

An aerial night view of a city skyline, likely New York City, with numerous illuminated skyscrapers and a bridge spanning a body of water. The lights are primarily warm yellow and orange, with some cooler blue and white lights from the buildings and infrastructure.

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Prioritization on Commercial Networks

IWCE 2016

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- Public Safety Priority and QoS needs must be met on commercial networks
 - Default day-to-day Prioritization based on role of User and type of Application
 - Dynamic Prioritization to meet special incident situations such as responder emergency
- Agency control for prioritization within a national framework





Radio Admission Control (ACB)

Prevent entire classes of user from connecting to network using Access Class Barring (ACB)
Access classes : 0-15



Allocation and Retention Priority (ARP)

Admission Priority, Preemption capability, Preemption vulnerability



Scheduling Priority (QCI)

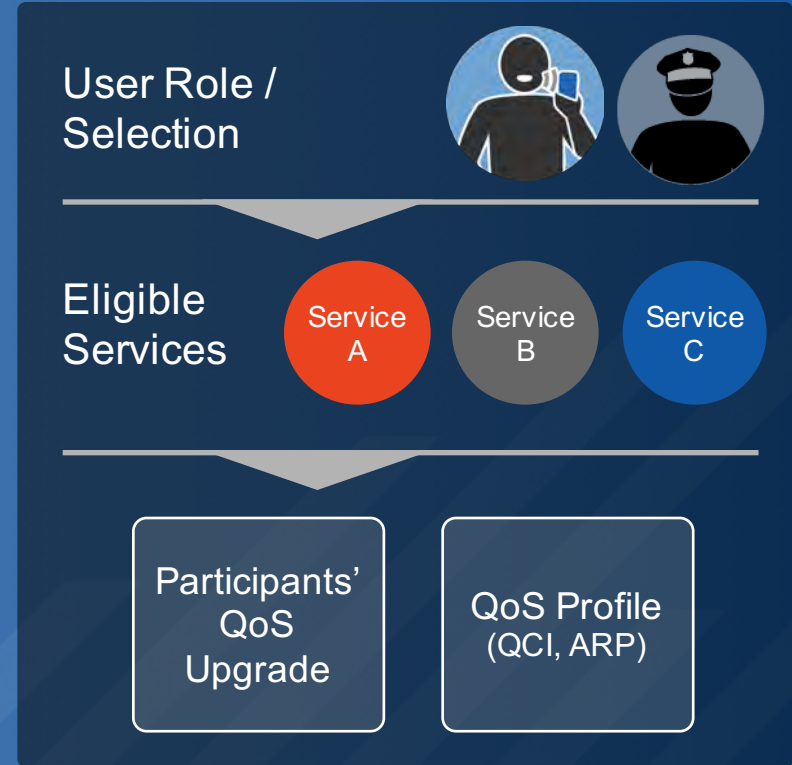
Scheduling and traffic prioritization
QoS Class Indicator (QCI) – Packet Priority, Delay budget, Packet Error loss



Rate and Bandwidth Management

GBR – Guaranteed Bit Rate, Maximum Bit Rate
Non-GBR – Aggregate Maximum Bit Rate

- Default Priority are elevated when an Incident happens
- Incident detected by
 - Responder emergency button
 - Administration
 - Application analysis
- Application Server Interfaces with PCRF to elevate QoS priority (Rx)

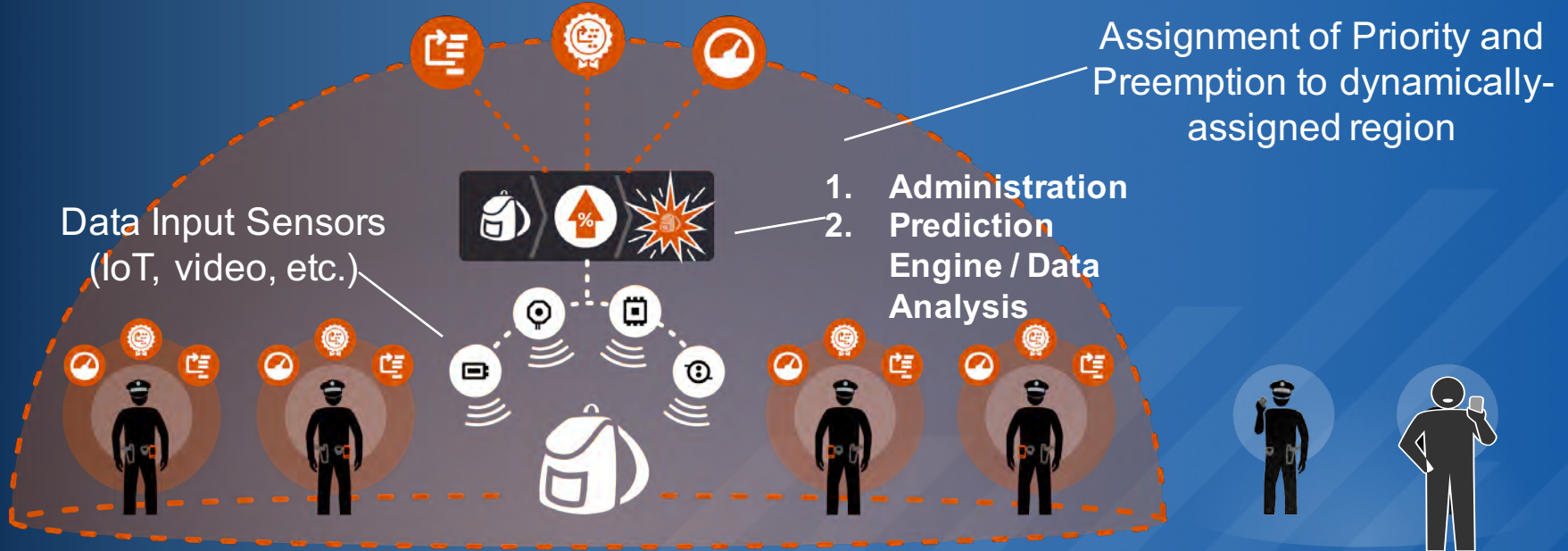


Typical



With Priority & Preemption





- LTE standards provide needed parameters for prioritization of commercial and public safety traffic on common network
 - 3GPP Rel 12 introduces new QCI parameters for mission critical communications
- Tight integration between network and application is key to effectively implement prioritization
 - Dynamic QoS and priority via Rx interface
- Coordination and Operational processes required for QoS assignment between networks

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Thank You!

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