



## Worksheet additional information

### *Possible requirements for Situational Awareness Systems*

General information/data
Mission statement
Chain of command, command and control structure (including stakeholders/CP organisations involved)
Contact details of relevant stakeholders (communication plan)
Logistics (catering and supply)
Units and equipment availability
Extent of damage
Distances
Casualties

General user interface devices
Smartphone
Tablet
Notebook
Digital situation wall
Multi-touch or tangible tables

General functions for visualizing the crisis situation: Symbols, data and databases
Digital situation map
Use of digital tactical signs (symbols) for the situation map or for the visualization of the extent of the damage
National lexicon and common map symbols (so all responders have access to the same map symbols and terminology)
Data and visualization of current meteorological data and forecasts
Libraries/databases of previous/historic incidents
Library/database of different data and plans, e.g., Emergency and Contingency plans



### General functions for visualizing the crisis situation: Geo-referenced maps

Geo-referenced maps with multiple information layers

Global land cover and land use maps

Information and map about operational site and surroundings

Information and map about Critical Infrastructure (e.g. location)

Street maps

Route planner

Maps and printouts from online satellite data (Google, OpenStreetMap, Apple maps)

Maps for flooded areas (e.g. information about water level, plan/map of supply circuits in the flooded area)

Map with information about extent of area fires

Cartography, thematic/risk maps

### General functions for visualizing the crisis situation: Images and GPS points

Current images with GNSS-data from satellite or drone of damages/dimensions, current level of flooding, traffic situation (e.g. traffic jam, road restriction) etc.

GPS positions/location from points of interest (e.g., vehicles, road conditions, operational sections, operational site, risks, and team movement)

Defined locations, describing meeting points in case of emergency by coordinate data (helping practitioners to find the accident site)

Mobile phone positions, e.g. use of mobile phone tracking

### Data management functions

Different information layers that can easily be created, adapted, navigated through and shared among practitioners during CP mission

Easy access to different databases

Access via different user interface devices, such as smartphone, tablet, notebook (ruggedized version, i.e., water and dust resistant)

Off-line access during CP mission (e.g. non-connected devices and redundant power sources)

Multi-user and multi-station system (information of each subject area can be maintained aggregated and displayed on different devices)



### Incident information management tools

Cloud services for data sharing

Social media services (push and pull services)

Simulation tools/field situation reporting software capable of numerical simulations, e.g., flood simulation, evacuation planning and forest fire simulation

Other numerical simulation tools, e.g. traffic information systems (visualizing traffic)

Decision support software

Resource management software

Shared mapping tools (mapping on the screen)

Explosion impact modelling software

Toxic plume calculation and prognosis software

Recalculation of source-term (HAZMAT)

Software assisting probabilistic/deterministic approach for possible development of crisis situation

### Sensor devices for collecting data

Electronic triage tags/bracelets

Portable, self-contained live-streaming camera

Wi-Fi high-definition body camera

Camera-ball with multiple cameras

Unmanned-aerial vehicle (drone) equipped with infrared- /visual video camera, gas- and radiation sensors

Enhanced vision for First Responders in visually-impaired conditions, through head-mounted display

3D positioning of first responders in indoor environments

Handheld toxic gas detector

Land-based unmanned vehicle with environmental sensors

Radar

Tactical robot with embedded audio and video payload

Mobile X-ray detection system

Handheld radiation detector (Gamma, Beta, Alpha and Neutron radiation)



## Some definitions

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**CP:** Civil Protection

**Decision support software:** Decision Support Systems (DSS) map the situation, enhance situational awareness, coordinate staff in real-time, and assist emergency managers to make faster and better decisions. An essential component of DSS is the incorporation of geographic coordination technology, capable of using mobile terminals, pocket-sized tracking devices, smartphone and tablet apps, mission control software and possibly also third-party components (e.g., automated sensors or unmanned aerial vehicles, UAV).

**Device:** handheld electronic equipment that aids in accomplishing a task (hardware)

**GNSS:** Global Navigation Satellite System

**GPS:** Global Positioning System

**HAZMAT:** hazardous material

**Resource management software:** Resource Management software provides the following emergency management tools: Information on available resources, critical assets and vendor management; locations of hospitals, shelters; control of disbursement of goods and services; donations and volunteer management; retail locations; Disaster Recovery Centre locations, commodity staging areas; locations of resources in transit.

**Situational Awareness Systems:** information technology solution consisting of a combination of hardware and interrelated and interdependent elements as software-components, interfaces, tools and functions used for situational awareness in civil protection

**Situational Awareness:** identification, assessment and documentation of circumstances of a Civil Protection crisis situation and the management thereof in a particular space and time → state of knowledge where one knows what is going on

**Tool:** “piece of software or hardware that carries out a particular **function**, typically creating or modifying another programme”