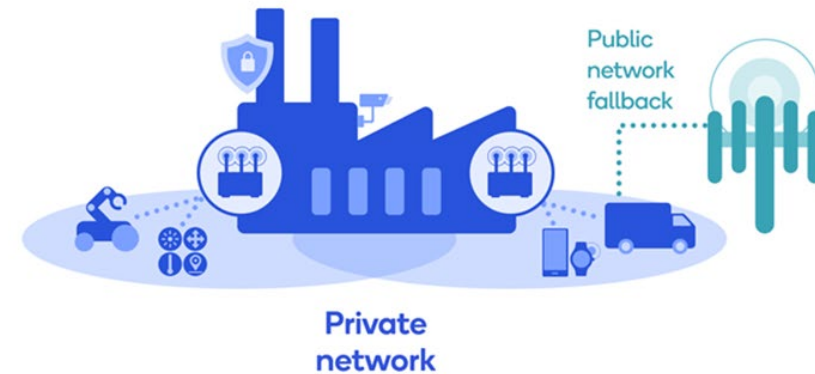
Private Mobile Networking – Is It Important?

- Everything will be connected in an Industry 4.0 world
- Use of automation and robotics is reaching every market vertical
 - Manufacturing, Transportation, Construction, Utilities and Defence
- People, Machines and inanimate objects will all provide data in a truly digitised world
 - Over 74% of all data is not collected or utilised.
- Fixed and Wi-Fi network won't deliver flexibility and coverage capability required to capture data at the edge of the network
 - 5G offers lower latency, higher throughput capabilities than Wi-Fi, flexibility versus fixed
- Market for and applications using private mobile networking is growing



Private Mobile Networking – What is it?

- A dedicated network providing unified wireless connectivity
 - Less passive infrastructure, easier to deploy
- Supporting low latency dependant applications
 - Offers higher performance than Wi-Fi/4G technologies
- Control
 - An autonomous network owned and controlled by user
- Performance
 - Transmit large volumes of data to support next gen applications leveraging AI and ML
- Secure
 - Encrypted and SIM based connectivity in local domain



Dedicated

Local network, dedicated resources, independently managed

Secure

Cellular grade security, sensitive data stays on-premise

Optimized

Tailored performance for local applications, e.g., low latency, QoS

5G

Coverage, capacity, and mobility

Outdoor/indoor, high data speeds, seamless handovers, public network fallback

Reliability and precise timing

Industrial grade reliability, latency and synchronization (eURLLC and TSN)

Interoperability

Global standard, vast ecosystem, future proof with rich 5G roadmap

Key Applications for Connected Emergency Services

Security/Surveillance

- Central / multi-site monitoring
- Automated patrols / drone
- Geofencing
- Asset Protection

People

- Geofencing Health & Safety – geofencing of critical areas
- Private comms / video / voice
- Health monitoring

Assets

- Maintenance
- Works programming

Remote Control

- Drones & UAV's
- Dangerous High Risk Operations

Vehicle

- Connected plant / tracking autonomous / remote control
- Performance & Usage
- Maintenance Planning

Remote Monitoring

- Centralised Monitoring
- High Risk Location Monitoring
- Proactive Decision Making
- Effective Resource Utilisation

Command & Control

- Monitoring & Reporting
- Incident & Resource Management

Training

- BIM
- Augmented Reality
- Head cams

Video Analytics

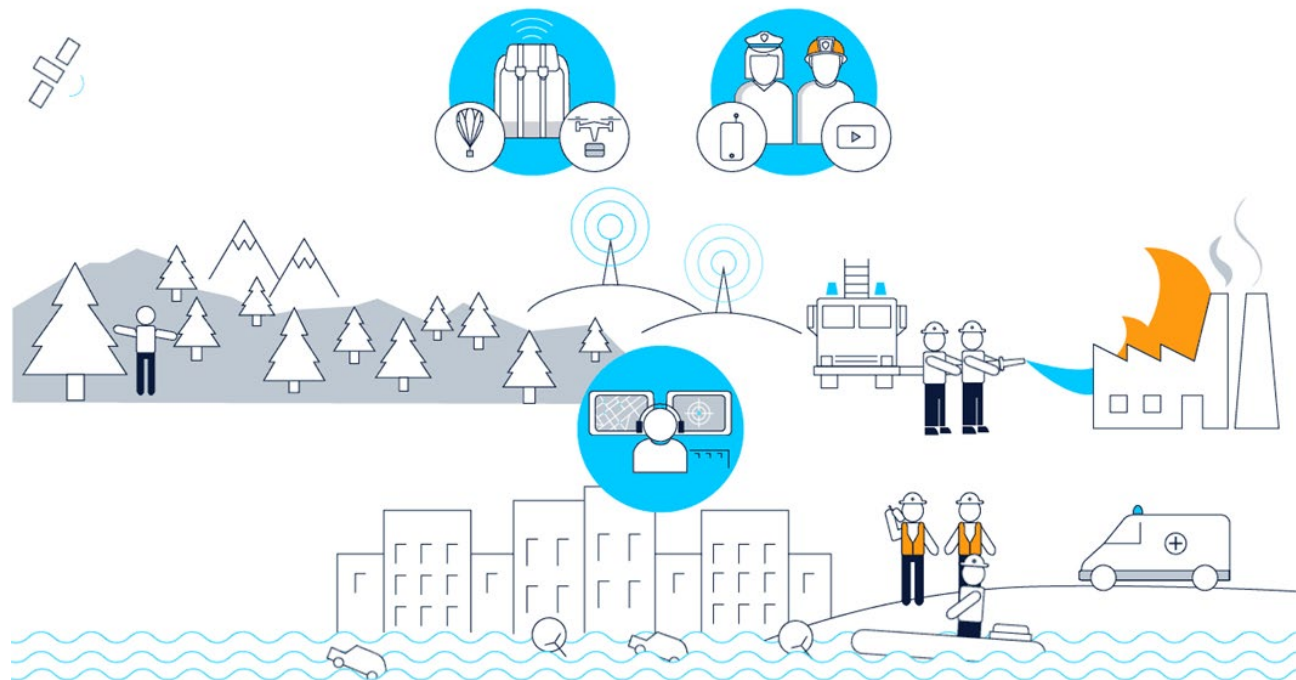
- Unauthorised Activities
- Trend Analytics

End Devices

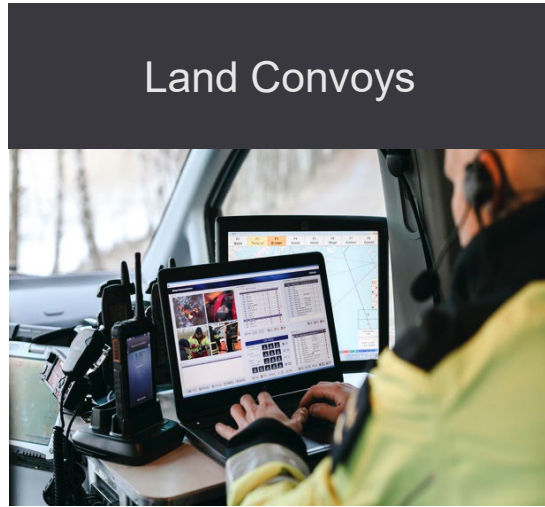
- Wearables
- Camera
- Sensors
- Real time BIM

Connectivity

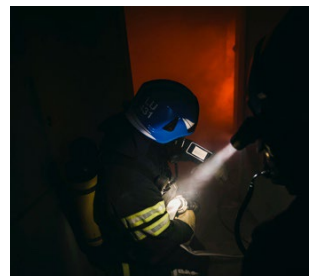
- Incident C&C
- Site Operations
- Inter / Intra site



The 5G Tactical Bubble



Public Safety - Land Operations , Security, Peacekeeping



Disaster Recovery

Remote Areas

Events

Security

Operational



Representative Tactical Bubble

- Manage your network with local GUIs
- SW management and support services agreed separately.
- Optional remote access to simplify services



Preconfigured Portable Network

Waterproof aluminium case
Hand-luggage form factor
Total weight 17kg
Aluminium ideal conductor for heat-dissipation
Stackable & lockable

Battery options
Small battery (3-5 hrs)
Large battery (pictured) (15-24 hrs)

Rugged IT Ancillaries
Maintenance & config
Application hosting
User equipment

2 x N-Type RF Connectors
Suitable for Omni-, eMIMO- and V/X-Pol Antennas

2 x Ethernet RJ45
Maintenance
Application server
Configuration
Backhaul

230/110VAC Power Supply
IP66, Waterproof and MIL Spec connectors

N-Type GPS Connector
Optional with 90° angle connector



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Questions & Answers



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**Come and talk to us on
stand F11**