MINISTERO DELL'INTERNO

Dipartimento dei Vigili del Fuoco, del Soccorso Pubblico e della Difesa Civile
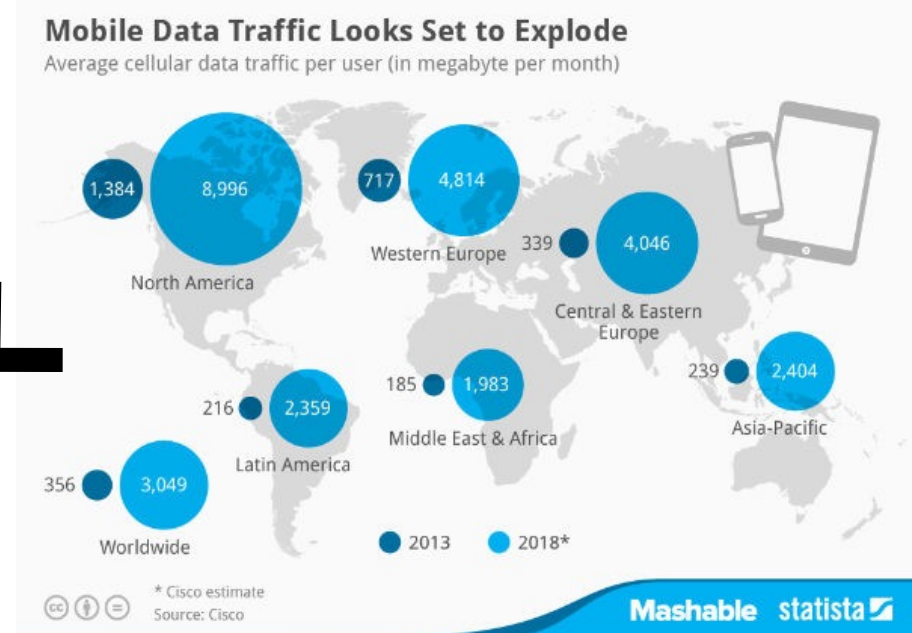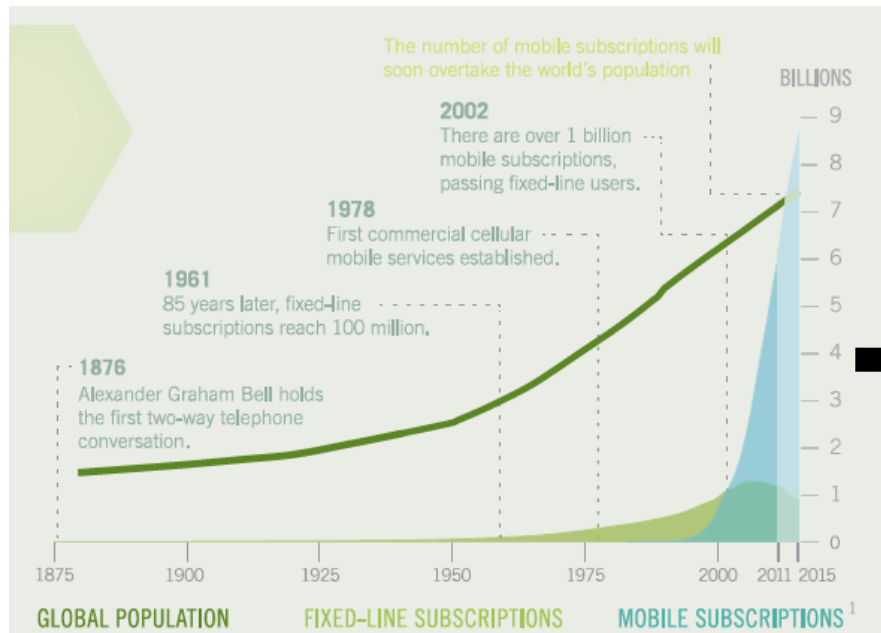
AF3 Advanced Forest Firefighting

GET-2016

Kuwait City, Kuwait, 26th January 2016

Large scale disasters and vulnerable people: the role of ICT

Stefano Marsella - CNVVF - Italy
Marcello Marzoli - CNVVF - Italy

Italian National Fire Corps (CNVVF)

Ministry of Interior

Italian National Fire Corps

18 Regional Directorates

100 Provincial HQ

700 Fire Stations

35.000 Firemen

hazmat-CBRN

technical rescue

multi agencies coordination

civil protection

rescue/fire protection training

http://
www.radiostreamingne
ws.com/
2012_07_01_archive.ht
ml

http://sourcedigit.com/3901-number-mobile-connected-devices-will-exceed-worlds-population-2014/

=

DIGITAL DIVIDE *

* when during an emergency mobile devices are part of the response plan

People evacuated from their homes due to a forest fire rest at the Ruiz de Padron school in San Sebastian de la Gomera on the Spanish Canary Island of La Gomera August 13, 2012. More than 4,000 people have been evacuated from their homes in Spain's Canary Islands …

http://www.reuters.com/article/us-spain-fires-idUSBRE87B05U20120813

Thousands evacuated in Spain forest fires

Municipal police officers speaks with a tourist during an evacuation of a camping while a forest fire has destroyed 330 hectares on July 4, 2011 in Lacanau, near Bordeaux,

http://www.gettyimages.it/detail/fotografie-di-cronaca/municipal-police-officers-speaks-with-a-tourist-fotografie-di-cronaca/118165665

Katrina, USA, 2005 - elderly people, people with disabilities

Costa Concordia shipwreck , Italy 2012 - ten different languages
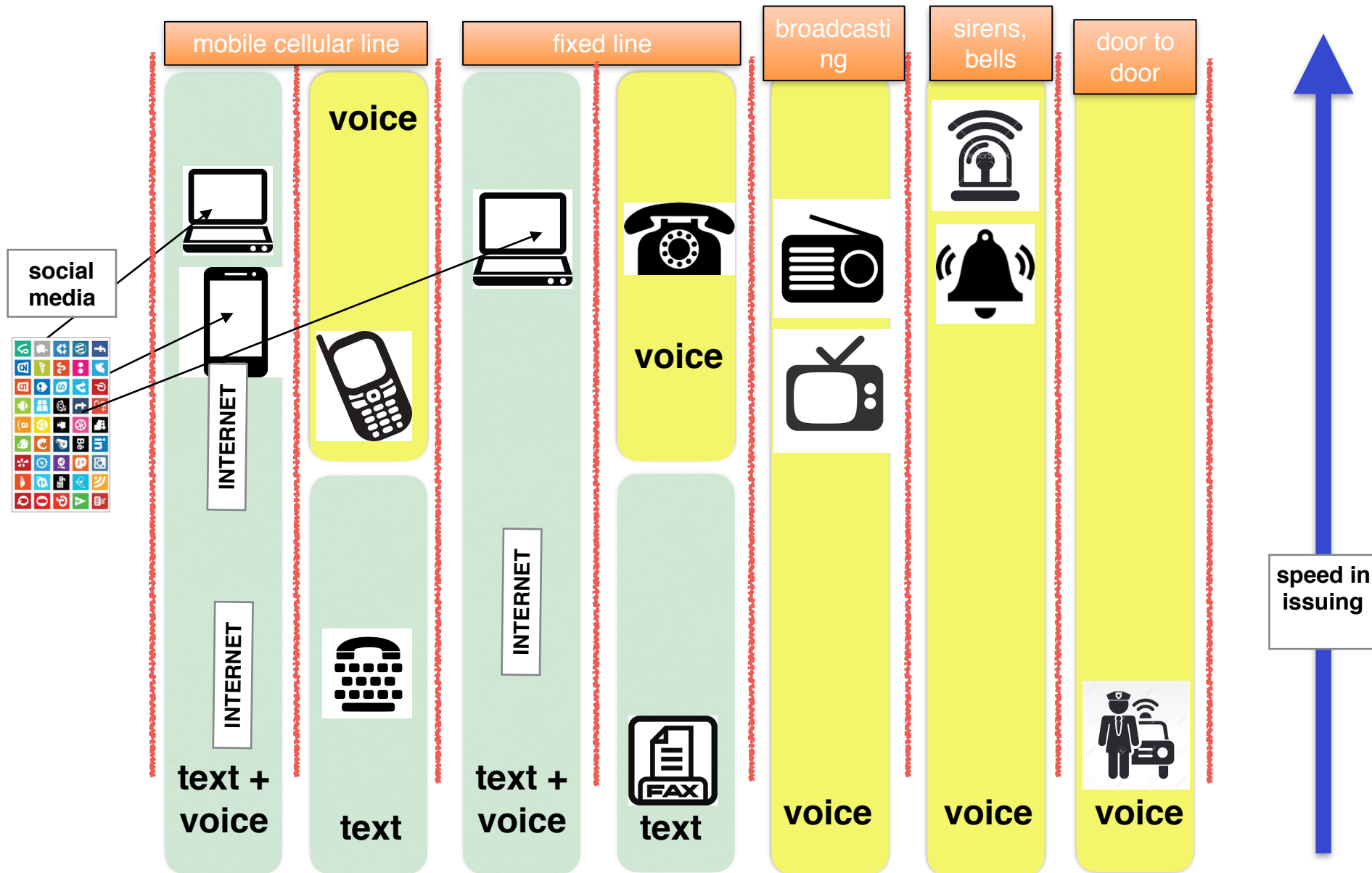
© News Pictures / Rex Features

Communicating to/from people

- to be prepared for emergencies to come

- **communicating** preparedness and warning information is critical

- however significant numbers of **any population fail to** respond or **act** upon warnings of imminent disaster

- the more so **vulnerable** populations

Communicating to/from vulnerables

- people with disabilities, elderly,

- people **situationally disabled**:
  - tourists,
  - recent immigrants, and
  - refugees
  when confronted with disaster
    - in **unfamiliar locations**,
    - **linguistically isolated**

digital divide is a risk factor

Communicating to people

- Alert and warning systems based on CAP
  - as per ITU-T Recommendation X.1303
  - US Integrated Public Alert and Warning System
  - Italian CAP-ITEM initiative
- Informing people means to
  - send out a message
  - send it in time (as fast as possible)
  - messages which can be easily understood and
  - distributed through many different media channels

Federation for Internet Alerts (FIA)
Public Warning Design Guidelines for FIA Messaging

Guidelines aim to allow automatic alert publishing on several available communication means so as to reach the only interested citizens (geographic filter)

They adopt standards and channels for online advertising

In this way text and alert dimensions can be optimized for the form-factor of the device utilized by the citizen
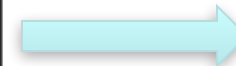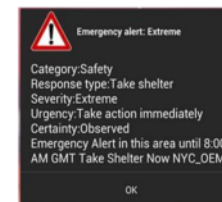
Federation for Internet Alerts (FIA)
Public Warning Design Guidelines for FIA Messaging

To make the alert comprehensible to everyone, tourist and foreigners included (Tsunami 2004), the guidelines want to standardize globally:

Appearance of the message alerts (color, font, format, Authority icon)

Event icons

Canned texts ready for the receiving form-factor

TABLE 1. TEXT MESSAGES OF VARIOUS LENGTHS

100	Tsunami danger on the coast. Go to high ground, up to third floor, or inland. Listen to local news.
90	Tsunami danger on the coast. Go to high ground or move inland. Listen to local news - NWS
78	Tsunami danger on the coast. Get higher or move inland. Listen to local news.
56	Tsunami danger on the coast. Get higher or move inland.
41	Tsunami danger. Get away from the coast.
34	Warning! Extreme Tsunami Observed
25	Warning! Extreme Tsunami
16	Tsunami Warning
7	Tsunami

WMO Alert Hub

- The WMO Alert Hub only handles copies of CAP alerts issued by official sources: the organizations designated in the WMO Register of Alerting Authorities

example CAP alert feed URLs to be designated official in the Register of Alerting Authorities.

Canada: Alberta Emergency Management Agency	http://emergencyalert.alberta.ca/aeapublic/feed.atom
Indonesia: BMKG (Agency for Meteorology, Climatology and Geophysics)	https://inatews.bmkg.go.id/rss/capatomlast40event.xml
Philippines: PAGASA (Philippine Atmospheric Geophysical and Astronomical Services Administration)	http://publicalert.pagasa.dost.gov.ph/feeds/
Tanzania: Tanzania Meteorological Agency	http://tma.meteo.go.tz/cap/en/alerts/rss.xml
USA: NOAA, West Coast and Alaska Tsunami Warning Center	http://wcatwc.arh.noaa.gov/events/xml/PAAQAtom.xml
USA: USGS, Earthquakes greater than magnitude 4.5	http://earthquake.usgs.gov/earthquakes/feed/v1.0/summary/4.5_hour.atom

Other alert and warning systems

- Red Cross Red Crescent **Universal App**

- International public CAP **Alert aggregators**
  – The Weather Company
  – AccuWeather
  – Samsung
  – Google Alert Hub
  – Federation for Internet Alerts Hub
  – **WMO Alert Hub**

Alerting in Italy

- Ministry of Interior, National Fire Corps adopted CAP in 2008

- The National Fire Corps does not issue public alerting

- It exchanges real-time operational data by its Control Centres with any other Authority Having Jurisdiction through CAP

- to enable more fluid communication Authority to Authority A2A

Communication A2A

Authorities communicate
with other Authorities
on daily basis

Local Police

Technical Services

Local Volunteer Fire Brigades

Local Volunteer ambulance serv.

RN Squads

CB Squads

Bomb Squads

Emergency Assistance Numbers

but **when smaller event escalate in scale** the number of Authorities to be involved increases

most often the chain of communication changes

and critical piece of **information could get lost** during the transition

Communication A2A

CAP-based communication between Authorities on daily basis ensures full scalability of response models, from those tailored for small incidents to the one designed to cope with large emergencies

Decisors receive real-time updates on incidents throughout their full evolution, including the most critical first phases

CAP alerts are ready to be immediately forwarded to Alert Hub to be distributed to the public

R&D activities on mass evacuation

CNVVF carry out R&D activities regarding Mass Evacuation in the framework of some EC-funded project

- Funded by the EC under FP7 (2014-2016)
- 3 years, 19 partners
- Trials in Spain and Greece
- Scope: Advanced Forest Fire Fighting. Preparedness for a management of large scale forest fires, through: innovative active countermeasure, innovative passive countermeasures, early detection and monitoring and integrated crisis management.

AF3 Advanced Forest Firefighting

Mass Evacuation experiment in Gualdo Tadino (ITA)

•Data on walking speeds of people over long distances.

•1) Elderlies, 2) People with disabilities 3) Family groups

•Participants: 176, including 9 special needs people with their assistants and 10 families

Communicating from people

- A flow of **information from people** is vital to control the situation and decide on corrective action

- We need tools to collect information from social media

  – by a huge number of information items
    e.g. **13/11/2015 #Paris**

    - 2.3 Million tweets
    - **1,200 /minute**

Communicating from vulnerables

- Information **from vulnerable people** is even more vital

- We need tools to collect info from vulnerables functioning worldwide, disregarding

  – platforms, providers, languages, disabilities

Addressing the right Authority/rescuer, able to cope with the concerned vulnerability

  – including tourists, elderlies, different disabilities

Thank you