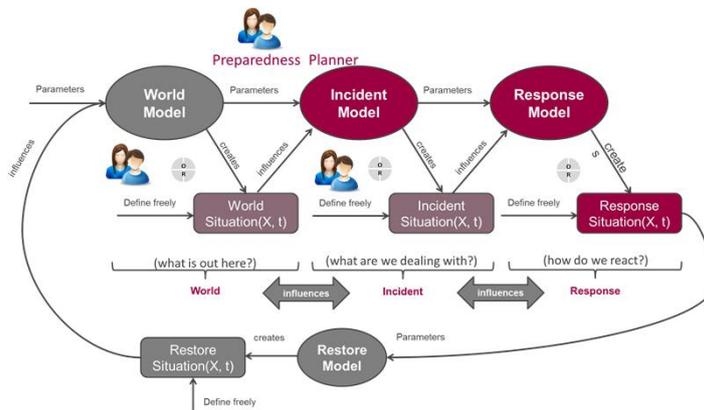


# Strategic and Operational Planning View

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**Keywords:** Preparedness planning, living conditions, economic impacts, cross border co-operation, rural areas

Authorities from emergency services or municipalities often need help for strategic and operational planning to avoid disturbances especially in rural areas. These situations arise from various incidents and problems like power blackout, massive snowfall, road blockage in areas where population needs help. In this simulation view the users are capable of trying different scenarios where various problems arise to become aware of possible threats in sparsely populated areas. This enables them to see if they are sufficiently prepared for these situations. The main focus is on running several CRISMA simulations so that the results can be compared easily. Alternative strategies are assessed by comparing costs and benefits of selected mitigation decisions or investments to reduce the impacts of incidents or disturbances with no death casualties. Cross border co-operation is considered when emergency services' or municipalities' own resources are not sufficient. Users of this simulation view are interested to identify threats and find out how to mitigate possible impacts of disturbance situations to assess their preparedness. Preliminary planning is very important because resources are scarce even under normal conditions



**Context of Use:** E.g. Pilot A

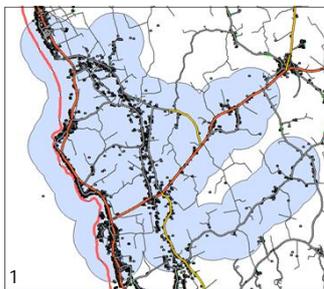
**Environmental Conditions**

*Office use:* The CRISMA system is supposed to be used for long-term decision support in the office environment. It should be possible to use the CRISMA system in a distributed shared environment where several actors are planning the same crisis scenario and testing different long-term solutions with cross border authorities.

**User Profiles and Tasks:** The users in this planning context can be described as follows:

**Preparedness planner (middle-level authority):** benefit through analysis of several potential impact scenarios, considerations for alternative actions and by cost-benefit analyses from the CRISMA system.

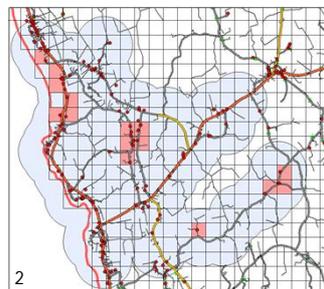
**Preparedness planner (higher-level authority):** Politicians, deciders and emergency planners on higher levels use the CRISMA system to analyse several potential impact scenarios, consider alternative actions (e.g. cross border co-operation) and carry out cost-benefit analyses to be used for emergency plans in the preparedness phase.



1 Target area for power blackout

**Action:** User defines / choose different incident parameters to build up a scenario with disturbance situations (e.g. affected area, transformers, weather conditions)

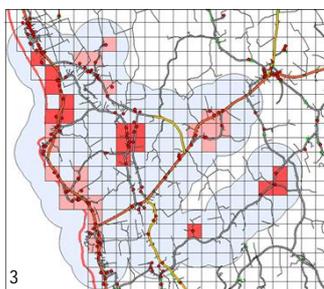
**Output:** Georeferenced representation of affected area with visualization of damage extent (e.g. shows to the user what areas have blackouts)



2 House cooling result after first time step

**Action:** The user achieves the first results of the simulation.

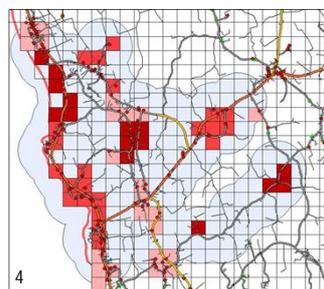
**Output:** The CRISMA simulation visualize the first situation. The colors of the grid shows most critical area in addition how serious the situation is. The user can choose the origin for the change of living conditions.



3 House cooling result after second time step

**Action:** The user works on with the simulation.

**Output:** The CRISMA simulation visualize the situation after certain time frame. Changes of the color of the grid shows what specific areas are getting worse. Living conditions are going to be dissatisfied very soon on some areas.



4 House cooling indicates immediate actions needed

**Action:** The user achieves the final results of the simulation.

**Output:** The CRISMA simulation visualize the situation in further time frame. Now it is shown how serious the situation is in the areas without electricity.

**Action:** It is shown that mitigation is needed immediately in operational level or cross border co-operation has to been prepared in strategic level.

**Proceeding the planning:**

1. Deciding the planning area.
2. Building the scenario
3. Starting the calculation
4. Visualization of the results
5. Decision of strategic or operational planning
6. Compare the results
7. Choose the most effective result



The scenario area of Pilot A

**CRISMA Consortium**

The CRISMA project ([www.crismaproject.eu](http://www.crismaproject.eu)) is co-ordinated by VTT Technical Research Centre of Finland. The consortium counts 17 partners from 9 countries, representing end-users, research and industry. The project ends in August 2015.

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