UNIVERSITÀ DEGLI STUDI DI MILANO
Dipartimento di Scienze Agrarie e Ambientali

Co-funded
by the COSME programme
of the European Union

Greenways HERITAGE

Greenways Heritage Outputs

Touristic GIS, Web-App, Protocol

Giulio Senes, Roberto Rovelli

Dikli, September 5th 2019

The Greenways Heritage Project

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Tourism product	Technologies in Cultural and Creative Industries	Promotion & Communication
✓ Creation of **tourism product package** through **collaboration agreements.**	✓ Creation of a **multiplatform web-application**, **containing all the information** on Greenways Heritage itineraries.	✓ **Declaration** for UNESCO and greenways as common destination
✓ Improving the competitiveness of SMEs: ➢ improving skills and raising awareness; ➢ strengthening public-private cooperation.	✓ **360° virtual tour**	✓ **Workshops and conferences**;
	✓ **Best practices guide** - new technologies used on Cultural UNESCO sites and greenways	✓ **Valorisation strategy**
		✓ **Best practices guide**
		✓ **Special GWH award**

Specific objectives

The objective of UMIL actions is to **promote and enhance the visibility** of a new transnational thematic tourism product **("Heritage greenways") by using Cultural Creative Industries (CCIs) - related technologies** and by providing comprehensive and practical information to potential tourists and tourism stakeholders.

In particular, the WP2 aims to:

1. **create new information** on heritage, greenways and related services, geographically contextualized and mapped;
2. **share and spread the information** to potential tourists and tourism stakeholders using CCIs-related technologies;
3. create a "**brand awareness**" related to **"Heritage greenways"**.

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Activity 1: detailed mapping

This activity consists of **gathering and mapping** (at 1:10.000/1:25.000 scale) all the **information** related to the territories characterized by:

- the presence of a **UNESCO site,**
- and the presence of a **greenway**.

The information gathered are related to:

- natural, cultural and historical resources,
- touristic attractions,
- accessibility,
- services.

- The data have been collected from ***official sources***, when possible (e.g: UNESCO organization, national and regional touristic agencies, etc.).
- Different **buffer zones** have been defined, in order to identify the resources and touristic services to be mapped (on the base of *the literature related to pedestrian and cycle touristic activities).*

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Activity 2: Greenways Heritage Touristic GIS

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The information collected have been organized in a GIS database, with 14 entities or layers.

Layer ID	Layer	Geometry type	Source	Criteria for selection
01	UNESCO sites [UNESCO]	Point	UNESCO web site	**Max 10 km** from a greenway
02	Greenways [GW]	Polyline	Partner knowledge	Max 10 km from a UNESCO sites
03	Cultural-Historical resources [CHR]	Point	Official touristic Information	**Max 2,5** km from a greenway
04	Protected Areas [PA]	Polygon	Official list of national protected area	Max 2,5 km from a greenway
05	Natural Resources (NR)	Point	Official touristic Information	Max 2,5 km from a greenway
06	Cycle friendly accommodations (CA)	Point	Official cycle friendly certification; ex. Bed and Bike (DE)	**Max 5 km** from a greenway
07	Generic Accommodations (GA)	Point	National/regional touristic databases	Max 2,5 km from a greenway
08	Food & Beverage (bar, restaurant, etc.) [F&B]	Point	Partner knowledge	**Max 1** km from a greenway
09	Transfer Services [TS]	Point	Partner knowledge	Max 2,5 km from a greenway
10	Bike Rental points [BR]	Point	Official touristic Information; partner knowledge	Max 2,5 km from a greenway
11	Rail Stations [RS]	Point	Railway company	Max 2,5 km from a greenway
12	Public Navigation Services [PNS]	Point	Navigation Company	Max 2,5 km from a greenway
13	Emergencies [EM]	Point	Official Information	Max 2,5 km from a greenway
14	Touristic Information points [TI]	Point	Official touristic Information	Max 1 km from a greenway

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01 - UNESCO sites

02 - Greenways

03 - Cultural & Historical resources:

- *Religious buildings (chapels, churches, monasteries, etc.)*
- *Castles, towers and fortifications*
- *Archeological sites and ruins*
- *Museums and monuments*
- *Palaces, villas and other civil buildings*

04 - Protected areas

05 - Natural Resources:

- *Historic and botanical gardens*
- *Panoramic points*
- *Interpretation centers of nature*
- *Other natural resources*

06 - Cycle friendly accommodations

07 - Generic Accommodations

08 - Food & Beverage

09 - Transfer services

10 - Bike rental points

11 - Rail stations

12 - Pubblic Navigation Services

13 - Emergencies

14 - Touristic Information points

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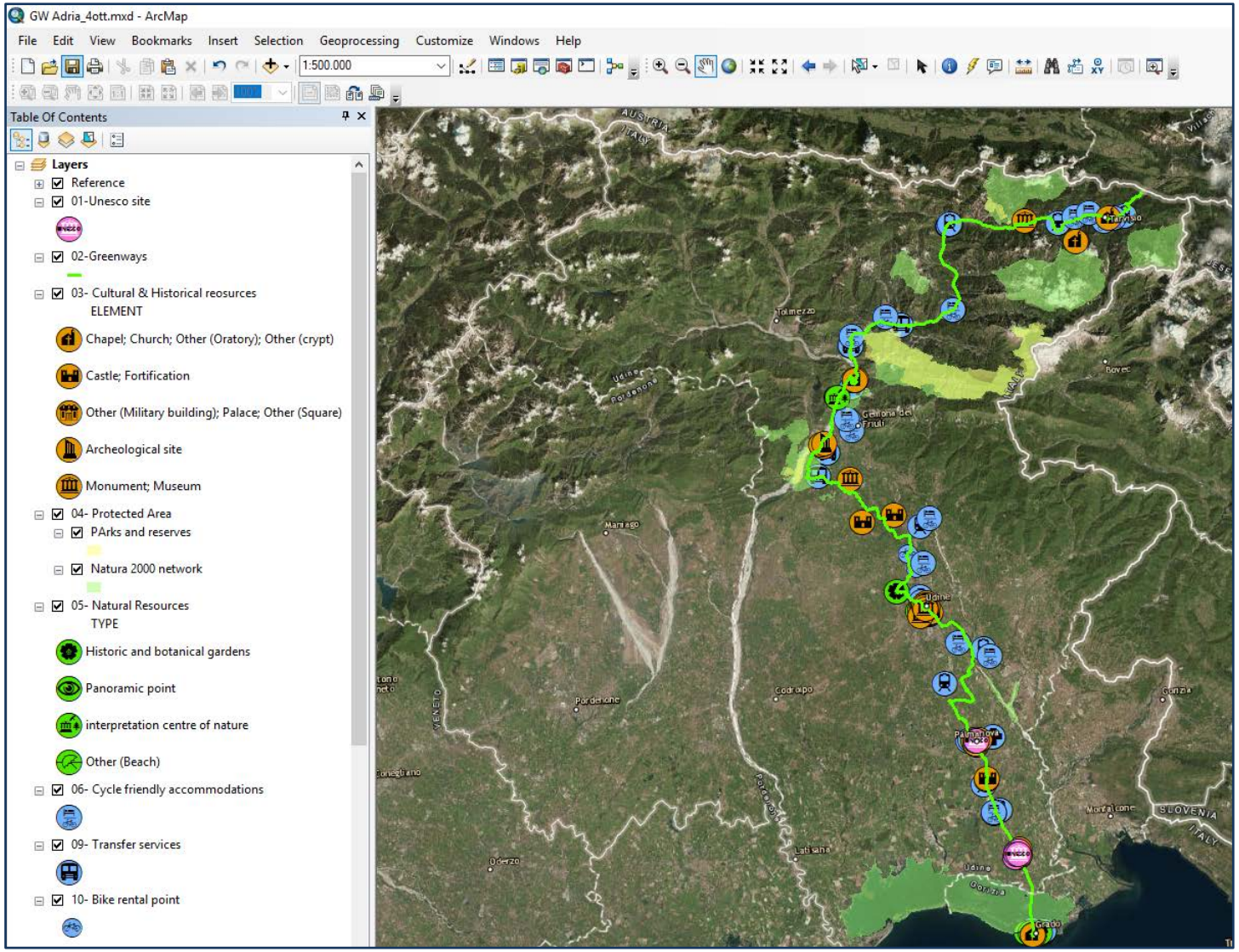

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Resources and services mapped

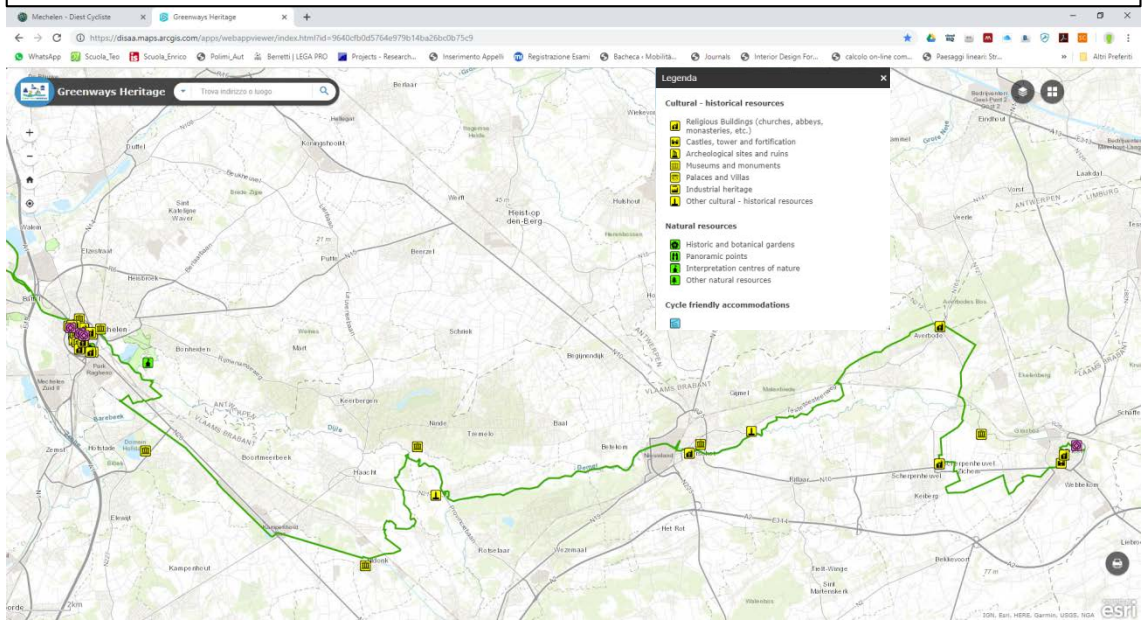
- ✓ ***22*** *UNESCO sites;*
- ✓ ***15*** *greenways* connected to the UNESCO sites in ***10*** *countries* (**1.132 km**):
  - *Vía Verde de la Sierra de la Demanda (**Spain**): 54 Km;*
  - *Vía Verde de los Montes de Hierro (**Spain**): 43 km;*
  - *Vía Verde del Ferrocarril Vasco Navarro (**Spain**): 127 Km.*
  - *Vennbahn (**Germany, Belgium, Luxembourg**): 125 Km;*
  - *Piste Cyclable d'Echternach (**Luxembourg**): 43 km*
  - *Alpe Adria (**Italy, Austria**): 410 Km;*
  - *Dampfroß und Drahtesel (**Austria**): 50 km*
  - *Beghina (**Belgium**): 40 Km;*
  - *Mechelen – Diest (**Belgium**) : 76 km;*
  - *Rīga - Ērgļi (**Latvia**): 79 Km;*
  - *Two Tunnels Greenway (**UK**): 20 km;*
  - *Bristol Bath Railway Path (**UK**): 21 km;*
  - *Ecopista de Guimarães (**Portugal**): 14 km;*
  - *Ecopista do Ramal de Mora (**Portugal**): 20 km;*
  - *Přibyslav – Sázava Greenway (**Czech Republic**): 10 km;*
- ✓ ***409*** *cultural-historical resources;*
- ✓ ***106*** *natural resources;*
- ✓ ***151*** *cycle friendly accommodations and* + ***712*** *generic accommodations;*
- ✓ ***2816*** *Food & Beverage;*
- ✓ ***57*** *bike rental points and* ***31*** *transfer services;*
- ✓ ***69*** *rail stations* and ***16*** *public navigation services;*
- ✓ ***19*** *emergencies*;
- ✓ ***41*** *touristic information points*.

Activity 3: Web-GIS based Multiplatform application

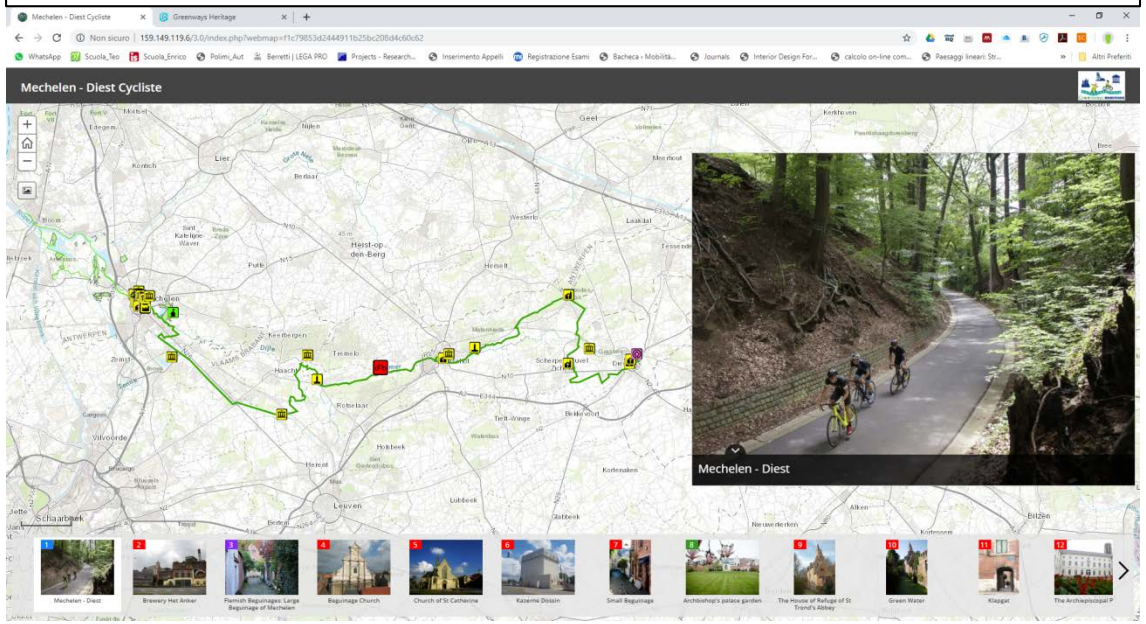
The Database will be **shared with tourists and stakeholders** through the development of a **multiplatform Web-GIS based application** that will run on **any device** and **Operation System.**

The application will be based on the integration of **two tools**:

Web App



Story Map Tour



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Activity 3: Web-GIS based Multiplatform application

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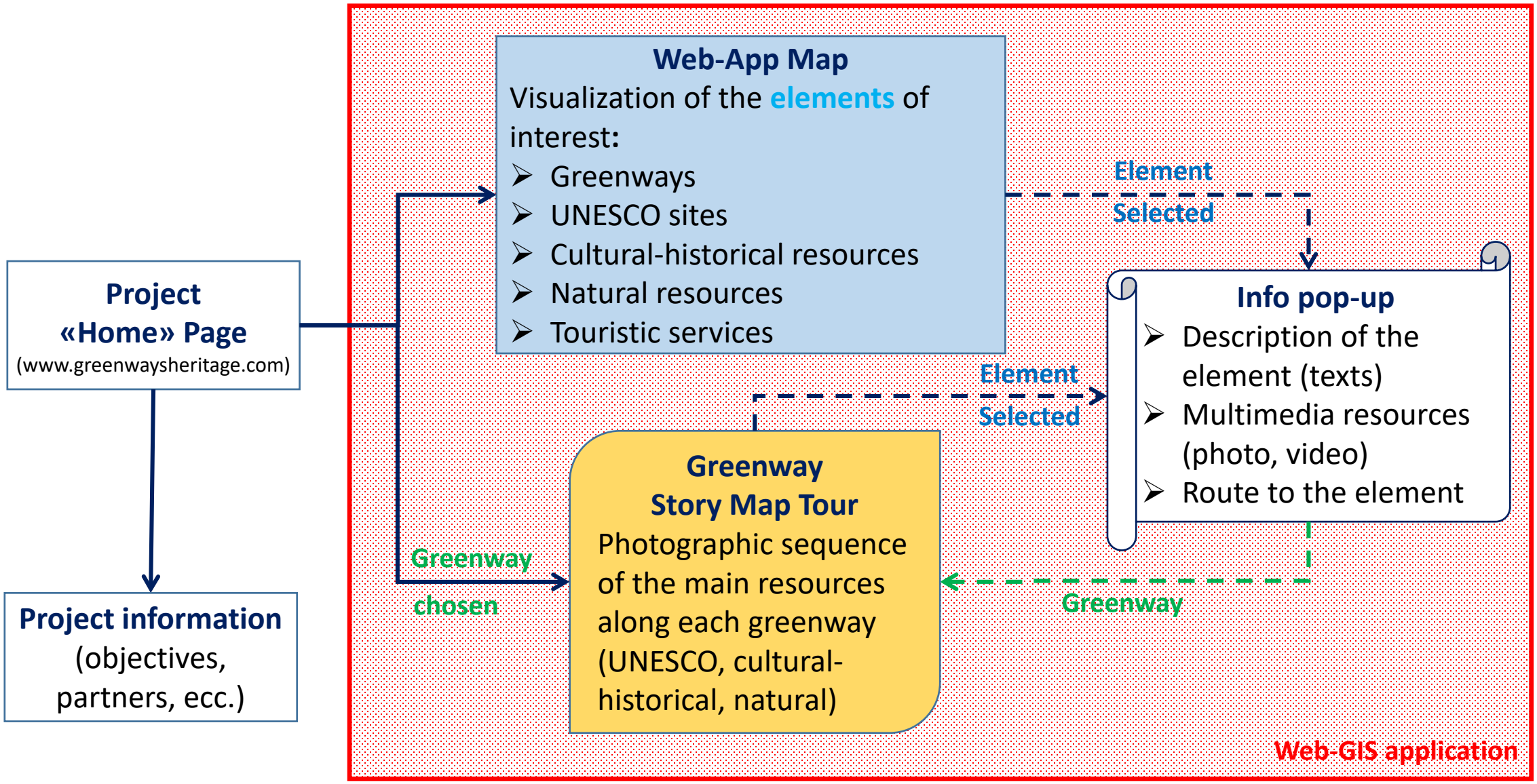
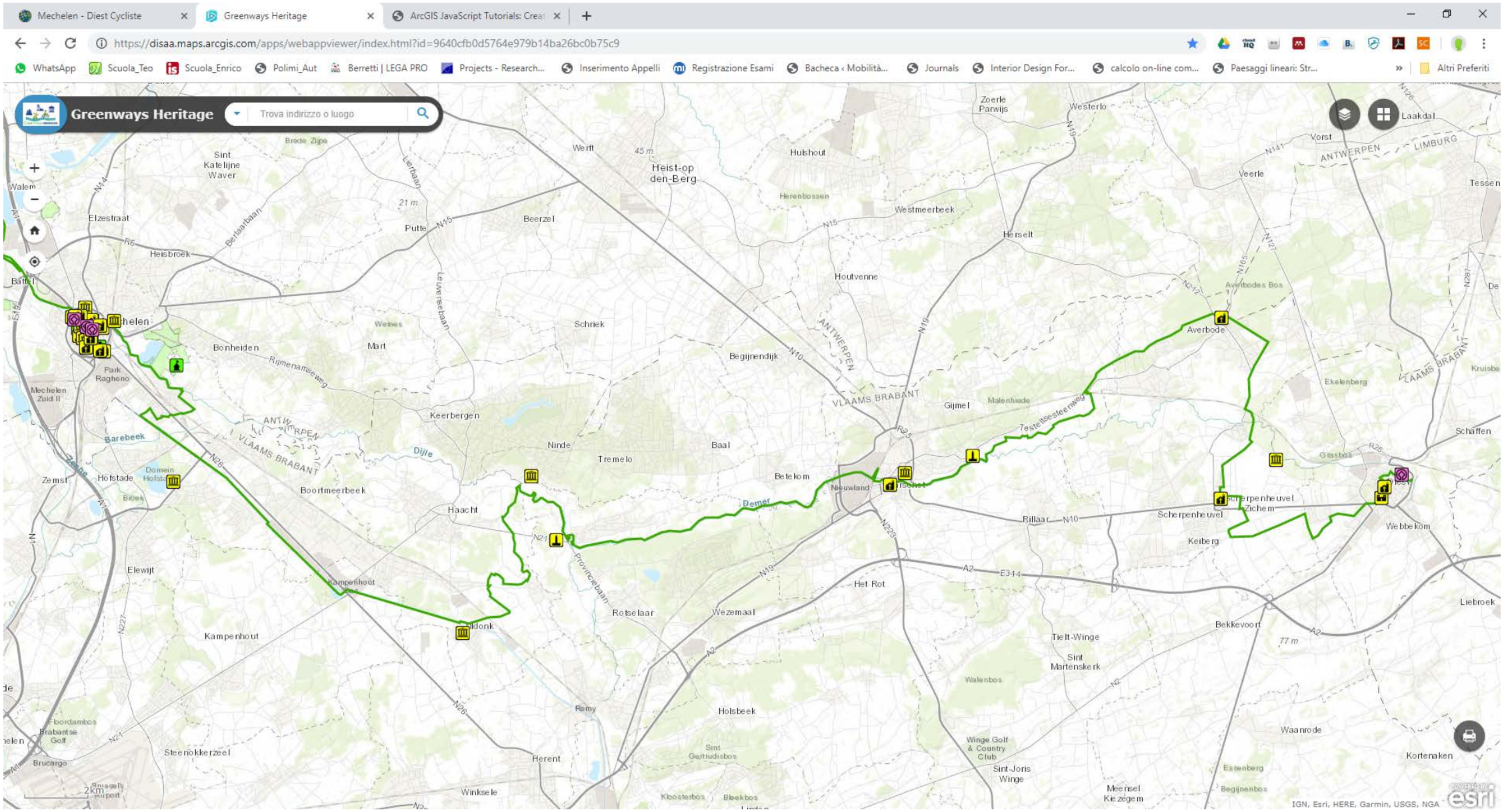


Activity 3: Web-APP



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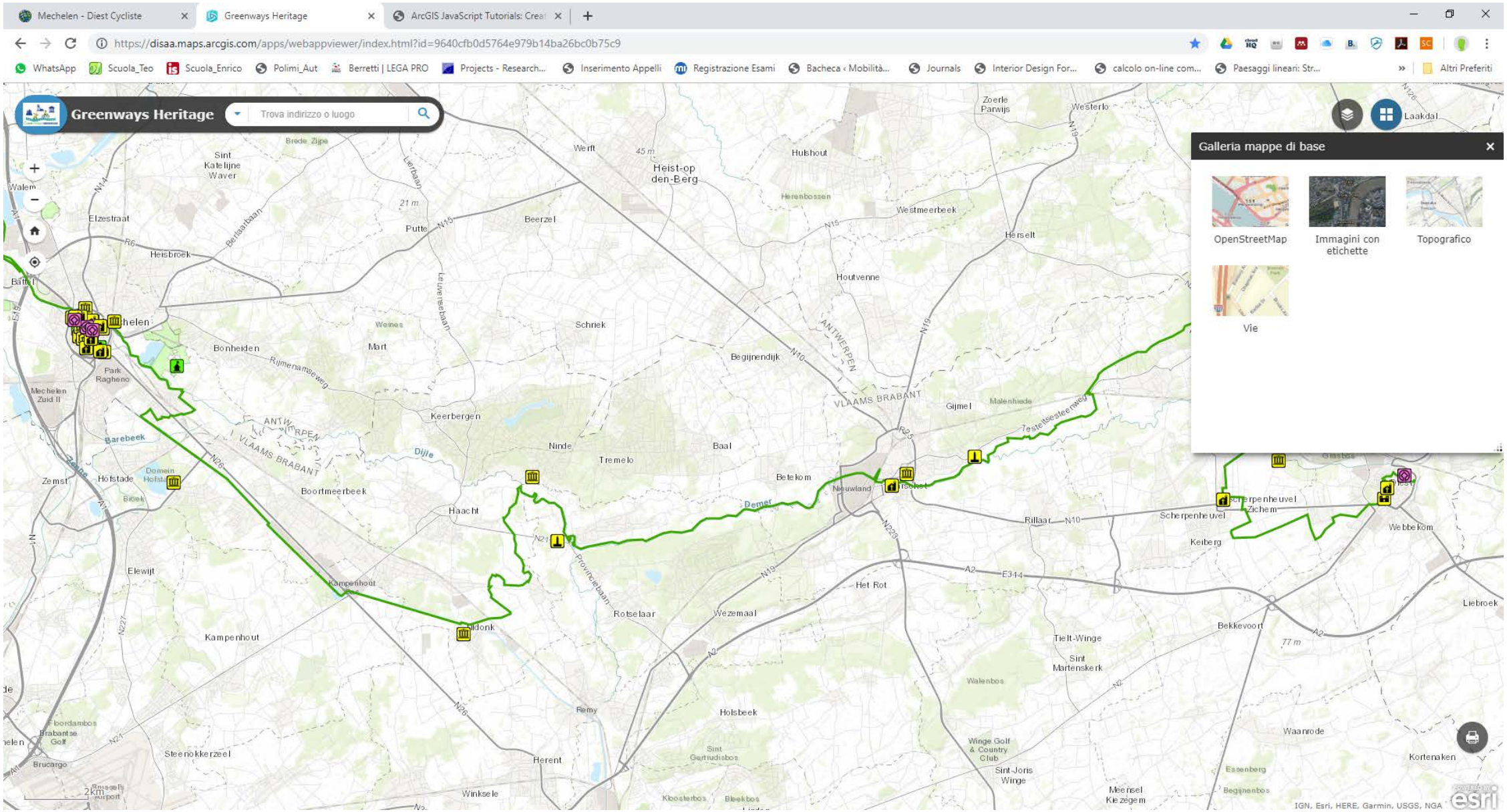

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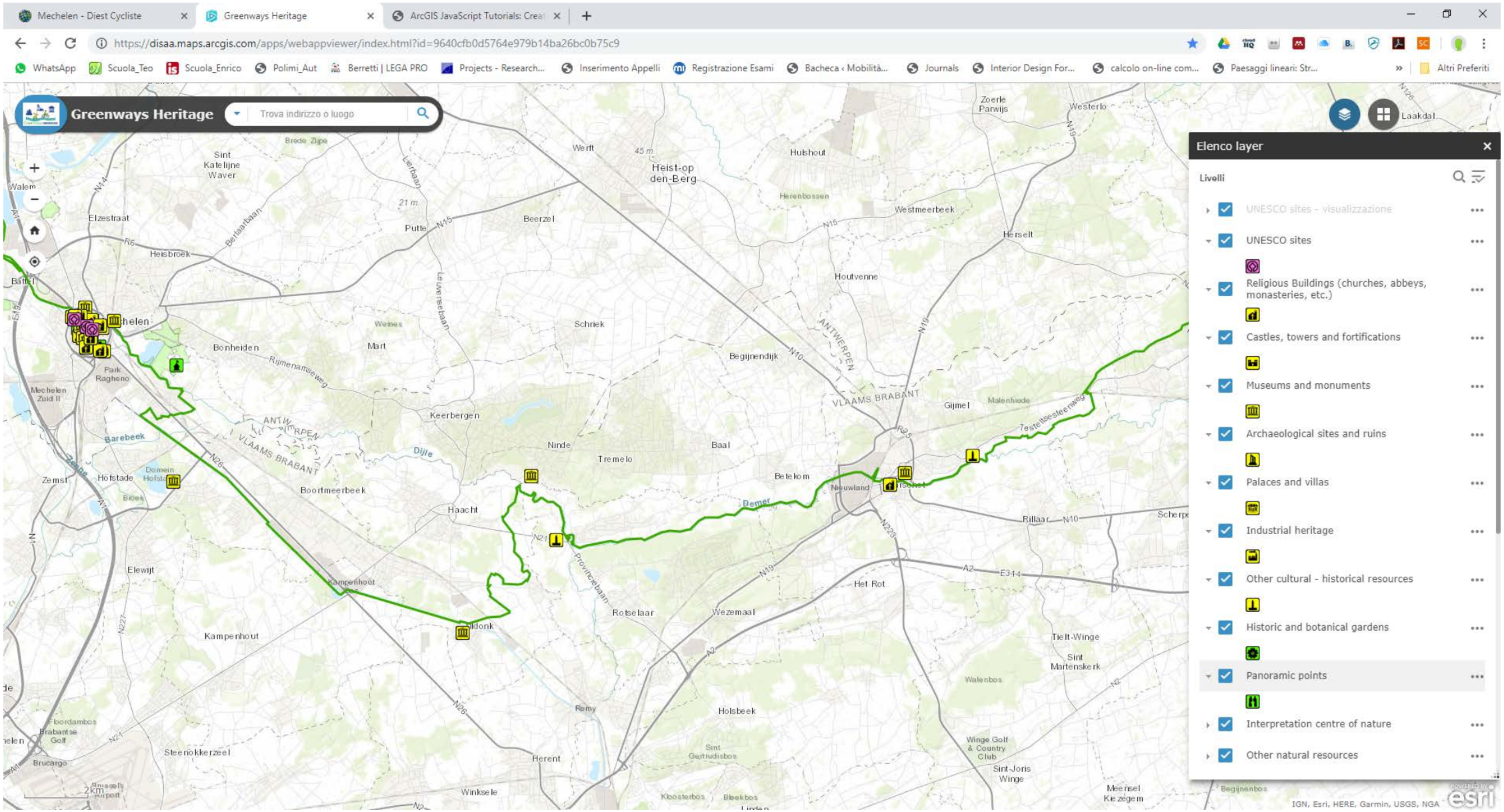

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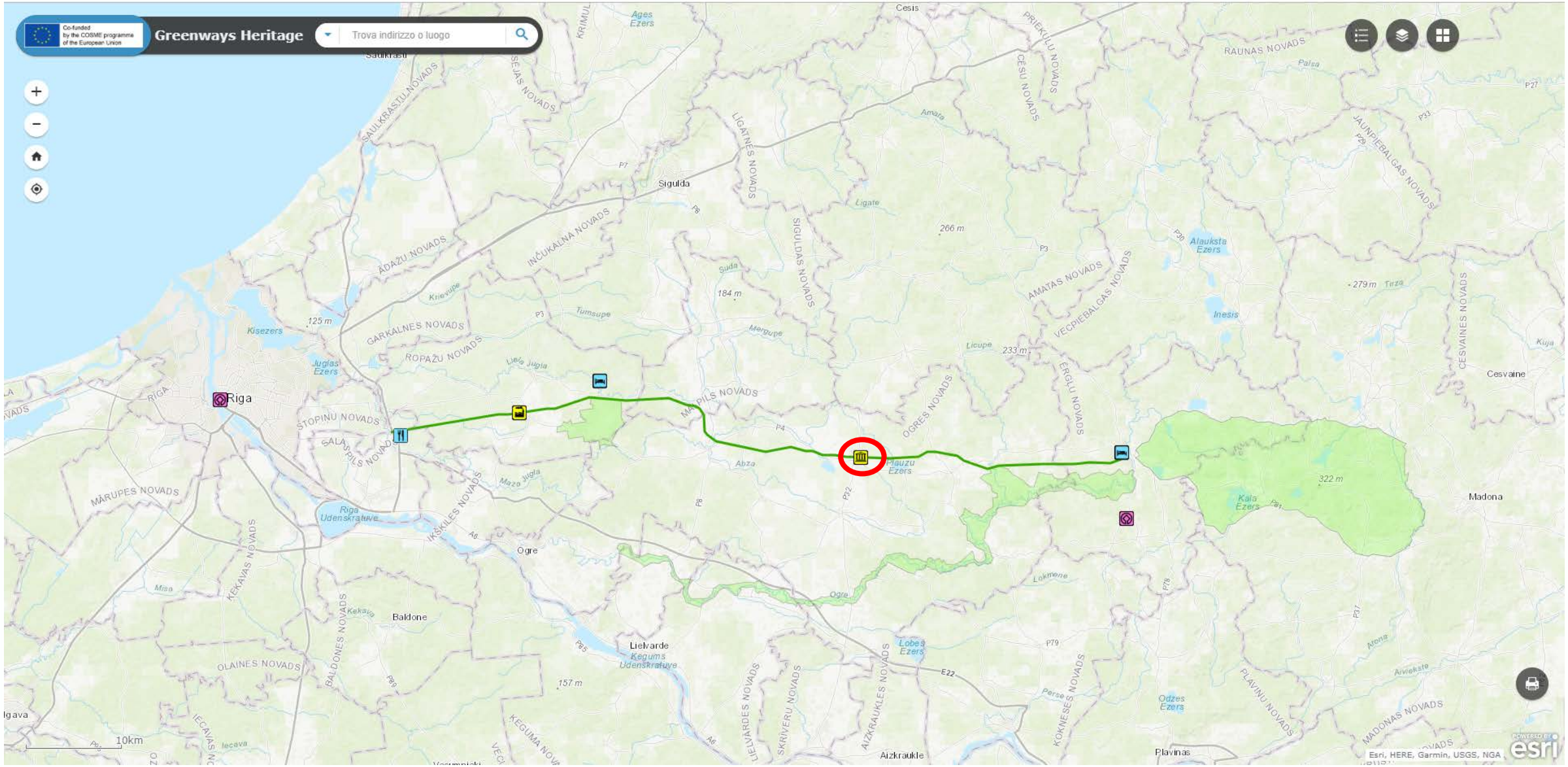

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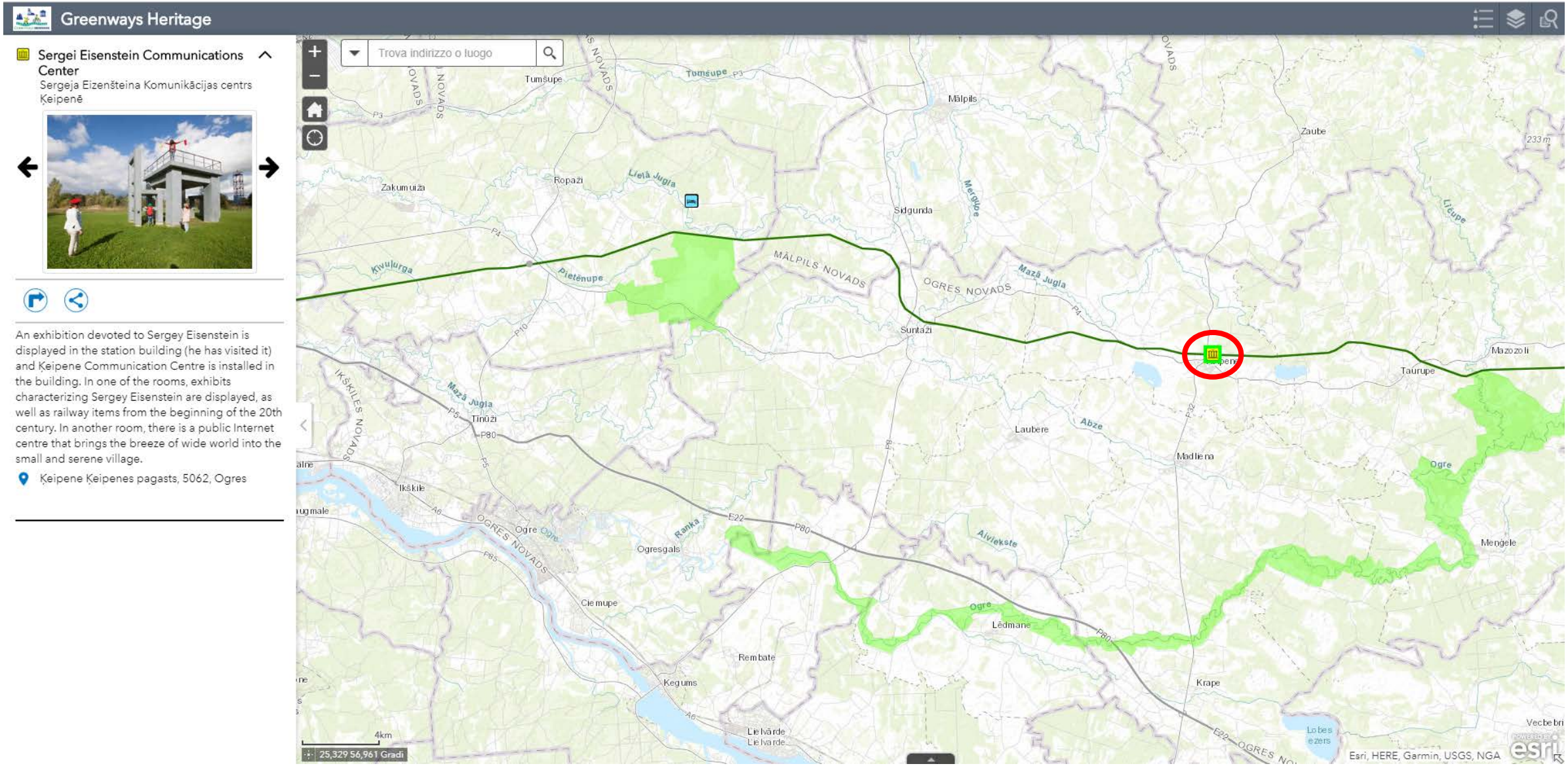

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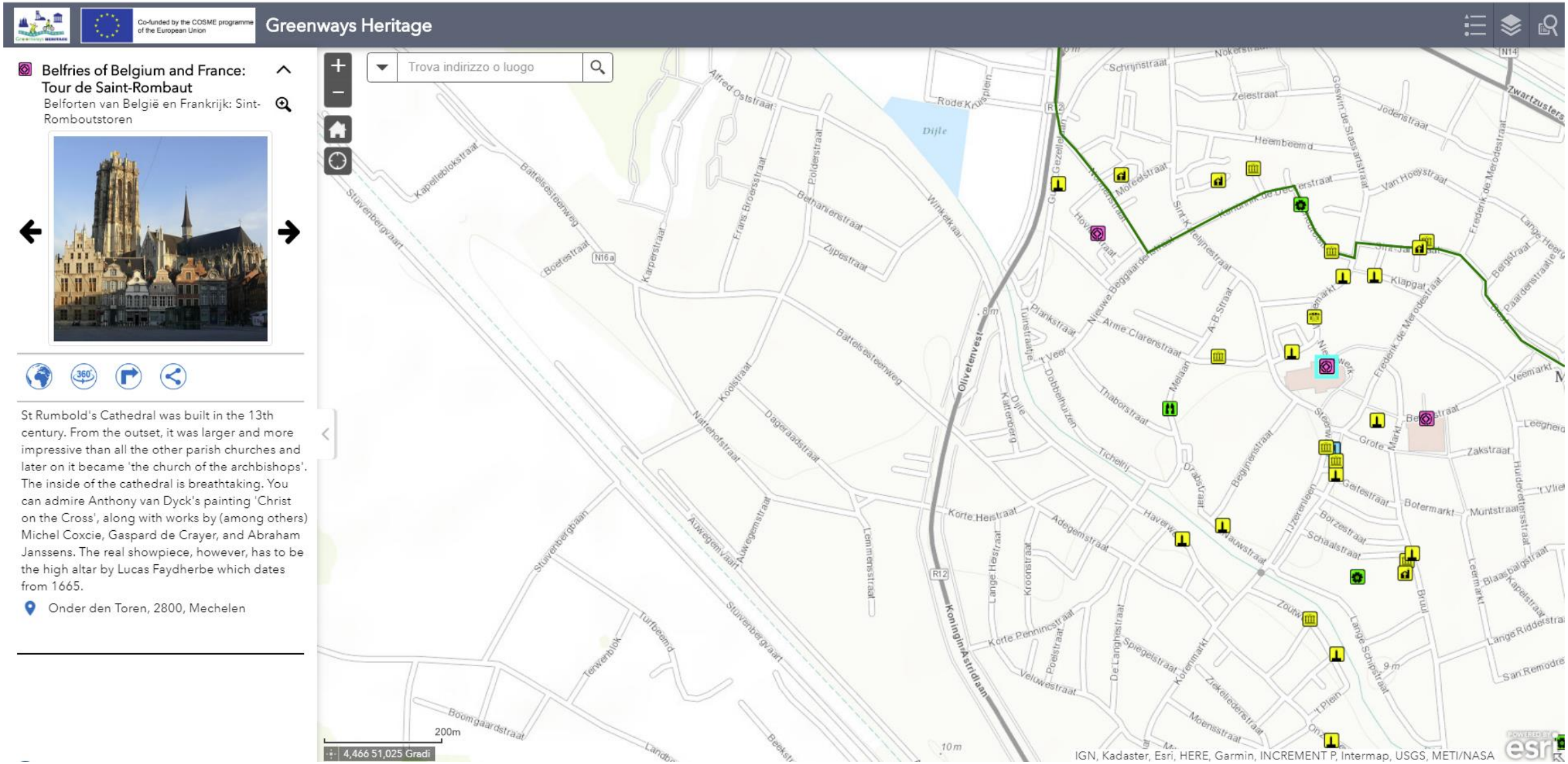

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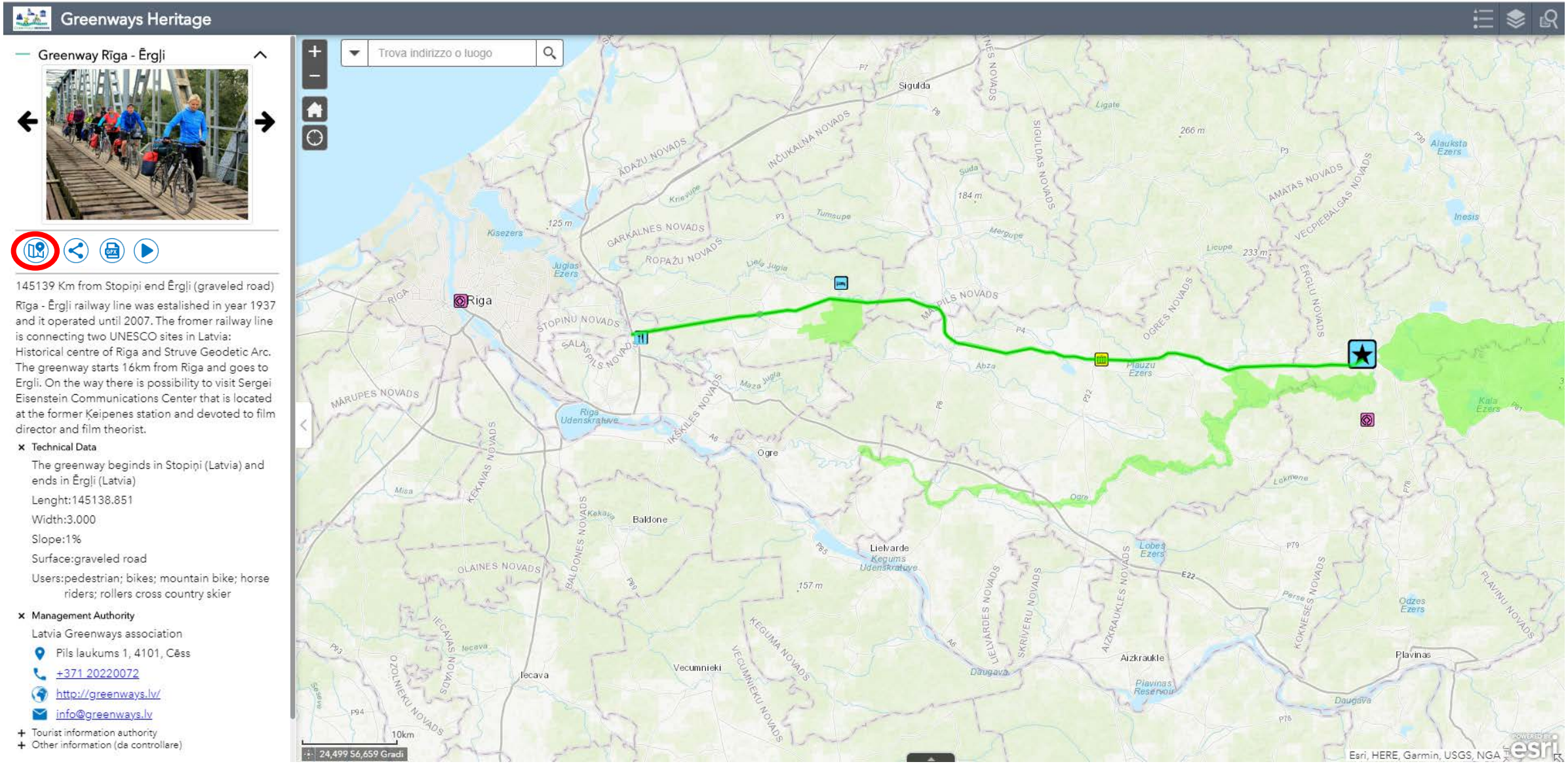
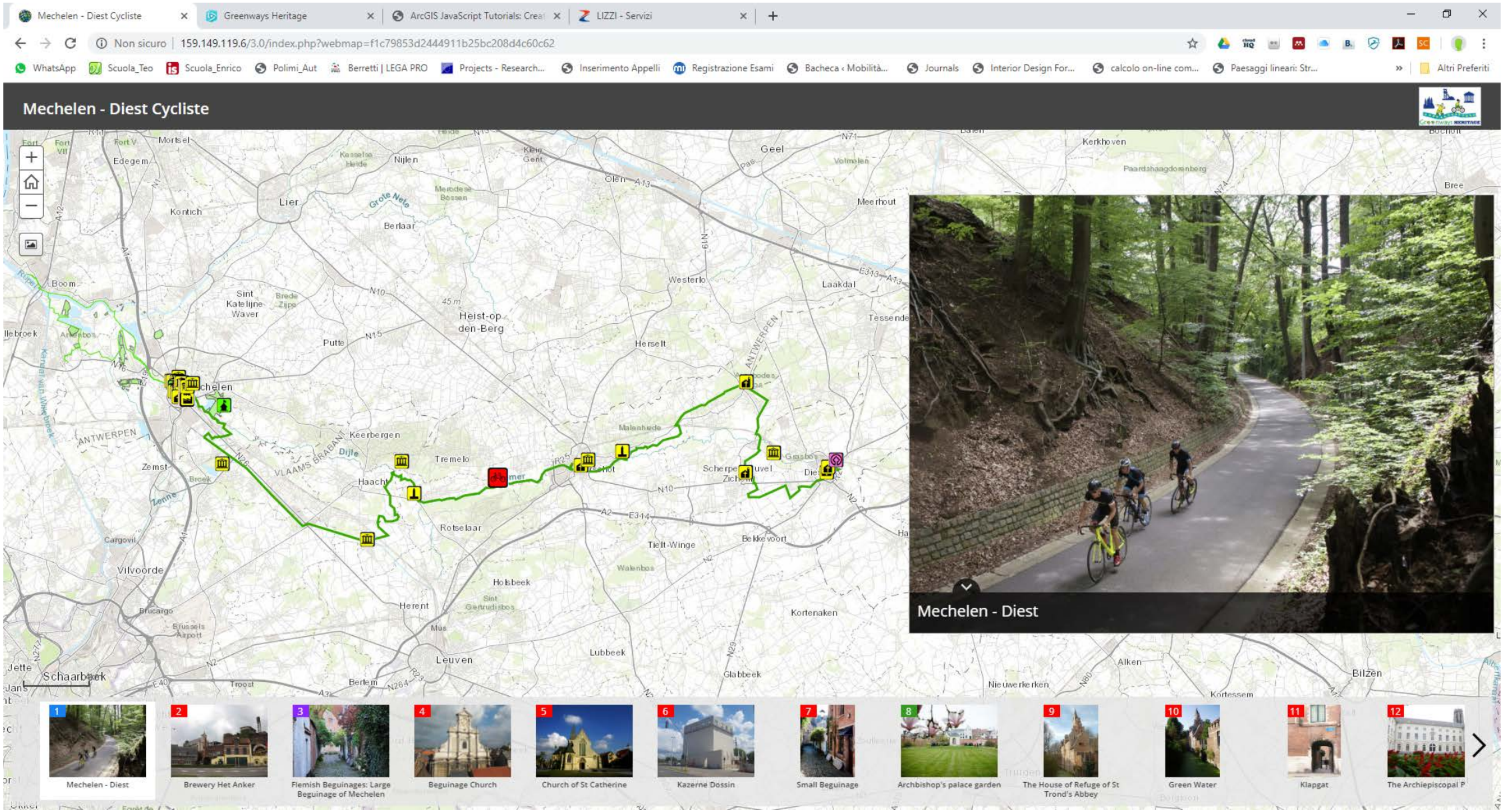


Activity 3: Story Map Tour



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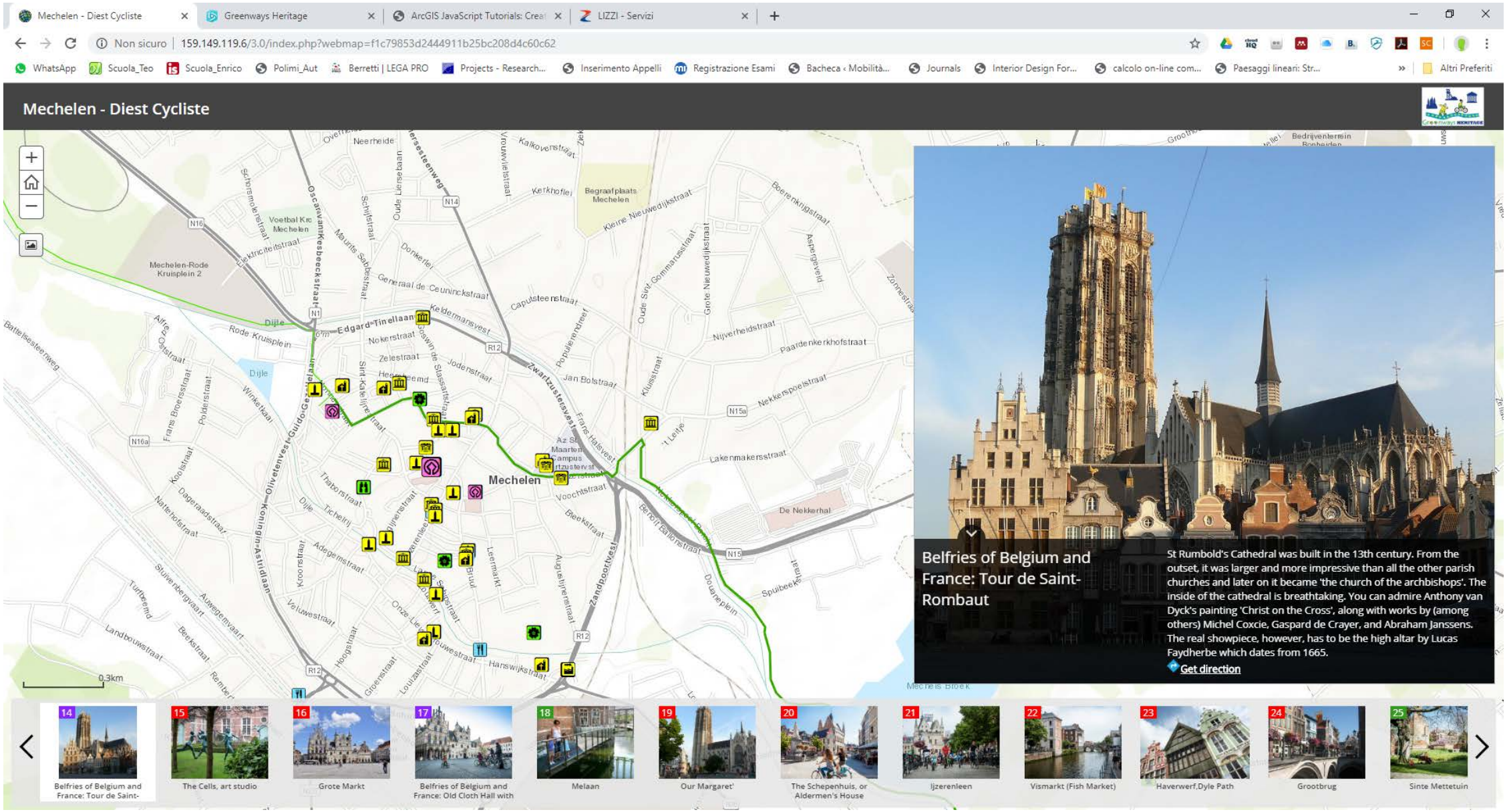

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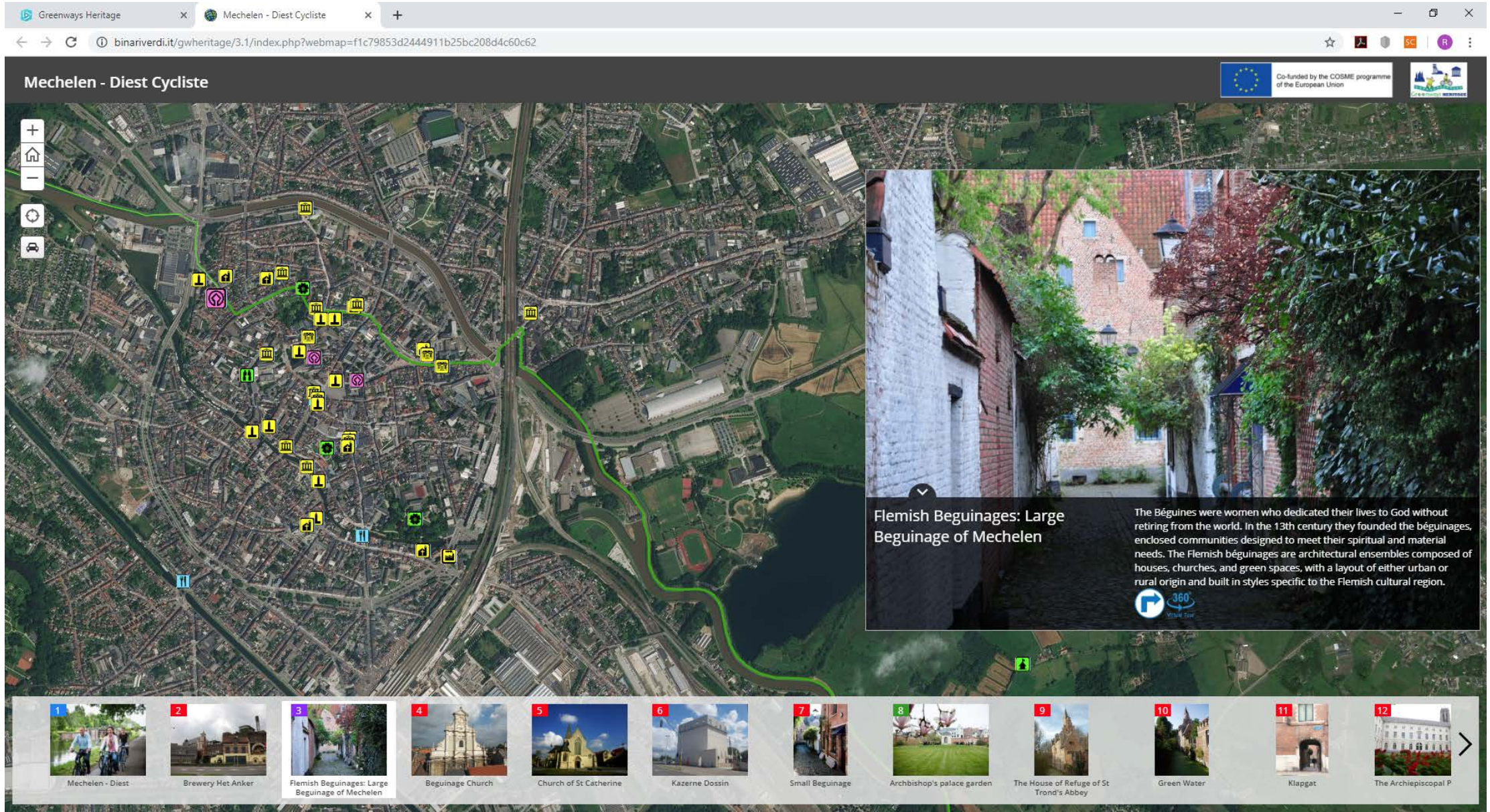

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Activity 4: Development of the “brand”

Definition of a **“protocol” for the development of the "Heritage Greenways" brand**, with guidelines, criteria and requirements check-list.

The evaluation grid consists of **55 criteria**, organized into **3 main themes** and **9 subthemes**, that consider the most relevant greenway qualitative characteristics for the users.

For each criterion, the evaluator can assign:

- 2 points, if the greenway presents the ideal condition,
- 1 point, if the greenway presents the acceptable condition,
- 0 points, if the greenway presents an inadequate condition.

Tab. 1 - Evaluation grid: Themes, subthemes and n° criteria

Theme	Subtheme	N° of criteria
A. Greenway	A1. General conditions	5
	A2. Safety	7
	A3. Comfort	6
	A4. Maintenance	4
	A5. Signage along the greenway	7
	Greenway Total	**29**
B. Tourism services	B1. Intermodality	5
	B2. Accommodations and other services	7
	Tourism services Total	**12**
C. Heritage	C1. UNESCO heritage	7
	C2. Other resources (natural, historical and cultural)	7
	Heritage Total	**14**
Total		**55**

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Definition of a **“protocol” for the development of the "Heritage Greenways" brand**, with guidelines, criteria and requirements check-list.

A **weight** (0.5, 1, 2 or 3) is assigned to each criterion, based on its contribution and importance to the overall greenway quality. The score is obtained multiplying the assigned points by its weight.

The assignment of the brand is subject to compliance with **5 mandatory criteria**, defined as General Conditions, for which it is necessary to obtain at least one point/each.

General conditions (Subtheme A1)				
N.	**Criterion**	**POINTS**		
		Answer A (2 points)	**Answer B (1 point)**	**Answer C (0 points)**
A.1.1	Presence of UNESCO sites within 10 km from the greenway	≥2	1	0
A.1.2	Greenway realized through the recovery of disused railways, towpaths or rural roads, with the preservation of heritage elements that witness to the past of the route. (e.g.: tunnels, viaducts, bridges, stations, progressive mileage signs, hydraulic engineering works, mills, etc.)	Yes, most sections are realized through the recovery of disused railways, towpaths or rural roads	Yes, only some sections are realized through the recovery of disused railways, towpaths or rural roads	No
A.1.3	Access allowed to different users (pedestrians, cyclists, rollers, horse raiders etc.)	cyclists and pedestrians and others	only cyclists and pedestrians	No, only one category of users
A.1.4	Slope of the greenway <4%	Yes, for all the greenway	Yes except for short sections	No, for long sections
A.1.5	Signalization of the intersections with ordinary roads and shared sections	Most intersections are adequately regulated	At least half of the intersections are adequately regulated	Less than half of the intersections are adequately regulated

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The overall greenway quality is assessed by comparing the achieved score (ranging from 0 to 109) with the maximum possible score (109); in this way, the **final score is scaled to a 0-100** scale. The same scaling procedure can be applied to the scores related to each theme (greenway, tourism services and heritage)

Tab. 3 - Final score calculation

Theme	Score Max (Point Max X Weight)	Final score (0-100)
Greenway (GW)	57	$\left(\frac{\sum Score\ GW_{\ [0-57]}}{57}\right) x\ 100$
Tourism services (TS)	23	$\left(\frac{\sum Score\ TS_{\ [0-23]}}{23}\right) x\ 100$
Heritage (HE)	29	$\left(\frac{\sum Score\ HE_{\ [0-29]}}{29}\right) x\ 100$
Overall quality (OQ)	109	$\left(\frac{\sum Score\ OQ_{\ [0-109]}}{109}\right) x\ 100$

Tab. 4 - The “Quality Stars System”

Final Score (0-100)	Quality class	Quality Stars
0-20	Sufficient	★
21-40	Discrete	★★
41-60	Good	★★★
61-80	Very good	★★★★
81-100	Excellent	★★★★★

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Activity 5: raise “brand” awareness

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• Greenway users questionnaire

Personal information (origin, age, gender, education level, occupational status, outdoor activities propensity)	8
Current greenway use (activities, mode and time of use, mean of transport, reasons of use)	9
Relation with the Unesco site (knowledge, visit, influence on the greenway use)	5
Expenses along the greenway (type and amount of expenses: accommodation, bar, restaurant, bike rental, UNESCO ticket, ecc.)	4
Usual greenway use (frequency and time of use, activities, reasons, mean of transport)	8
Evaluation of the greenway quality (information, services, possible improvements)	5
Total	39

• UNESCO site users questionnaire

All UNESCO users	**Personal information** (origin, age, gender, education level, occupational status, outdoor activities propensity)	8
	Visit to the UNESCO site (reason, activities, mean of transport)	5
	Relation with the greenway (knowledge and use of the greeway)	6
Only greenway users	**Usual greenway use** (frequency and time of use, activities, reasons, mean of transport)	7
	Expenses along the greenway (type and amount of expenses: accommodation, bar, restaurant, bike rental, UNESCO ticket, ecc.)	4
	Evaluation of the greenway quality (information, services, possible improvements)	5
	Total	35

On-site version (pdf and QR code) / online version

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Thanks for the attention

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Paldies par uzmanību

Dikli, September 5th 2019