



## CRISIS MANAGEMENT SYSTEM

The Crisis Management System is the SELEX Sistemi Integrati solution that supports and coordinates activities and resources during preparedness, response and mitigation phases of Emergency Scenarios. This solution is based on a coherent set of integrated systems, able to efficiently support the operational procedures and interventions of all operational units and participants involved in crisis management.

The increasing frequency of catastrophic events caused both by natural phenomena, including extreme weather conditions, flooding, landslides, earthquakes and fires, and by technology-related accidents, such as explosions in industrial plants and leaks of toxic substances, is revealing the difficulty in affected countries to deal with catastrophes of these proportions.

A critical analysis of where emergency management operations may encounter major problems, causing even partial failure or delay in recovery action, highlights the need for more efficient co-ordination, and for a unified and homogeneous approach at the same time.

This aspect is highly important in complex operational scenarios as interventions may involve collaboration and information exchange between many units and organizations, e.g. fire brigades, volunteers, each having a specific operational role. Moreover, according to the disaster type and extent, emergency scenarios could span from a local up to a national or even international scale, with suitable deployment of resources and personnel.

### THE SOLUTION

The complex and heterogeneous information sources and activities request a flexible, modular and scalable solution to quickly react against and to effectively plan prevention and mitigation activities for predictable disasters. In this frame, SELEX Sistemi Integrati has developed the Crisis Management System, targeted to Civil Protection organizations.

The Crisis Management System consists of a suite of elements that perform the following main functions:

- Command and Control that enables strategic event monitoring and control, giving a common operational picture and support for making informed decisions in the case of crisis situations

- Emergency & Information Management that consists of a suite of integrated software applications providing operator support through all phases of the crisis management lifecycle including the management of:
  - pre-disaster simulation and scenario preparedness
  - environmental sensors monitoring
  - fire fighting management
  - situational awareness
  - intervention teams management
  - available means and asset management
  - friendly resources localization
  - post disaster inspection.
- Information & Telecommunications Infrastructure Management that includes robust, scalable, redundant and secure communications at every level of the operational chain, providing connectivity for voice, video and sensor data.

### THE SYSTEM

The architecture of the Crisis Management System consists of:

- the Command and Control subsystem
- a web-based SW subsystems platform that supports the Emergency and Information Management
- the ICT Infrastructure that enables secure networking and information flow.

The system architecture is defined following a flexible and modular approach, customizable to all operational levels, which can be tailored to any Civil Protection organization.

The geographical distribution and hierarchical instances of the system (National, Regional or Local) are based on the deployment requirements of the response to the crisis and on the structure of the Civil Protection organization. The web based technology of the solution allows operators to remotely access any central information and to receive updates directly from the scene of the disaster. The system is based on open architectures, to improve interoperability between the various services involved and to facilitate interfacing with specific technical and scientific monitoring systems for any kind of event.

### KEY POINTS

Based on a System of Systems approach and on the collaboration with National and International Civil Protection organisations, the Crisis Management System presents the following major features:

- compliance with international standard emergency management procedures
- availability of a common picture and decision aids suggesting a set of possible interventions in the field with geolocation of events, assets and status of resources
- effective resource management at all levels from strategic to tactical
- system interoperability providing easy and immediate integration with existing operational systems and information exchange with co-operating agencies and organizations
- high flexibility to fit different operational contexts.

