Project IDIRA

■ Interoperability of data and procedures in large-scale multinational disaster response actions

■ Information Day on Interoperability

■ 19th May 2011 Scuola Grande di San Rocco, Venezia

Fraunhofer Institute for Transportation and Infrastructure
Systems IVI in Dresden

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Project Identity

Project Short Name:	IDIRA
Project Full Title:	Interoperability of data and procedures in large-scale multinational disaster response actions
Call:	FP7-SEC-2010-1
Project Start Date:	May 1st, 2011
Project Duration:	48 Months
Project Budget:	EUR 10.925.164,35 (Max. EC Contribution EUR 8.032.971,06)
Consortium:	18 organization from 7 countries

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Today's situation

- Floods

- Large fire situations

- Earth Quakes

- Pandemics

- Pollution

Source: Ralf Roletschek

Source: enpasedecentrale

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Remember European situation

- Large scale disaster happen repeated in an European wide dimension

- National efforts are often not able to respond the large demand of help

- National efforts are often inadequate to respond to extensive requests for help

IDIRA: A Vision?

- Imagine large-scale disaster response actions, where

    - all acting organisations share a common operational pictures,

    - technical and linguistic communication barriers don't constrain an efficient resource management,

    - structures and procedures of information interchange are compatible.

- IDIRA will contribute this vision in a multinational and inter-organisational collaboration

Existing barriers

Temporal horizon	Layer concept and barriers for interoperability	Planning perspective

Weeks

Administrative layer
- Structures
- Legal Background/Mandates
- Resource Management

Strategic level

Days

Command and control layer
- Procedures
- Information handling

Tactical level

Hours

Field operations layer
- Language
- Communication systems
- Equipment

Minutes

Task level

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IDIRA overview

- **Analysis of the present-day situation**

  - identifying European state-of-the-art disaster management systems and procedures

  - specifying differences between organisations and countries (taking into account users' needs, mandates and legal background)

- **Framework concept**

  - modeling workflow in multinational disaster response actions

  - high-level specification of supporting technological components

  - system integration concept for interoperability /specification of interfaces

IDIRA work package overview

- **Interoperable communication**

  - integration of communication protocols for data exchange

  - voice communication interoperability (combining and interrelating existing protocols for different levels)

  - interoperability of data models for tasks and resources

  - integration of geographic and attribute data, integration of sensor data

- **Interoperable information**

  - provision of a common operational picture

  - structured text communication over language barriers

  - information interchange for the provision of early situational awareness

  - integration of planning and optimisation tools for missing persons' tracing

IDIRA work package overview

■ Interoperable response management

- decision support for coordinated multinational response planning and optimisation

- integration of micro simulation as an up-to date technology for decision support

- system integration and implementation of the MICS concept as a whole

- augmentation of MICS with international donation management and multinational resource management

- map based Visualization

■ Training and dissemination

- taking into account simulation, training, operational response, and recovery

- proofing the interoperability of the solutions by field trainings organized as multinational and multi-organisational exercises

IDIRA work package overview

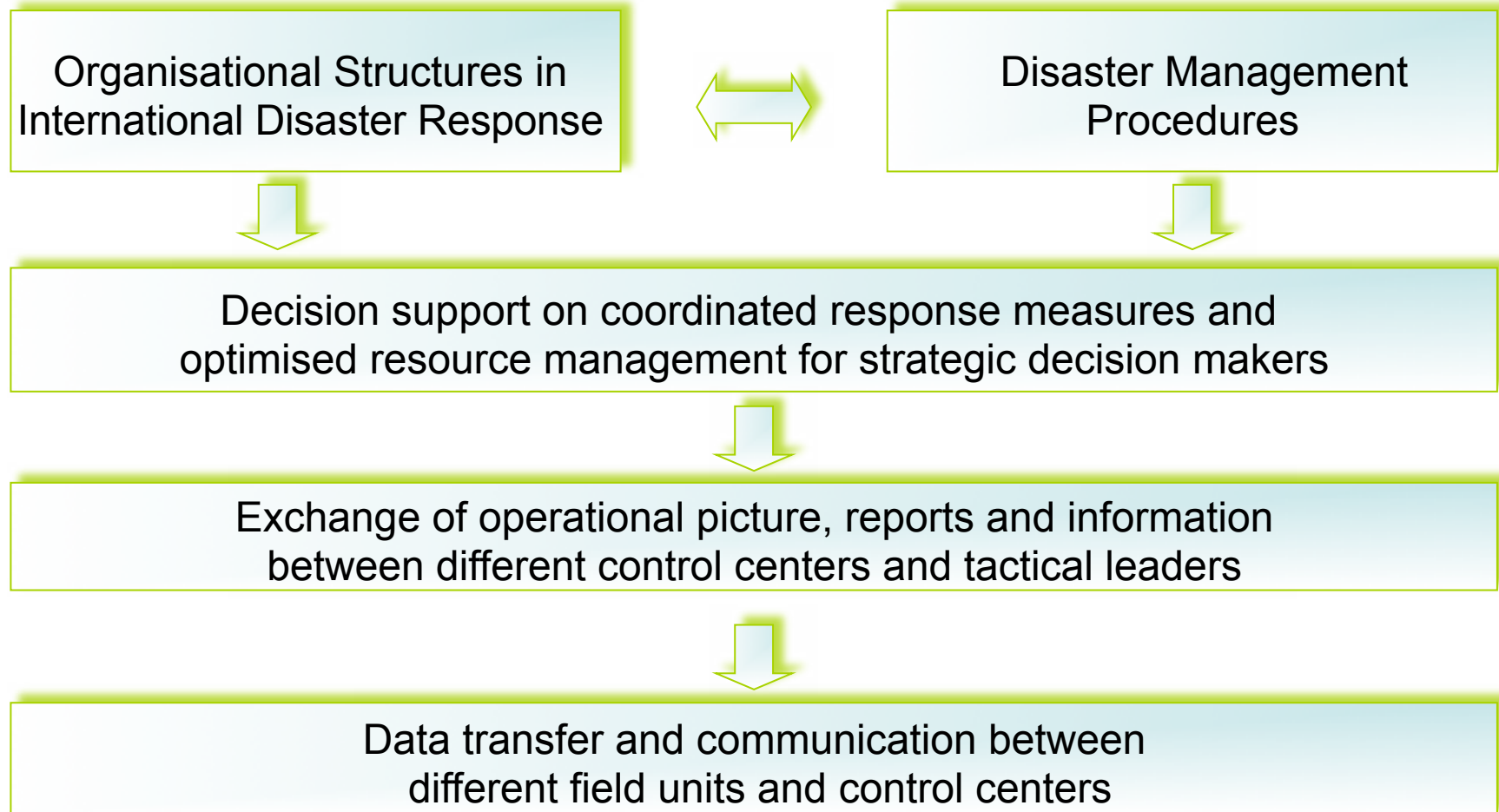- **Guidelines & standards**

  - description of successful rules and procedures

  - provision of the

  - integrated MICS Architectural Reference and recommendations for harmonization and standardization in the European Union
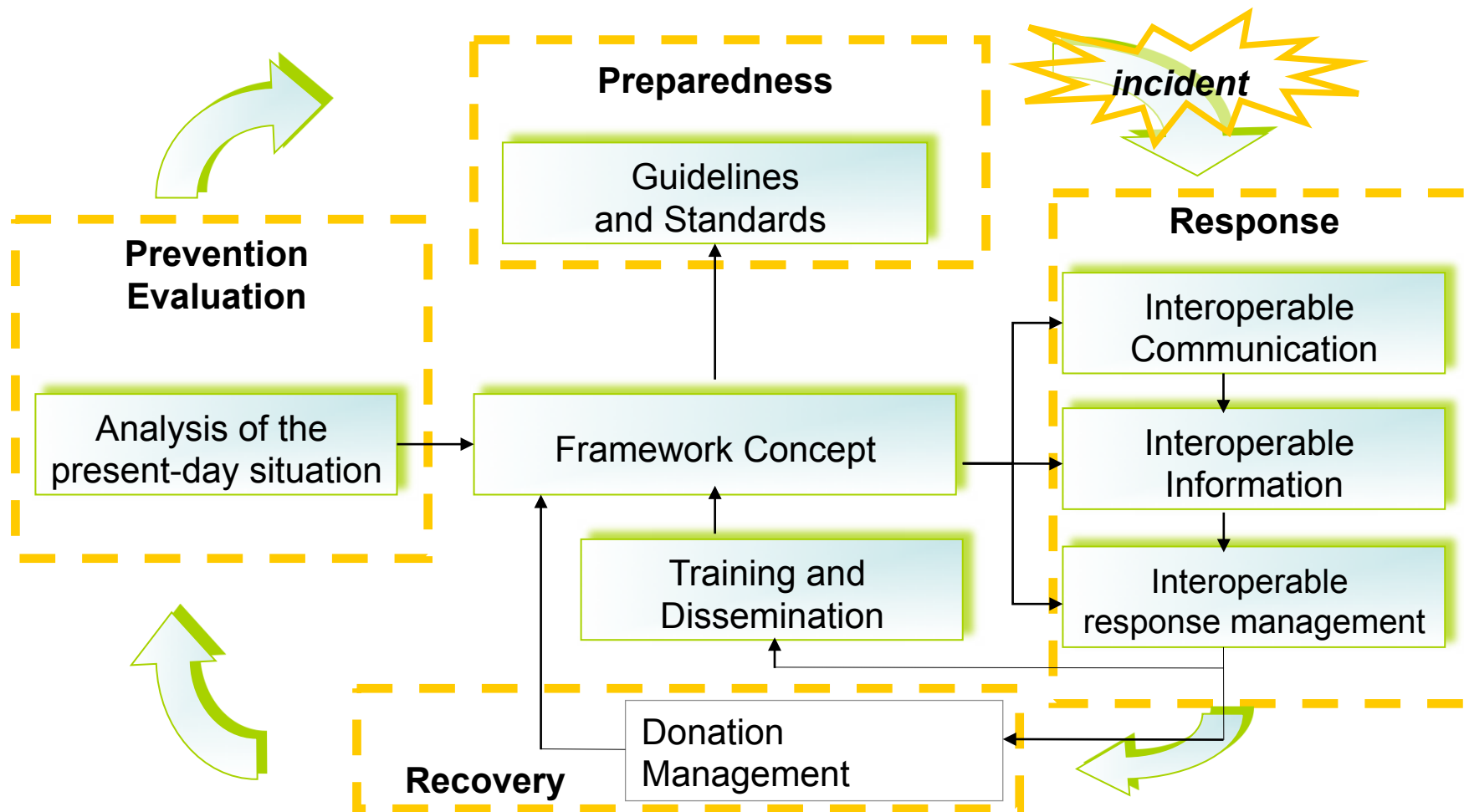
- **Project management**

  - including steering committee

  - involving of advisory and end-user board

  - project controlling and quality management for deliverables

IDIRA top-down-approach

| Organisational Structures in International Disaster Response | ⟷ | Disaster Management Procedures |

⬇ ⬇

Decision support on coordinated response measures and optimised resource management for strategic decision makers

⬇

Exchange of operational picture, reports and information between different control centers and tactical leaders

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Data transfer and communication between different field units and control centers

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Disaster management lifecycle in IDIRA

IDIRA: evaluation and trainings

- Testing's of developed RTD results on national level
  - verification of project results
  - testing's may result in extended RTD activities

- Small scale evaluation by end users on local/regional/bilateral
  - verification of project results
  - aggregation of national Testing's in bilateral activities
  - evaluation may result in extended RTD activities

IDIRA: evaluation and trainings

- Small scale user training on multinational level

  - preparation of large scale training

  - evaluation of developed training procedures

  - based on verification and evaluation of project results

- Large scale trainings

  - trainings will involve first responders of different organisation in large scale scenarios in different European

  - based on verification and evaluation of project results in prior tasks

  - first responder organisation will be enabled to practice the developed IDIRA procedures under real conditions

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IDIRA: more than a vision!

- Imagine large-scale disaster response actions, where

  - all acting organisations share a common operational pictures,

  - technical and linguistic communication barriers don't constrain an efficient resource management,

  - structures and procedures of information interchange are compatible.

- IDIRA enables first responder organisation to act in real disaster situation multinational and inter-organisational using the project results under circumstances even while the project duration

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Invitation to end uses and researchers

■ The project IDIRA wants to give an opportunity to disaster management organisations and interested researchers to express their experience, demand and ideas on technical and organisational interoperability for multinational disaster management actions. Organisations with relevant responsibilities or research interests can be informed on useful project results, field exercises, workshops and the like. The best way to get informed and involved is to join the IDIRA Advisory and End User Board (without obligations).

■ If you are interested in receiving more information or joining the IDIRA Advisory and End User Board, please contact the Administrative Coordinator

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Discussion

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