



# STREAM



Project Acronym: **STREAM**  
 Project Reference: **IST-2002-511705**  
 Contract Type: **S** pecific Targeted  
**Research Project (STREP)**  
 Start Date: **01/12/2004**  
 Duration: **42 months**  
 End Date: **31/05/2008**  
 Project Cost: **3.969.601 €**  
 Project Funding: **2.499.220 €**

# STREAM

*Technology to Support Sustainable Humanitarian Crisis Management*

The key basis of this project is the use of advanced ICT to improve sustainable humanitarian crisis response in risk reduction. Two main humanitarian crisis applications will be addressed, namely Displaced Populations and Mine Action.

In terms of risk reduction, both types of crisis require the assessment of the extent of the hazard, and hence need survey and decision tools for area assessment/reduction.

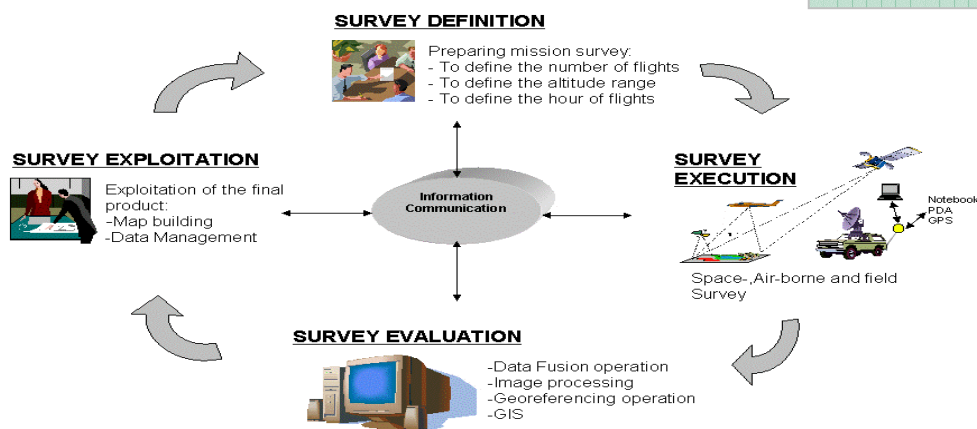
It is essential to bear in mind that all aspects of understanding, planning and implementing the survey missions are crucial to its overall success. This presents major challenges in many areas of crisis management.

### More Information:

<http://www.stream.vub.ac.be>

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## Objectives

The project's goals are twofold, namely the development of (1) products and (2) procedures for end-to-end technological platforms and tools for survey and decision support in humanitarian crises:

- Products for survey and decision support include:
  - Mission planning and management, for space-/air-borne and field surveys;
  - A Mobile Computing Infrastructure for field surveys including ground truth acquisition and verification tools including;
  - Remote sensing data analysis and interpretation;
  - Information Management and Decision Support System for structuring, analysing and synthesizing the acquired data and knowledge;
  - Information Communication and Broadcasting.

These products will be developed based on, and integrated with, existing Information Management Systems and Mobile Computing Infrastructure, namely, the Information Management System for Mine Action (IMSMA)<sup>1</sup> developed by the Geneva International Centre for Humanitarian Demining (GICHD), and EOD IS<sup>2</sup> developed by the Swedish EOD and Demining Centre (SWEDEC).

- Procedures: This project will address the planning, operational and logistic aspects of setting up and conducting a survey mission. Moreover, legal and contractual aspects for airborne surveys will be investigated.

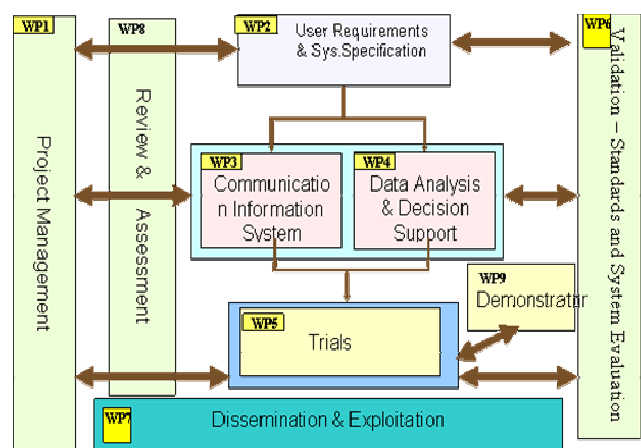
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## Description of the work

The project has been structured in seven work packages (see Figure below) following a development cycle with the following main phases:

- **The Concept & system requirements:** production of the system specifications according to the end-user requirements (WP2).
- **The Design & Implementation of the system components:** during this phase, a first release of the system will be designed and implemented according to Milestone 2. As the project relies on existing technology, which has been developed either by separate partners, or jointly by several partners prior to the **STREAM** project, an effort will be made in the early stage of the project to integrate these sub-systems for the development of a 'technology trial system' which will be used during the planned first trials.
- **The Integration of the system components:** this phase will use the results of the first field phase, for refining the implementation of the system components and their complete integration. This phase will end with the release of the final system (Milestone 6) for the second field trial.
- **Validation of System Products:** During this phase, the system will be validated to match the functioning of the system with the objectives. For validation and demonstration of the proposed technology, the system will be tested in two case studies.



<sup>1</sup> <http://www.gichd.ch/imsma/index.htm>

<sup>2</sup> <http://www.eodis.mil.se>