

D.T.2.2.6 WEB-GIS PLATFORM MANUAL



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I. INTRODUCTION

The platform described in this deliverable is conceived to help Public Bodies to implement their Monitoring Plan for HBAs.

At management level, the platform is addressed to Public Bodies (for example to Urban Planning Department, to Public Works Department, but it can also be useful for cooperation between different Departments). For this reason, the paragraphs on “how to maintain” and “how to implement” the Platform are conceived for Public Bodies.

THE USERS

Despite that, the Platform can have many different users. Anyone can be potentially interested in consulting the Platform, depending on Platform’s topic and goals. Consequently, the users could be citizens, professionals, operators, PA technicians, associations, public or private organizations, etc. It is expected that professionals and operators consult the Platform to extract information to use as the basis for their technical arguments and designs. Citizens will consult the platform for their personal interests, to stay informed, to be included, to express their opinion on a topic, to answer a question that was asked from PA.

DIFFERENT APPLICATIONS

To do that, it was planned the opportunity to have crowdsourcing solution. It is often quite hard for a PA to have a feedback from citizens, associations or professionals. The platform wants to make the communication easier. For its features, the Platform is open to different applications, to different topics and filed testing. It is easy to implement and to use. Its efficacy will depend on the good design of the entire process: the topic of the platform has to be communicated very well; the goals to pursue have to be clear; the platform has to contain only useful information, worthless information should be identify and delete; and so on. For this reason, we suggest to a Public Body that wants to take this path to read the deliverable D2.2.4. It describes the steps towards designing a Monitoring Plan for an HBA and implementing the related Platform. Then the Public Body can afford the technical instructions illustrated in the next paragraphs.

CHAPTER I

HOW TO USE THE PLATFORM



Bhenefit Platform is design for private citizens, associations, organizations and PA technicians that are non-GIS-expert.

Bhenefit Platform is easy to use: you do not need specific IT skills or software.

You can use Bhenefit Platform through a pc, Smartphone or tablet. Everything you need is a web browser.

1.1 OPEN THE PLATFORM

Open the Bhenefit web site (click on the following link: <http://www.interreg-central.eu/Content.Node/BhENEFIT.html>), click on “platform” and then on “read more”. Now you can choose between Mantova and Poprad GIS-Platforms. After you choose one of the platforms, you can read its description and goals. The interface is a simple web-page and the description is written in an easy-friendly way. Click on the map to open the queryable map.

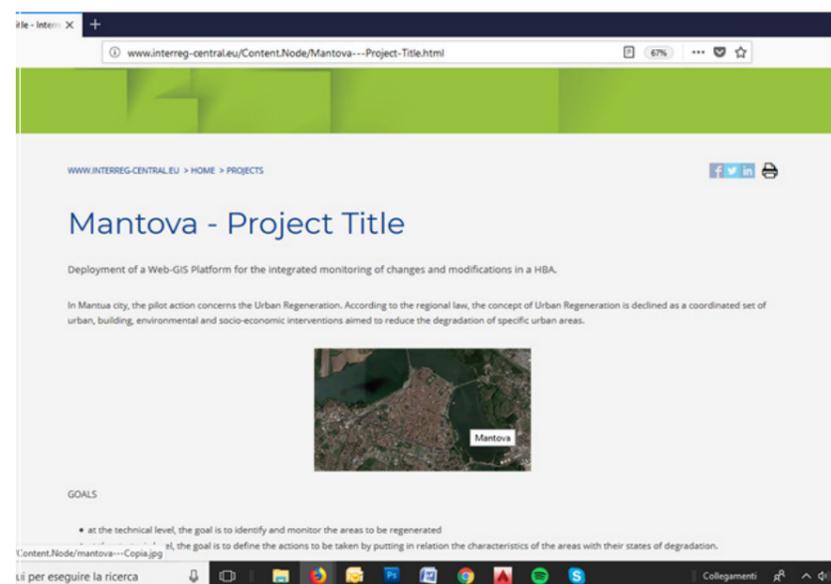
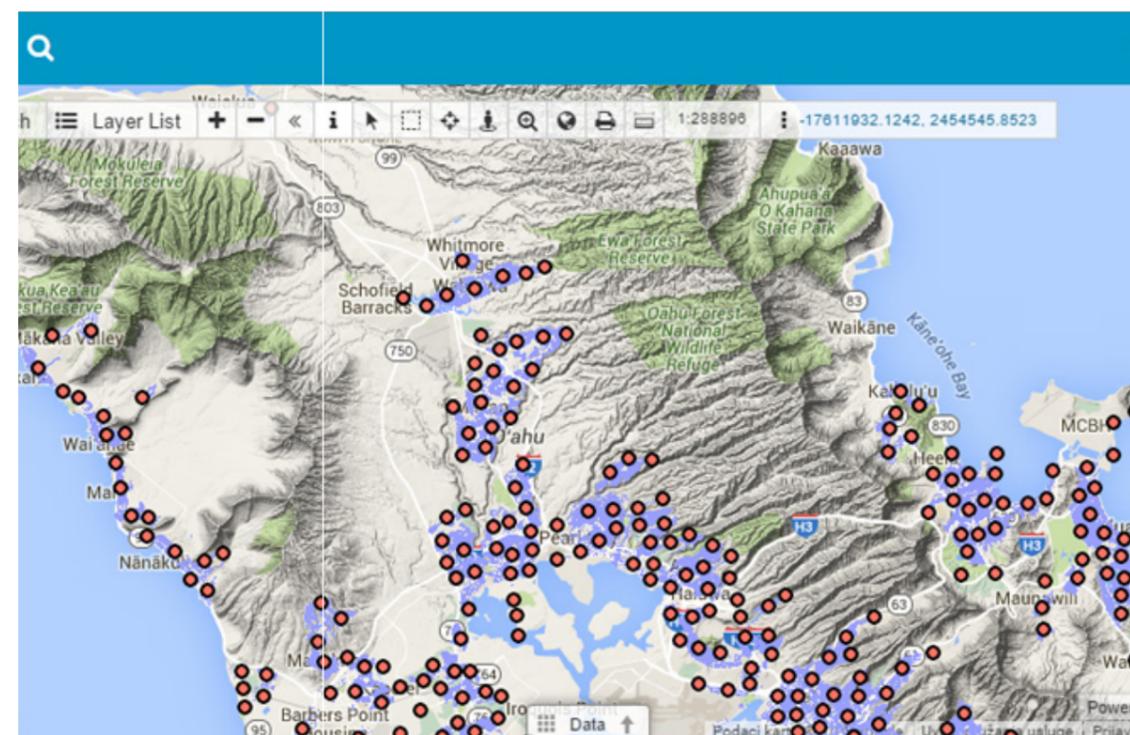


Figure 1. open the platform

The interface of the queryable map includes:

- a Toolbar with tools for basic operations with maps. It is always shown (3).
- a Legenda with a list of all layers in the map. It is always shown (5).
- a Map View: a map display of visible layers and cartographic features. It is always shown (6).
- an Info Panel: attribute info about selected feature. It is shown when a feature is selected (8).

EASY TO USE



1.2 CONSULT

THE MAP VIEW

The Map View allows you to zoom in/out and scroll around the map:

- to **zoom in** click the plus icon (1) in the top-right or press your keyboard's plus (+) key. This will zoom towards the centre of the currently displayed map.
- to **zoom out** click the minus icon (2) in the top-right or the minus (-) key or use your mouse's scroll wheel. Shift-click also works here.
- to **pan and scroll** around simply drag the map with your mouse or use the arrow keys.

THE INFO PANEL

If you **click on an object**, you obtain related **information**: when you “select” an object, a pop-up window appears. It is the Info Panel and contains information about the selected feature.

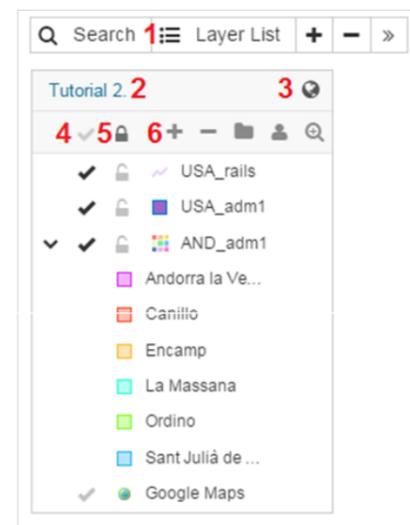
THE INTERFACE

The Toolbar (3.) contains tools for basic operations with maps:



THE TOOLBAR

- **Search** - Search for the attribute data in the layers or search places and addresses
- **Layer List** - Layer list shows list of layers in the map
- **Zoom in** - Increases a zoom level of the map
- **Zoom out** - Decreases a zoom level of the map
- **Show/hide toolbar** - Toggles the toolbar
- **Info** - Identify a feature on the map and show its attribute information
- **Select** - Select a single feature in an active layer (Hold CTRL for multiple selection)
- **Area selection** - is used to draw a rectangular box and select features within it
- **Freehand selection** - is used to draw a simple shape and select features within it
- **Zoom to current** - Zooms pointer to the current position
- **Zoom** - Click and drag a rectangular box on the map to define the desired view extend. Zooming can also be achieved by a mouse scroll
- **View entire map** - Zoom to Full Map Extent
- **Print Tool** - Exports the map with all visible features and basemaps
- **Measuring Tools** - Measuring tools allow interactive display of coordinates, distances and area on the Map View
- **Map Scale** - shows current map scale
- **Change units projection** - changes projection format
- **Jump to Coordinates** - display the current coordinates of the cursor on the map. To define specific coordinates and have the view zoom to the specified position, left click and enter coordinates
- **Selected Objects** - displays number of selected objects on the map



The Legend (5.) shows all of the layers in the map. The following cartographic options are available:

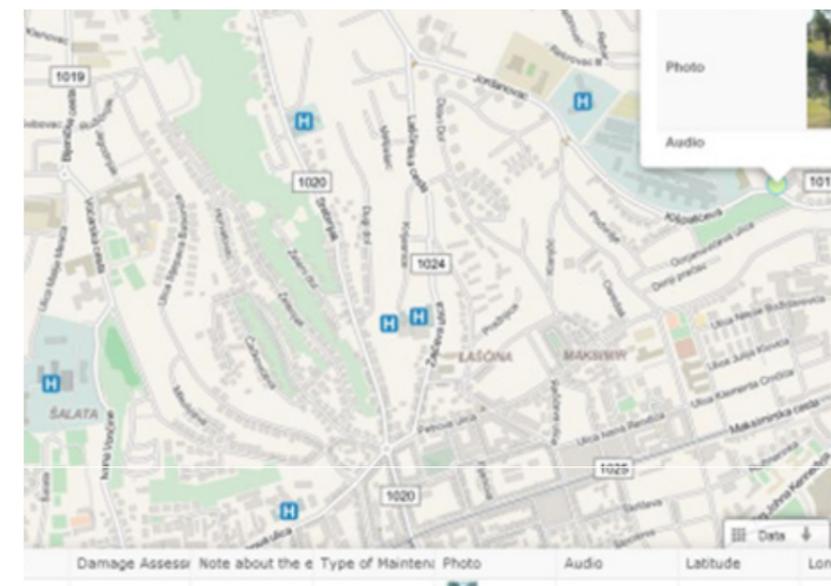
THE LEGEND

1. **Layer List** - Show/Hide layer list
 2. **Check box** - Toggles layer visibility on or off.
- GIS Cloud's Portal enables data collection process.

1.3 REPORT (CROWDSOURCING SOLUTION)

EXPRESS YOUR
OPINION

You can submit new reports, including photos and comments of any kind using Web App. Click on “report” and fill the form. You will see the filled report on the map after it will be validated. Data validation is required to detect spam and abuse. You can also review existing reports, comment or vote on reports and observations submitted by others.



CHAPTER 2

HOW TO MAINTAIN THE PLATFORM



2.1 CONTENT UPDATE

It is not generally possible to determine how often data should be update. However, rules for periodicity must be specified. These rules can be divided into:

- Strict periodicity - short-term or long-term fixed cycles (it can be linked to local strategy or development program)
- Ad hoc - based on needs (e.g. new planned activity in area) or milestones (e.g. before and after intervention)

Updated data can substitute existing data or be added to the map. For monitoring the HBA it could be useful to have a timeline of the data so you can interrelate projects and the changes they produced.

2.2 CONTENT UPLOAD

If you need to substitute existing data or to add new data, you must authenticate as admin. Open the web portal admin page and login with your password.

To add data to the map, drag & drop the shapefile on the map web page.

To substitute data, delete the old shapefile and drag & drop the new shapefile on the map web page.

You can always add data on the platform: you can upload data that you realize that can be useful on the platform; you can upload data after you detected it or you can periodically add updated information.

The platform can grow over time: you can open the portal with the basic information (but without all the needed information) and decide that periodically data will be detected and upload on the platform. This can be planned based on PA budget availability.

2.3 CROWDSOURCING SOLUTION

If the platform is based on a crowdsourcing solution, you periodically should enter in the Admin Web App and:

- validate the reports (once a day? twice a week?). You should verify the reports are not spam or abuse
- save the reports' shapefile (every 10 reports? once a week? twice a month?)

The Admin Web App allows the Project Coordinator to review submitted reports, problems, and observations. The Project Coordinator can approve or reject

PROGRAM THE
DATA UPDATE

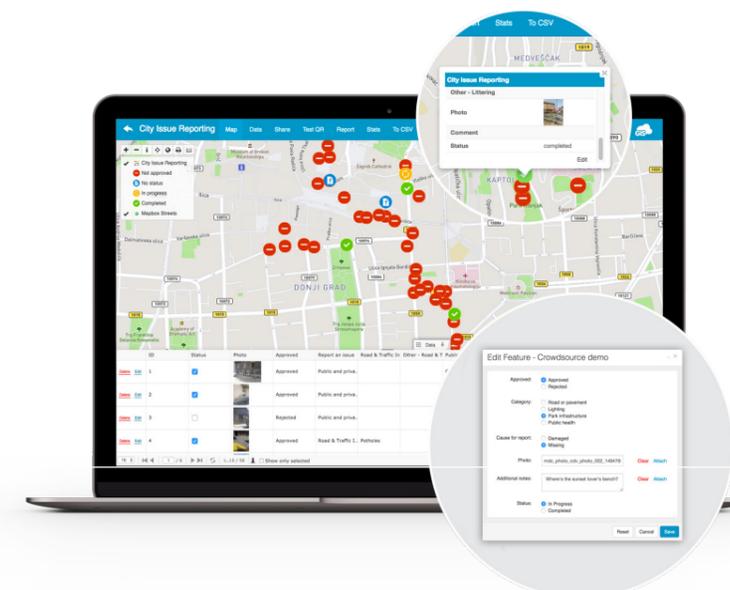
TO ADD OR
TO SUBSTITUTE?

REMEMBER TO
VALIDATE THE
CITIZENS' REPORT

submissions, update the status of the reported issue and coordinate between departments, track progress and have an overview of statistics through graphs and charts.



The Project Coordinator's ability to approve or reject a submission for public reviews stands as a form of protection because not all the submission are complete or adequate to release to the public (spam, abuse, etc.) so Project Coordinator should pass only the reports and submissions that are complete. Only approved submissions will be publicly visible.



2.4 PROMOTION

To involve citizens, associations, organizations, especially if you are using a crowdsourcing solution, you should sort a website strategy and give some thought to what other digital activity you could undertake to help raise awareness, drive traffic to your website and build relationships.

CHAPTER 3

HOW TO IMPLEMENT THE PLATFORM



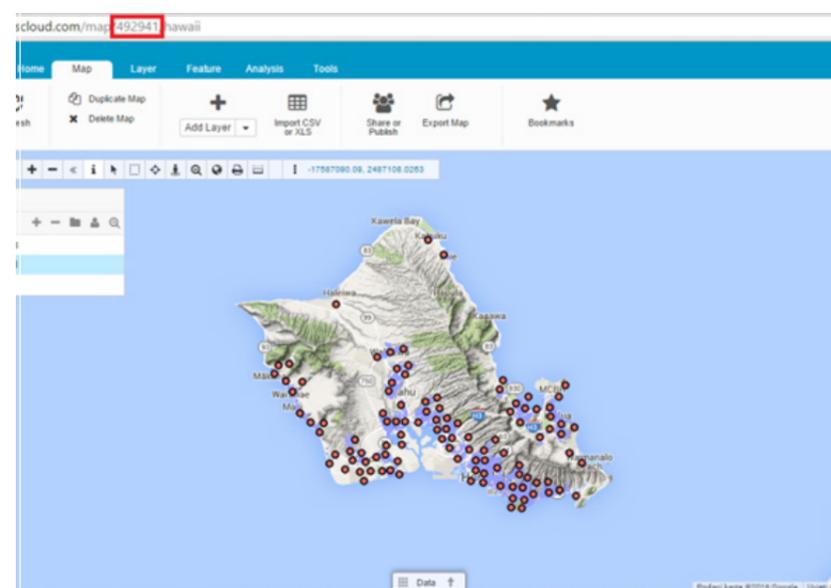
So you decided to open a Web GIS Platform. You decided what you want to do with your portal and who will use the portal.

Now you have to fill the platform with the data and decide which information will be visible to which user.

Set the landing page on the Bhenefit site: explain the project and its goals in an easy friendly way.

Then you must create a new map and add layers. To do this, first you have to authenticate on the Web GIS Platform as admin: open the web portal admin page and login with your password.

LOG-IN



To add layers, drag&drop files from your computer to your GIS Cloud account. All data uploaded to the GIS Cloud is stored in the File Manager. Layers added to maps from the File Manager are not editable. To perform editing or data analysis, layers must be imported in the Database. Layers imported from the Database are editable.

You can upload various types of data such as:

- Spatial Vector files: .shp, .mif, .mid, .tab, .kml, .gpx, .dxf
- Spatial Raster files: .tif, .tiff, .jpg, .png, .gif, .img, .ecw, .sid, .jp2
- Image files: .jpg, .gif, .swf, .png, .img, .ecw, .sid, .jp2
- Excel 2003 and CSV: .csv and .xls

There are several ways to upload files into the GIS Cloud:

- Drag & Drop
- Upload though the File Manager.
- Upload through the SFTP client.

ADD LAYERS

SET THE OPTIONS

After you upload data, set the options. You can set:

- map publicly
- default language
- default map to load on the beginning
- unit for distance measurement on measure tools

When all the layers have been uploaded, verify the options (especially map publicity) and then publish the map. Go-live can have different meanings: Does go-live mean that the portal is complete? Does it mean that the portal is ready for a soft launch? Or is the customer portal entirely finished and available to all the users?

3.1 CROWDSOURCING SOLUTION

CREATE CROWDSOURCING FORMS

The main application used to create crowdsourcing projects is the Admin Web App. Project forms can have many different attribute field types (Date & Time, Checkboxes, Photos, Audio field, etc.).

PA can create their own unique Forms. Forms are easily changed at any moment, quickly deployed and instantly updated on web app.

Type	Name		
Radio buttons	Damage Assessment	Details	Delete
<input type="checkbox"/> Persistent	Items:	No default	
<input type="checkbox"/> Required	1	Poor	<input type="radio"/>
	3	Good	<input type="radio"/>
	5	Excellent	<input type="radio"/>
	Add item		
Select list	Elements	Details	Delete
<input type="checkbox"/> Persistent	Items:	No default	
<input type="checkbox"/> Required	Traffic	<input type="radio"/>	<input type="radio"/>
	Pole	Label (optional)	<input type="radio"/>
	Sign	Label (optional)	<input type="radio"/>

CHAPTER 4

HOW TO CROWDSOURCE



Project Coordinator creates a unique form in the Admin Web App and shares it through customized Web App to citizens and the public.

STEP 1

Citizens report city issues using automatic geolocation or by pinpointing location for better precision. Reports included photos, comments, descriptions, suggestions and more additional information relevant to a project.

STEP 2

Citizens can also review existing reports, comment or vote on reports and observations submitted by others.

Project Coordinator evaluates received reports, problems, suggestions and observations then approves submissions for public voting. Allowing the public voting, commenting and proposing solutions to issues makes citizens feel more involved in decision-making process of the city they live in.

STEP 3

Both Project Coordinator and city leaders can track progress and status of reported issues using charts and graphs in the web interface. Project Coordinator can forward issue report or development suggestion to a city department responsible for its solving.

4.1 HOW TO CROWDSOURCE WITHOUT CROWDSOURCING SOLUTION

Sometime it could be useful to collect information from citizens, associations and organizations without using a webGIS crowdsourcing solution.

If you are not using a crowdsourcing solution, you can still collect some data.

If you are using a crowdsourcing solution, you should know that it is possible to set just one form at the time. It means that with crowdsourcing solution it is possible to collect data on only one topic.

No problem: the Info Panel related to each feature can show links for example to Google Calendar or Flickr groups. It means that citizens, organizations and associations, with or without specific authorisation, can add information on the Google Calendar or photos on the Flickr groups.

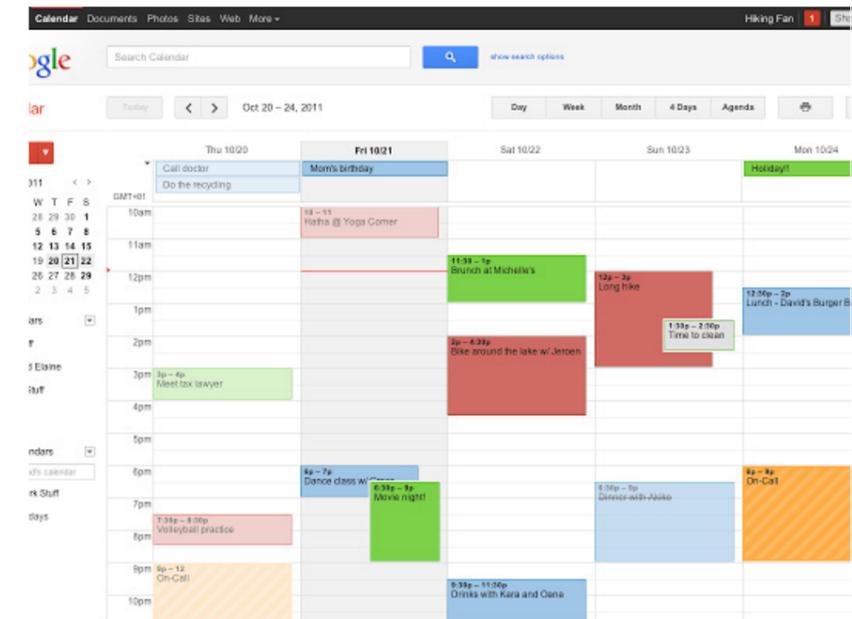


Figure 1. Google Calendar

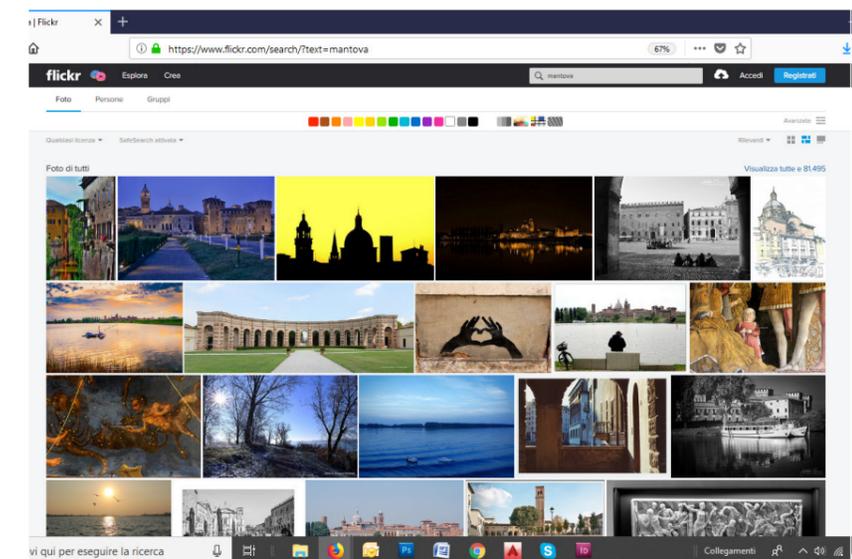


Figure 2. Flickr