CAP for Emergency management in Italy and Europe

Marcello Marzoli - CNVVF
Italian National Fire Corps

- Ministry of Interior
- 18 Regional Directorates
- 100 Provincial HQ
- 700 Fire Stations
- 34,000 Firemen

700,000 rescue operations/year

Bangkok, 24 August 2016 – CAP Implementation Workshop
MINISTERO DELL’INTERNO
DIPARTIMENTO DEI VIGILI DEL FUOCO DEL SOCCORSO PUBBLICO E DELLA DIFESA CIVILE

Italian National Fire Corps

- structural fires
- forest fires/WUI
- transport accidents
- CBRN events
- floods
- earthquakes (USAR/provisional works)
- airports
- etc.

- Ministry of Interior
- Italian National Fire Corps
- 18 Regional Directorates
- 700 Fire Stations
- 35,000 Firemen
Info exchange between rescuers

The 100 provincial + 18 regional + National CNVVF Control Centers cooperate and exchange info daily with a large number of other first responders’ C&C

selected on the basis of: type of incident, location / jurisdiction

...through calls
U.S. DHS interoperability continuum
Focussing on data interoperability
CNVVF interoperability policy: CAP adoption
CNVVF interoperability policy: CAP adoption

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CNVVF interoperability: technical side

Building a distribution system
- reliable
- redundant
- scalable
- configurable
- sustainable

Tailoring it to the available technical resources
- in terms of number and skills of personnel vs. the prospected number of partners in the long term
CNVVF interoperability: SO115 (source) rules (1)
CNVVF interoperability: SO115 (source) rules (2)

Filtering per incident type

Filtering per incident location
CNVVF interoperability: SO115 (source) rules (3)

Filtering per recipient

Resources deployment updates

Only calls / only incidents
CNVVF interoperability: Distribution rules (1)

Each (one-way) sender-recipient channel can be distributed through:

- **Atom feeds**
  - To connect high numbers of organisations (e.g., 8,000 municipalities)
  - Workload for IT security unrelated to number of recipients (same port)
  - Easy to configure even for lower level IT techs

Applying a filter profile to filter specific CAP fields.
CNVVF interoperability: Distribution rules (2)

Each (one-way) sender-recipient channel can be distributed through:

**Router 2 Router**

To send CAP messages via WS to internal or (trusted) external distribution systems (e.g., National Civil Protection Dept.)

- Higher workload for IT security and system managers - directly related to the number of systems connected (i.e., firewall and system config)

Applying a filter profile to filter specific CAP fields:

- **Mitigante (Nome Sala Operativa)**: V.F.GROSSETO.SO
- **Mitigante (Acronimo)**: com.grosseto@cert.vigifuoco.it
- **Destinatario (Nome Sala Operativa)**: P.S.GROSSETO.SO
- **Destinatario (Acronimo)**: gab.quest.or@pecps.poliziadistato.it

### Filter Profile

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<tr>
<td>alert.info.source</td>
<td><strong>RIMOSSO</strong>*</td>
</tr>
</tbody>
</table>
CNVVF interoperability: Distribution rules (3)

Each (one-way) sender-recipient channel can be distributed through:

- **Web Services**
  - To provide read/write access to the DB further internal services (e.g., reporting tool)

- **Web interface**
  - To provide access to the CAP content to:
    - Partners not yet CAP-compliant (as a first step toward legacy system adaptation) or
    - Partners without a real Control Centre system
  - No workload for IT security managers
  - High workload (directly related to the number of recipients connected), but easy to configure even for lower level IT techs from branch offices (e.g., small config and management of credentials)
CNVVF interoperability: building knowledge

Informing/convincing colleagues (first) and partners (after), and answering (always) to the (same) questions:

- What (practical) advantages does it bring interoperability to my job? to my role?
- Does it work? Really?

Best way to convince:

- providing ‘working’ use cases which involve colleagues, partners and professionals they trust
USE CASES in Italy (1)

When launching the interoperability services we had some use cases in mind, e.g., data exchange with:

- Cultural Heritage experts, to work on the damaged listed buildings in the earthquake aftermaths (L’Aquila)

- Local civil protection services, to share a Common Operational Picture and reinforce cooperation for forest fires, floods, environment, etc. (Venezia, Portogruaro consortium)

- Motorway authorities, to reinforce cooperation for road incidents (Autovie Venete)
USE CASES in Italy (2)

But the more the knowledge spreads, the more ‘unexpected’ use cases arise ‘from below’, e.g., data exchange with:

- Drainage authorities, to share in real time the status of calls concerning floods, so as to allow a faster optimization of water management (Veneto Orientale, where most land is reclaimed, and water flow is mainly managed through water pumps)

- National Police forces, to share in real time details of citizens calling for forest fires, so as to allow specific interviews and speed up pending investigations on arsonists (Grosseto)
USE CASES in Italy (3)

Other public bodies have adopted CAP too, e.g.,:

- **Puglia** region, with an European bid for their new Regional Control Centre able to allow real-time operational data exchange, through CAP, with subject local Authorities (and the National Fire Corps).

- **Sicilia** region, with a new emergency management system implementing text-to-speech services which accept inbound CAP messages to broadcast public alerts on radio frequencies.
USE CASES in Europe

Some updates on European use cases:

- The 112 of Portugal embed CAP into its National emergency management system

- The Prefecture of Paris issued an European bid for a new Emergency Control Centre including CAP for data exchange

- The implementation project for eCall included CAP between the candidate standards to send eCall messages between PSAPs and third parties (applying the EN 16102 standard).

- France Government SAIP, a smartphone application aimed at issuing public alerts on ongoing large crisis (e.g., terrorist attacks), into the next version should integrate CAP
Thank you