



**BLACK SPACE
TECHNOLOGY**

CLOSING THE CARE GAP

TECHNOLOGY ENHANCED INCIDENT CARE

ONE INTEGRATED SOLUTION FOR FIRE, AMBULANCE AND RESCUE TEAMS

RAPID-FAR 'ONE DEVICE - MULTIPLE SCENARIOS'

ABOUT BLACK SPACE TECHNOLOGY

Black Space Technology is a privately funded SME which specialises in scalable and future proofed mobile telemedicine and telehealth solutions. It is software focused; hardware agnostic and all its solutions are configurable to local service needs including language localisation.

All its products have full medical accreditation, GDPR compliance and have ISO 9001, 13485 (medical software), IASME IoT Gold, NHS Data Security and Protection Toolkit and Cyber Essential Plus accreditation. The solutions are currently used internationally by military and civilian first responder services, deployed on land, sea, and air.

The core Android digital platform is easily configurable to individual skill sets including

language localisation. The solution provides interagency data visibility improving operational readiness and interoperability for fire, ambulance and rescue missions. The integrated platform allows incremental data capture from any emergency incident using Android end user devices facilitating information exchange between devices and integrated data flow into 3rd party platforms – **‘One Device – Multiple Scenarios’**



1. Rapid-METHANE – A First Responder incident reporting system that alerts the Control Centre of an emerging incident such as a fire etc. The system allows bidirectional flow of information to allow the rapid deployment of appropriate resources following incident assessment. The GIS mapping allows real time location updates to be issued to all Responders including Bronze, Silver and Gold Control Centres to allow the dynamic response to be visible on all devices. The mapping allows the transmission of all types of hazards, access routes, numbers involved, emergency services required and deployed as well as the plotting of zones, deployed multi agency assets including an overview map. In addition, the modules has a dynamic risk assessment tool, sectoring tool, Joint Decision Log and IIMARCH template for planning and communication.

2. Rapid-EPR – A fully automated prehospital care electronic patient record (EPR)

combined with wireless monitoring systems for the real-time management of emergencies. It allows incremental data capture from point of injury through to the receiving medical facility. There is optional low bandwidth high-definition videoconferencing as well as ultrasound and video laryngoscopy. The downloadable Android platform has the advantages of simpler deployment, easier maintenance, and multinational language interoperability. Increased operations in austere environments and longer evacuation times require light, scalable, modular and flexible equipment customised to the appropriate personnel with tactical and operational competencies.

3. Rapid-MCI – Mass Casualty Incident (MCI) is a MASCAL management system with real time situational awareness that can deal with multiple mass casualties and allow incremental data capture from point of injury through



the evacuation chain allowing tracking of casualties. It allows the rapid triage of multiple casualties and allows geo location of casualties to avoid 'left behind' scenarios with the ability to monitor the vital signs of multiple casualties. It allows real time incident control and allocation of resources to improve scene management. It matches the availability of the appropriate hospital resources with casualty demand to avoid surges and inappropriate transfers. The solution is air accredited to support CASEVAC and MEDEVAC missions.

There is also an optional wearable Force Protection system:

4. Rapid-SAM – Situational Awareness Monitoring is a dismounted biometric monitoring and threat assessment platform that is worn by the First Responders. The system consists of wearable devices that can monitor the First Responder's vital signs and environmental conditions. The wearable sensors mitigate against environmental risks (heat stress and cold injury) and allow the Control Centre to monitor the position and condition of the First Responders to prevent any injury or emerging threat. The solution can also be used to monitor injury recovery and return to operational fitness by biometric monitoring.



A background image showing firefighters in silhouette against a bright orange and yellow fire. One firefighter in the foreground is holding a hose, while another is further back. The scene is dramatic and high-contrast.

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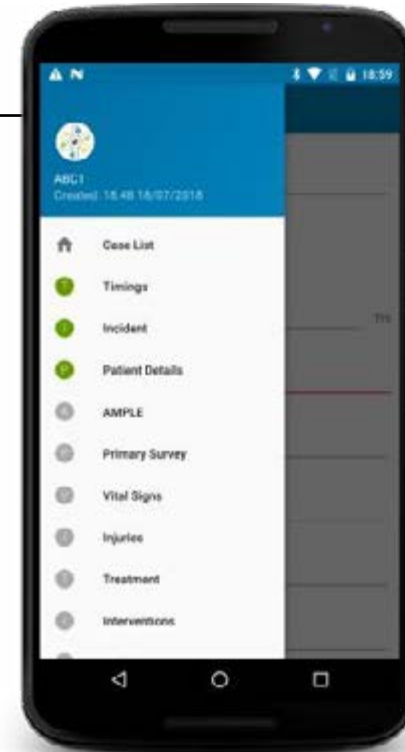
CLOSING THE CARE GAP

HOW IT WORKS

RAPID-FAR TECHNOLOGY ENHANCED CARE

HOW IT WORKS

1



First Responders are equipped with an air accredited light, portable Android smartphone with the Rapid-FAR software, plus wireless enabled equipment for capturing vital signs. A First Responder attending the incident sends a digital METHANE message to the Control Centre. The receiving Control Centre has access to a web-based portal to receive the incident data and transmit deployment plans to all devices. The system can capture and transmit all the incident data including GIS asset mapping information which is available to all responders. Casualties' vital signs captured using wireless peripherals allow intelligent diagnosis. Devices include: 6/12 channel ECG, Blood Oxygen Saturation, Respiratory Rate, Blood Pressure, Blood Sugar, Pulse Rate, Peak Flow and Temperature with optional Defibrillator

2



Ease of use is critical, and the system can be configured depending on the skill set of the user. The device will guide the First Responder through a simple step-by-step process that will support incident reporting, casualty diagnosis, and provide treatment instructions and advice. Includes easy and quick instructions on how to apply the key monitoring peripherals provided as part of the solution. Single point of failure is avoided by monitoring devices having independent power supply and display screens, data entry can be wireless or manual and embedded knowledge supports remote clinical decision making.

HOW IT WORKS

3



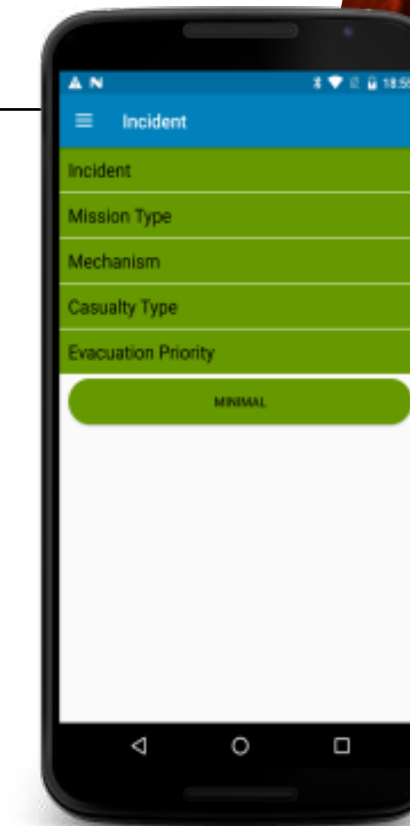
The solution can be used in any FAR incident on land, sea or air. The First Responders can assess the incident to determine the severity, assets required and triage status including GIS location. Further casualty data capture includes digital imagery and vital sign capture.

4



The touch screen interface including short cuts, enables incident, resources required and vital signs to be captured and transmitted in 'real time' via communication channel in a secure, encrypted format to the Control Centre. The designated receiving hospital or trauma centre receives full patient details, including the vital signs and digital images. Specialist clinicians can then advise on interventions whilst receiving real time information on the patient's status, location and destination.

5



In a Mass Casualty Incident all casualties can be triaged using the Ten second Triage Tool, GIS located and bar coded to allow subsequent identification and tracking. Receiving hospitals can submit the bed availability which allows the Transport Officer to allocate the casualty to the appropriate hospital to avoid surges and inappropriate transfer. This speeds up evacuation times and leads to more efficient use of existing resources and enhanced outcomes bring order to chaos.

HOW IT WORKS

ESSENTIAL FEATURES & BENEFITS

ALLOWS A COMPREHENSIVE RESPONSE TO ANY FAR INCIDENT

- Enables digital communication between First Responders and the Control Centre to allow Real Time Situational Awareness to improve the management of any FAR incident improving interagency data visibility.
- The solution allows allocation of appropriate resources in response to the digital METHANE message including GIS location of responders, required and on scene assets and casualty tracking.

FAST CONNECTIVITY BETWEEN DEVICE AND PERIPHERALS

- Pre-paired wireless peripheral devices for automatic biometric data capture.
- Supports secure WiFi, GSM, satellite and MESH radio links to military medical control centre
- All data is 256 AES encrypted on device, in transit and at rest.
- The data can be hosted in the Client's cloud or in a 'walled garden' portable laptop.

EASY TO USE FOR DIFFERENT SKILL SETS

- Intuitive user interface with touchscreen technology.
- The solution can be configured to the appropriate skill set of the responder and allows handover between devices or via the server.

ENHANCED CASUALTY SAFETY

- Provides powerful reassurance to casualties in any location.
- Can support and monitor multiple incidents and/or casualties simultaneously over prolonged periods of time.

SMALL, LIGHT AND POWERFUL DEVICE

- Latest Android tablet and smartphone technology with integrated WiFi, GSM and Bluetooth.
- Two built-in cameras to allow both photography and video capture.
- Push to Talk functionality

Rapid-FAR provides safe and effective support for any FAR incident in remote locations where medical facilities are lacking. Delivering first class healthcare using technology in any FAR incident.

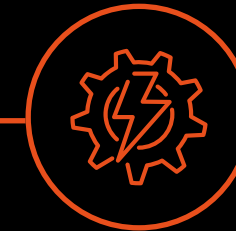
HOW IT WORKS

CORE COMPONENTS



- Android tablet or phone with Rapid-FAR application
- Wireless 6/12 channel ECG
- Wireless Blood Pressure Monitor
- Wireless Pulse Oximeter
- Wireless Capnometer
- Wireless Thermometer
- Wireless Glucometer
- Power pack
- Total weight of components and case 2Kg

CORE FUNCTIONS

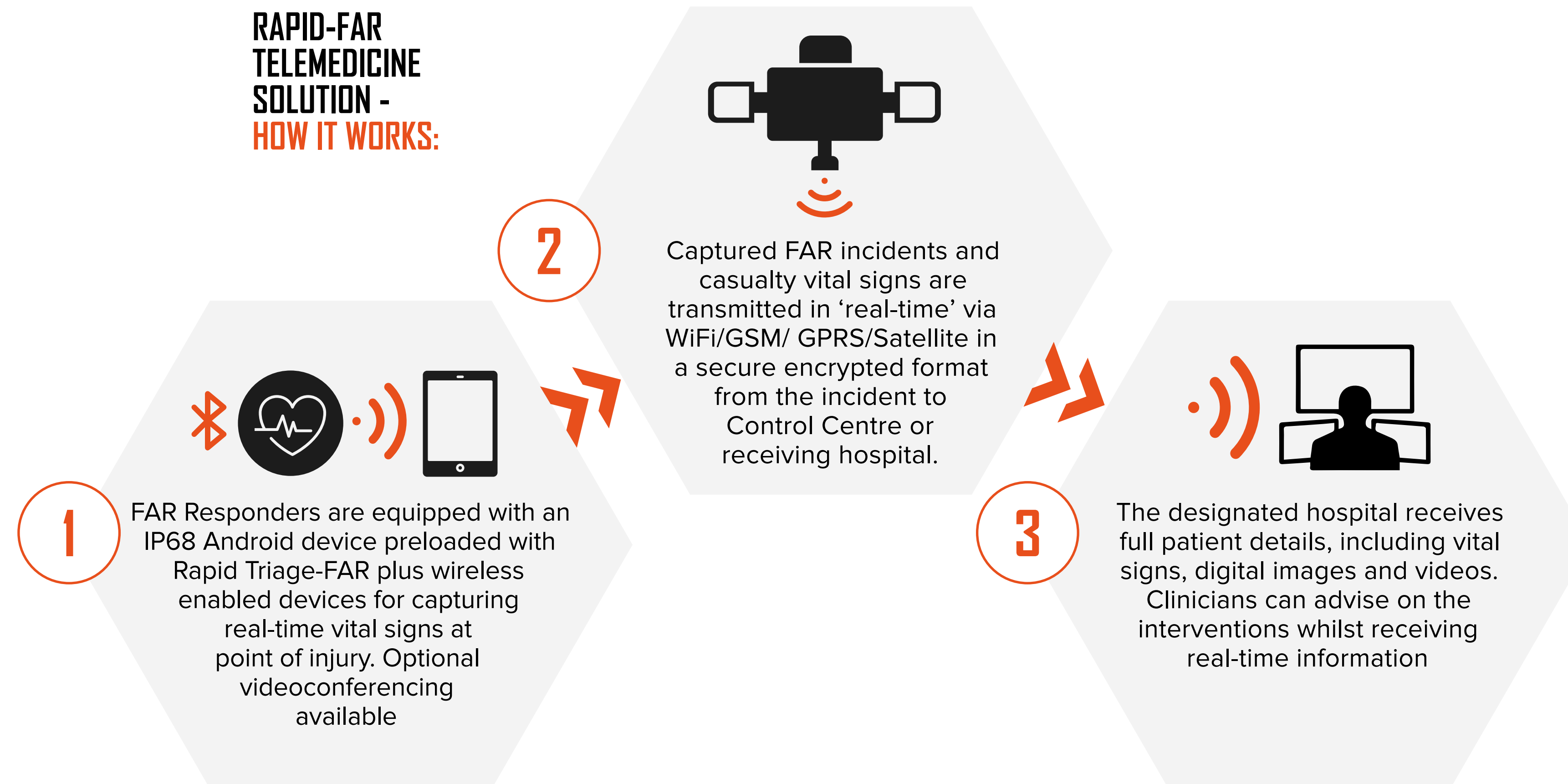


- Digital (M)ETHANE messaging
- Zone and Asset mapping to provide RTSA
- Real-time vital sign capture and transmission
- Real-time photo and video capture
- Comprehensive medical and drugs database
- Touch screen input
- Link to Remote Incident and Medical Support
- Print/USB option
- Optional Video Conferencing
- Optional Ultrasound
- Optional mixed reality smart glasses for First Person View Teleassistance



RAPID-FAR

RAPID-FAR TELEMEDICINE SOLUTION - HOW IT WORKS:



RAPID-FAR

ANDROID END USER DEVICE

- IP 68
- MIL-STD-810H standard
- IP68 waterproof
- 4950mAh battery
- Push to Talk
- 6.08 inch screen
- Processor Qualcomm QCM6490
- RAM 6GB
- Storage 1024 GB
- 100dB speaker
- 48MP camera
- 4K camera.
- 5G, Wi-Fi, BLE 5.0
- AER Certification
- Android 12
- 5-year warranty



CONTACT

Tel: +44 (0)121 274 7171

Email: info@blackspacetechnology.com

Black Space Technology Limited
Birmingham Innovation Campus
Faraday Wharf
Holt Street
Birmingham
B7 4BB
United Kingdom

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