ENHANCING PUBLIC WARNING & EMERGENCY COMMUNICATION

CELL BROADCASTING IN NORTH MACEDONIA

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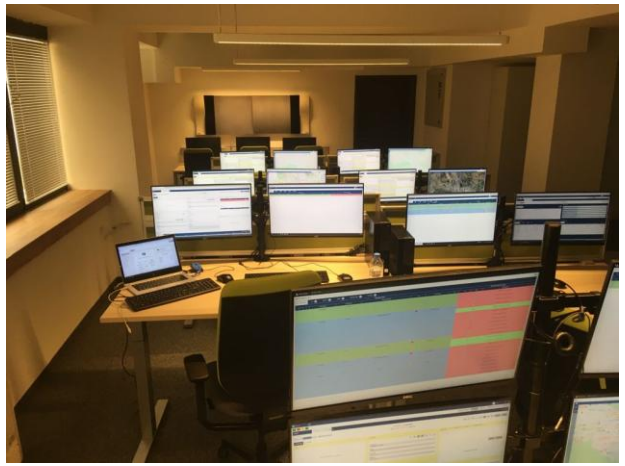
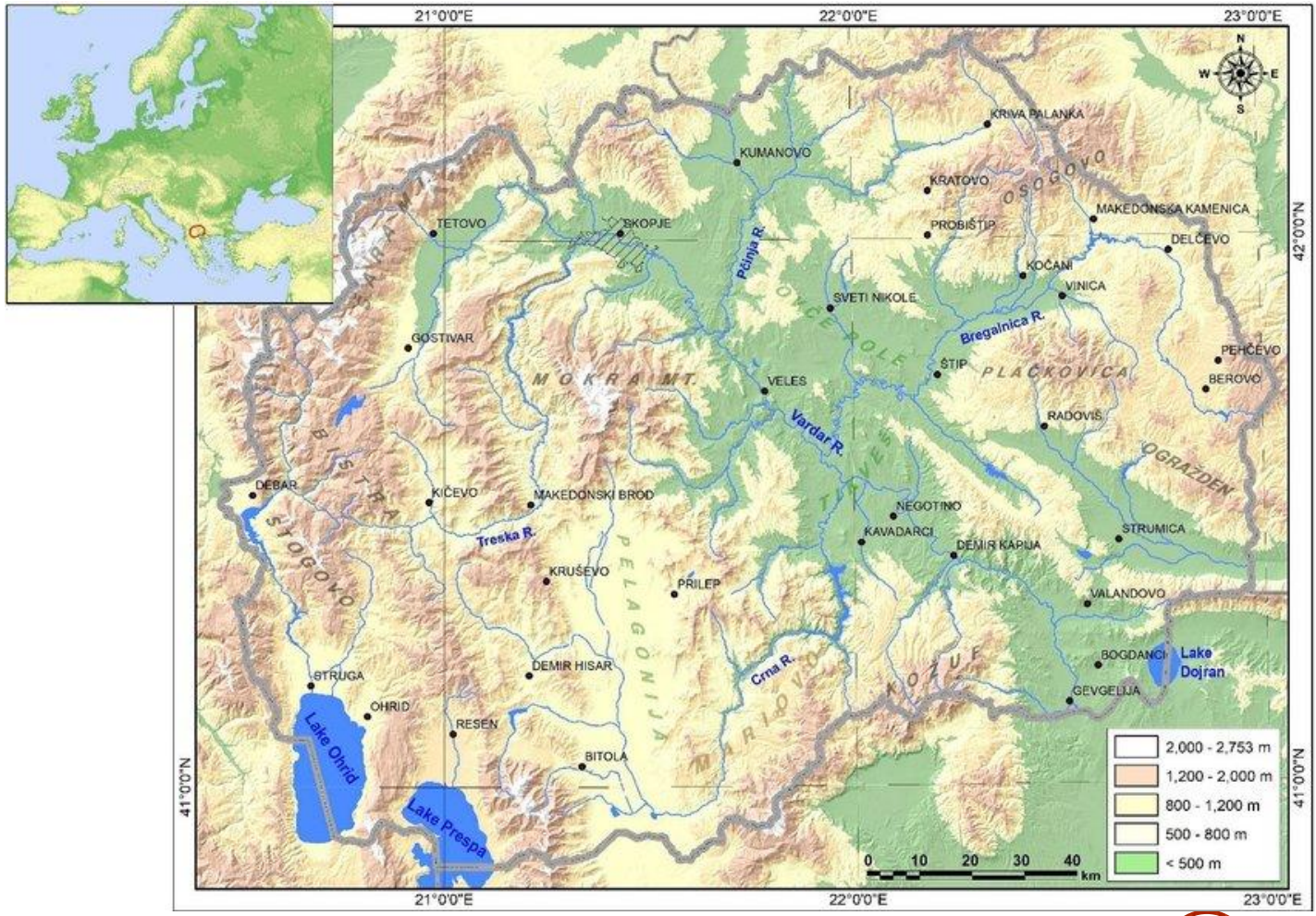
cuk.gov.mk or 112.mk

THE REPUBLIC OF NORTH MACEDONIA

- Description of Country
  - Size 25,713 km²
  - Population **1.836** million (2021) Census
  - Around **1,218 million in Urban areas and 0,618 million in Rural area**
  - **112 In function from 2022**





INTRODUCTION

- Cell Broadcasting (CB): technology for sending alerts to all mobile phones in a defined area
- Works regardless of operator, phone model, or network load
- Used in EU, USA, Japan and globally

WHY CELL BROADCASTING?

- Fast, reliable delivery in crisis situations
- Reaches everyone with a mobile phone (no app needed)
- Works even when networks are congested
- Supports multilingual alerts

LEGAL & POLICY FRAMEWORK

- Aligned with Crisis Management System policies
- AEC Last law from 27 June 2025, number 08-3689/1.

Public Warning System

Article 138

Operators of communication services between persons, who use numbering in a mobile communication network, upon request of the authority responsible for the number "112", are obliged, free of charge, to provide end users with public warnings of imminent emergencies or disasters.

Need to prepare Rulebook till April 2026

- EU Civil Protection Mechanism compliance
- EU Directive (2018/1972) requires public warning systems by 2022

KEY COMPONENTS

1.National Authority / Crisis Management Center (CMC) + MOI

1. Initiates emergency alerts.
2. Defines target area (specific cells or regions).
3. Sets message priority and language (e.g., Macedonian, Albanian, English).

2.National CB System (Central CB Server)

1. Secure platform for creating and managing Cell Broadcast messages.
2. Sends alerts simultaneously to all connected operators.
3. Ensures message consistency across different networks.

3.Operator CB Nodes (A1 & Telekom)

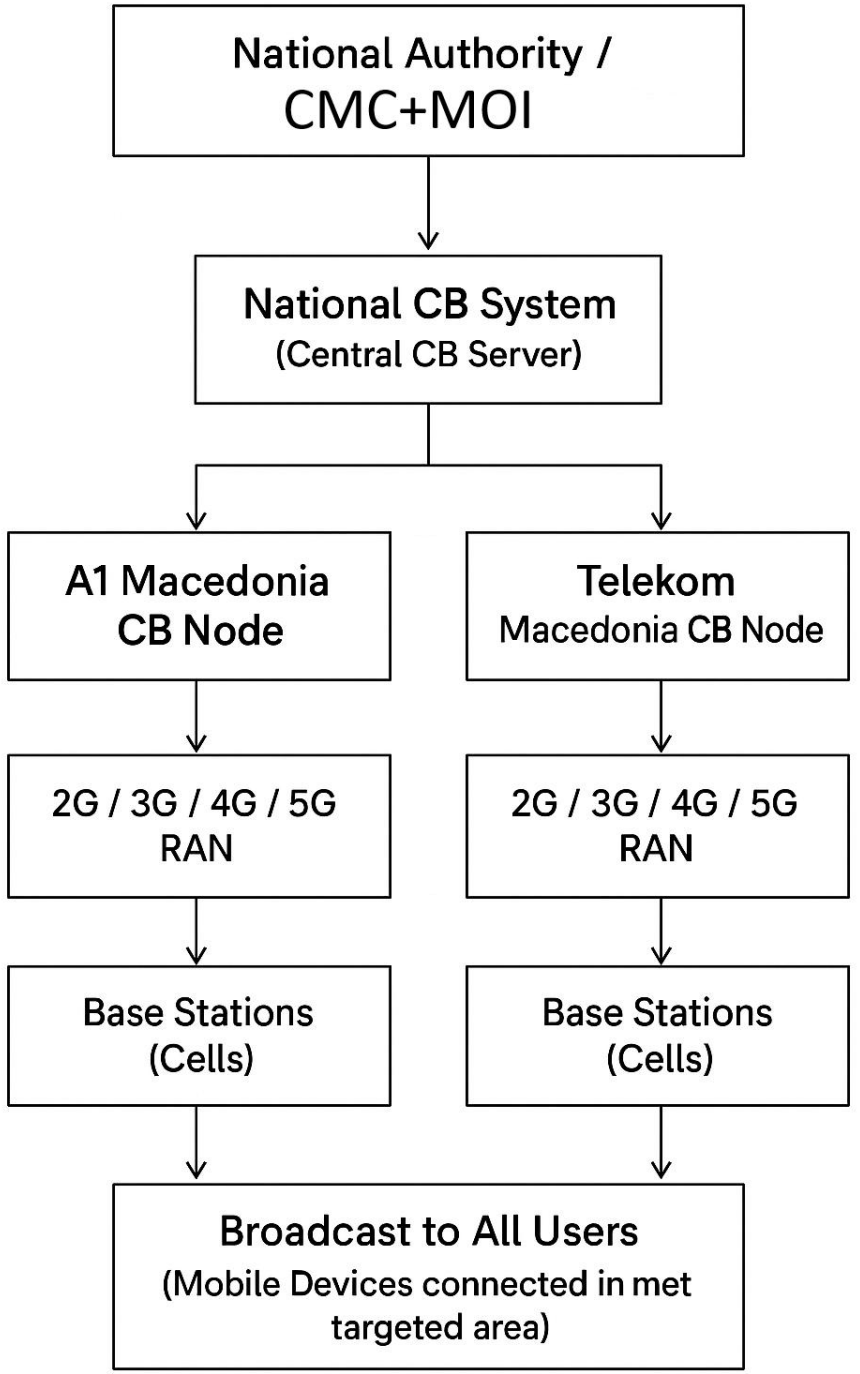
1. Each operator has its own CB interface (Cell Broadcast Center – CBC)
2. Receives alerts from the national CB server.
3. Distributes alerts across its radio access network (RAN).

4.Radio Access Network (RAN)

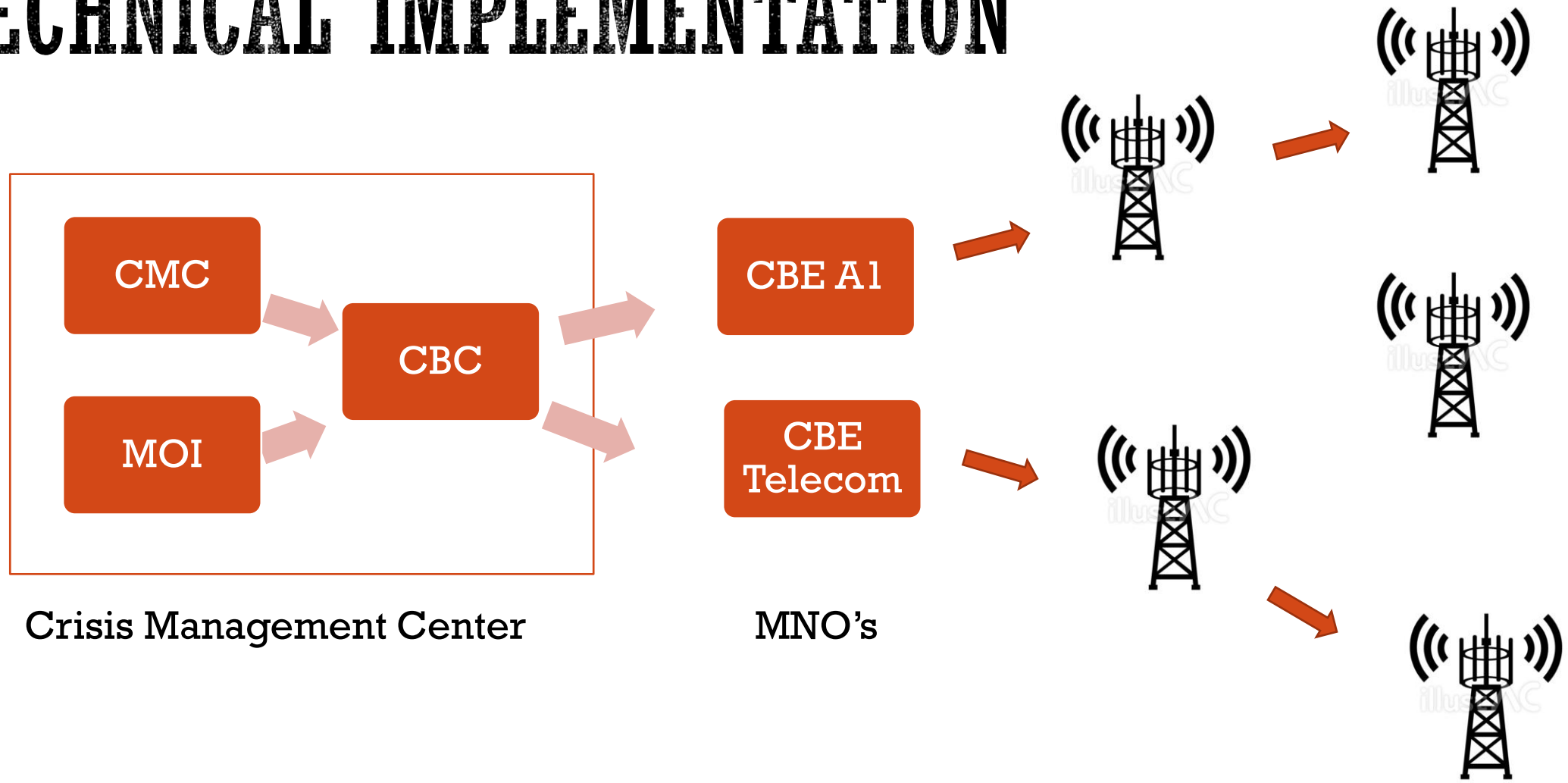
1. Includes 2G, 3G, 4G, and 5G base stations.
2. Delivers CB messages within the selected geographical area.

5.Mobile Devices (Subscribers & Visitors)

1. All compatible devices in the targeted area automatically receive aler
2. No need for users to install an app or subscribe.

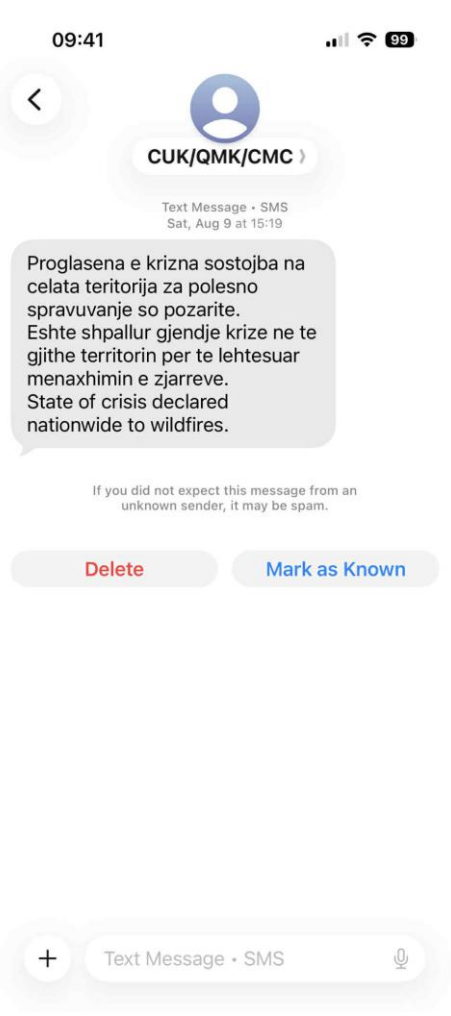


TECHNICAL IMPLEMENTATION



USE CASES IN NORTH MACEDONIA

- Earthquakes (Skopje seismic risk)
- Wildfires (summer season)
- Floods (Vardar, Pelagonia)
- Industrial accidents (Trubarevo, Kocani)
- Public safety/security threats
- Missing people



BENEFITS FOR CITIZENS

- Life-saving alerts in real time
- Clear instructions during emergencies
- Builds trust in institutions
- Accessible for vulnerable groups

NEXT STEPS FOR NORTH MACEDONIA

- **Preparing Feasibility Study with ITU support**
- **Need to prepare Rulebook till April 2026**
- Integration with EU Civil Protection system
- Regular testing & cross-border exercises
- Expansion to public health alerts
- Collaboration with NICS system

CHALLENGES & CONSIDERATIONS

- Technical integration with operators
- Multilingual alerts (Macedonian, Albanian, English)
- Public awareness campaigns
- Data protection & privacy
- Maintenance & testing

CONCLUSION

- Cell Broadcasting = Modern, reliable, inclusive emergency alert system
- Strengthens national resilience
- Saves lives
- Builds trust between government & citizens
- Integrate with all Media (social, tv's….)
- Renewing state siren system (from EX-YU, with 278 locations)
- Integrate existing siren systems (SASA, Zletovica..)

QUESTIONS

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