



# INDIGO Crisis Management Solutions: European Symbol Standard Component



**INDIGO**  
Crisis Management Solutions



# INDIGO

Funded under EU's FP 7 & led by Diginext, INDIGO aims to research, develop & validate an innovative system integrating latest advances in Virtual Reality & Simulation to enhance preparedness & management of complex crises.

INDIGO, based on successful FP 6 forerunner CRIMSON, will improve situational awareness & sharing of a Common Operational Picture (COP) during exercises & actual crises.

Additionally, INDIGO will propose a European emergency symbology reference for 2D/3D maps.

# CRiSMART Research on Crisis Management Symbology within INDIGO

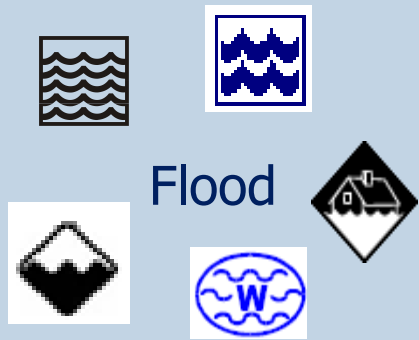
## Extensive Overview of Field:

- Symbols collected from 16 countries/orgs
- Plethora of symbols/sets, even within countries
- Few standardised sets
- Typically large number of symbols in sets
- Symbols often under-utilised
- Some divergence between different sets, i.e. symbols not particularly intuitive or universal
- More often convergence, promising for a shared European symbology set
- Symbol innovation & design

# A carefully adopted/devised & harmonised **Symbology for Emergency Management**

- increases rapid & accurate understanding
- facilitates information-sharing
- improves crisis exercises & training
- improves realtime crisis management:
  - locally;
  - regionally; & in
  - largescale transboundary incidents

# Symbols collected suggest Ease of Design for some symbols...



Flood

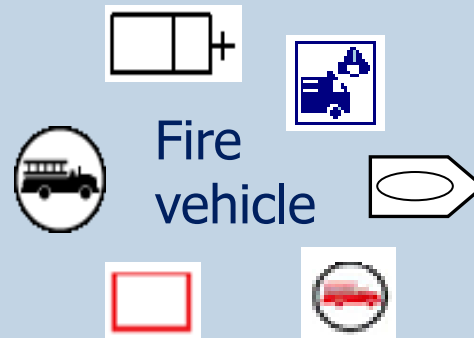


Fire

...over others

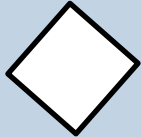


Hospital

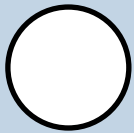


Fire vehicle

# Suggested Frame Shapes



Incidents



Operations



Infrastructure

Grouping symbols in effective categories is vital-critical that information is interpreted quickly & accurately!

Frame shapes above used in the US emergency management symbology (FGDC) standard & in proposed Australasian set

Recent research shows that in one of the few standardized sets around [US FGDC used by DHS], less than 1% of existing symbols are used (5-15 symbols out of 209)

(Robinson, Roth, and MacEachren, 2010)

INDIGO will propose a smaller practitioner-evaluated symbol set tentatively grouped into

3 categories:

**Incidents; Operations; Infrastructure**

## Incidents

- Riot
- Bomb threat
- Bomb
- Fire
- Chemical incident
- Biological incident
- Radioactive/Nuclear incident
- Explosion
- Contaminated area
- Plane accident
- Marine accident
- Train accident
- Vehicle accident
- Landslide
- Earthquake
- Flood
- Powerful wind/hurricane
- Contagious illness
- Electricity outage
- Water outage/shortage

## Operations

- Forward control point
- Cordon
- Medical services
- Police
- Fire Suppression
- Incident command center
- Head of medical services
- Head of police
- Head of fire suppression
- Medical assembly point
- Public assembly point
- Media coordination centre
- ...?

## Infrastructure

- Hospital/medical facility
- Police station
- Fire station
- Emergency operations centre
- Emergency shelter
- ...?



These suggestions are integrated in an online questionnaire available at:

<http://indigo.diginext.fr/Symbology>

## **Results to Date:**

An absolute majority prefer that **symbols:**

- are in colour (as opposed to b&w)
- indicate whether information is confirmed or not
- indicate logged times of information updates & status changes
- have a clear organisation

For more information please refer to:

<http://indigo.diginext.fr>

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Crisis Management Research and Training

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