UMS
UNIFIED MESSAGING SYSTEMS

PUBLIC WARNING SYSTEMS

For supporting emergency operations

ABOUT UMS

Unified Messaging Systems AS

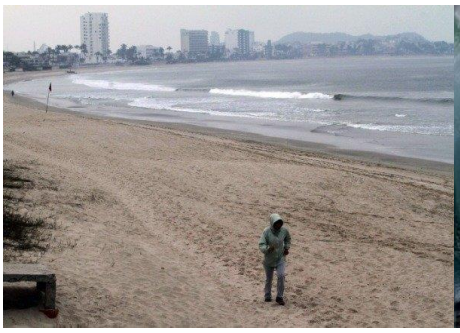
- Founded in 1997 and a pioneer and leader in the development of advanced critical messaging systems.
- UNISDR partner for Early Warning Systems
- Working hand to hand with several governments and first responders groups.
- Several patents applications, which makes it unique in the industry for its technological and live saving capabilities.
- Offices in Norway, Sweden, Denmark and India with operations in other countries in Europe, Asia and Latin America.
- More systems deployed in real life situations than any EWS manufacturer worldwide.
- PAS deployed in Norway, Sweden, Netherlands and others.

EARLY WARNING SYSTEMS (EWS)

In many instances, populations are exposed and vulnerable. Disasters can strike anywhere at any time without a moments notice.

- Natural or man-made hazard
  - Acts of terror
  - Industrial accidents
  - Flooding
  - Hurricanes and Cyclones
  - Tsunamis
  - Public demonstrations
  - Large scale traffic accidents
  - Power failures

PUBLIC WARNING SYSTEMS (PWS)



BEFORE

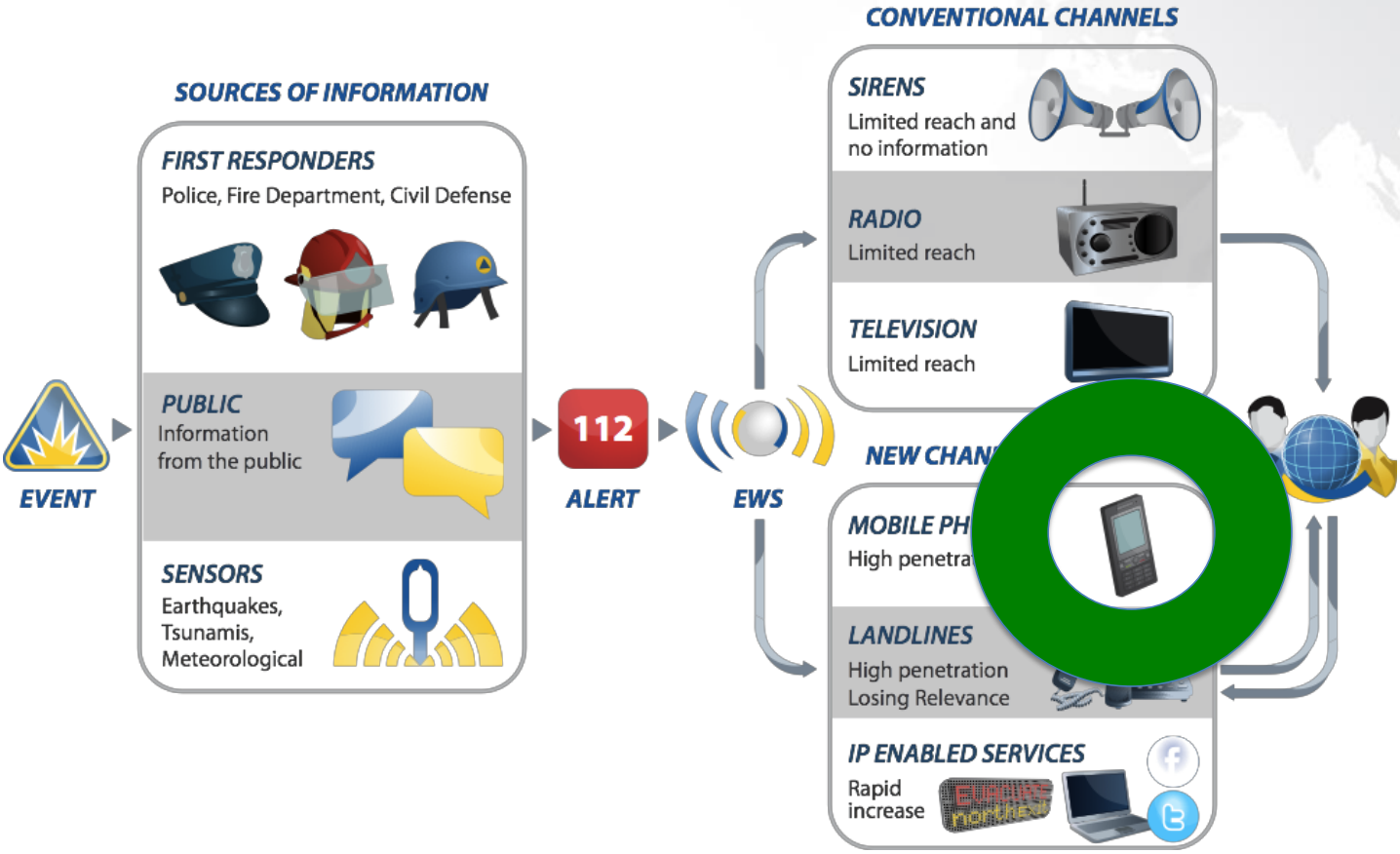
DURING

AFTER

- Targeted and informative warnings allow people to protect themselves before, during and after emergency situations.

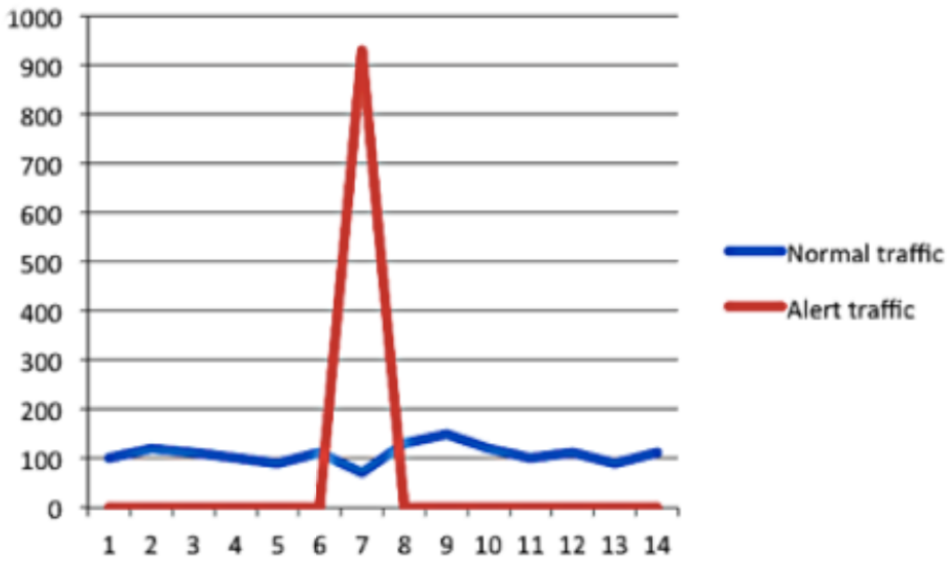
EARLY WARNING SYSTEMS (EWS)

How does PWS reach the affected population?



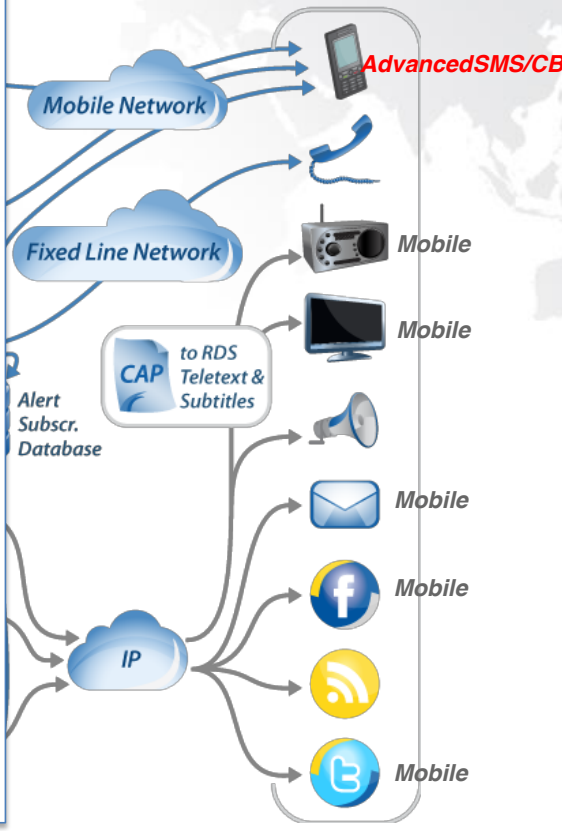
ADDRESSING IMPORTANT ISSUES FOR CRITICAL COMMUNIACTION

- Alert is unlike any other form of communication traffic pattern



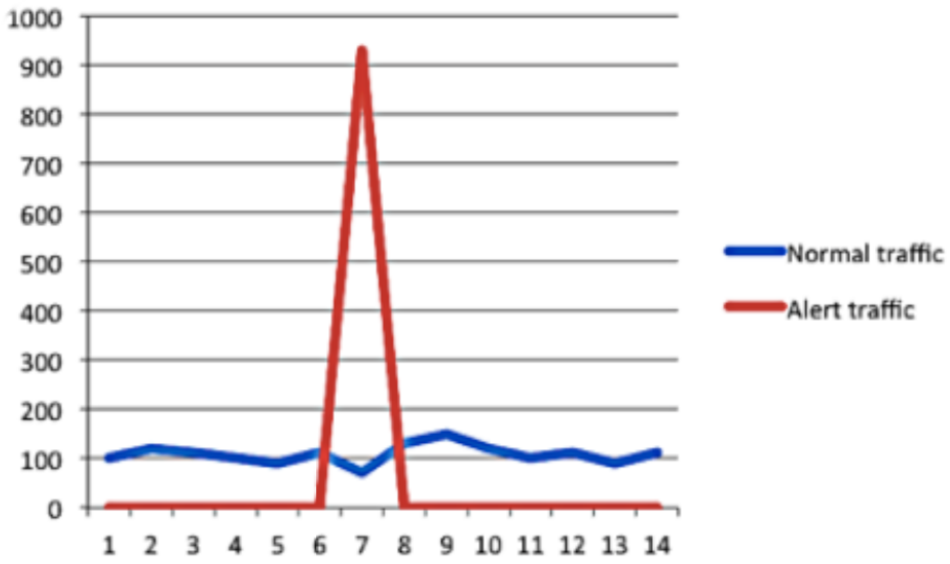
PUBLIC WARNING SYSTEM CHANNELS

Why does Government need to be involved?

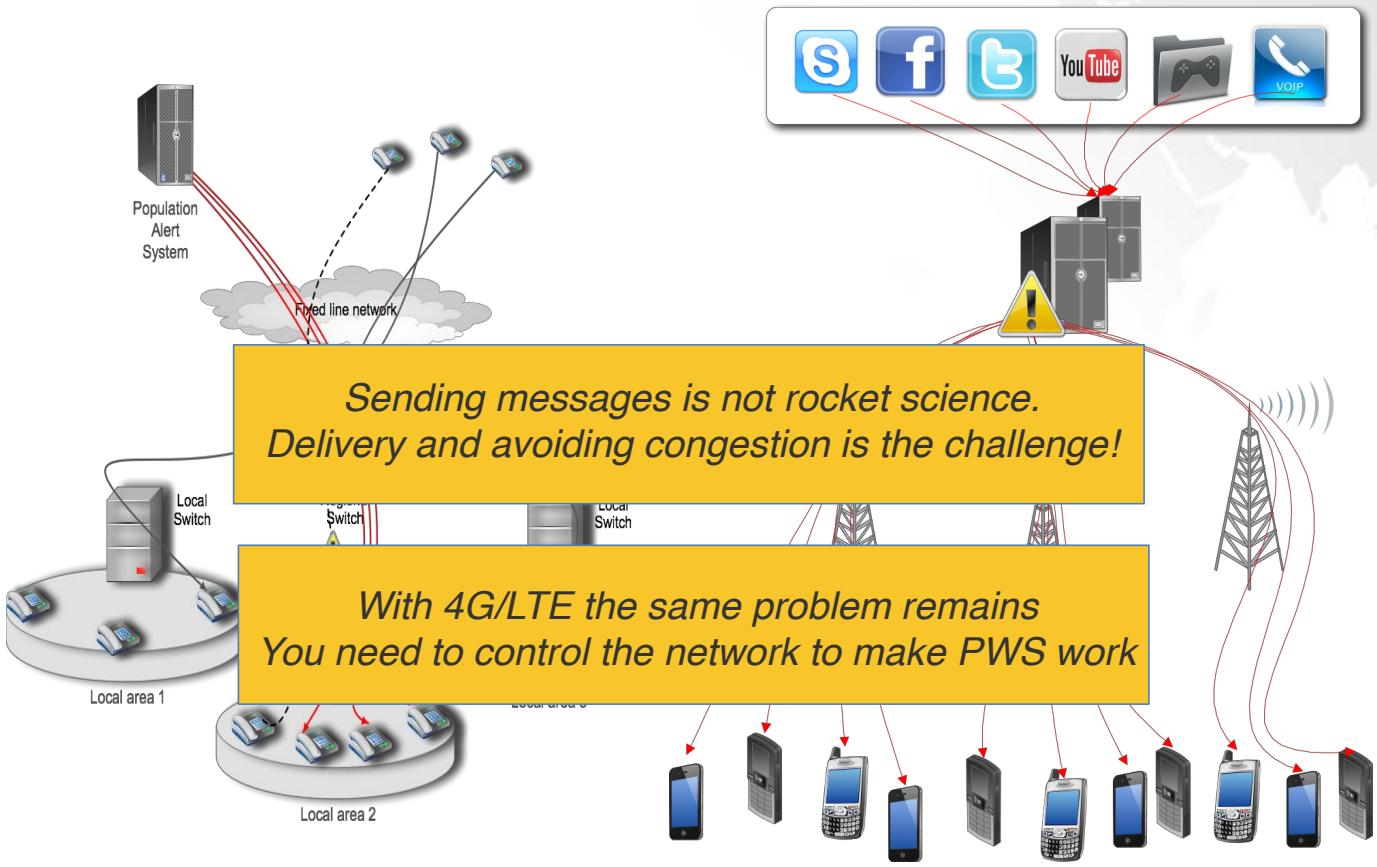


ADDRESSING IMPORTANT ISSUES FOR CRITICAL COMMUNIACTION

- Alert is unlike any other form of communication traffic pattern
- If you want to alert and communicate using multiple media (mostly through the cell phone network)……..



YOU NEED TO CONTROL THE NETWORK



Sending messages is not rocket science.
Delivery and avoiding congestion is the challenge!

With 4G/LTE the same problem remains
You need to control the network to make PWS work

HOW TO SUCCEED AS A GOVERNMENT

A few humble tips:

- Control Network

  Implement regulations/agreements for optimized use of mobile network during disasters (communication – not only alerts)

  – Involve Telco Regulators
  – Regulate the use of mobile network for Public Warning
  – Implement regulations for priority in mobile network
  – Work with mobile operators on how to use ODB

- Choose mobile alert channel
  – Advanced SMS
  – Cell Broadcast

  – *Forget regular SMS*

HOW TO CHOOSE MOBILE ALERT CHANNEL?

- ***Use a Need Based Assessment – what do you really need/want?***

*1 Capability to deliver alert during an emergency while experiencing traffic overload.

*2 CB has 100% hit rate. For A-SMS handsets within affected area are localized based on updates and calculations. Experience places hit rate close to 90%.

*3 Logistics, response, status and situational awareness are provided by LBAS. As well as location of single handsets, number handsets within area, handling inbound roamers.

*4 Cost to establish service at site of mobile operator.

*5 Implementation time:
A-SMS estimate is related to the technical installation without other dependencies.
CB implementation depends on handset support.

Capability		A-SMS	CB
Delivery capacity		Hundred thousands per minute	Millions per minute
Network Impact		Less	None
Durability (*1)		Strong using barring	Very Strong
Location based		Yes	Yes
Location based Accuracy in % (*2)		85-90	100
Handset req.		No	Yes
Configuration req.		No	Yes
Increased functional Capability (*3)		Yes	No
Location based response		Yes	No
Cost infrastructure (4*)		Yes	Yes
Cost traffic		No	No
Implementation time (*5)		1-2 months	Year(s)

SUMMARY

- Control Network (mobile and fixed)

- Choose mobile alert channel
  - Use a Need Based Assessment
  - *Or implement both Advanced SMS and CB*

UNIFIED MESSAGING SYSTEMS

THANK YOU

mgu@ums.no | +47 934 66 060