



LEARNING LOOPS IN THE PUBLIC REALM

WP4. Implementation and monitoring framework for the living labs
T4.3 Set-up of the LOOPER Platform

Deliverable D 4.3b

LOOPER platform user guide (final)

Version: 2.0

Date: 30 September 2020

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DOCUMENT CHANGE RECORD

Version	Date	Status	Author	Description
0.1	25/10/2018	Draft	JY (Clicks and Links)	Initial draft for comment
0.2	12/11/2018	Draft for review	JY (Clicks and Links)	Comments actioned
1.0	16/11/2018	Draft for review	JY (Clicks and Links)	For review
2.0	30/9/2020	Final version	JP (VUB)	For publication

TABLE OF CONTENTS

DOCUMENT CHANGE RECORD	2
TABLE OF CONTENTS	3
1. INTRODUCTION	5
2. OVERVIEW	5
2.1. Domains	5
2.2. Websites	5
2.2.1. General Site	5
2.2.2. Local Living Lab Sites	6
2.2.3. Co-design Subsites.....	6
2.2.4. GeoTagging Sites	6
2.3. LOOPER Database.....	6
3. TECHNOLOGY	6
3.1. WordPress	6
3.1.1. WordPress Themes.....	7
3.1.2. WordPress Plugins.....	7
3.2. LOOPER Visualisation.....	7
3.3. Other Technologies.....	7
3.4. Compatibility with mobile devices	8
4. WEBSITES	8
4.1. General Site	8
4.1.1. Home Page	8
4.1.2. Co-creation Platform Page	9
4.1.3. News & Events Page	9
4.2. Local Living Lab Sites	9
4.2.1. Variation	9
5. PLATFORM COMPONENTS	10
5.1. Timeline Page / Simple Vertical Timeline Plugin.....	10
5.1.1. Motivation	10
5.1.2. Functionality.....	10
5.2. GeoTagging.....	11
5.2.1. Motivation	11
5.2.2. Functionality	11
5.3. Visualisation.....	14
5.3.1. Motivation	14
5.3.2. Functionality.....	14

5.4.	Database	18
5.4.1.	Functionality	18
5.5.	Other Data.....	18
5.5.1.	Geojson files	18
5.6.	Co-design Tool	19
5.6.1.	Motivation.....	19
5.6.2.	Functionality.....	19
5.7.	Evaluation Tools (MCA and MAMCA).....	20
6.	WORDPRESS CUSTOMISATIONS	20
6.1.	LOOPER Theme	20
6.1.1.	Extra Configuration	20
6.2.	Plugins.....	20
6.2.1.	LOOPER Carousel.....	20
6.3.	Other	21
6.3.1.	Collapser.....	21
7.	HOSTING & DOMAIN REGISTRATIONS.....	21
7.1.	Combell.....	21
7.2.	Versio.....	21
7.3.	Exacthost.....	21
7.4.	Rationale.....	21
8.	CONTACTS	22
9.	BACKUP	22
	ACKNOWLEDGEMENTS	23

1. INTRODUCTION

This LOOPER platform user guide gives an insight into the IT infrastructure developed to support the LOOPER project.

2. OVERVIEW

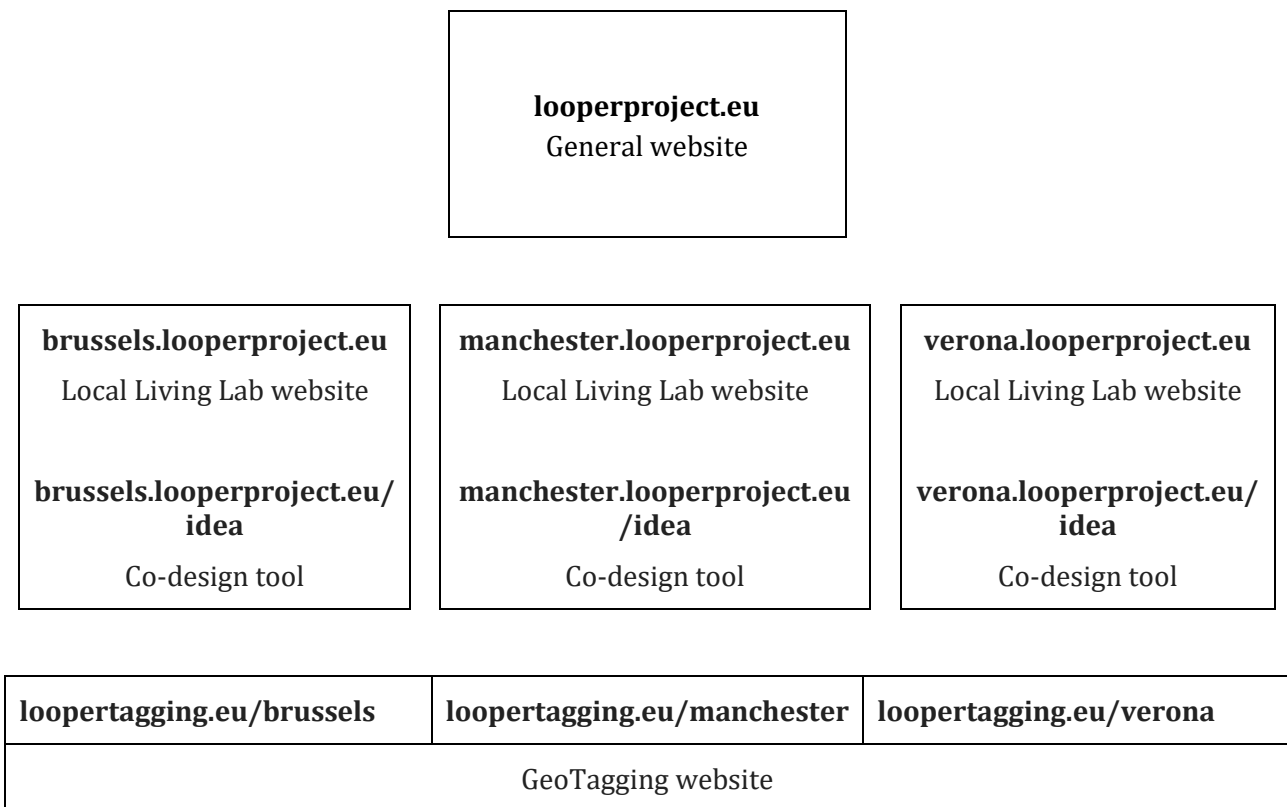
The core of the LOOPER platform consists of a general website, a main database and three local websites – one for each Local Living Lab. Associated with each local living lab is a subsite hosting a Co-design tool and a GeoTagging website.

2.1.Domains

The LOOPER platform utilises two Internet domains:

- **loopersproject.eu** – used to address the general site and the Local Living Lab sites.
- **loopertagging.eu** – used to address the GeoTagging websites.

2.2.Websites



2.2.1.General Site

The General Site – **loopersproject.eu** – hosts information about the LOOPER project. The site contains links to the three Local Living Lab sites. *See 4.1 General Site for more detail.*

2.2.2. Local Living Lab Sites

There is a separate website for each of the three LOOPER Local Living Labs, each addressed by a subdomain of the `looperproject.eu` domain. *See 4.2 Local Living Lab Sites for more detail:*

`brussels.looperproject.eu`

`manchester.looperproject.eu`

`verona.looperproject.eu`

2.2.3. Co-design Subsites

Each Local Living Lab site has a subsite hosting a Co-design tool. The subsites may be addressed directly as subsites of the Local Living Labs' subdomains. *See 5.6 Co-design Tool for more detail:*

`brussels.looperproject.eu/idea`

`manchester.looperproject.eu/idea`

`verona.looperproject.eu/idea`

However, to maintain continuity of look and feel, these subsites are included in an iframe within a regular page of the Local Living Lab site.

2.2.4. GeoTagging Sites

There is a separate GeoTagging subsite for each of the three LOOPER Local Living Labs, each addressed as a subsite of the `loopertagging.eu` domain. *See 5.2 GeoTagging for more detail:*

`loopertagging.eu/brussels`

`loopertagging.eu/manchester`

`loopertagging.eu/verona`

2.3. LOOPER Database

The LOOPER Platform hosts a database which stores data collected for each Living Lab. Data from the LOOPER Database is visualised on the Local Living Lab websites. *See 5.4 Database for more detail.*

3. TECHNOLOGY

A variety of technologies are employed to build the LOOPER Platform. The websites are WordPress sites except for the GeoTagging sites which are built with ASP.NET.

3.1. WordPress

All the sites - except the GeoTagging subsites - are built with WordPress (`wordpress.org`). WordPress is a free open-source content management system which provides a powerful, extensible and widely understood framework for websites. WordPress provides a simple mechanism for site administrators to add and manage web pages and blog posts.

Learning resources for WordPress are widely available on the Web.

3.1.1. WordPress Themes

3.1.1.1. LOOPER Theme

The LOOPER general site and Local Living Lab sites use the LOOPER theme. *See 6.1 LOOPER theme for more details.*

3.1.1.2. Nextseventeen Theme

The co-design subsites use the theme 'Nextseventeen' which was also used in the CIVITAS (City VITAlity and Sustainability) project (civitas.eu/tool-inventory/nextseventeen-co-creative-wordpress-theme). *See 5.6 Co-design Tool for more details.*

3.1.2. WordPress Plugins

A selection of WordPress Plugins is installed on each site, including:

- **Jetpack** (wordpress.org/plugins/jetpack) - provides site statistics and supports the contact forms on the Manchester and Verona sites.
- **Akismet Anti-Spam** (wordpress.org/plugins/akismet) - helps to avoid spam in submitted comments.
- **WPForms Lite** (wordpress.org/plugins/wpforms-lite) - supports the 'Contact' form on the General site.
- **LOOPER Carousel** - this is a specially customised version of 'WP Responsive Recent Post Slider' (wordpress.org/plugins/wp-responsive-recent-post-slider) which powers the 'carousel' that displays blog posts in rotation on the General Site front page. *See 6.2.1 LOOPER Carousel for more detail.*
- **Simple Vertical Timeline** - this is a specially customised version of 'Simple Vertical Timeline' (wordpress.org/plugins/simple-vertical-timeline). Customisations include use of the LOOPER logo and colour options. Used on the 'Timeline' page of the General site, the 'Doe mee!/Participez!' pages on the Brussels site and the equivalent 'Participate!' and 'Agenda' pages on the Manchester and Verona sites. *See 5.1 Timeline Page / Simple Vertical Timeline Plugin for more detail.*
- **Polylang** (wordpress.org/plugins/polylang) - supports the dual-language functionality of the Brussels site.

3.2. LOOPER Visualisation

The LOOPER Visualisation system utilises a combination of HTML, CSS, PHP, JavaScript and Ajax to visualise data from the LOOPER database over a map. The mapping makes use of the Google Maps Platform JavaScript API.

The visualisation is displayed in an iframe within a regular WordPress page on each Local Living Lab site. *See 5.3 Visualisation for more detail.*

3.3. Other Technologies

WordPress is built with PHP, HTML and CSS. WordPress data – including page text and blog posts – are stored in MySQL databases, uploaded media (e.g. images) are stored in the host server's file system.

The LOOPER database is built upon PostgreSQL (postgresql.org) with PostGIS spatial extension (postgis.net).

3.4. Compatibility with mobile devices

WordPress is designed to cope with variations in screen size, so all the functionality of the websites is available from mobile devices. The most noticeable change is that the menu/navigation bar is replaced by a drop-down menu.

The only feature known not to be available on mobile is use of the sliders that appear on-screen when Air Quality is selected in the Participatory Sensing section of the visualisation page (see 5.3.2.3 Participatory Sensing). The date range can still be selected using the 'date picker' which pops-up when the start/end date is clicked-on; a technical solution to allow a time-of-day range to be selected will be developed.

4. WEBSITES

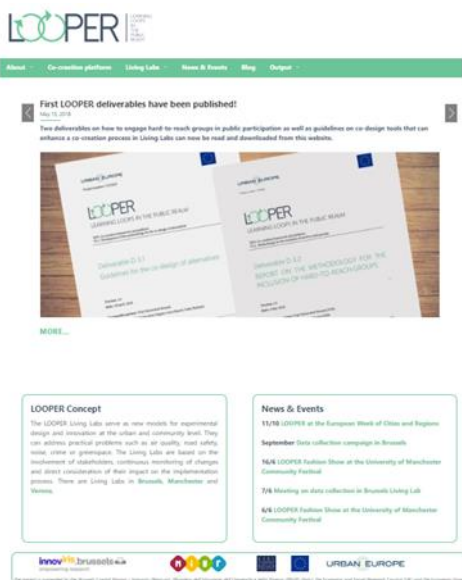
The four LOOPER websites are all built using the same customised LOOPER theme (see 6.1 LOOPER theme). This gives them all the same look and feel, with the LOOPER logo at the top of the page above a consistent navigation/menu bar; below the page content is a footer displaying the LOOPER project funders' logos and linking to their websites.

Site design is covered in LOOPER Deliverable D8.2 'Dissemination and outreach guidelines'.

4.1. General Site

The General Site is located at loopersproject.eu and is in English. It is mostly made up of regular WordPress pages and blog entries. Notable exceptions are discussed here.

4.1.1. Home Page



The top part of this page is a 'carousel' which displays blog posts in automatic rotation. Arrow keys enable the reader to speed-up or reverse the rotation. This is powered by the Looper Carousel plugin. See 6.2.1 LOOPER Carousel for more detail.

The two panels on the lower part of the page are simply two columns in a one-row HTML table.

4.1.2. Co-creation Platform Page



The map on this page is encoded as a separate HTML web page and is included on the WordPress page within an iframe. The map is generated via the Google Maps JavaScript API, using the 'terrain' map type.

The three Living Lab locations are shown on the map with markers consistent with the data visualisation page. The markers hyper-link to the local websites.

4.1.3. News & Events Page

The collapser on this page allows some page content to be hidden by default, but to be displayed at the viewer's click utilises classes and JavaScript. *See 6.3.1 Collapser for more detail.*

Older items +

Older items -

- During the summer months, the Brussels Living Lab **collected data** on people's o
- The LOOPER application to collect data on traffic safety was presented and explain the **Anéro Rina** in Schaerbeek

4.2. Local Living Lab Sites

The Local Living Lab sites are all in their relevant local language, while the Brussels site is dual-language. As with the general site, these sites contain regular WordPress pages and blog entries. The Local Living Lab's city name is displayed in the header bar.

The three sites each contain similar content, - each containing 'About', 'Goals', 'Contact', 'Timeline' (*see 5.1 Timeline Page / Simple Vertical Timeline Plugin*), 'Ideas' (*see 5.6 Co-design Tool*), 'Visualisation' (*see 5.3 Visualisation*) and 'News & events' pages - their navigation bars (menu bars) follow a similar structure although there is some local variation.

4.2.1. Variation

- The 'Home' pages for Brussels and Verona display the latest blog posts, while the Manchester site has a specific home page.
- The 'Visualisation' and 'Idea' pages appear on the navigation bars of the Manchester and Verona sites, while links to these pages are nested under the 'Timeline' entry on the Brussels site.
- The Brussels site contains logos of partners BRAL and MOBI. (See 3.1.1.1).

The Brussels site header and navigation bars.

- The Brussels site is dual language (Dutch and French). This functionality is provided by the Polylang plugin (*see 3.1.2 WordPress Plugins*) – both Dutch and French versions of each page and blog post are manually created by the administrators. Language is toggled by clicking the flag to the left of the navigation bar.

5. PLATFORM COMPONENTS

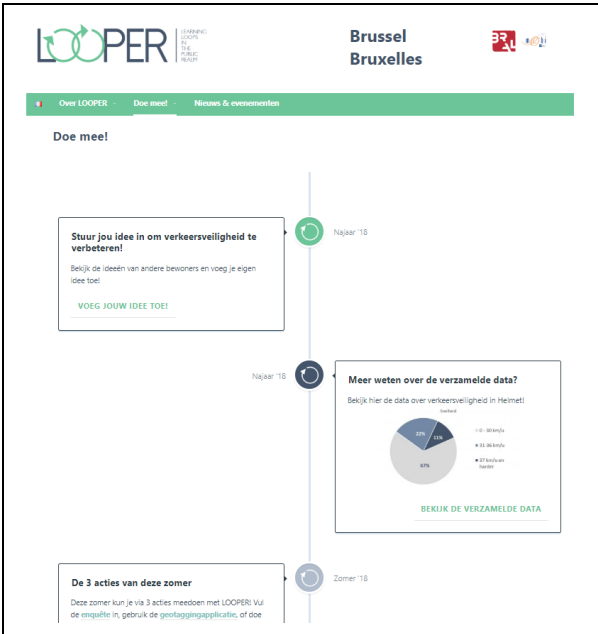
Several components were developed for and integrated into the LOOPER platform. The common purpose is to disseminate information, presenting it with clarity and with intuitive controls.

5.1. Timeline Page / Simple Vertical Timeline Plugin

5.1.1. Motivation

In order to provide an easy-to-follow timeline for the different stages of co-creation a time line is used. Each dot on the timeline displays a milestone of the co-creation process with a short description. The current co-creation phase is indicated by a green button, while the stages that have passed are indicated by a grey button. Each button has a text box with a short description of the stage, optional images and a link to the respective platform page or tool.

5.1.2. Functionality

 <p>The screenshot shows a vertical timeline on the 'Doe mee!' page. The timeline consists of three circular markers connected by a vertical line. The top marker is green and labeled 'Najaar '18'. The middle marker is grey and labeled 'Najaar '18'. The bottom marker is grey and labeled 'Zomer '18'. Each marker is associated with a text box containing a description and a link. The first text box is titled 'Stuur jou idee in om verkeersveiligheid te verbeteren!' and includes a 'VOEG JOUW IDEE TOE!' button. The second text box is titled 'Meer weten over de verzamelde data?' and includes a 'BEKIJK DE VERZAMELDE DATA' button. The third text box is titled 'De 3 acties van deze zomer' and includes a 'DEELNEEM' button.</p>	<p>The timeline is powered by a customised version of the ‘Simple Vertical Timeline’ WordPress plugin (wordpress.org/plugins/simple-vertical-timeline/).</p> <p>Customisations for LOOPER:</p> <ul style="list-style-type: none"> Use of the LOOPER logo as the marker on the time line Additional colour options for the timeline marker. Extra colours – all from the LOOPER style guide - are: <ul style="list-style-type: none"> svt-looper-blue (#44546A) svt-looper-green (#6CC598) svt-looper-grey (#B0BCCC)
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5.2. GeoTagging

5.2.1. Motivation

GeoTagging is a community-based tool to collect geolocated information by several people in a way that data and multimedia contents are stored in a remote database, so it's not lost or disperse during or between each loop. Stored information can be easily deployed to the visualization section of main website and visualized by users in a more user-friendly way.

5.2.2. Functionality

Loopertagging.eu allows registered users to create geolocated tags with text, categories and multimedia attachment and store them directly to the remote database. User can create a tag following a simple procedure: draw a map feature, fill in text and options, upload a multimedia file with the preferred sequence order. In loopertaggin.eu user send one single tag at a time but he can switch on and off the whole tag layer as needed.

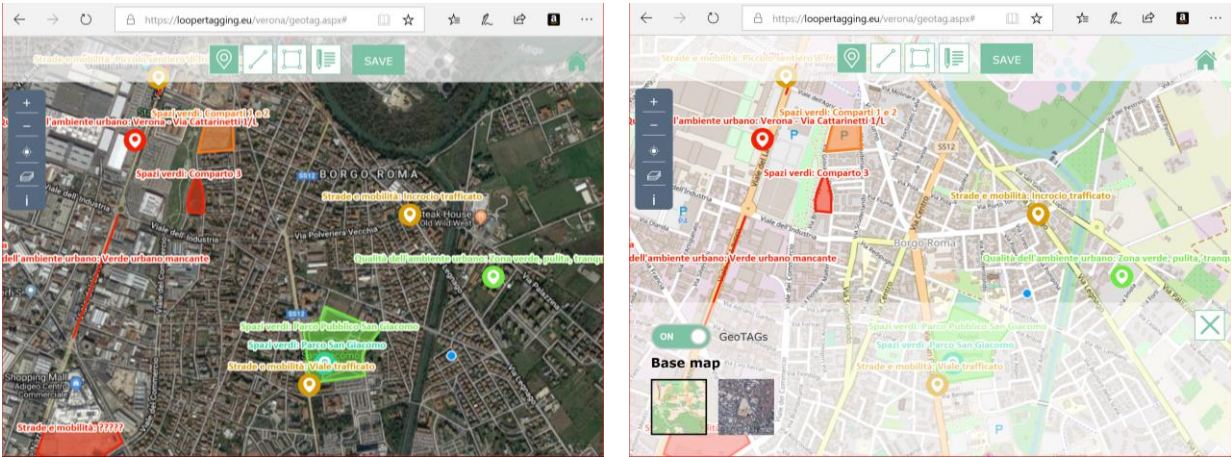
Loopertagging.eu is a full responsive mobile-friendly HTML5 web application. It can be used through the most popular web browsers as well as any Android / IOS / Windows10 smartphone.

5.2.2.1. Landing page

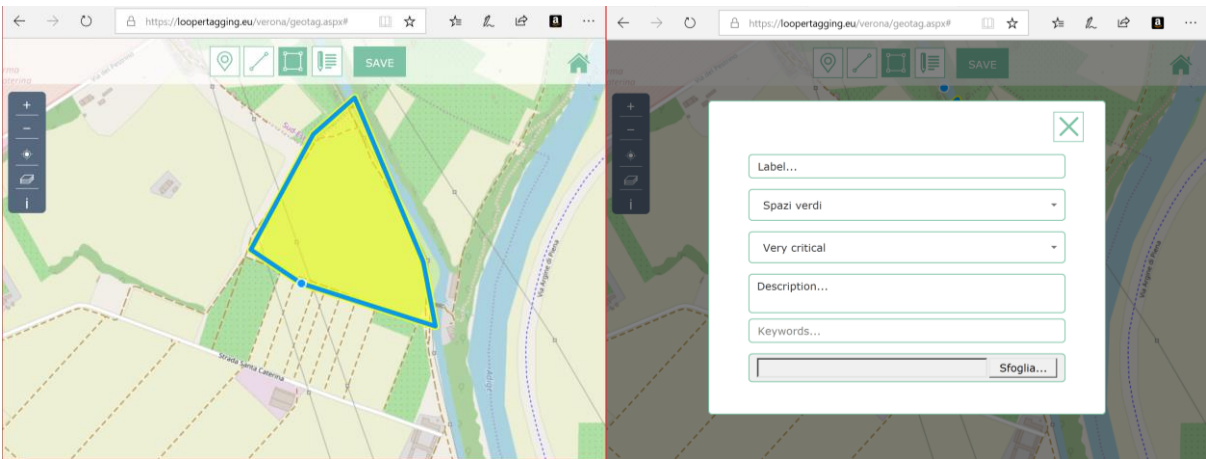


In the main page user can register or log-in, recover forgotten password, switch user interface language and finally go to insert section. Admins can also enter administration tools.

5.2.2.2. Insert section



In the insert section user can browse the map choosing two different base layers, and switching on/off the existing geoTags layer.



User can draw different kind of objects selecting one of the three feature types (point, line, polygon) on the toolbar and clicking on the map. User can also open the data form and fill in label and description field, choose category and rating as well as upload a multimedia file.

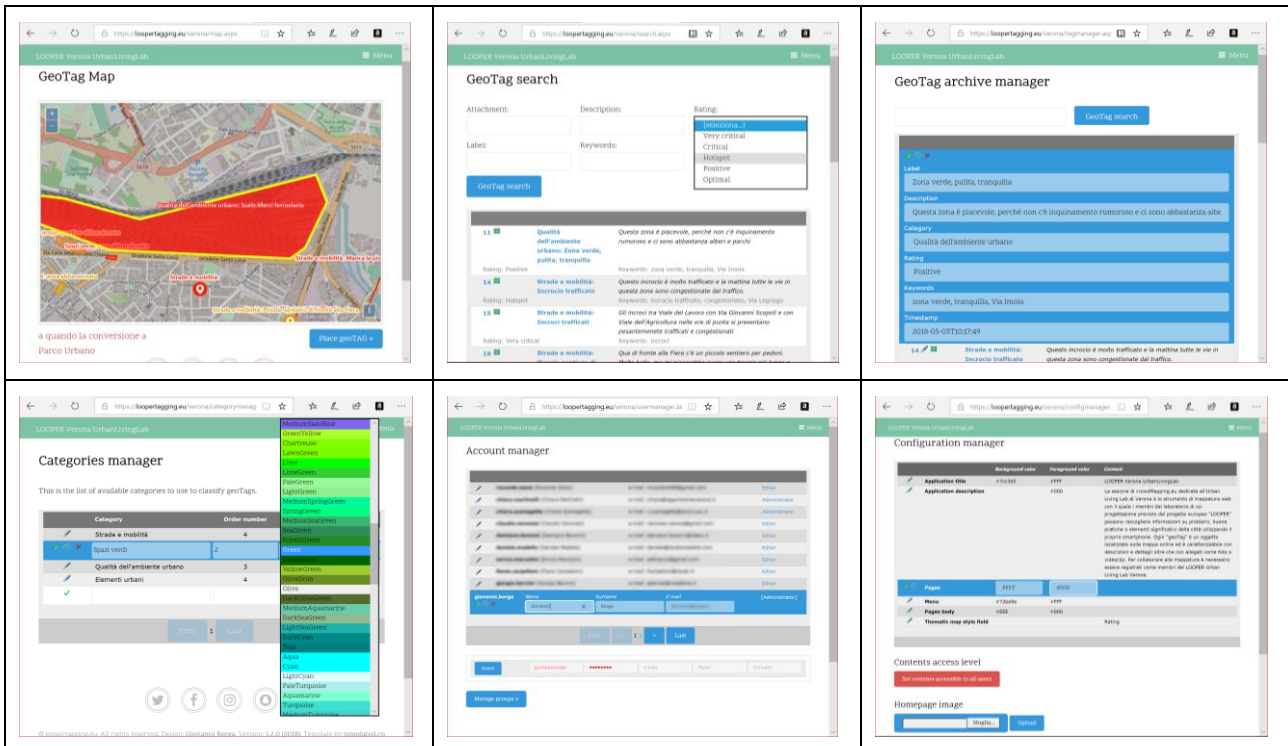
The navigation bar on the left provides zoom buttons, layer panel switcher, user guide and a “pan to GPS position” function.

5.2.2.3. Admin section



Admin section allows following management tools:

1. GeoTag full map visualization and feature identifying
2. GeoTag search engine
3. GeoTag archive manager with edit/delete functions
4. Categories management (which affect categories list in the tag insertion form)
5. User and roles management
6. Main application management (Application title and description, background and foreground colours, thematic mode of internal map viewer)
7. Layer and attachments bulk download.



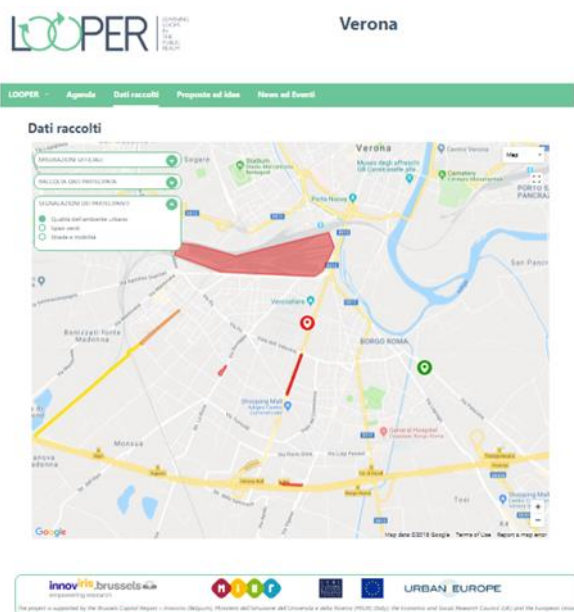
5.3. Visualisation

5.3.1. Motivation

Data visualisation is a key element of the LOOPER platform. Its aim is to visualise the data collected by citizens at the LOOPER labs by stationary and mobile sensors or smartphones as well as external data. The visualisation elements are used to present the findings of the problem identification phase. For more details see Deliverable 2.1.

5.3.2. Functionality

Data from the LOOPER database is presented on the local websites' 'Visualisation' page using interactive markers and map overlays. The mapping makes use of the Google Maps Platform JavaScript API. LOOPER visualisation is read-only from the database - it is not used to add or revise data.



The map background – map or satellite - may be selected using the control in the top right corner of the map. The map may be zoomed using the control in the bottom right corner, or by using a mouse scroll-wheel whilst holding down the ctrl key. Panning is via mouse left-click and hold. On mobile devices, pinch control facilitates zoom, and the map may be scrolled using two fingers.

Clicking on markers these opens information dialogues which may themselves be linked to further information.

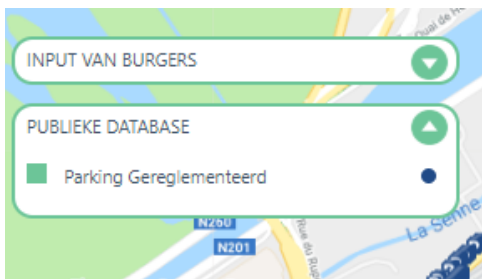
5.3.2.1. Data Set Selection Overlays

On permanent display in the top left corner of the map is the data selection menu. This menu consists of a list of data categories; each category may or may not be present on each local site, depending upon whether data in that category exists for the relevant LOOPER Living Lab.

A category may be expanded by clicking on its expansion icon to show a list of data types available to visualise within that Living Lab's data set. The categories are:

- Official Measurements
- Participatory Sensing
- Stakeholders Feedback & Report
- Public Database

In most cases, one data type may be selected at any one time – NO₂ is selected on this screenshot.

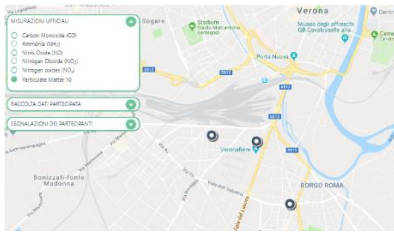


Where it's possible to select Multiple data types, the 'selected' icon is square rather than circular.

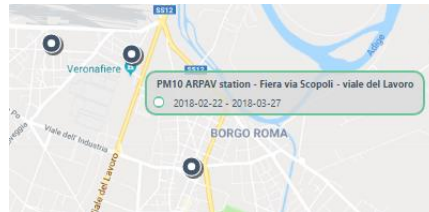
5.3.2.2. Official Measurements

Official Measurements encompasses environmental data acquired from official sources.

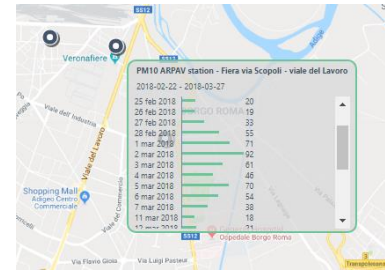
When a data type is selected, markers appear on the map at locations where data of that type has been collected. When the mouse pointer hovers over a marker, a description of the data/location is displayed in a pop-up overlay. Clicking on the marker results in a campaign selection overlay being displayed, clicking on one of those campaigns swaps the campaign selection overlay for an overlay displaying the relevant measurement campaign data; this overlay may have a scrollbar on the right-side.



Data type selection



Campaign selection



Campaign display

5.3.2.3. Participatory Sensing

Participatory Sensing includes data acquired by Living Lab participants. This may be air quality measurements collected with portable equipment, or other data collected at fixed measurement locations.

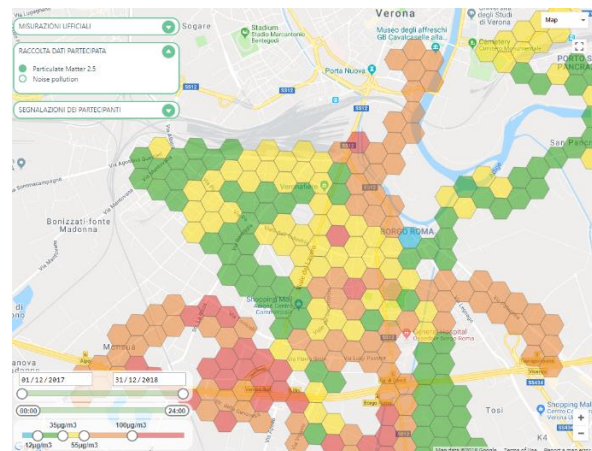
Fixed location data is visualised in a similar way to the Official Measurements described above, with markers positioned on the map. Portable air quality measurement data are visualised as follows.

Air Quality

Air quality readings are combined in the database into hexagonal geographical areas for display on the map. There are several hexagon footprints of different sizes, the suitable size for the current zoom level on the map is automatically selected.

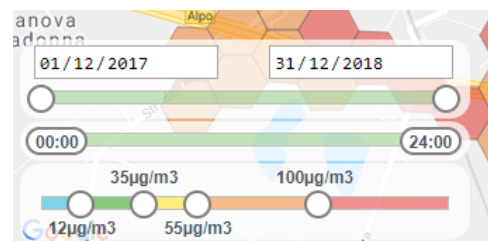
The hexagons are colour-coded from low pollution levels in azure, through green, yellow and orange to red for higher pollution levels.

Clicking on a hexagon reveals the recorded average level for that area.



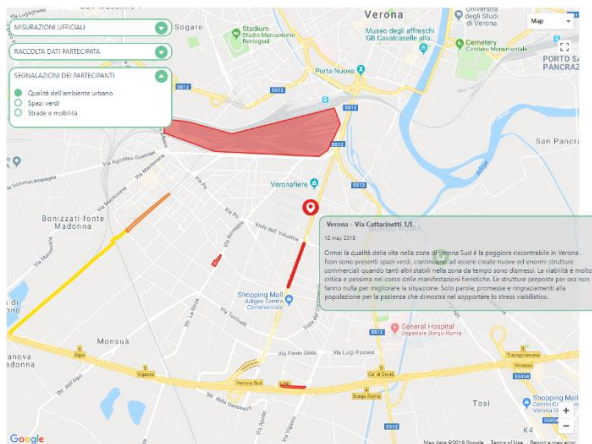
There are three controls at the bottom left of the screen allowing the user to:

- Select a date range
- Select a time-of-day range
- Vary the colour-coding thresholds.



5.3.2.4. Stakeholders Feedback & Report

This section displays feedback collected via the GeoTagging Tool. Places of interest are highlighted by markers, lines and polygons which are colour-coded according to the relevant issue's rating.



Colour-coding uses the same colours as Air Quality hexagons, ranging from red for rating 1 through orange, yellow and green to azure for rating 5.

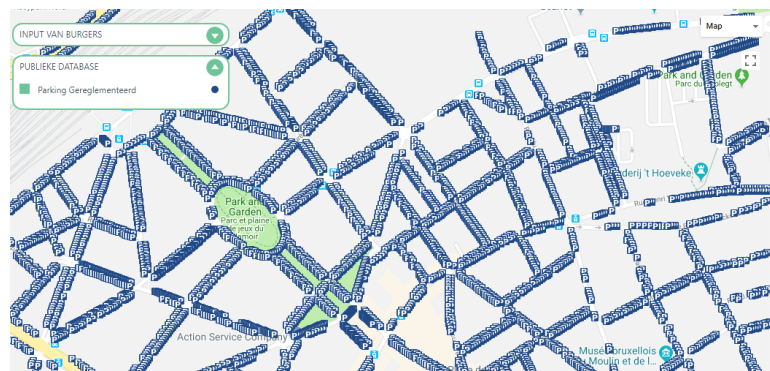
Clicking on a line, polygon or marker opens a dialog displaying the issue's title, date and text; if there's a related image, that will also be displayed – and clicking on it will open a new browser tab containing the image.

5.3.2.5. Public Database

Here, data collected from public databases may be visualised. The first such data added to the LOOPER Platform was parking spaces in the Brussels Living Lab area (source data-mobility.brussels/mobigis).

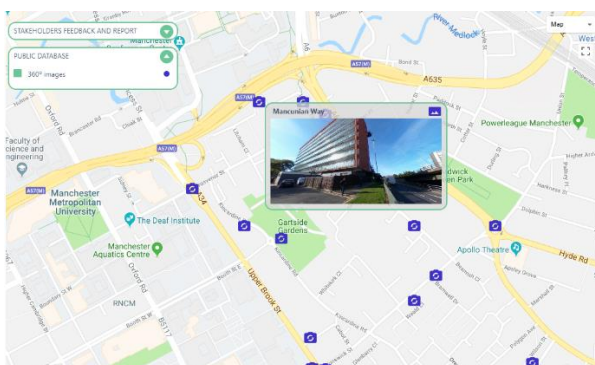
There are nearly 14,500 parking spaces in this dataset.

Although only one dataset is present here, multiple Public Database datasets may be selected if present.



Note that these datasets are not stored in the database, but in the server's file system as Geojson files (see 5.5.1 Geojson files).

360° Images



A set of 360° images is presented via the Public Database section on the Manchester website. The interactable images are shown in the popup dialog. Clicking an icon in the dialog opens a new browser tab containing the relevant image.

Images presented this way are prepared using Marzipano Tool (marzipano.net/tool) with a small manual post-processing adjustment to the html output to remove the header and other clutter.

Note: it is intended to add a new data category for this as this isn't 'Public Database' data.

5.4.Database

5.4.1.Functionality

The LOOPER database is maintained and managed by IUAV and built upon PostgreSQL (postgresql.org) with PostGIS spatial extension (postgis.net). All data input to the database is managed by IUAV.

The data model structure of the Looper Monitoring database is detailed in the deliverable D2.1, chapter 6.

The database provides three schemas:

- looper (custom Looper schema)
- public (default schema)
- topology (PostGIS system schema)

“Looper” schema stores 6 functions used to process external “Airbeam”, “GeoTagging” and “NoiseBox” raw data (import txt/csv files) and 11 tables to store temporary imported raw data.

“Public” schema stores all main tables and views:

Tables:

- hgrid025, hgrid050, hgrid100, hgrid250 (4 level hexagonal map grid for distributed crowdmapping data visualization)
- l_camp_type (campaign type lookup table)
- t_campaing (survey campaign list)
- t_data_crowdmap (loopertagging.eu data)
- t_data_distsurvey (distributed survey data)
- t_data_statsurvey (stationary survey data)
- t_datatype (data type list)
- t_measuringspot (list and location of survey measuring spots)
- t_owner (survey operators list)
- t_sensor (sensors list)
- t_sensortype (sensor type list)
- t_ull (Urban Living Labs list)

Views are not directly accessed by any application; views are template SQL queries hardcoded inside looper visualization tool:

- official* (queries used to implement “official data” panel in looperproject.eu visualization section)
- particip* (queries used to implement “participated data collection” panel in looperproject.eu visualization section)
- stakehld* (queries used to implement “stakeholders feedback and report” panel in looperproject.eu visualization section)

See D2.1 for details.

5.5.Other Data

5.5.1.Geojson files

The data types and locations in the Public Data category are not held in the main database, but in geojson files (<http://geojson.org/>) in the VPS's file system.

Some extra json objects are defined for LOOPER:

iconsvg	String - containing the XML text content of an SVG file. If not set, the default marker is used (the same one used for Official Measurements). <i>Tip: Original SVG file content may be made much more concise prior to copying it into the geojson file by processing it with an appropriate tool. The web-based tool svgomg (jakearchibald.github.io/svgomg) performs this task well.</i>
iconsize	Number - display size of the icon. If not set, the default is 30 (or 10 for datasets with > 100 points)
colour / color	String - containing the desired colour of the default marker. Ignored if iconsvg is set.
label	String - if present, displayed in a popup when a marker from this data set is clicked. <i>Note: for a 360° data set this is mandatory, although its value will be ignored.</i>

For 360° Images (0), some additional objects within the features' properties object are defined:

label	String – the title of the feature's popup dialog.
i360	String – URL of the processed 360° image's web page.

5.6.Co-design Tool

5.6.1.Motivation

The co-design tool aims to enable visitors to propose new ideas (solutions) consult the ideas already submitted or identified at face-to-face workshops and write a reaction to the ideas already posted. Ideas include a map marker (location), subject, title of the idea, description of the idea, category, optional photo, name and optional e-mail address.

When uploading a new idea, users first select which category their idea corresponds to: action/campaign; improving an existing object; new functionality or object; and an event. Then, they can select what use of public space their idea corresponds to: walking; biking; driving; playing or spending time in public spaces; other. Users then name their idea and enter a description. Then, they can localise their idea by putting a pin on a map. Lastly, users can submit the idea by clicking the submit button.

5.6.2.Functionality

The Co-design tool runs as a separate subsite alongside each Local Living Lab site. To maintain continuity of look and feel, the co-design subsites are included in an iframe within a regular page on each Local Living Lab site.

The co-design tool subsites are WordPress sites using the Nextseventeen theme (*see 3.1.1.2 Nextseventeen Theme*). The subsites were installed and configured for LOOPER by Urbanista who previously used the theme for the Nexthamburg site. (See www.urbanista.de/nextseventeen and www.nexthamburg.de/ideenliste.)

The control panel of the Nextseventeen theme is separate from the control panel of the WordPress website can be accessed by logging in via `/idea/wp-admin/`. Under the item 'Nextseventeen' in the menu bar, users can control parts of the theme. Under 'Design settings', users can edit layout settings, such as the colours, how the logo is displayed, and what information is required from citizens when they upload ideas. Links to social media accounts can be entered in the section 'Social media'. The colours for different categories of ideas (i.e. blue for an event or yellow for improvement of an existing object) can be selected under 'Topics settings'. The translation of the English text can be entered under 'Texts settings'. The settings of the map can be found under Settings > Easymap. Here, the map source and the icons for ideas can be changed.

5.7.Evaluation Tools (MCA and MAMCA)

The evaluation tools (MCA and MAMCA) are not integrated into the LOOPER platform. A description about the method and a link to the online evaluation tool (www.mamca.be) is provided on the local platform websites.

6. WORDPRESS CUSTOMISATIONS

6.1.LOOPER Theme

This is the custom-made child theme ‘Sequential Child’ developed by Clicks & Links for LOOPER; ‘Sequential Child’ customises the parent theme ‘Sequential’ (wordpress.com/theme/sequential).

Customisations to the theme include display of the LOOPER logo on the page header along with city names for the local sites, and display of LOOPER project funding partners in the footer with hyperlinks to their websites. Colours and fonts are all customised to conform to Deliverable D8.2 Dissemination and outreach guidelines, Appendix 1.

6.1.1.Extra Configuration

In addition to the regular specific WordPress configuration in the local sites’ wp-config.php files, there are some additional entries. *Note: these are not accessible to site administrators and are set-up by Clicks & Links.*

- The location name for display in the site header bar must be defined for Local Living Lab sites. There are two versions of the text, one for desktop and one for mobile. For Manchester and Verona, the two strings are identical, the desktop string for Brussels is spread over two lines (by the HTML ‘
’ tag). *These strings are simply omitted on the general site which does not display a city name.*

```
define('LOCATION', 'Brussel<br>Bruxelles');  
define('LOCATIONII', 'Brussel/Bruxelles');
```

- Additional logos for display in the site header bar may be defined together with associated hyperlinks. *This feature is used only on the Brussels site.*

```
define('LOGO1','http://brussels.looperproject.eu/logo/bral.jpg');  
define('LOGO2','http://brussels.looperproject.eu/logo/LOGO_MOBI_VUB_2017.jpg');  
define('LINK1','https://bral.brussels');  
define('LINK2','http://mobi.vub.ac.be/home/');
```

6.2.Plugins

6.2.1.LOOPER Carousel

This customised version of ‘WP Responsive Recent Post Slider’ (wordpress.org/plugins/wp-responsive-recent-post-slider) is used to cycle through Blog posts on the General website’s home page. *See 4.1.1 Home Page for an illustration.*

The WordPress shortcode for the General Site’s home page is:

```
[looper_carousel design="looper2" show_category_name="false" show_date="true" show_author="false"  
show_read_more="false" autoplay="true" autoplay_interval="5000"]
```

The values that are set to 'false' remove some items that default to true in the standard WP Responsive Recent Post Slider plugin. Other parameters documented for the standard plugin are not tested in LOOPER Carousel and 'design' should always be set to "looper2". Setting autoplay to true enables automated cycling between blog posts with an interval set in milliseconds by `autoplay_interval`.

6.3.Other

6.3.1.Collapser

Two CSS classes are provided (with some behind-the-scenes JavaScript) to facilitate 'collapsible' page content. This is utilised on the general site's News & Events page to show/hide old news items. *See 4.1.3 News & Events Page for an illustration.*

To use the collapser, you need to define both a button with class "collapser" and an HTML tag (illustrated here as a <div> for clarity, but in the case of the News & Events page, it's a) with class "colcontent" which contains the content that you want to hide/show.

The latter must have an id matching the former, but with '-t' appended. e.g.

```
<button id="bru" class="collapser">Older items +</button>
<div id="bru-t" class="colcontent">collapsible content</div>
```

The '+' character in the button text, if present, is automatically changed to '-' when the collapser is 'open'.

7. HOSTING & DOMAIN REGISTRATIONS

7.1.Combell

www.combell.com

The domain `looperproject.eu` is registered with Combell and the general LOOPER website - `looperproject.eu` - is hosted by them.

7.2.Versio

www.versio.eu

A Linux VPS (Virtual Private Server) is rented from Versio. The VPS hosts the LOOPER database and the Local Living Lab websites (including the co-creation subsites).

7.3.Exacthost

www.exacthost.com

The domain `looperprojecttagging.eu` is registered with Exacthost and the Geotagging websites are hosted by them.

7.4.Rationale

The registration and hosting of `looperproject.eu` was implemented before the specification for the VPS had been determined. A VPS fitting LOOPER's requirements was not available from Combell hence the VPS contract being with a different provider.

Traffic is directed to the LOOPER Living Lab sites on the VPS by A-record settings at Combell for the three subdomains.

The Geotagging application required ASP.NET hosting, necessitating a third provider.

When the hosting arrangements with Combell expire, the loopersproject.eu site could be transferred to the VPS. The loopersproject.eu registration could either remain with Combell or be transferred to another registrar.

8. CONTACTS

Technical contact for hosting, VPS, websites, WordPress, Visualisation

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9. BACKUP

The VPS runs an automated daily backup process which is pushed into a Git repository at bitbucket.org. Backed-up are

- WordPress databases
- Apache web server configuration
- Web site content
- Geojson files

The Combell site is automatically backed-up by Combell at least once a day and retained by them for 14 days. The WordPress database (for the general site) is backed-up by Combell every day and retained by them for 7 days.

ACKNOWLEDGEMENTS

The support of Brussels Capital Region – Innoviris (Belgium), Ministero dell'Istruzione dell'Università e della Ricerca (MIUR) (Italy), the Economic and Social Research Council (UK) and the European Union is gratefully acknowledged.