



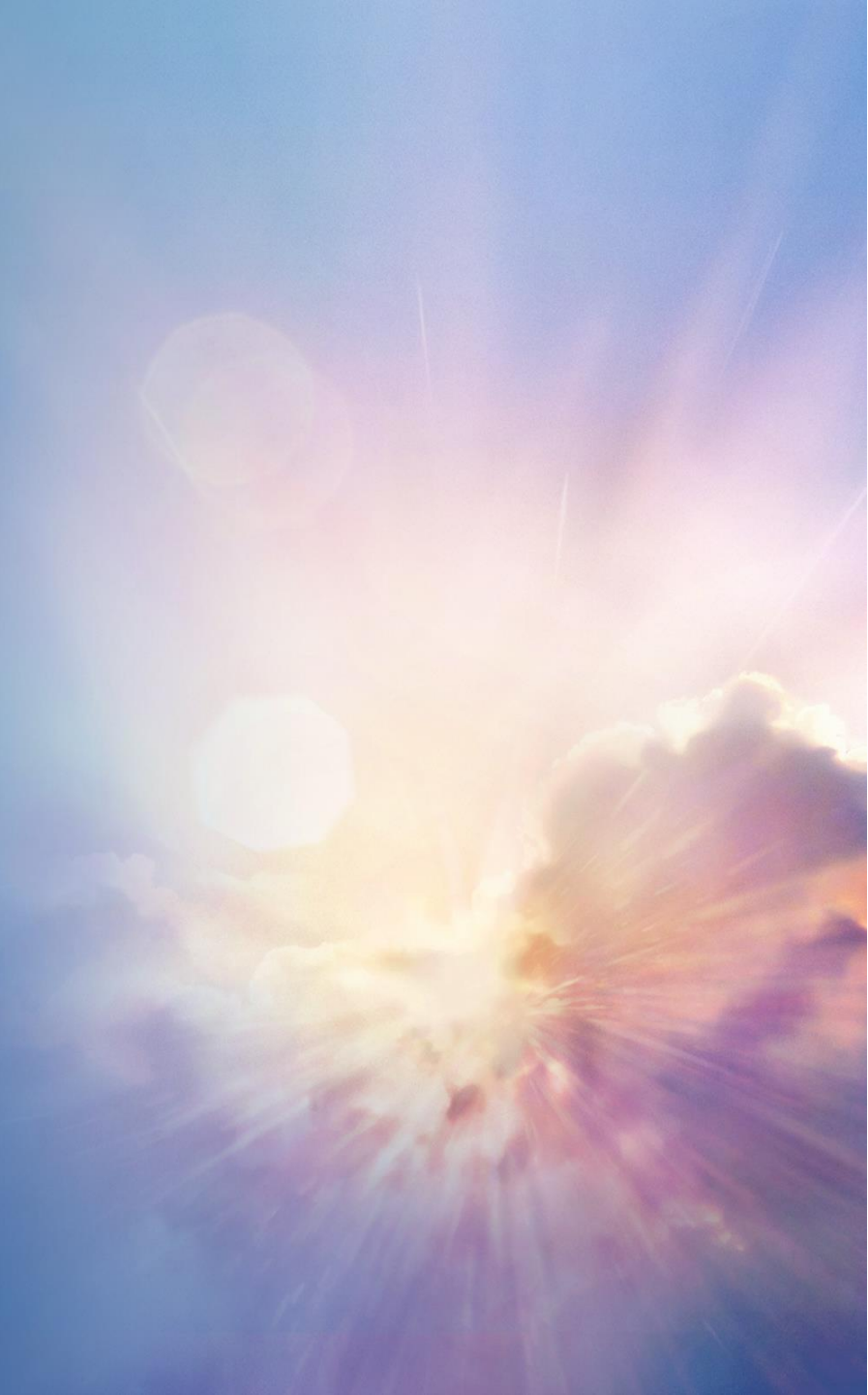
# Leading New ICT

## Making Cities Safer

Huawei Comments on the ICASA National  
Frequency Plan 2017

Prepared by Gerbrand Steyn

**LEADING NEW ICT**



# These Threats Bring Serious Challenges to Agencies

## Before the Incident: Limited Early Warning



*Bangkok Bombing  
(17 Aug, 2015, Thailand)*

- **20** dead and **125** injured
- Highest density: **2-3** person/m<sup>2</sup>
- Limited risk early warning and Poor Contingency Plan

## During the Incident: Lack Multi-Agency Collaboration



*Paris IS Attacks  
(13 Nov, 2015, France)*

- **3** teams launched **6** distinct attacks
- Not been hit for **20** years
- **130+** dead, **368** injured
- Lack of collaboration among multiple agencies leading to chaos

## After the Incident: Poor Investigation Efficiency



*Chinese Serial Killer Zhou Kehua  
(2004-2012)*

- Shot **10** person dead in **8** years
- **200** policemen, **7** days, **17s** key footage
- Lack of efficient search method from massive video

# The Key Reason Behind Those Challenges: Unawareness

## Call-takers and dispatchers



- What is the exact location of the incident?
- What has happened at the scene?
- What resources are available?
- How to effectively communicate with field responders?

## Commanders



- How to obtain firsthand information?
- How to communicate with other agencies?
- How to efficiently make accurate decisions?
- How to interact with and command field responders?

## Field responders



- What needs to be handled onsite?
- Where are my partners?
- How to address difficult problems?
- How to promptly send feedback to commanders?

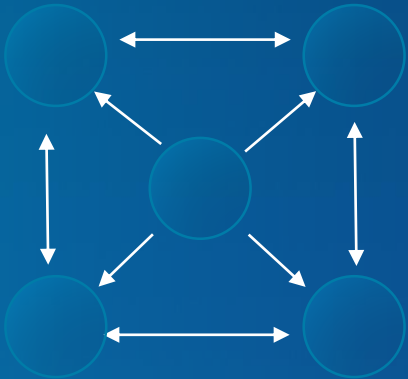
## City operators



- How to predict the breakdowns of public utilities ?
- How to get information about public utilities?
- How to recover the breakdowns of public utilities in the shortest time?

# Facing Unawareness, Agencies Need Better Situational-Aware Capabilities

## Complete information collection



- From information collection to information usage
- Each person participates in information collection
- All information can be aggregated to the user interface for unified actions

## Cross-agency collaboration



- Aggregate separated information to enhance on-site awareness capabilities
- Smoothly transfer information across agencies to support accurate decisions

## Critical Video Communication



- Video is able to deliver 10-fold information content than voice
- Real-time video communication brings up-to-the-minute and comprehensive information to field responders

## Unmanned Aerial Vehicle (UAV)



- Improve security for big event
- First responder for harsh environment
- Variety ways for video back (MW/WIFI/PLMN/ eLTE)

# Innovative ICT Help to Improve Agencies' Capabilities

## Before the incident

### Smart Sensing



### Omni Collection

Video and Image Alarming  
Intelligent Early - Warning

## During the incident

### Smart Decision-Making



### Rapid Response

Multi-Agency Collaboration  
Empower the Field

## After the incident

### Smart Clue Analysing



### Efficient Post- Processing

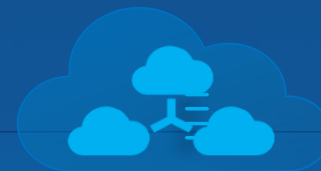
Multi-dimensional intelligence  
Intelligent Analysis



Wired & Wireless



Broadband Trunking



Cloud Data Center



Large Data Platform

# Safe City Helps to Make A Better and Safer Society

Source: Hefei Safe City Case, China

## Crime rate

30% ↓ in total  
65% ↓ violent crime rate



Comprehensive surveillance  
and early warning

## Cases Closing Rate

65% → 95+%



Accurate combat

## Response Time

10Min. → 4.5Min.



Command and dispatch center

## Citizen's Satisfaction

60.2% → 98.3%.

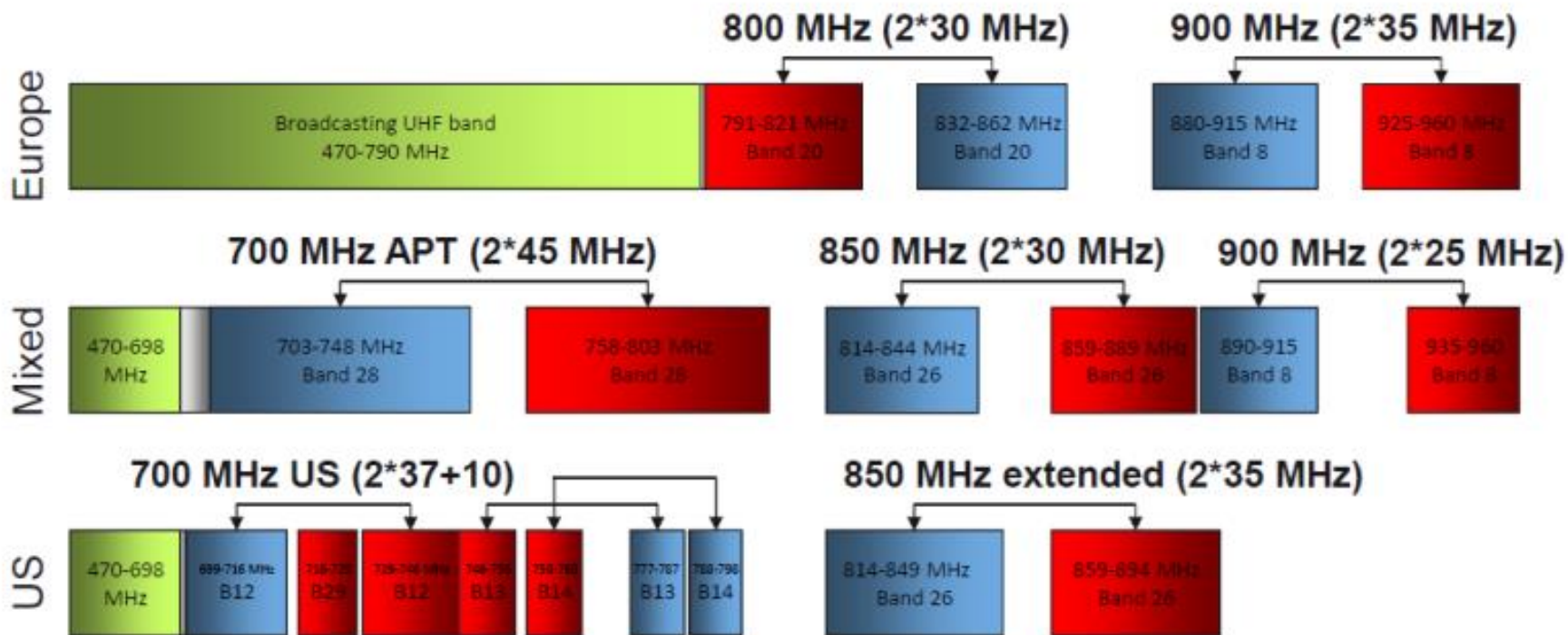


Highly efficient police

# Safe City Implementation Video



# LTE Spectrum for Public Safety - Trends from around a World



- The US develops a 700 MHz band plan from 1997-2008.
- The European 800 MHz bandplan is developed from 2007-2011.
- The Asia Pacific Telecommunity (APT) develops an alternative 700 MHz bandplan from 2009-2011. This bandplan is gaining momentum in Asia, Latin America, Africa and Middle East.

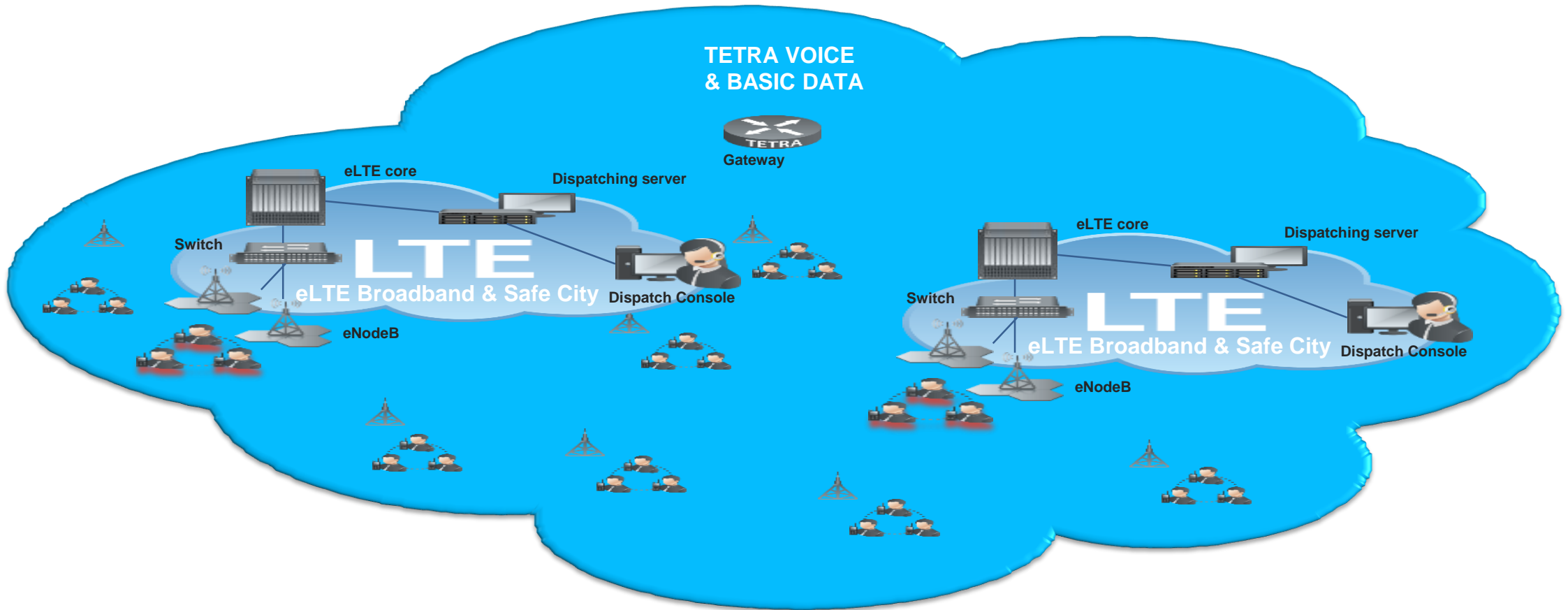


# Huawei's Comment on National Frequency Plan 2017

- SA currently 7 - 10 Years behind the rest of the World
- Adopt a strategy for dedicated spectrum – Public Safety & Emergency in 2017 Plan
- SA 15+ Years behind by the time the opportunity presents itself again.

**Please Provision Now!**

# Network Deployment Strategy - Coexistence with Tetra



Wireless Connected Industry, Smart Integrated Operation



# THANK YOU

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