



TRIDEC FACTS

FP7 ICT Call 5:
Intelligent Information Management

Acronym:
TRIDEC

Reference:
258723

Start Date:
01.09.2010

End Date:
31.08.2013

Duration:
36 months

Contract Type:
Collaborative project - IP

Costs:
8.9 million €

Funding:
6.79 million €

Coordinator:
GFZ German Research Centre for
Geosciences

www.tridec-online.eu

TRIDEC PARTNERS



*Helmholtz Centre Potsdam
GFZ German Research Centre for Geosciences,
Centre for GeoInformation Technology
(Germany)*



*University of Southampton, IT Innovation Centre
(United Kingdom)*



*Queen Mary and Westfield College, University of
London - Department of Electronic Engineering
(United Kingdom)*



*Joanneum Research Forschungsgesellschaft
GmbH - DIGITAL - Institute of Information and
Communication Technologies (Austria)*



*IOSB - Fraunhofer-Institute of Optronics,
System Technologies and Image Exploitation
(Germany)*



*TDE Thonhauser Data Engineering GmbH
(Austria)*



*Q-Sphere Limited
(United Kingdom)*



*Instituto de Meteorologia, I.P. -
Departamento de Sismologia e Geofisica
(Portugal)*



*Alma Mater Studiorum- Universita di Bologna -
Department of Physics
(Italy)*



*Bogazici Universitesi - Kandilli Observatory
and Earthquake Research Institute (Turkey)*

TRIDEC³

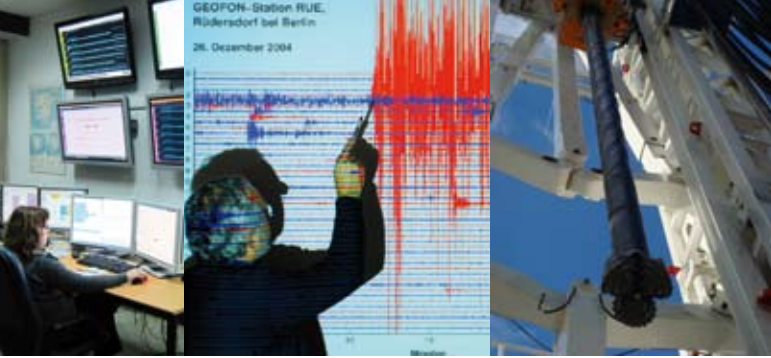
Collaborative, Complex and Critical
Decision Support in Evolving Crises

Co-funded by the European Commission under FP7
(Seventh Framework Programme)
ICT-2009.4.3



Intelligent Information Management
Project Reference: 258723





In Earth management, making the right decisions during crises situations like natural disasters can prevent the loss of many lives and avoid financial losses. This demanding task requires innovative technologies for intelligent information management. This challenge is addressed by the Integrated Project TRIDEC (Collaborative, Complex and Critical Decision-Support in Evolving Crises), which is funded by the European Commission under the 7th Frame Programme.

The project's goal is the development of an innovative software architecture including both a service platform and the next-generation of work environments supporting human experts to manage and mitigate emergency situations triggered by the earth system.

When dealing with crises, a recurring pattern is the need to establish support confirming the current situation assessment. This is to ensure that pending mitigation-related decisions will be appropriate. For this, TRIDEC provides efficient and effective access to preserved human expertise dating from past crises stored in a knowledge base.

The central challenge for software development in TRIDEC is the conceptual design and development of a platform for interoperable software services. This is to enable smart management of sensor-data and derived information during crisis situations. Based on this work, a software environment will be provided to support decision makers in collaborating in complex and time-critical decision processes.

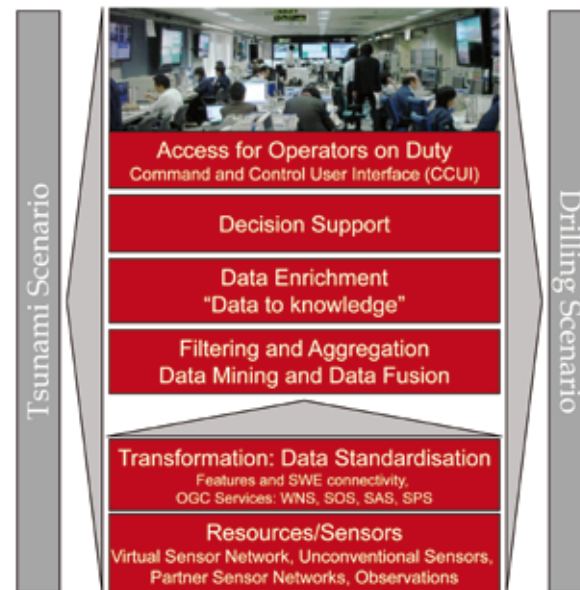
TRIDECs research and development activities also include the setup of a robust and scalable service-platform, allowing for simple integration and flexible

usage of existing resources, while providing a dynamic focus on the most relevant information streams. Resources to be included consist of sensor systems, geodataservers, repositories for context-information and also components for prognostic simulation and data stream fusion in a collaborative environment.

Intelligent information management requires data enhanced with context information. For this, special software tools are being developed in TRIDEC, which enable optimised usage of system resources based on a knowledge base. New functions to support both complex workflows and decision-processes can be dynamically adapted by orchestration.

The first application scenario deals with the management of natural disasters causing potential crises for human society. This is demonstrated by the virtual simulation of a Tsunami-scenario. In this scenario experts will work together in crises control centres and governmental agencies to protect human lives and preserve critical infrastructures and industrial installations.

The second scenario focuses on drilling-related crisis situations. Drilling, a highly cost-intensive exploration method, is crucial for the mining industries. Engineers and analysts collaborate in a common task. During ongoing drilling operations any deviation from nominal operations has to be detected and compensated immediately. For this, the drilling operations are continuously monitored by sensor networks. This is imperative to ensure the safety of the drilling teams, to avoid time delays with resulting financial losses and to protect the natural environment.



The potential of TRIDEC's technological approach is demonstrated in two separate fields of application, both requiring the handling of very large data volumes.

