Workshop on “Role of Broadcasting in effective Early Warning Dissemination”

Session 4: Cell Broadcast System Implementation and Field Demonstration

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1. Role of ICT/Digital Infrastructure in Early Warning System

- **ICT/Digital Infrastructure has played key roles during the COVID-19 Pandemic. Under the leadership of MPTC, there have been several strategic activities such as:**
  - **Enhancing Digital Connectivity**
    - Facilitated the expansion of internet infrastructure to support remote work, online education, and telehealth services.
    - Coordinated with telecom operators to maintain stable network services despite increased demand.
  - **Supporting Remote Learning and Work**
    - Collaborated with the Ministry of Education to enable e-learning platforms.
    - Promoted access to online tools and platforms for government and private sector employees working remotely.
  - **Public Health Messaging**
    - Leveraged mobile networks and digital platforms to disseminate accurate and timely COVID-19 information, such as health guidelines, emergency numbers, and vaccination updates.
  - **Digital Services and Innovation**
    - Supported the development and deployment of mobile apps for contact tracing and Vaccine App

1. Role of ICT/Digital Infrastructure in Early Warning System

- **Post-Covid-19 Digital Development**
  - Digital Economy and Society and Policy Framework and Digital Government Policy
  - Improve and expand fixed and wireless broadband infrastructure
  - Various Digital Government Products has been developed by MPTC

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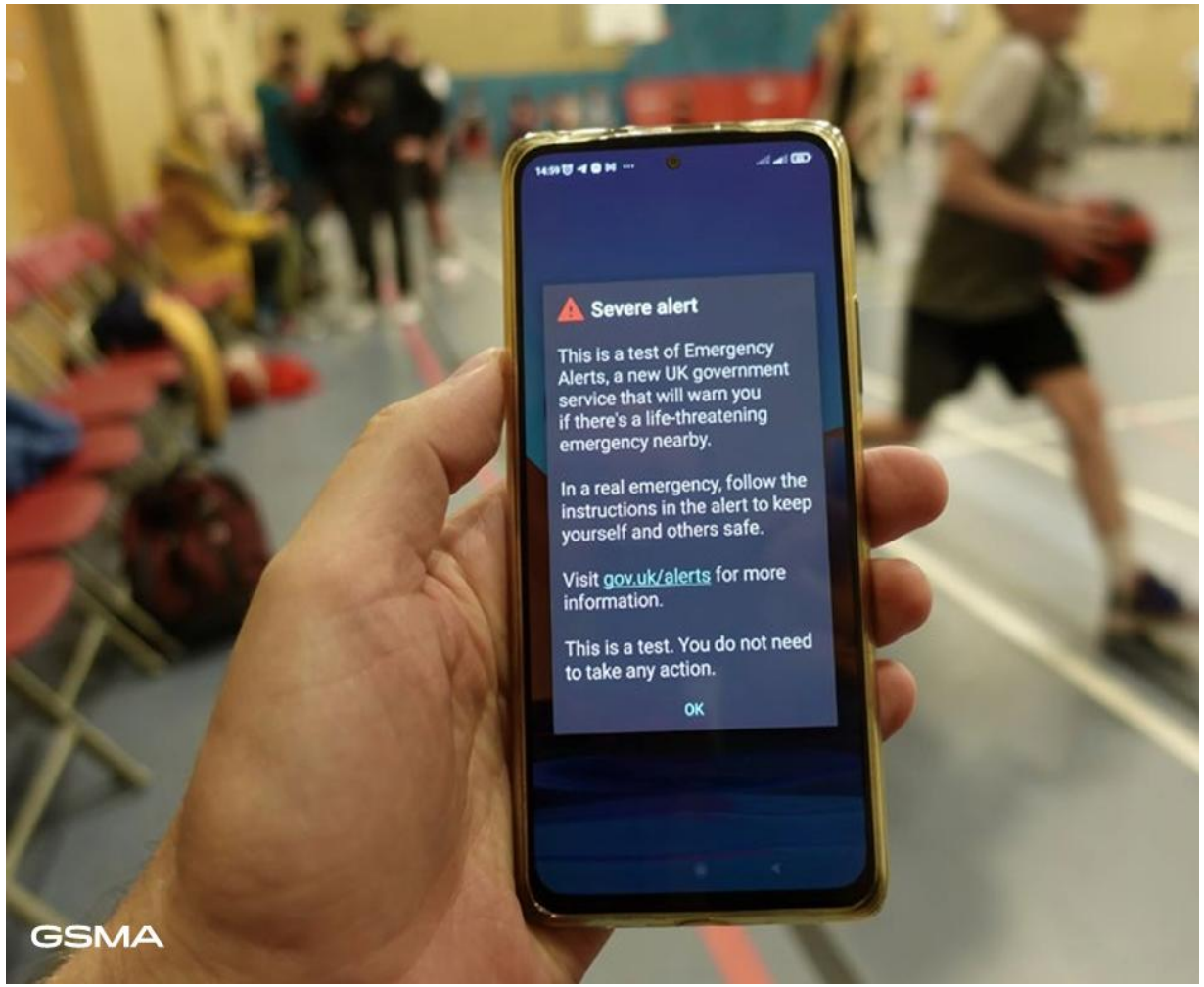
- **Cambodia Digital Economy and Society Policy Framework** gives the direction to **establish digital infrastructures for data collection and develop data-driven technologies** to provide early warning for unexpected events, including natural disasters, floods, deforestation, and migration
  - Cell Broadcast is one of the measure to be supported by MPTC to the collective effort in Early Warning System led by National Committee for Disaster Management of Cambodia.

2. What is Cell Broadcast (CB)?



- At its core, CB is a technology that allows mobile network infrastructure to communicate with mobile handsets in one direction.
- Particularly suited for emergency warning systems, as it supports real-time alerts.
- A key component of modern Mass Notification Systems (MNS) and is often integrated into national Early Warning Systems (EWS).
- Governed by standards such as 3GPP TS 23.041.

3. Why CB is Important for Early Warning Dissemination?

One-to-many

One-to-many Cell broadcast messages (CBMs) are disseminated from a mobile network's radio cells rather than to a specific mobile device. CB works on a one-to-many basis.

Rapid distribution

A Cell Broadcast Message (CBM) can be distributed to millions of compatible handsets in just a few seconds. It does not cause network congestion and cannot be affected by it.

Geographically targeted distribution

The specified target area for a CBM can be anywhere from a single radio cell to an entire mobile network. Because it uses a network's radio cells, CB is a location-based technology.

Audible and visual alert

CBMs for national alerting systems can be configured to sound an audible and unique alert tone, overriding silencing/mute settings. CBMs appear automatically on the screen of a mobile handset without needing to be opened, providing a visual alert.

Privacy conscious

A CBM is anonymous by nature and will be received by any compatible phone in the target area. Because the message is broadcast to the user equipment and not the mobile number, no pre-registration is required and no mobile subscriber information is used or stored in the broadcast of the message.

Secure/difficult to infiltrate or replicate

Unlike an SMS, it is very difficult to fake a CBM. Physical protection of CB facilities and authorization stages can reduce the risk of impersonation.

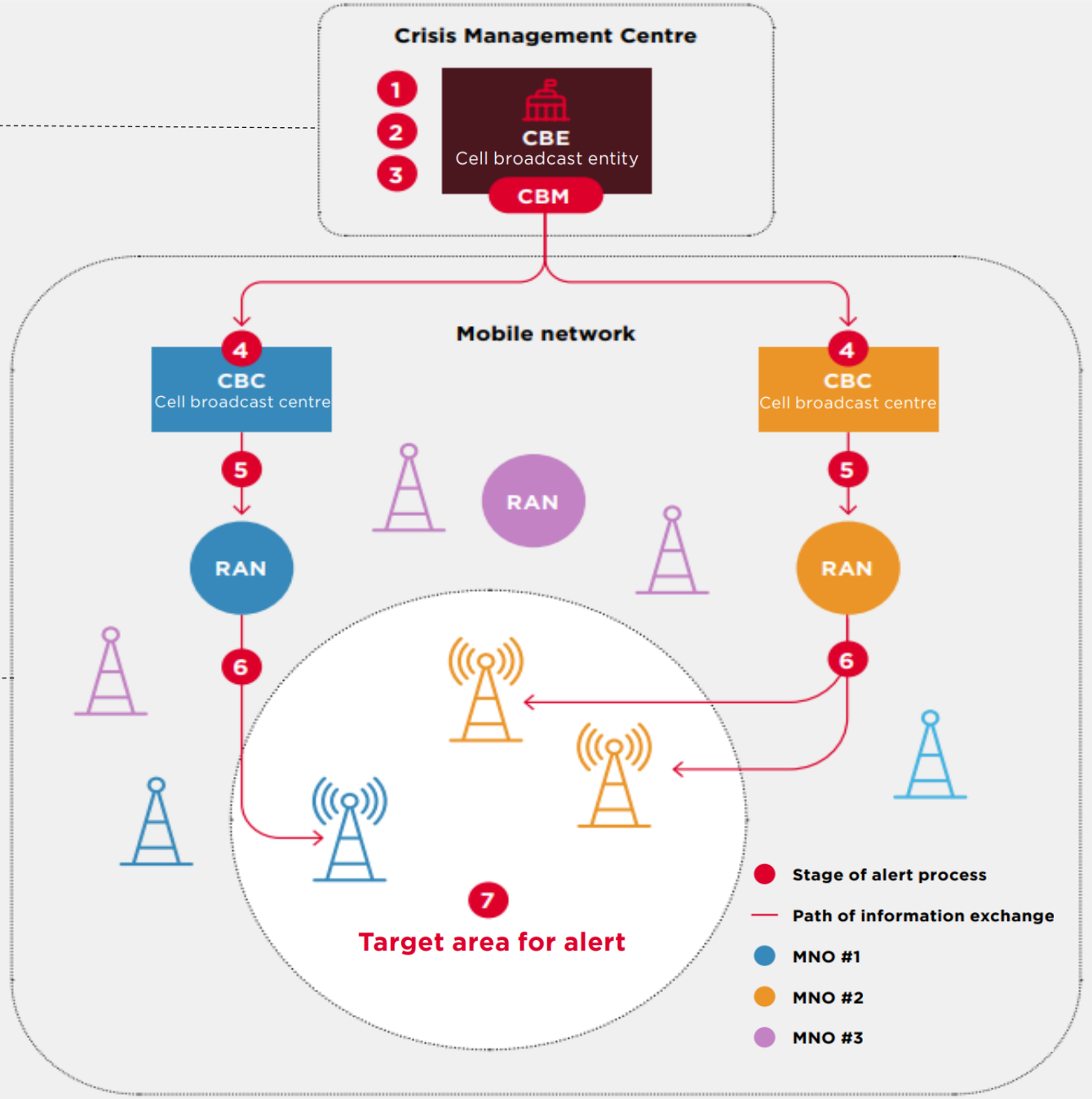
Secure/difficult to infiltrate or replicate

does not usually require users to opt in, it has the power to reach many users, especially compared to services that require users to download or subscribe to a service

4. CB: Path of information exchange of a CBM

Government

Mobile Network Operator



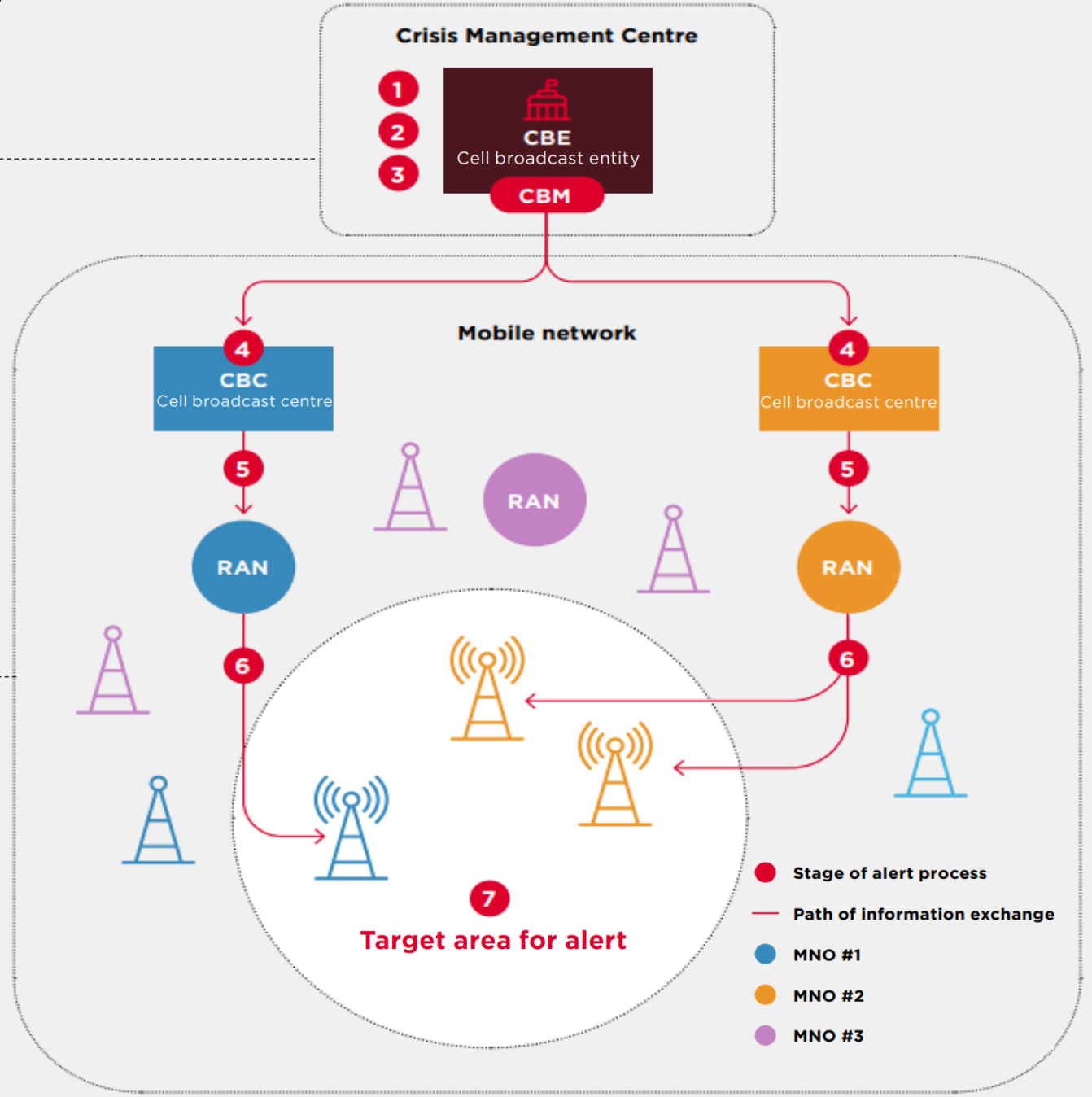
5. CB Pilot Project

MPTC in Collaboration with Centre for Development of Telematics (C-DOT)

CamGSM PLC.

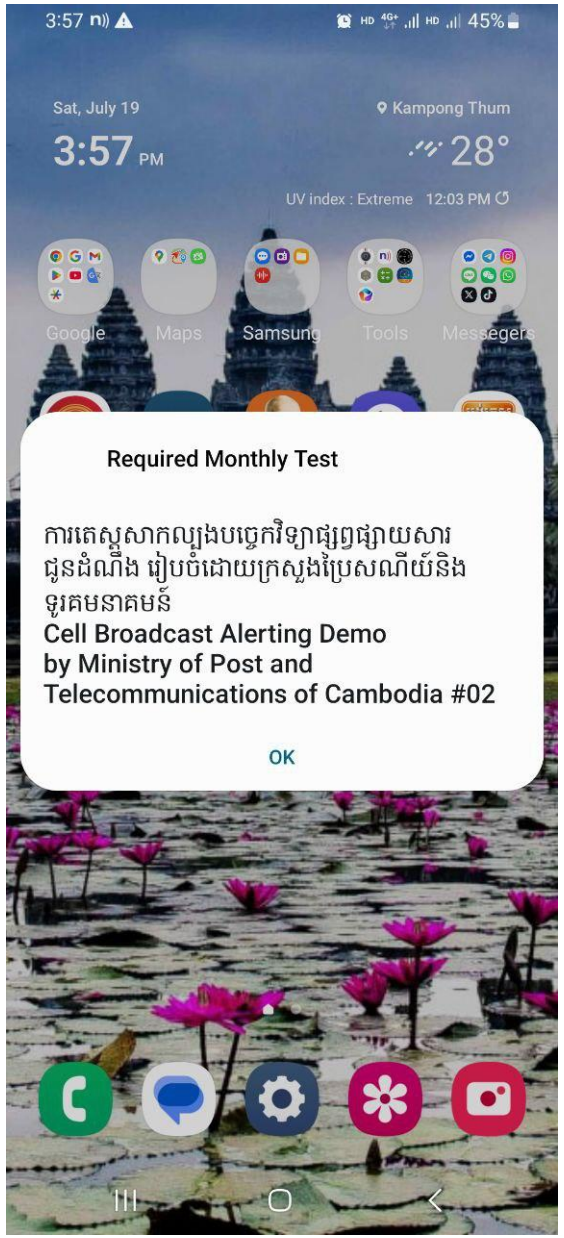
Smart Axiata Co. Ltd.

Viettel (Cambodia) PTE Ltd.



5. CB Pilot Project: Demonstration of Cell Broadcast Alert System for Early Warning Dissemination

Start the Demo



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