



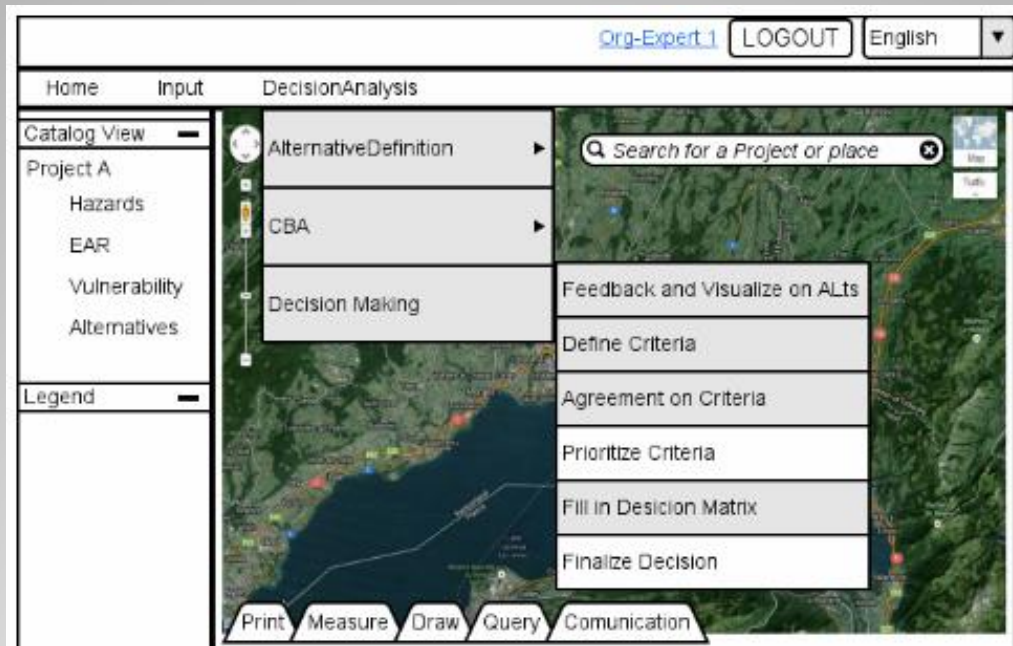
~~CHANGES~~  
Risk=HVA



# Decision Making

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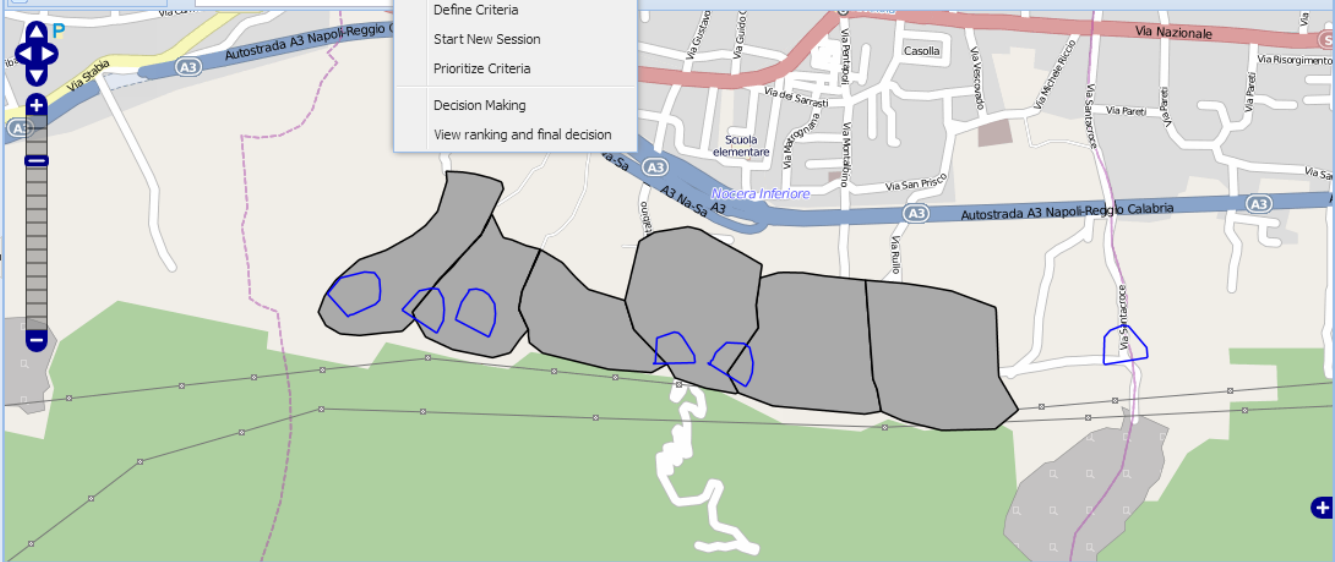
- Technologie
- User Interface Design (UI Mock up)
- Framework
- Methodology
- Prototype
- Tasks



# UI Mockup

- Nocera
- Projects
- Data
- Adm Unit Maps

- Visualize alternatives
- Feedback on Alternative
- Descriptive Criteria
- Define Criteria
- Start New Session
- Prioritize Criteria
- Decision Making
- View ranking and final decision

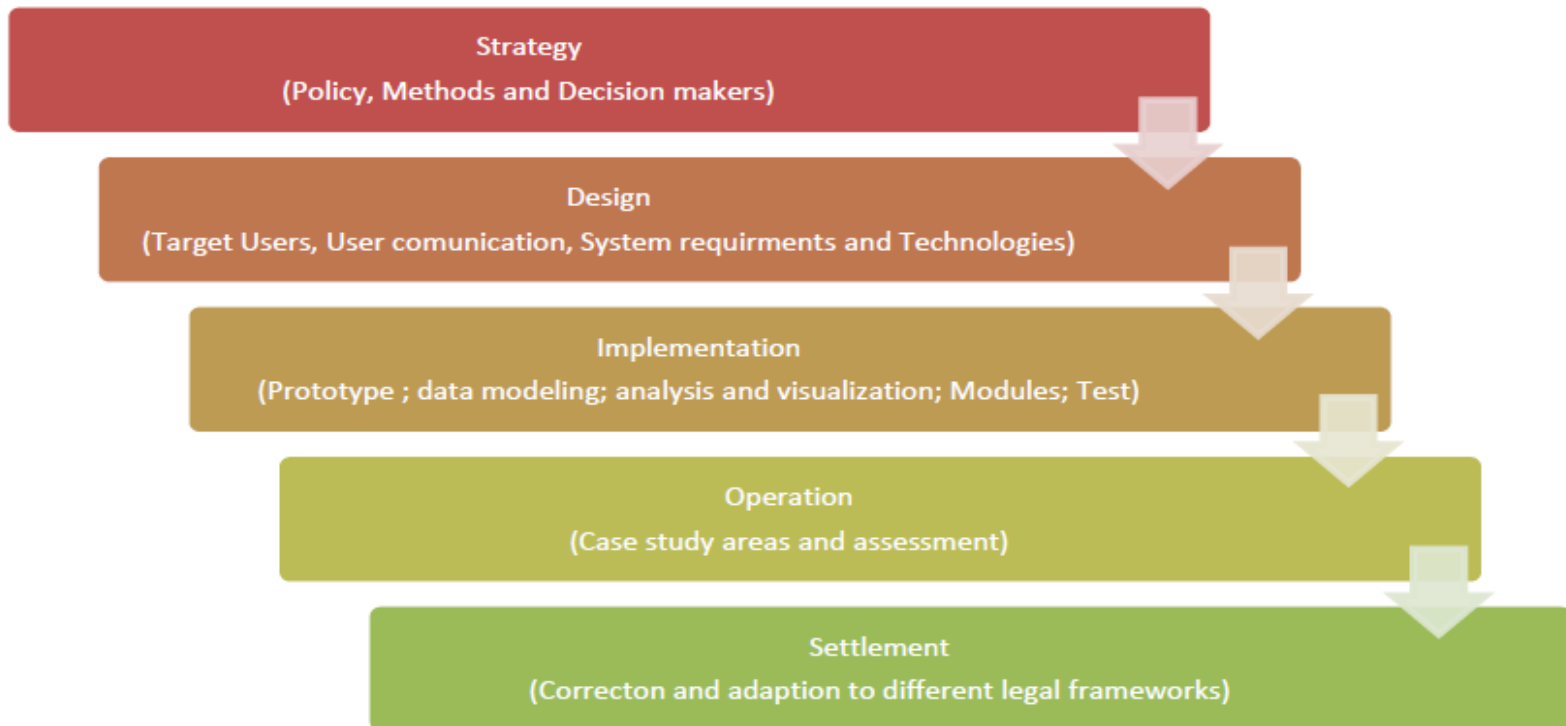


- Map Layers
- Map Legend
- More info

# Prototype



**Changing Hydro-meteorological Risks  
as Analyzed by a New Generation of European Scientists.  
A Marie Curie Initial Training Network - Jan 2011 to Dec 2014**



**Framework**

- Multi Objective Decision Making (MODM)
- Multi Attribute Decision Making (MADM)
- Here : MCDM is MADM
  - Alternatives
  - Set of Criteria (Indicators)
  - Decision Weights
  - Decision Matrix
  - Method:
    - Type of Data
      - Fuzzy
      - Deterministic
      - Stochastic
    - Decision Maker
      - Single
      - Group
    - Method used
      - WSM, AHP, WPM, TOPSIS, ELECTRE

$$A_i^{\text{WSM-score}} = \sum_{j=1}^n w_j a_{ij}, \text{ for } i = 1, 2, 3, \dots, m.$$

## MCDM (Methodology)

Done	Plans till April	Plans from April - December
<ol style="list-style-type: none"> <li>1. Framework of SDSS (Version1)</li> <li>2. Learn ExtJS Java Script, PHP, Python and GIT</li> <li>3. Baseline Version by MVC pattern (Updated to Git)</li> <li>4. Merge all available source codes by other ESRs and add it to baseline version.</li> <li>5. Mobile version Draft (Version0)</li> <li>6. User Interface (UI) for MCDM attached to baseline version</li> <li>7. Connection between different UIs and data.</li> <li>8. Database connection (by PHP) with UI including (Adding, Deleting, updating any kind of data such as Criteria, Weight, Decision Matrix)</li> </ol>	<ol style="list-style-type: none"> <li>9. User Interface for Alternative Definition and Scenario Definition as part of Data Input model</li> <li>10. Updates for UI in MCDM applied by last changes</li> <li>11. Ranking and AHP Method</li> </ol>	<ol style="list-style-type: none"> <li>12. Apply more changes in MCDM</li> <li>13. Apply other methods like fuzzy, TOPSIS and borda score</li> <li>14. Move from PHP to Python if needed</li> <li>15. Connection to all modules such as Risk, CBA, Visualization</li> <li>16. Connection between Feedback by General public and MCDM</li> <li>17. Connection to CHANGES-SDSS DataModel</li> <li>18. Show the results in graph, tables and text.</li> <li>19. Save the results in txt file</li> <li>20. SMCE (If Spatial Criteria available)</li> </ol>

# Tasks

- Challenges:
  - Users not yet defined
  - Legal framework

1. The main challenge is how to apply SMCE. SMCE needs Spatial Criteria and to be able to implement in a system, minimum 3 different dataset of spatial Criteria will be needed.

2. Another challenge is to find a way to satisfy all Decision Makers that they usually comment in different ways (Supervisors and Specialists in MCDM will be counted as decision maker in this case.)

3. The last challenge is to have all necessary data from other modules and apply to MCDM such as Risk, CBA and Visualization (Currently our data model does not support it).



# ☆ Roadmap

1 | Share | RSS | ⌵

SDSS-Changes Project

List

Calendar

View <sup>1</sup>/<sub>2</sub>/<sub>3</sub> Tasks to Do ⌵

New ⌵

## Version 1.0 Release:

2 | First Version | Apr 4

### MCDM Module:

4 | User Interface for all sub-modules: Descriptive Criteria, Define Criteria, Prioritize Criteria, MCDM

5 | UI: Comment on alternatives by public and visualize alternatives and their description

6 | Simple method AHP or TOPSIS (concerning just Non-Spatial analysis)

7 | Connection to CBA, Risk and Visualization will be defined

## Version 2.0 Release:

9 | Second version | Sep 30

### MCDM Module:

11 | Fuzzy method for MCDM

12 | Apply SMCE if spatial criteria will be available at least for one study area.

13 | Connection to all modules such as CBA,Risk, Input data and visualization

14

## Version 3.0 Release:

16 | Third Version | Dec 31

## Later Release (s):

🔍 📅 ⌨ Tab+Q Quick Add ⌵ New Task Tab+BKSP Delete Task Ctrl+↓ Move Down Ctrl+Shift+↓ Jump Down Ctrl+⌵ Mark Complete Tab Open Details more...

Share Asana

# Road Map:

- ASANA: Online Project Management Tool