

It was developed in the framework of the Mu.S.A. - Must See Advisor Project, aiming at giving visibility to communities by valuing knowledge from selected stakeholders (Artese et al., 2013, pp. 244-245). In our applications, stakeholders' representatives are involved in GPS mapping activity, gathering information and data entry, concentrating the efforts on the tangible properties – as cultural heritage themselves or location linked to intangible cultural heritage elements.

In effect, the Smart Map<sup>+</sup> procedure includes: planning and executing of a survey with photos acquisition for each property; geo-localization (using metadata available for shots taken by GPS camera, map surfing, or GPS in smartphones); data entry and map generation.

The last step is performed through an Authoring System, specifically implemented, running on a web browser (Maiellaro & Varasano, 2013); at present, it reads two different data sets:

- a “list” file containing, for each property, basic information (longitude and latitude; title; accessibility level; century; age; address; short description; marker name; typology; typology marker name; survey date; filename of extended description; name of the main photo at different resolution and frame; rating);
- a “media” file containing additional information about media available for each property (reference property; media type as sheet, image, audio, video, 3D; preview image of media; property title; media description; media URL; source; source URL; media date of production).

Then, using switchable parameters, it produces a preview map using Google Maps, given the purpose of the system and possible difficulties in finding cartographies.

Finally, it allows to input additional parameters for the project (the map filename and the window title), the header and the map (clustering distance and threshold); when the user has completed the data input, it prompts to produce the interactive map according to the output needed with different contents and functions. For example, the “Smart Cities” Project for the municipality of Siracusa” (Lerario & Maiellaro, 2014) needed maps for desktop, qr-code app and totem.

The desktop map interface, now evolving to work also on mobile, has five components: menu, sidebar, navigation commands, markers and callout.

### *The Menu*

The menu (fig. 3, up on the left) contains the functions:

1. Best site, to locate on the map the most interesting property.
2. Satellite, to switch between map and earth view.
3. Slideshow (fig. 3, bottom), to activate a moving set of main photos; clicking on a photo, the map centre itself on the related properties, opening its callout.
4. Time slider, to automatically hide/show markers of properties according to the selected century.
5. Folder, to display the previews of all the media belonging to all the properties in the project. The default approach is a gallery, displaying previews item by item in a dynamic resizing window - the current item number and the total item number is reported in a panel, containing also function icons to:
6.
  - a. Open/close Tile - all previews are displayed in a scrolling window, giving a media overview;
  - b. Activate the media (sheet, image, audio, video, 3D) linked to the previews;
  - c. Locate on the map the property linked to the selected media;
  - d. Navigate in the gallery (backward, forward, start/stop automatic forward);
  - e. Open/close full screen.