PUBLIC SAFETY MISSION CRITICAL BROADBAND STANDARDS DEVELOPMENT
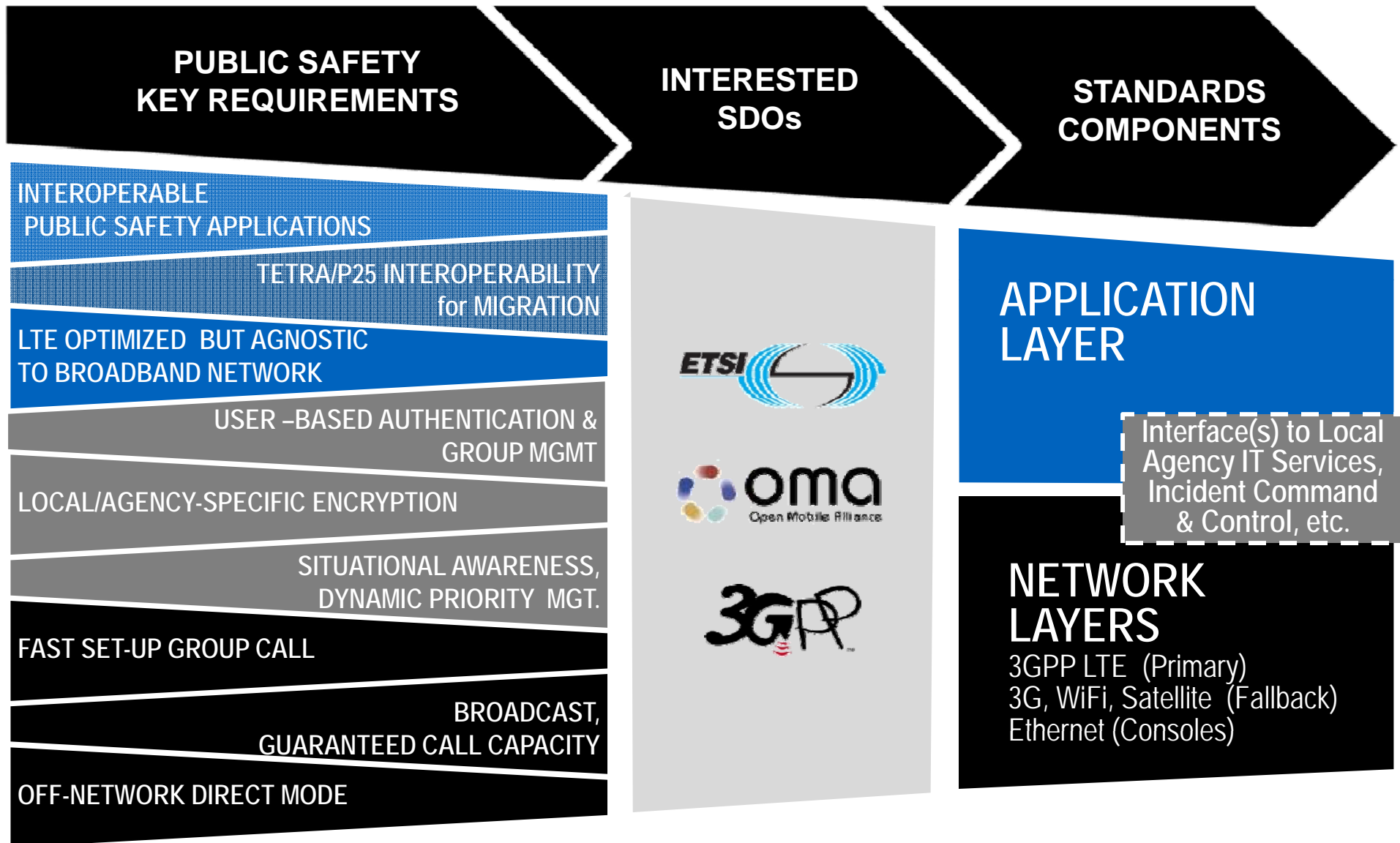
MOTOROLA SOLUTIONS

3GPP-OMA-ETSI CRITICAL COMMUNICATIONS WORKSHOP - MONTREAL

AUGUST 26-27, 2014

"Critical Communications" includes "Public Safety" and requires Mission Critical services and solutions

Way Forward: How should Broadband Industry Choose SDO(s) for Critical Communications?

PUBLIC SAFETY KEY REQUIREMENTS

INTERESTED SDOs

STANDARDS COMPONENTS

INTEROPERABLE PUBLIC SAFETY APPLICATIONS

TETRA/P25 INTEROPERABILITY for MIGRATION

LTE OPTIMIZED BUT AGNOSTIC TO BROADBAND NETWORK

USER –BASED AUTHENTICATION & GROUP MGMT

LOCAL/AGENCY-SPECIFIC ENCRYPTION

SITUATIONAL AWARENESS, DYNAMIC PRIORITY MGT.

FAST SET-UP GROUP CALL

BROADCAST, GUARANTEED CALL CAPACITY

OFF-NETWORK DIRECT MODE

ETSI

oma
Open Mobile Alliance

3GPP

APPLICATION LAYER

Interface(s) to Local Agency IT Services, Incident Command & Control, etc.

NETWORK LAYERS
3GPP LTE (Primary)
3G, WiFi, Satellite (Fallback)
Ethernet (Consoles)

Potential Critical Communications Related Broadband Standards Development*

Potential Application SDOs

Service SDOs

Network & Radio SDOs

Broadband Mobile · Broadband Mobile · WiFi · Broadband Satellite · Other Broadband Mobile & Fixed

* Not an exhaustive list of SDOs. Not indicative of all layers these SDOs create. Rather, just a snapshot of some potential SDOs.

\# NPSTC and TCCA are not SDOs, but do provide Critical Communications end user perspective requirements to relevant SDOs.

Critical Communications Standards
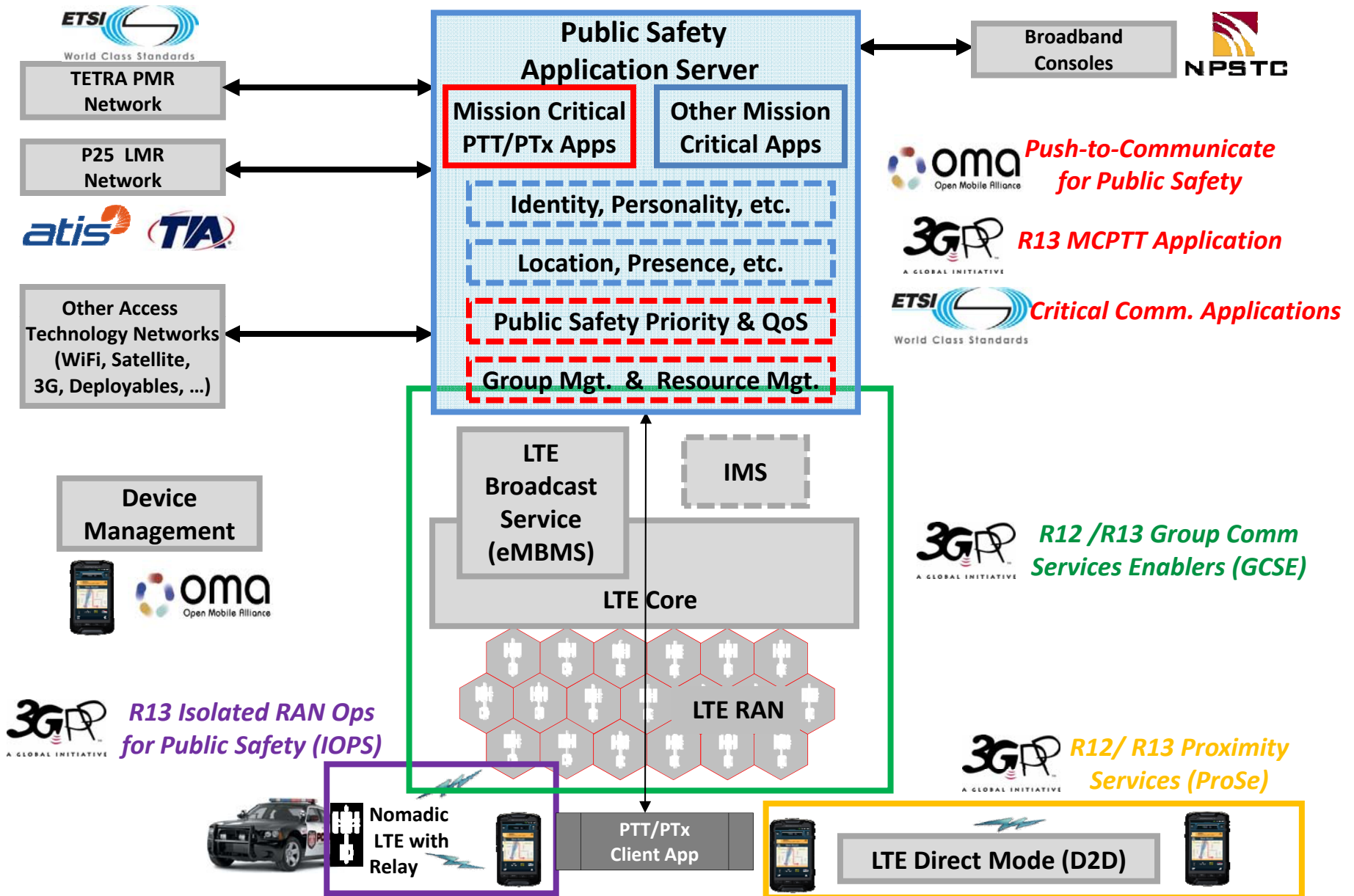
Criteria for Mission Critical Application Standards Development

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Technical Criteria:

- SDO supports focused application layer standards development:
    1. Dedicated Working Group (WG) for all Critical Communications Applications (CCA)
    2. CCA WG scoped only to application layer standards (i.e., over the top of network layer access technology standards)
- SDO CCA WG activity supports:
    3. Enabling horizontal interoperability at application layer for all Critical Communications applications (e.g., PTT voice/data/video, Location, Presence, Logging, Identity/Personality Management, etc.)
    4. Enabling a common architecture across application, service and network layers
    5. Optimizing for 3GPP LTE Critical Communications enhancements but also must function with and across any underlying access technologies including WiFi, 3G, satellite, temporary deployable, DSL, etc.
    6. Enabling applications that interoperate across both off-access network and on-access network scenarios (including all underlying access technologies)
    7. Enabling non-IMS (SIP based) and 3GPP IMS and deployments
    8. Emulating current P25, TETRA, etc. narrowband Critical Communications functionality in addition to new types of broadband functionality
    9. Enabling interconnection with legacy narrowband Critical Communications solutions

Criteria for Mission Critical Applications Standards Development

Organizational / Operational Criteria:

- SDO CCA deliverables:
    - 10. Are recognized as global standards that can legally be used in any region or country
    - 11. Will include complete application layer stage 1 requirements, stage 2 architecture and stage 3 interfaces/protocols standards specifications
- SDO CCA processes enable :
    - 12. Rapid and efficient application layer standards development:
        - Reuse existing application standards, especially those with deployed solutions, where applicable rather that starting from scratch
    - 13. Application layer standards development independent from access technologies standards development:
        - Enable development and specification delivery independent from access technology development and specification delivery
        - Enable multiple application projects to run in parallel and/or overlap with each other
    - 14. Participation from all Critical Communications vendors, user groups, government agencies, carriers, etc. (including leadership roles)
        - Independent meetings from other SDO WG meetings and allow remote participation as needed

Summary of Industry Options* for Global Critical Communications Applications SDO(s)

* As proposed by various industry perspectives

Critical Communications Applications SDO(s): Industry Option A

OMA & ETSI TCCE as the Global CCA SDOs (aka "3 SDOs"):

- 3GPP to continue enhancing LTE to support Mission Critical capabilities
- OMA remains as-is and completes PCPS v1.0; ETSI remains as-is and completes CCA v1.0
- ETSI TC TCCE and OMA PCPS to then jointly develop global Critical Communications (CCA) standards
    - OMA PCPS & ETSI TC TCCE must meet all SDO criteria listed on slides 6-7
    - ETSI TC TCCE may also choose to develop and release market specific extensions to CCA standards
- GSMA, ATIS, CCSA, TTA, ARIB, TCC, TIA, etc. may choose to permanently transition relevant application standards and development into joint OMA's and TCCE's CCA or continue to develop them separately
    - These SDOs may also choose to develop and release market/technology specific extensions to CCA standards

Critical Communications Applications SDO(s): Industry Option B

OMA as the Global CCA SDO:

- **3GPP to continue enhancing LTE to support Mission Critical capabilities**
- **OMA remains as-is and completes PCPS v1.0; ETSI remains as-is and completes CCA v1.0**
- **OMA PCPS to then develop global Critical Communications Applications (CCA) standards**
  - **OMA CCA must meet all SDO criteria listed on slides 6-7**
- **ETSI TC TCCE may choose to provide additional Mission Critical related input to OMA for the development and release of CCA standards**
  - **ETSI TC TCCE remains as-is and focused on driving TETRA and regional perspectives**
  - **ETSI TC TCCE may also choose to develop and release market specific extensions to CCA standards**
- **GSMA, ATIS, CCSA, TTA, ARIB, TCC, TIA, etc. may choose to permanently transition relevant application standards and development into OMA's CCA or continue to develop them separately**
  - **These SDOs may also choose to develop and release market/technology specific extensions to CCA standards**

Critical Communications Applications SDO(s): Industry Option C

3GPP as the Global CCA SDO:

- **3GPP to continue enhancing LTE to support Mission Critical capabilities**
- **OMA remains as-is and completes PCPS v1.0; ETSI remains as-is and completes CCA v1.0**
- **3GPP to develop global Critical Communications Applications (CCA) standards**
  - **3GPP to create a new single Critical Communications Applications (CCA) working group**
    - **Segregated from existing 3GPP working groups**
    - **Responsible for all application layer stage 1, stage 2 and stage 3 specifications**
  - **3GPP CCA should be added as a new Working Group to:**
    - **[preferably] SA as TSG SA WG6 – CCA (Critical Communications Applications)**
    - **[alternatively] CT as TSG CT WG7 – CCA (Critical Communications Applications)**
      - **CT should then be renamed to something like: "CTA": "Core Network, Terminals and Applications"**
  - **3GPP CCA must meet all SDO criteria listed on slides 6-7**
- **OMA, GSMA, ETSI, ATIS, CCSA, TTA, ARIB, TCC, etc. may choose to permanently transition relevant application standards and development into 3GPP's CCA or continue to develop them separately**
  - **These SDOs may also choose to develop and release market/technology specific extensions to CCA standards**

Motorola Solutions desires a common set of global Mission Critical standards that meet all requirements of Public Safety operations as soon as possible

If a broadband industry decision is not inclusive of all interested SDOs, multiple sets of standards could potentially arise.

NEXT GENERATION PUBLIC SAFETY

THANK YOU !