

Analysis of key parameters of the management of past disasters

Selected results



Establish Pan-European Information
Space to Enhance seCurity of Citizens

Requirements & Vision

Availability of Resources



shortest time



highest relevance



right location

Minimization of Damage



information access



communication



resource co-ordination

The vision: to develop a concept of a common information space based on the analysis of ...



response to past events



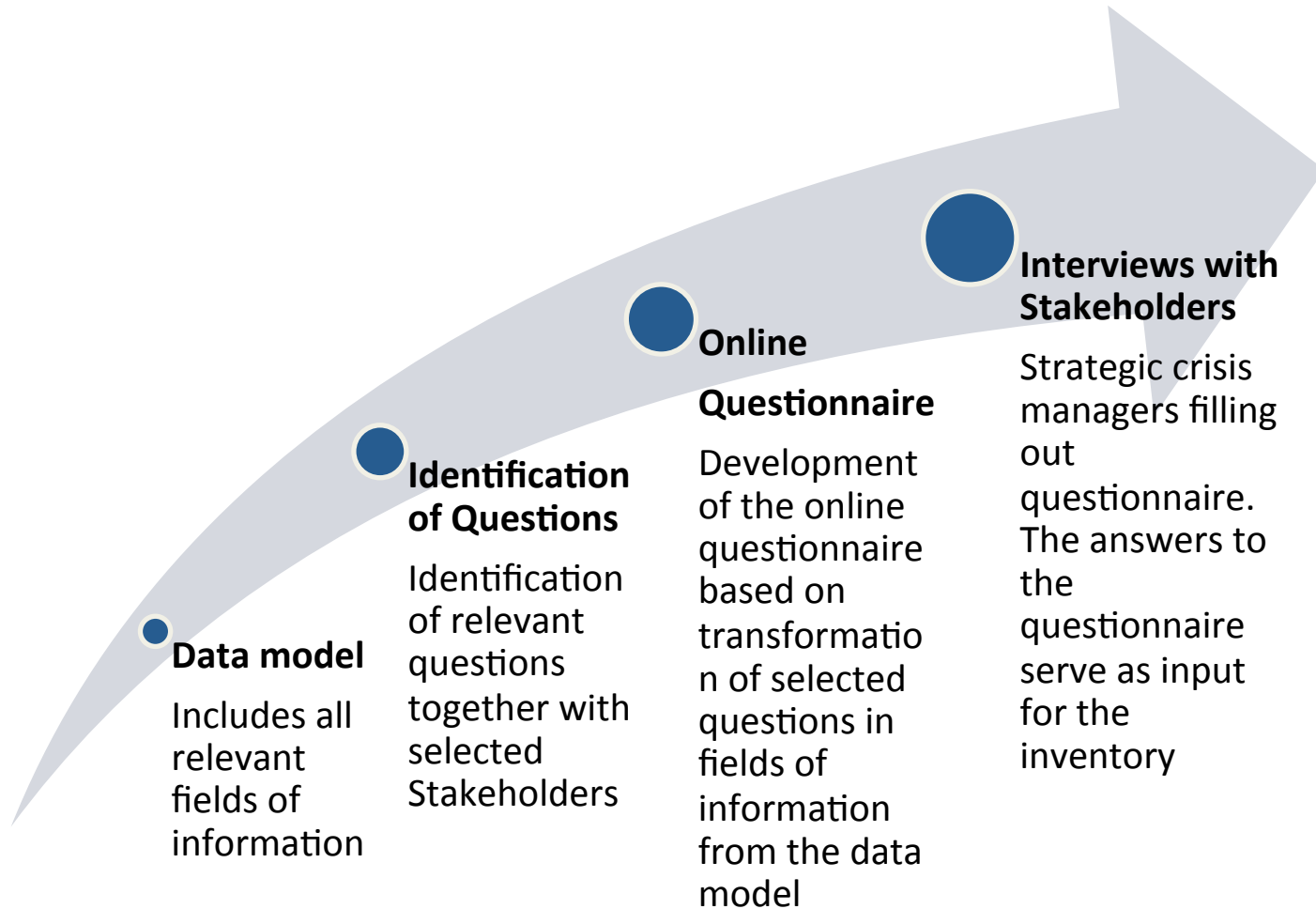
data and tools used



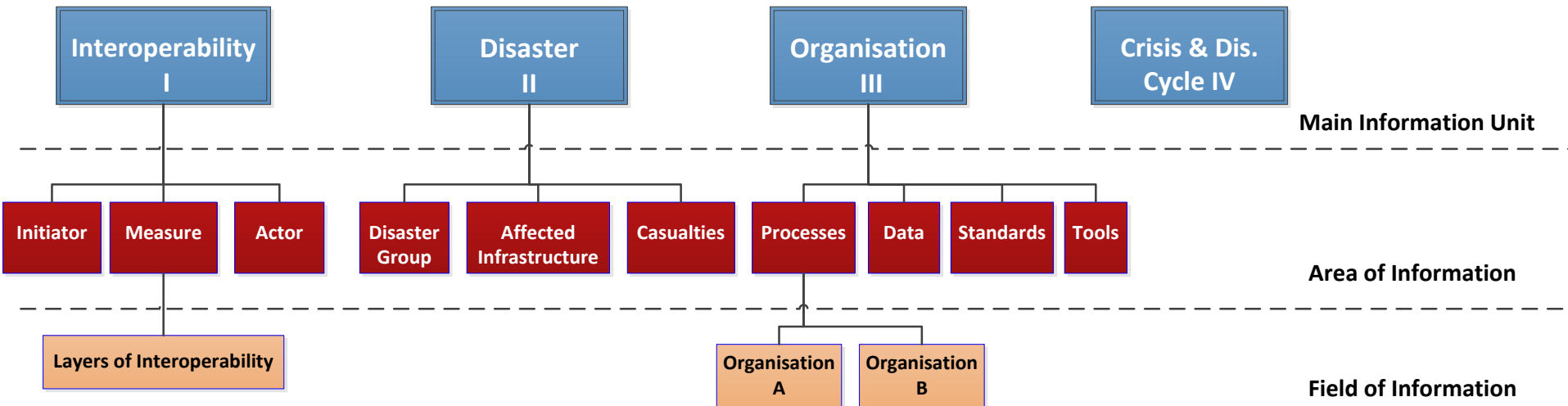
organisational structure



The development of the Inventory



The data model



Questionnaire – Interface to Stakeholders

- Information on interviewed Organization
- Focus on specific event (Disaster) including used processes, measures, standards, data resources, tools, cooperation with other organizations and interoperability

EPISECC Questionnaire

The Pan European EPISECC inventory supports crisis managers, emergency services and other stakeholders by allowing them to analyse interoperability and efficiency aspects of past critical events and disasters. The major focus is set on interoperability and efficiency in the response phase. The inventory intends to answer frequently asked questions of multiple stakeholders.



Menu
Respondent
Your Organisation
Disasters

Your Organisation

Description of the main purpose of your organisation in disaster management

Organisation name:

Acronym:

- Stakeholder Type: Governmental
 Industry/Other Business
 Research & Education
 NGOs
 International Organisations
 Other

Other category (please specify):

- Type of Responsibility: Strategic
 Tactical
 Operational

- Phases of Disaster Management: Prevention
 Preparedness
 Response
 Recovery

Scope of Inventory

EPISECC develops a concept of a common information space. To ensure that the required information will be exchanged adequately between different stakeholders

- Best practices and shortcomings of the management of past disasters need to be analysed
- Such analyses need to be performed in a way allowing comparable and quantifiable comparisons (taking data protection requirements into account)

That is what the EPISECC inventory ensures

Interoperability Indicator

A measure to quantify the quality of information exchange:

0 = very bad, no information exchange

1 = excellent, best possible

4 Parameters need to be assessed:

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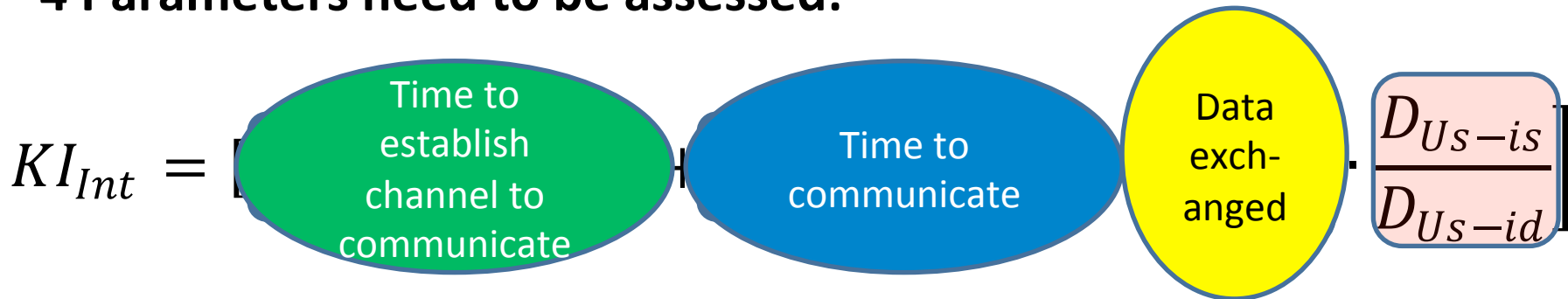
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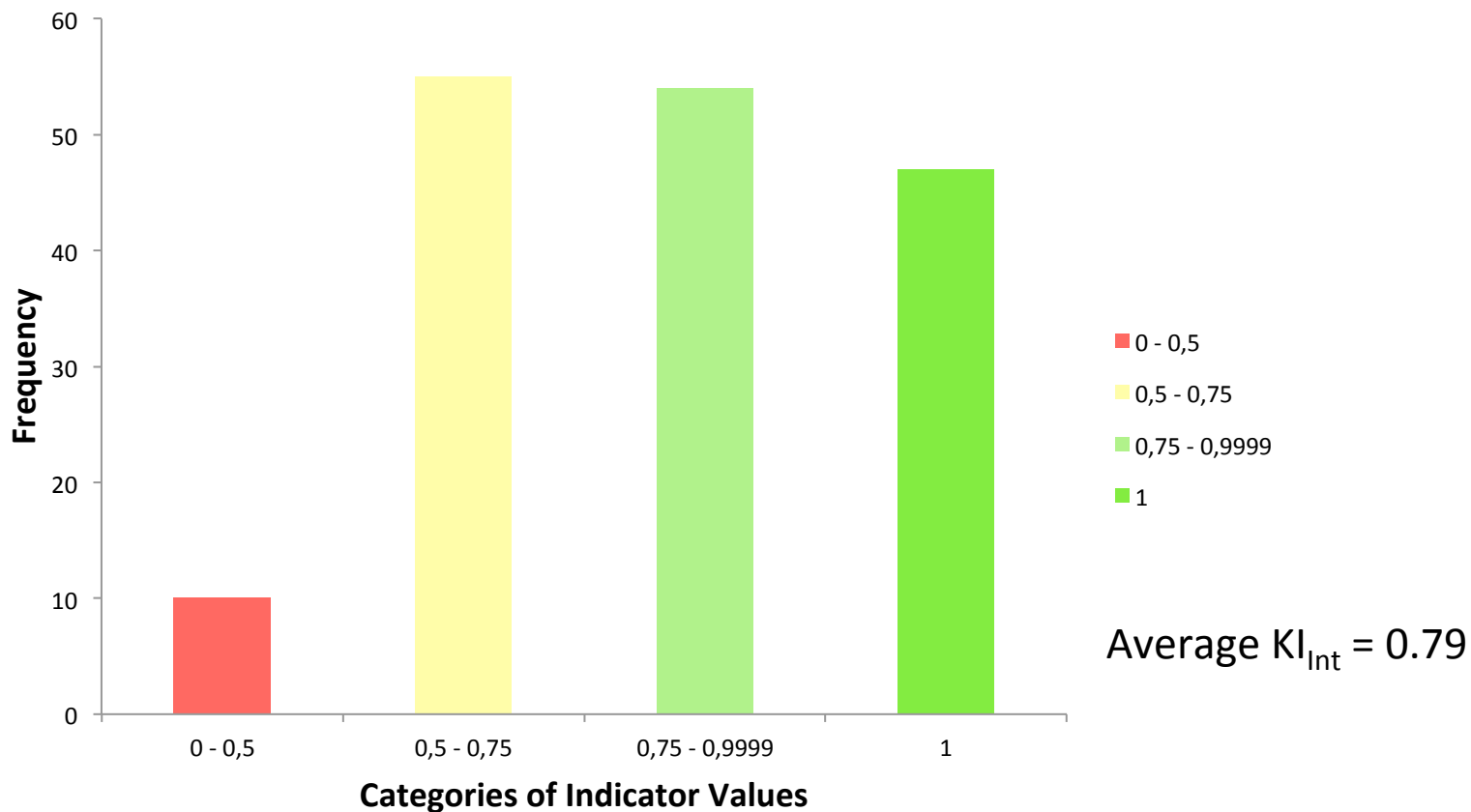
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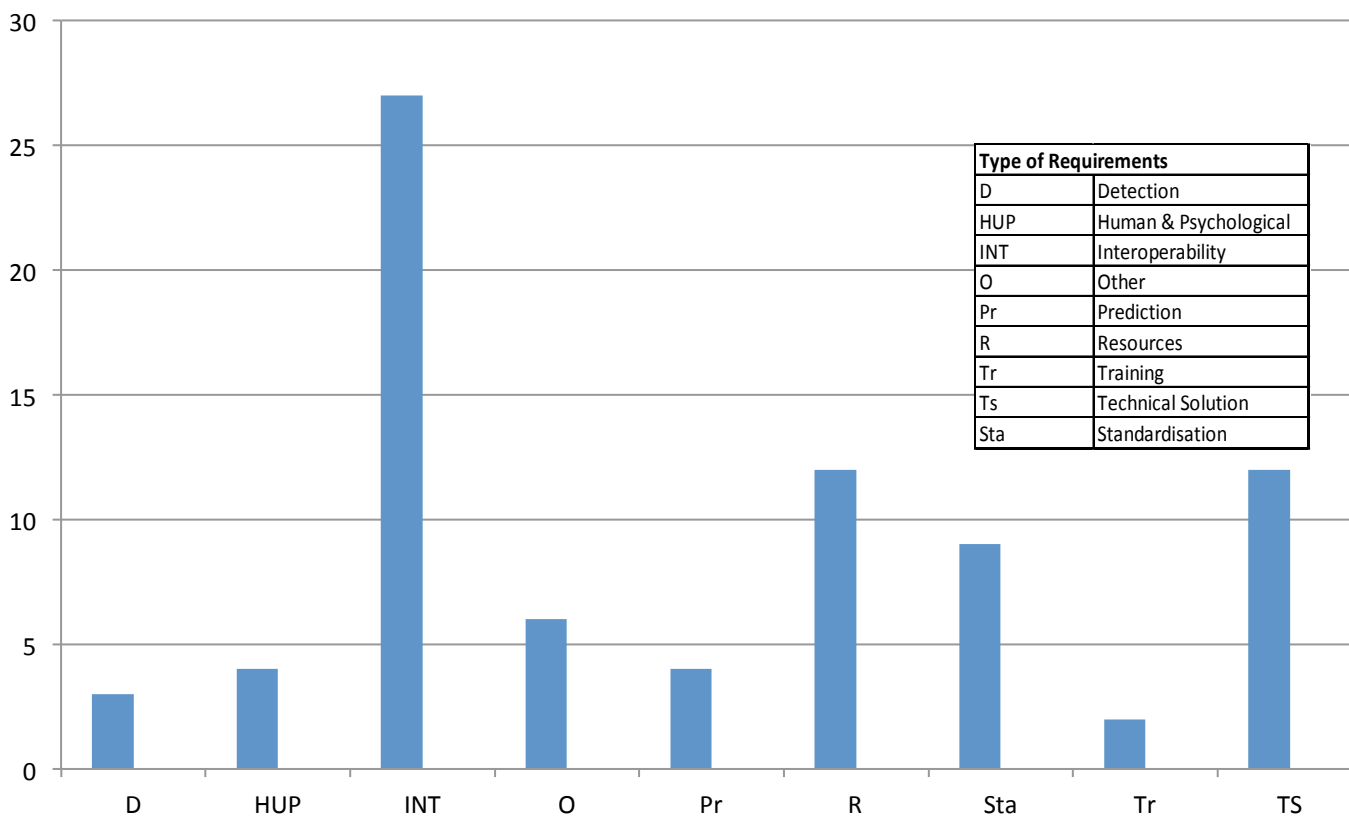
Interoperability

Key Indicator for Interoperability in a specific Measure



Requests for improvement

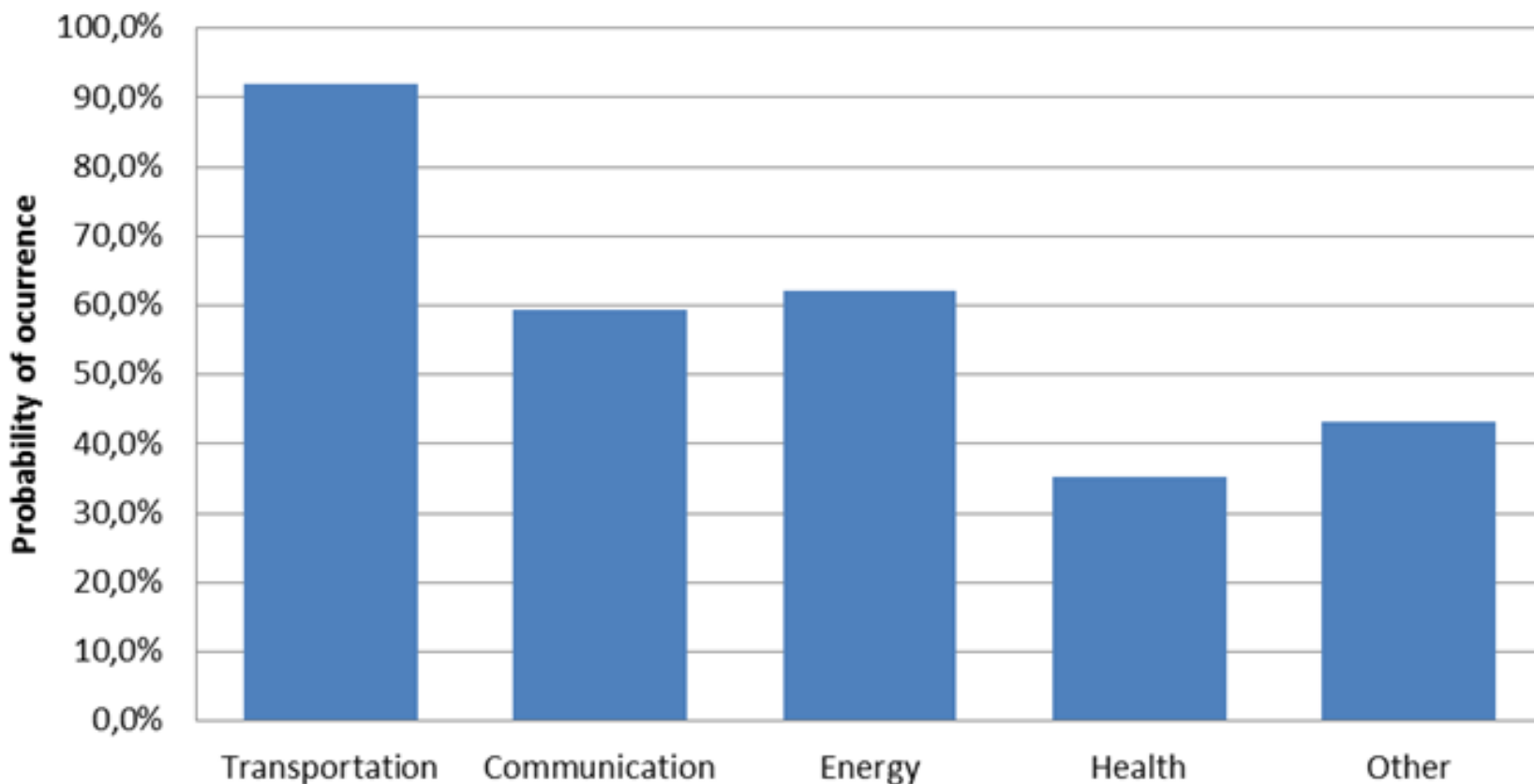
Number of Requirements for all Disasters



In total 79 requests were expressed

Type of infrastructures affected

Affected Infrastructure



Examples of other outcomes

- Average duration of response phase of examined disasters: 15.7 days (1 to 82 days)
- No correlation between degree of interaction and interoperability (-0.03)
- Communication media used for communication (multiple selections possible):

Public services:

- GSM: 98 %
- Email: 84 %
- Public IP: 75 %

Summary of Outcome from Inventory

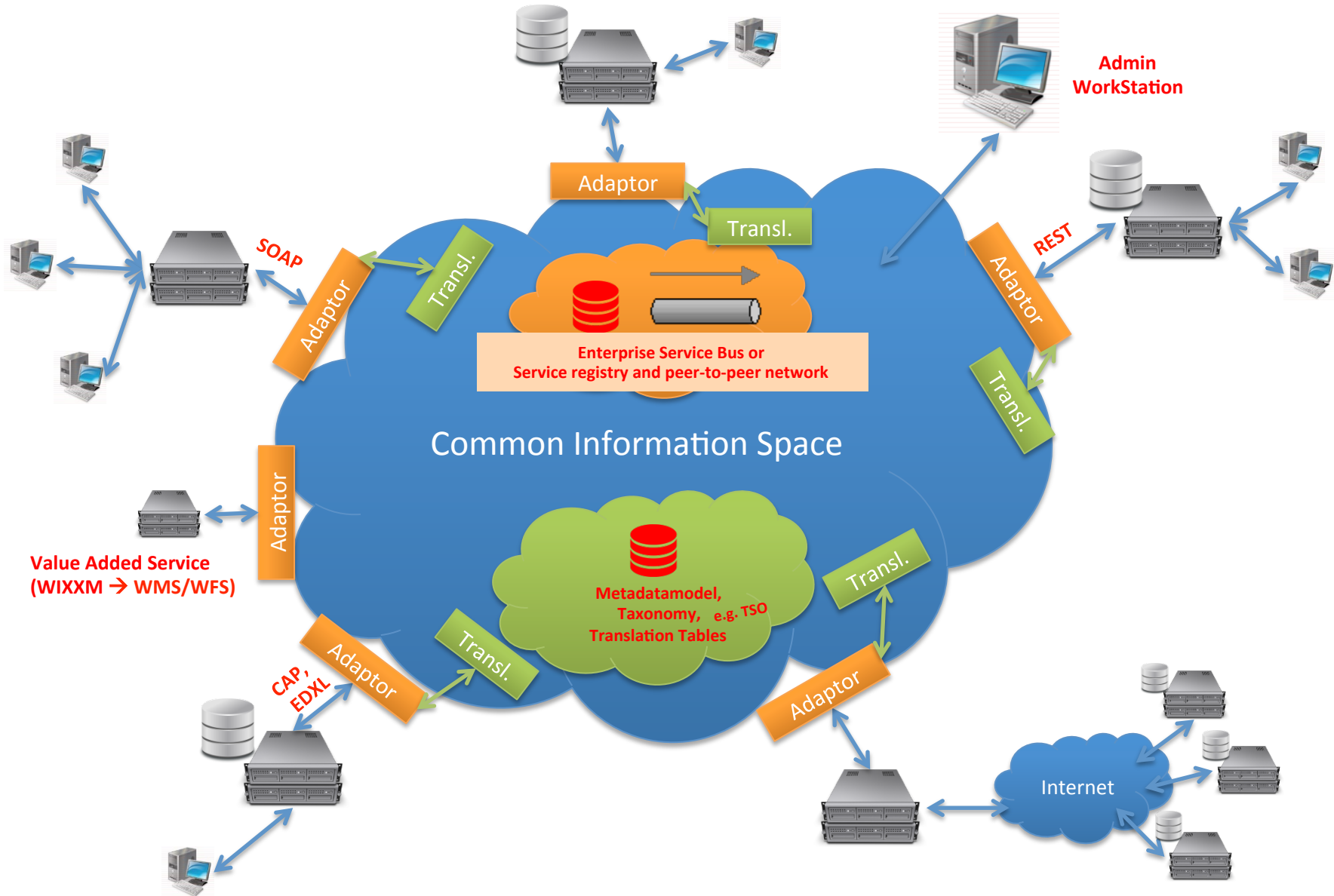
- 49 interviews were performed interviewing mainly governmental organizations (78%)
- 19 member states covered
- Regarding use of common standards and tools the degree of harmonization seems to be low in Europe
- The majority of disasters analyzed were natural, hydrological disasters
- About 180 requirements dedicated to improve management of disasters were expressed, the majority of them are related to interoperability
- Transport is the most affected infrastructure



Interoperability

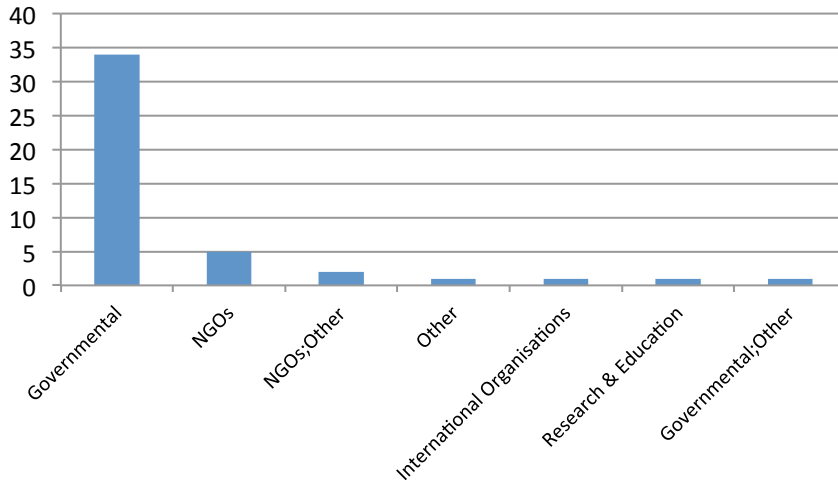
$$KI_{Int} = [0,5 \cdot (100 - T_{suc}) + 0,5 \cdot (100 - T_c)] \cdot \left[\frac{D_{Tr-is}}{D_{Tr-id}} \cdot \frac{D_{Us-is}}{D_{Us-id}} \right]$$

KI_{Int}	Key Indicator for Interoperability (Value between 0 and 1, 0 = Worst Case, 1 = Best Case)
T_{suc}	Normalized Time for Setting Up an information exchange Channel, e.g. a frequency channel for communication (Value 0 ideal case = no time for setting up Channel, value 100 worst case = worst case time to set up Channel, depending on expectation of stakeholder)
T_c	Normalized Time for exchanging or provision of information (Value 0 ideal case = no time needed for the process of information exchange (ideal, not possible, the shorter, the better), value 100 worst case = worst case time for exchanging information, depending on expectation of stakeholder)
D_{Tr-is}	Data transmitted real status (is); (Value 100 best case = all required data transmitted, value 0 worst case = worst case, no required data transmitted)
D_{Tr-id}	Data transmitted ideal (id); always 100 (100%), all expected data transmitted
D_{Us-is}	Data understood real status (is); (Value 100 best case = all data transmitted understood, value 0 worst case = worst case, no required data understood)
D_{Us-id}	Data understood ideal (id); always 100 (100%), all expected data understood



Type of responding organizations

Number of Interviewed Organisations



Responsibility Type of interviewed Organisations

