Critical Communications World 2026 Broadband Focus Forum

Monday 15 June 2026

Session #2: Identifying current and new use cases for critical communications using advanced Network and Service APIs

This report summarises the key takeaways from TCCA's Broadband Focus Forum Session #2 on the topic of Network and Service APIs for critical communications, held one day prior to Critical Communications World 2026 in London. It captures the operational use cases identified by the audience, based on current and existing CAMARA Service APIs that were presented during the workshop, with the objective of supporting mission critical public safety operations. In addition, the report explores potential operational use cases that could be enabled through enhanced or newly proposed Network/Service APIs.



Figure 1 below outlines the enablement of Network and Service APIs leveraging 3GPP Capability Exposure Framework (3GPP Capability Exposure Frameworks and APIs).

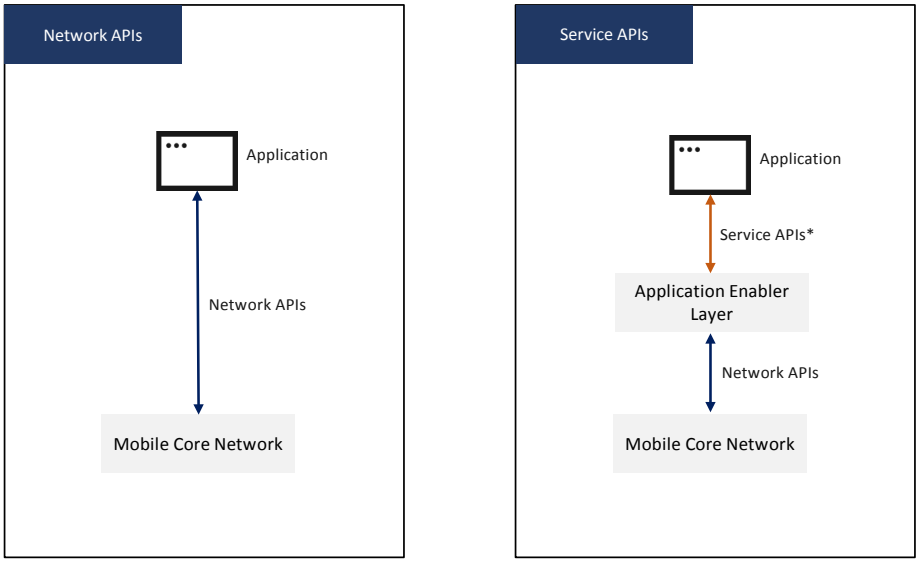


Figure 1 Network and Service APIs

Summary of Identified Use Cases for Critical Communications based on existing CAMARA Service APIs

Figure 2 below shows examples of CAMARA Service APIs (https://camaraproject.org/api-overview/) categories applicable to critical communications that were presented and discussed during the workshop conducted during the Focus Forum.

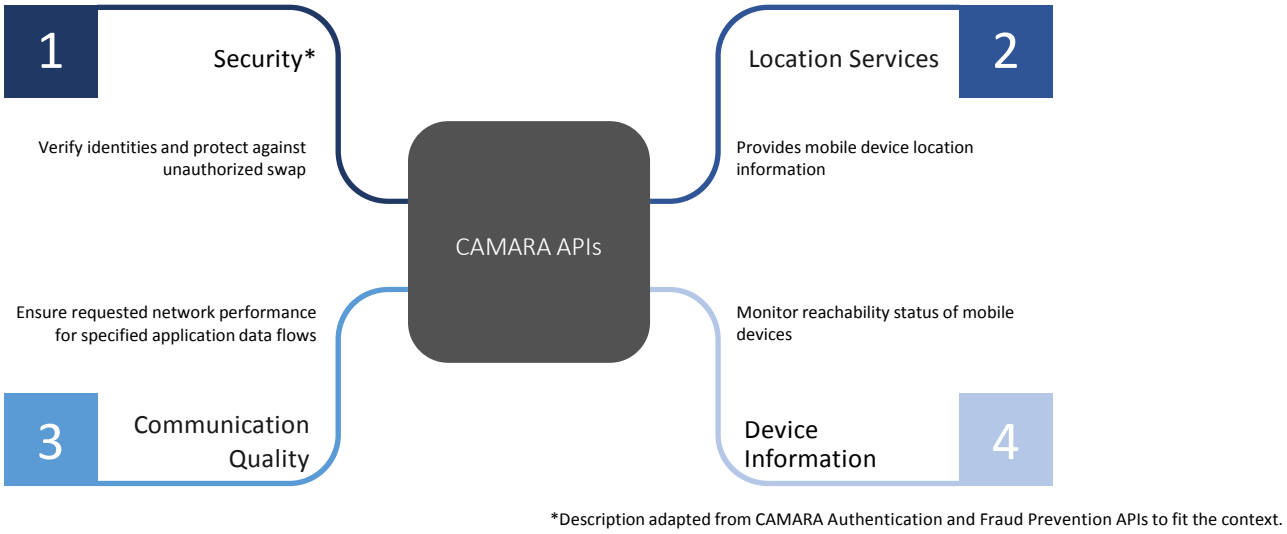


Figure 2 Examples of CAMARA Service APIs categories applicable to critical communications

The results from that workshop are presented in Table 1. Attendees were organised into 10 groups, each of which brainstormed the topic and shared their conclusions, leveraging supporting material that was presented during the

Focus Forum. The audience comprised multiple stakeholders, including government agencies and authorities, vendors (infrastructure, chipset, and SDK), commercial operators, specialised communication service providers (including mission critical network operators and system integrators), and mission critical end users.

Table 1 Summary of Identified Use Cases for Critical Communications based on existing CAMARA Service APIs

CAMARA Service APIs Category	CAMARA Service APIs	Proposed Operational Use Cases
Location Services	• **Geofencing Subscriptions** • **Location Verification** • **Location Retrieval** • **Population Density Data**	• **Detecting devices near an incident area.** • **Detecting when a device appears in an unusual location (a location where it does not normally belong).** • **Locating devices and drones in GNSS denied situations (GPS jammed/spoofed).** • **Assess incident situation (insights into crowd concentration).** • **Locating devices for better mission planning.**
Communication Quality	• **Quality on Demand (QoD)** • **Connectivity Insights/ Connectivity Insights Subscriptions** • **QoS booking**	• **Enhanced network quality for search and rescue operations, during incident assessment or for a specific drone mission:** • **Analyse expected network quality for first responders' devices (including drones).** • **Elevated QoS (higher throughput, lower latency) for first responders' devices (including drones) and services during an incident or for planned events.**
Security	• **Device Swap** • **SIM Swap/SIM Swap subscriptions**	• **Identify fraud based on change in device/SIM usage**

Proposed Use Cases for Critical Communications based on enhanced or new Network/Services APIs

- **Network Coverage API:** Provides real-time or predictive coverage quality maps for a defined area. In case of weak coverage, send a notification(s) to suggest deployment of temporary coverage solutions within the specified area(s) (drone cell (Cell on Wings), Cell on Wheels, etc.). This API can leverage an existing CAMARA Service APIs such as 'Connectivity Insights' enhanced with area definition.
- **Network Health Status API:** Provides real-time health status of the mission critical broadband network(s) for a defined geographic area (detect degradation, congestion, etc.).
- **Closed-Loop Control APIs (Self learning, Self-healing, Self optimising):** Triggers remediation actions following detected anomalies including but not limited to congestion, security threats, performance degradation, etc. Important to maintain human-in-the-loop.
- **Mission Critical Quality API:** Adjust the QoS during mission critical operations. Requires enhancement of existing CAMARA APIs related to Communication Quality including QoS Profiles API, Quality on Demand API with Mission Critical Performance characteristics.
- **Multi-Language Public Warning System Alert API:** Broadcast a multi-language public warning message in a targeted area based on analysed information of the devices in that area (whether local or roaming). Can leverage existing CAMARA Service API such as Device Roaming Status.
- **Role-Based Device Management API:** Ensure the correct role of a device when a SIM Swap or Device Swap occurs by deciding whether to keep, update, or revoke the device role (Police, Firefighters, etc.). Can leverage existing CAMARA Service APIs related to Device Swap/SIM Swap.
- **Location-Based Group Communications Management API:** Automatic add/remove end users from MCX Groups when they enter or leave a defined area (such as incident area, borders). Can leverage existing CAMARA Service API related to Geofencing Subscriptions.
- **Interference Detection (including Jamming and Spoofing) and Notification API:** Allows authorised users (such as dispatchers / control room operators) to subscribe to interference events and receive notifications when interference is detected or predicted in a specific area.
- **Location-Based Priority Management API:** Apply high priority to selected devices with a defined role (Police, Firefighters, Health/Paramedics, etc.) inside a defined geographic area. It can leverage with enhancements to existing CAMARA Service APIs related to Geofencing Subscriptions and Quality on Demand.
- **Location-Based Device Discovery API:** In a geographical area, identify the list of devices currently present together with their capabilities and roles (Police, Firefighters, Health/Paramedics, etc).
- **Lawful Interception API:** Allows authorised users to legally intercept communications of specific targets, under legal authority.

- **Ambient listening API:** Allows authorised users (such as dispatchers / control room operators) to remotely listen to ambient sounds around a selected device to find out what is happening around the location of that device.
- **Population Change Alert API:** Allow authorised users (such as dispatchers / control room operators) to subscribe to real-time or near real-time alerts when the population/ number of devices in a defined geographic area increases significantly (e.g. sudden crowd formation, influx of people into an incident zone, mass gathering detection). It can leverage existing CAMARA Service APIs related to Population Density Data and considering enhancements.
- **Device Presence API:** Detect devices that are trying to attach (or re-attach) to the network in a defined area during incidents. It can help identify whether there are survivors in a disaster area.
- **Enhanced Population Density Data API:** Enhancement to the existing CAMARA Service API related to Population Density Data to allow density categorisation to include categories such as – Public Safety, Connected Vehicles, Citizens, etc.
- **Capacity on Demand API:** Enables authorised users to request additional network capacity in a defined geographic area during disasters or major incidents.

Findings from this Focus Forum

- Network and Service APIs can unlock significant benefits for critical communications such as:
  - Improved situational awareness
  - Enhanced mission critical Quality of Experience (QoE)
  - Faster and more effective incident response
  - Better resource management and higher quality decision making
  - Enhanced resiliency in terms of operations and supporting communications
- Combining the use of existing Network and Service APIs unlocks enhanced capabilities that would provide more effective support for critical operational needs during both incident response and day-to-day operations.
- There are important considerations when implementing Network and Service APIs in critical communications. These include but are not limited to:
  - Mission-criticality of these services
  - Protection against misuse (deliberate or inadvertent)
  - Privacy and data protection
  - Authentication and authorization
  - Possible regulatory limitations in some countries.
- **Key role of commercial mobile operators:** To fully benefit from Network and Service APIs in critical communications, close cooperation between Public Safety operators and mobile network operators (MNO) will be important, as some of these APIs need to be invoked towards MNO networks. Other considerations include:
  - 1) Will MNOs allow sharing of non-identifiable user or user-related information for specific use cases?
  - 2) Is there a need for standardised or common framework agreements, or will access to these APIs be subject to bilateral agreements between public safety organisations and each operator?
  - 3) Additional aspects such as SLAs, liability, etc.
- Network and Service APIs and their potential relationship to Artificial Intelligence (AI). How both these technologies can and will interwork is an important area to explore. Key questions include:
  - If and how should AI agents consume and act upon the outputs of Network and Service APIs?
  - If and how should Network and Service APIs leverage AI or enable AI agents?
  - If and how should AI be used to enhance the accuracy, or automation of specific Network and Service APIs?

MCX end device-related APIs were also discussed. These focus on capabilities that directly involve or impact the end user MCX devices such as Emergency App Push API, Public Warning System message translation APIs, etc.

Recommended actions:

Create a new Critical Communications Broadband Group task force in TCCA to further study this area, collaborating with other Working Groups such as Broadband Industry Group (BIG), the Legal and Regulatory Working Group (LRWG) and any relevant TCCA partner organisations, such as GSMA. This task force has been provisionally named RACC – Role of (*Network and Service*) APIs for Critical Communications. A draft Objectives and Scope will be created and presented during the upcoming CCBG Plenary in September 2026. Further details available upon request via info@tcca.info.

Acknowledgments

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