



UNIVERSITÀ DEGLI STUDI DI MILANO

Dipartimento di Scienze Agrarie e Ambientali



“Greenways Heritage”

Quality protocol and Visitor profile

Giulio Senes, Roberto Rovelli, Gianpaolo Cirone

Milan, October 25th 2019



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The Greenways Heritage Project - The problem

- ✓ Many greenways cross territories of high historical-cultural value, characterized by the presence of **UNESCO sites**.
- ✓ Currently, **there isn't a specific touristic offer** able to combine greenways and UNESCO sites: the two users typologies are considered as separate.



"Burgos Cathedral" (Spain)



Vía Verde del Ferrocarril Vasco Navarro



"Historic Centre of Riga" (Latvia)

Activities

- 1) Definition of a **“protocol” for the development of the "Heritage Greenways" brand**, with guidelines, criteria and requirements check-list.
- 2) **Study of the needs and the behaviours of the tourists** along “Heritage Greenways”, through interviews, on-site surveys and on-line questionnaires.
- 3) Development of a **“provisional model” for estimating tourists increase and economic impact** of “Heritage Greenways”.

1) Definition of a “protocol”

The “**protocol**” for the development of the "Heritage Greenways" brand is made by a set of **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	
B. Tourism services	B1. Intermodality	5
	B2. Accommodations and other services	7
	Tourism services Total	
C. Heritage	C1. UNESCO heritage	7
	C2. Other resources (natural, historical and cultural)	7
	Heritage Total	
Total		55

1) Definition of a “protocol”

The “protocol” for the development of the "Heritage Greenways" brand is made by a set of 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

1) Definition of a “protocol”

The “protocol” for the development of the "Heritage Greenways" brand is made by a set of guidelines, criteria and requirements check-list.

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	$\left(\frac{\sum Score GW_{[0-57]}}{57}\right) \times 100$
Tourism services (TS)	23	$\left(\frac{\sum Score TS_{[0-23]}}{23}\right) \times 100$
Heritage (HE)	29	$\left(\frac{\sum Score HE_{[0-29]}}{29}\right) \times 100$
Overall quality (OQ)	109	$\left(\frac{\sum Score OQ_{[0-109]}}{109}\right) \times 100$

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	★★★★★

2) Study of the needs and the behaviors of the tourists

- 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, etc.)	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 visitors	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 greenway)	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, etc.)	4
	Evaluation of the greenway quality (information, services, possible improvements)	5
	Total	35



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



2) Study of the needs and the behaviors of the tourists

- Greenway users questionnaire

filled questionnaires collected

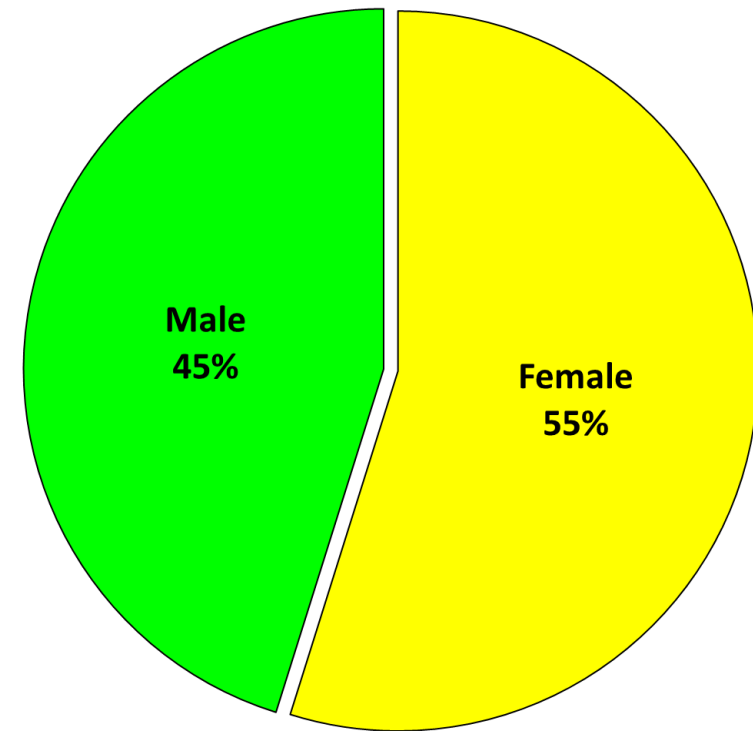
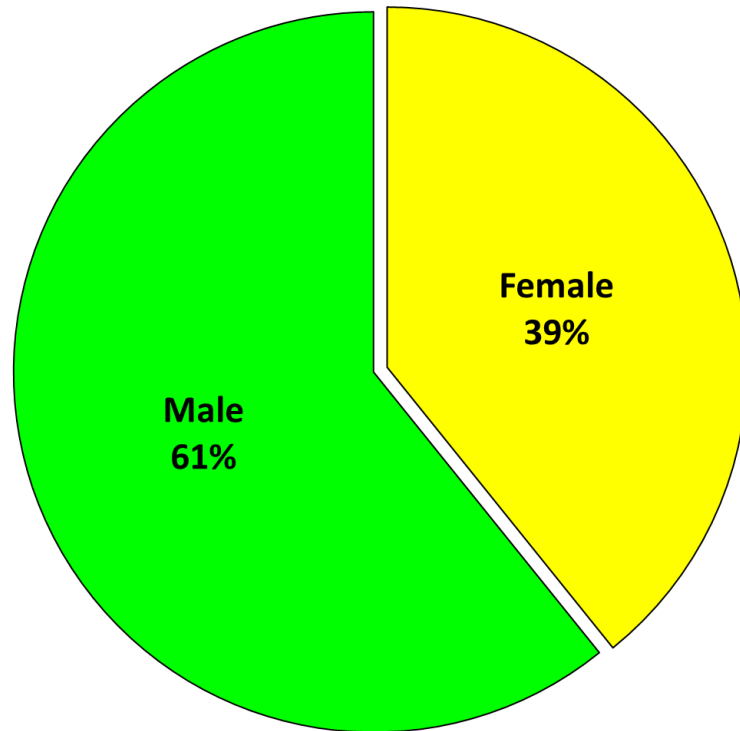
292

- UNESCO site users questionnaire

filled questionnaires collected

124

The survey campaign (May - September 2019) allowed to collect **416** filled questionnaires.



Gender

2) Study of the needs and the behaviors of the tourists

- Greenway users questionnaire

filled questionnaires collected

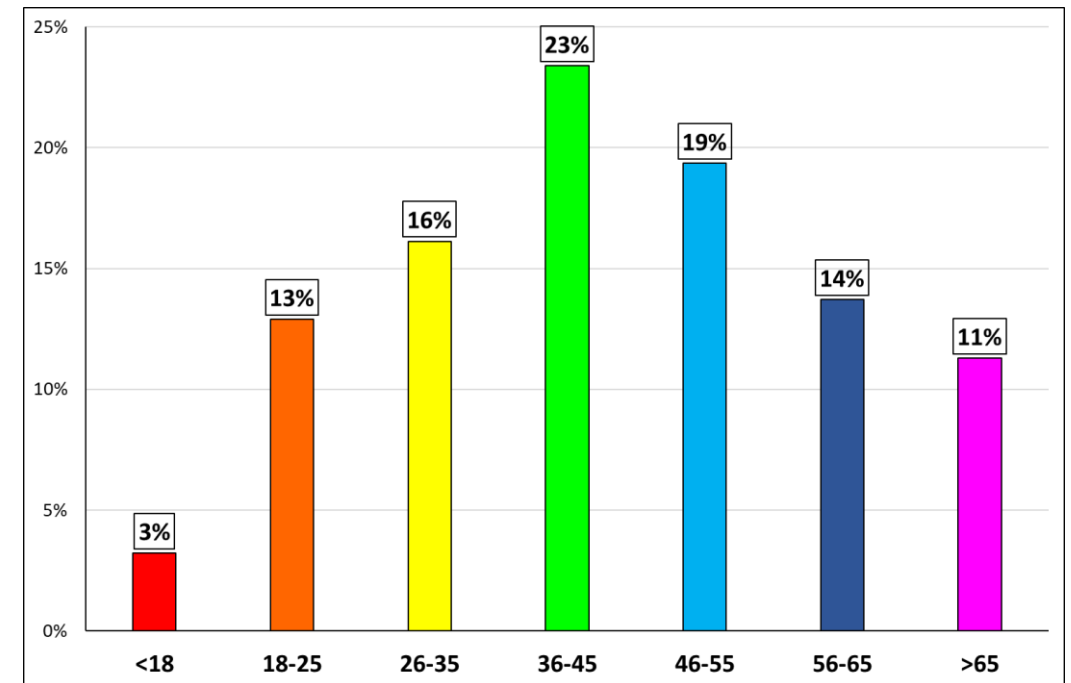
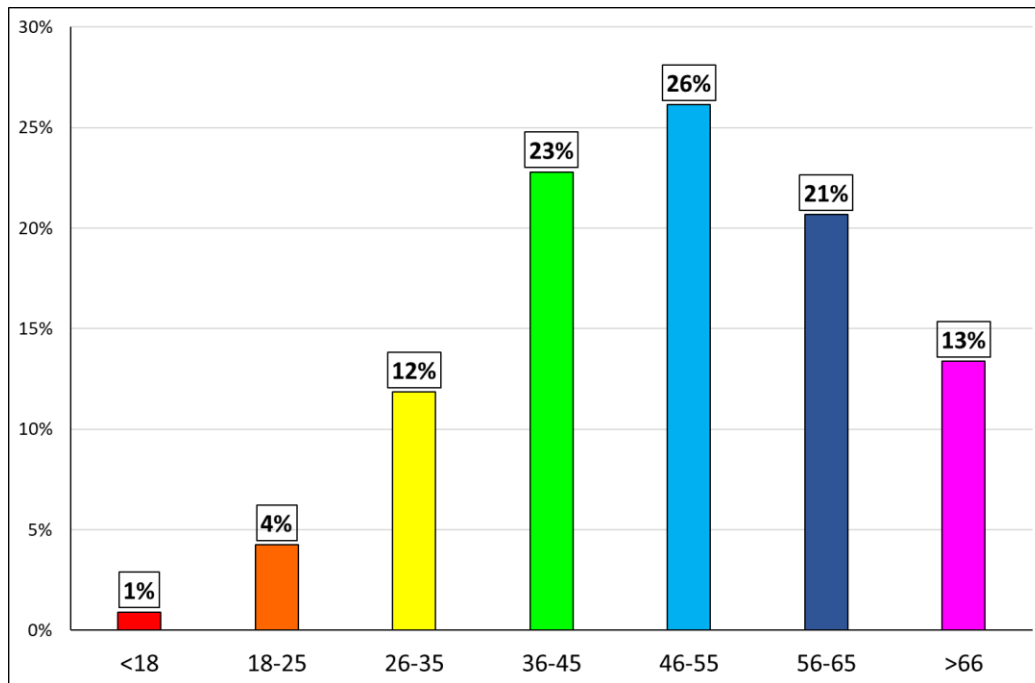
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- UNESCO site users questionnaire

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Age

2) Study of the needs and the behaviors of the tourists

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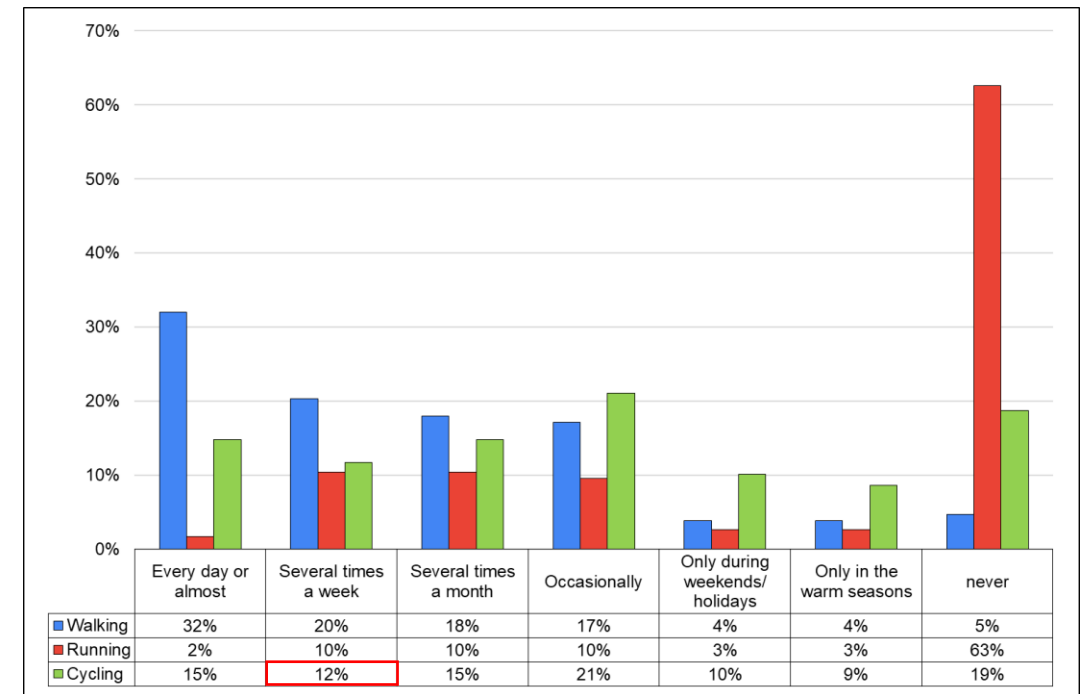
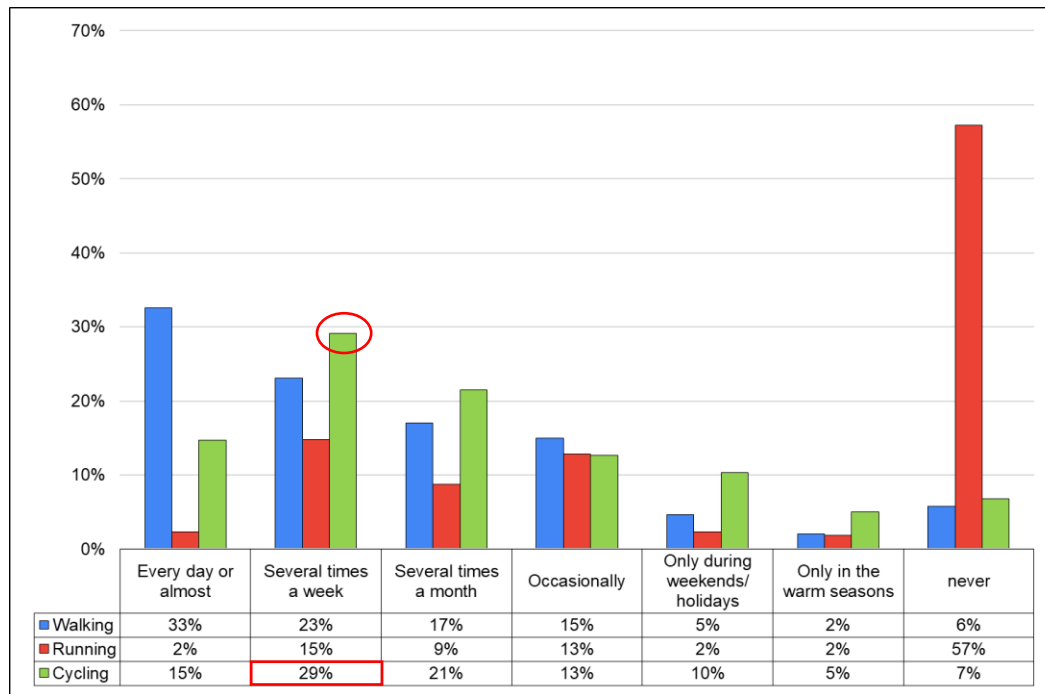
292

- UNESCO site users questionnaire

filled questionnaires collected

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During the year, how often do you make the following outdoor activities?

2) Study of the needs and the behaviors of the tourists

- Greenway users questionnaire

filled questionnaires collected

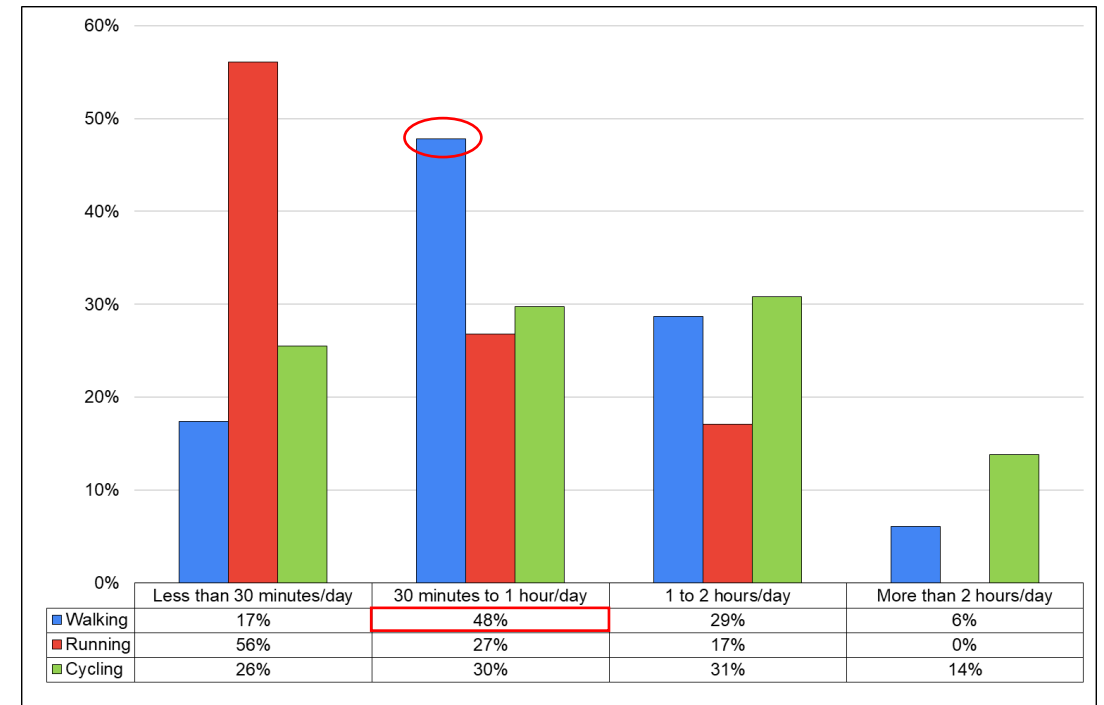
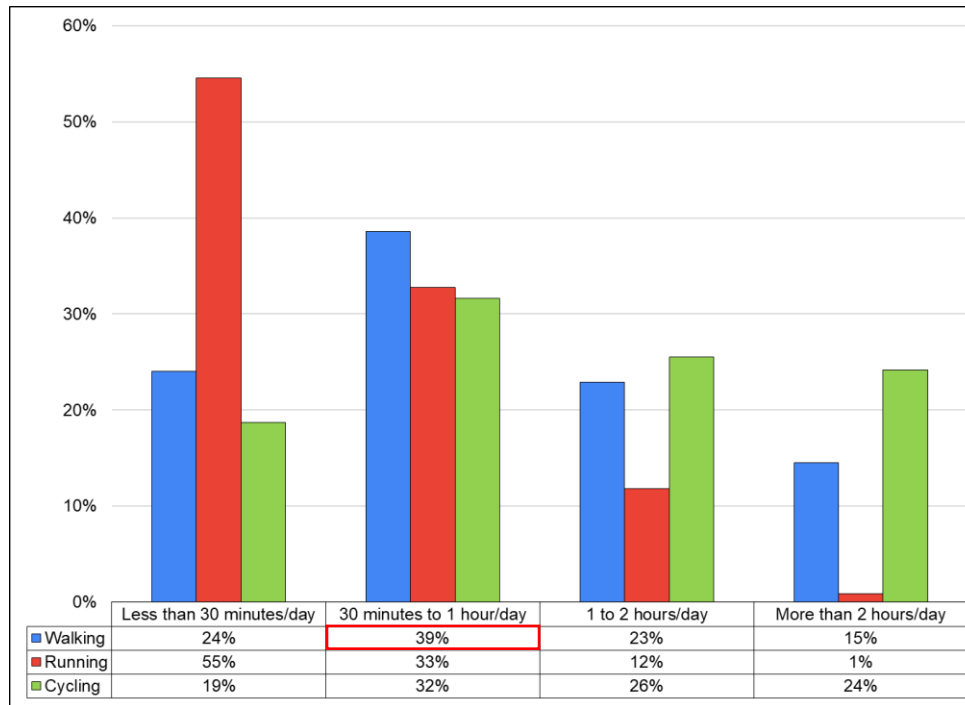
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- UNESCO site users questionnaire

filled questionnaires collected

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How much time do you spend on these activities, during the year?

2) Study of the needs and the behaviors of the tourists

- Greenway users questionnaire

filled questionnaires collected

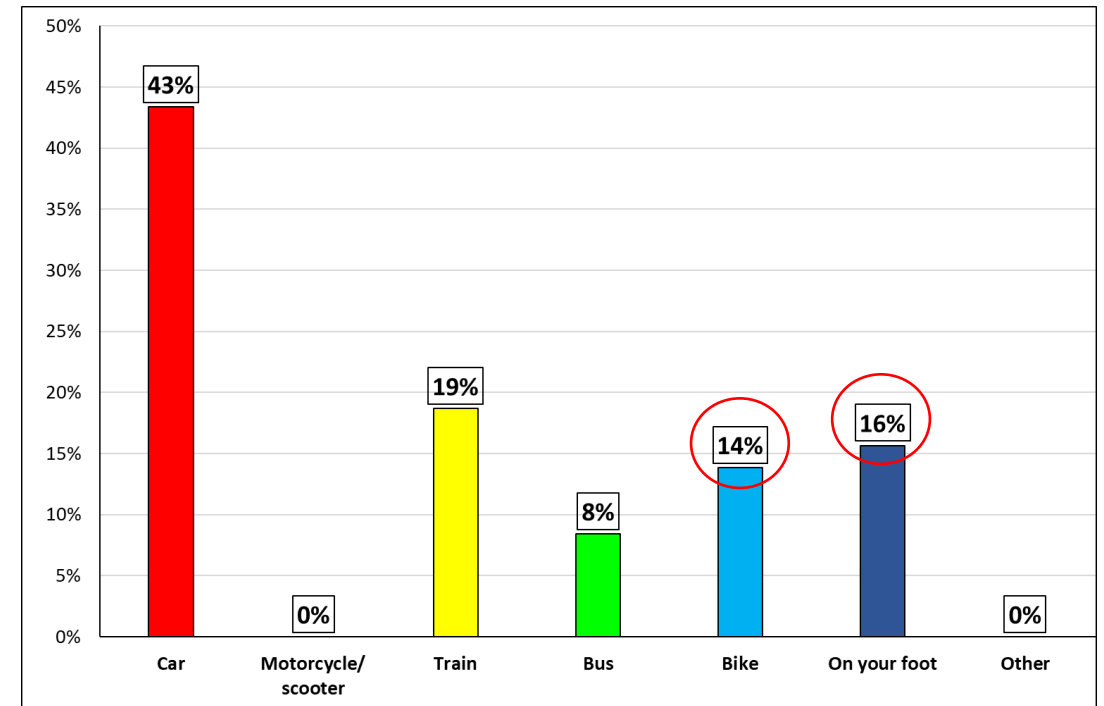
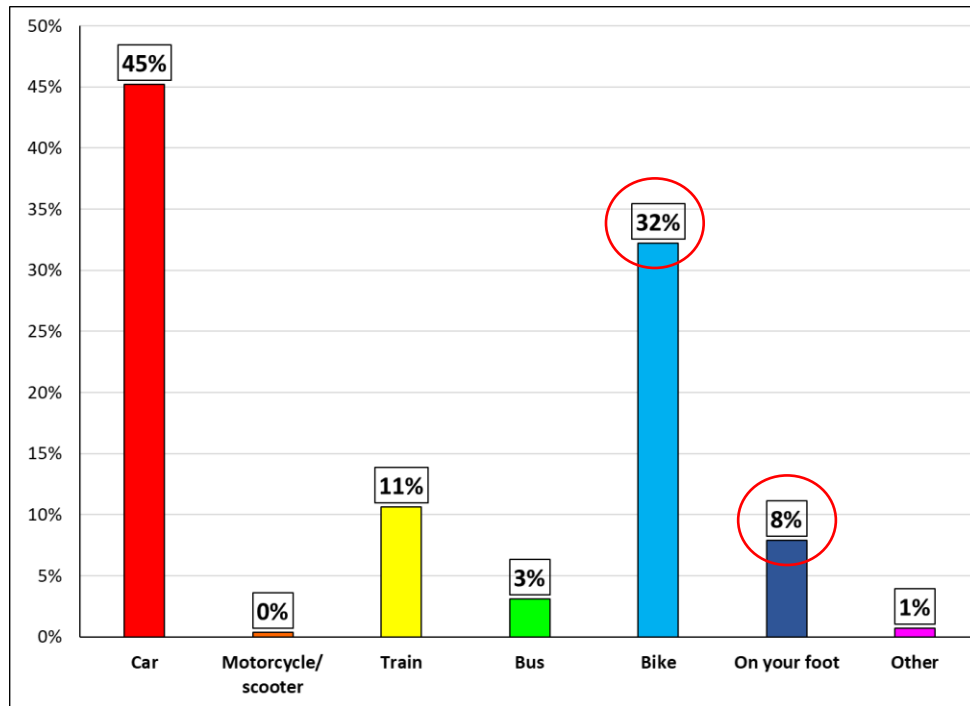
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- UNESCO site users questionnaire

filled questionnaires collected

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Which means of transport did you use to reach the site?

2) Study of the needs and the behaviors of the tourists

- Greenway users questionnaire

filled questionnaires collected

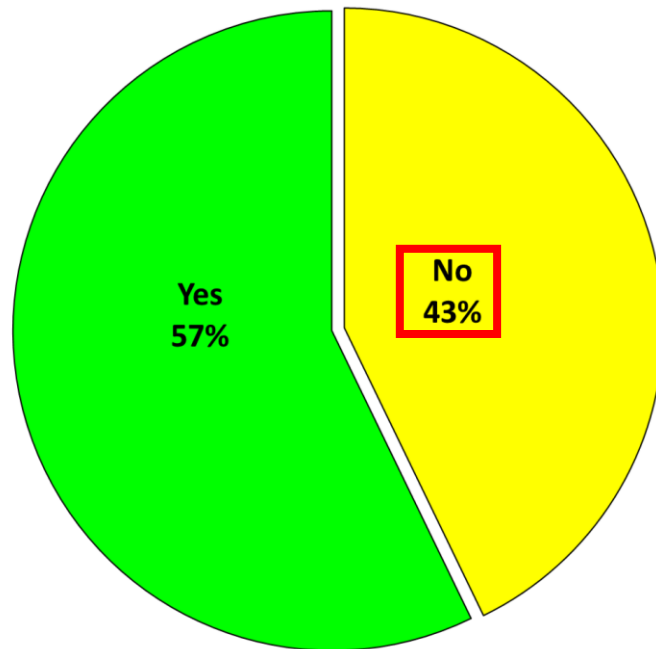
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- UNESCO site users questionnaire

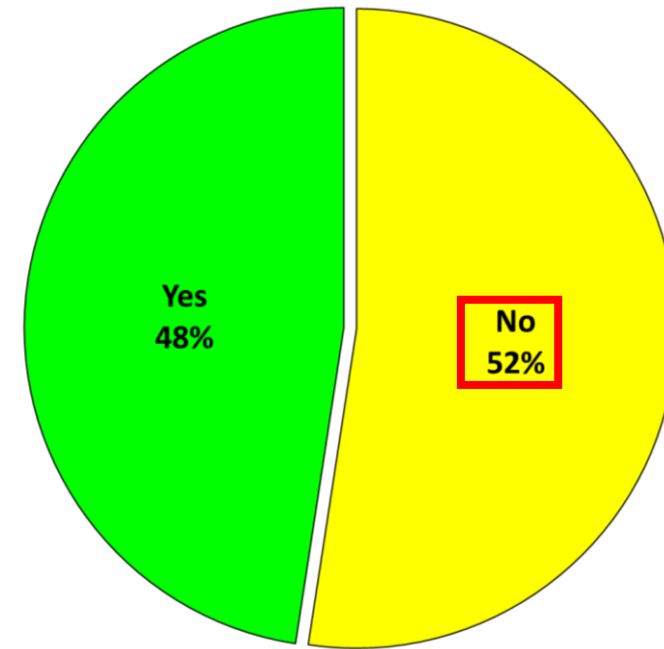
filled questionnaires collected

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Do you know that there is a UNESCO site near the greenway?



Do you know that there is a greenway near the UNESCO site?

2) Study of the needs and the behaviors of the tourists

- Greenway users questionnaire

filled questionnaires collected

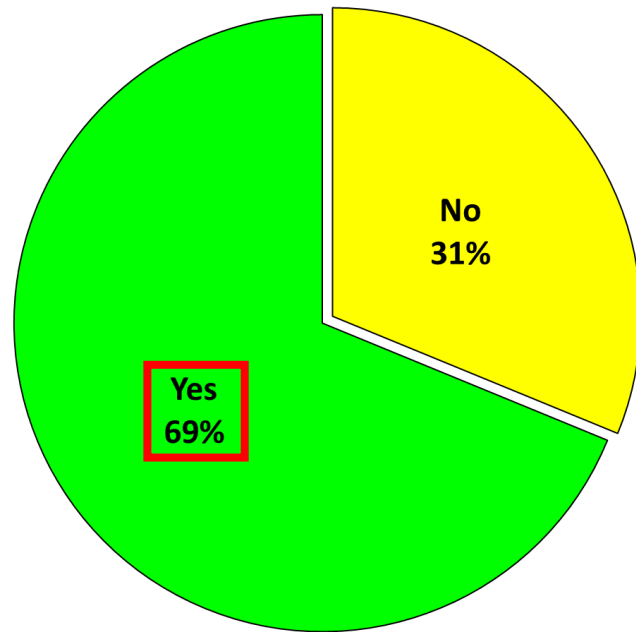
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- UNESCO site users questionnaire

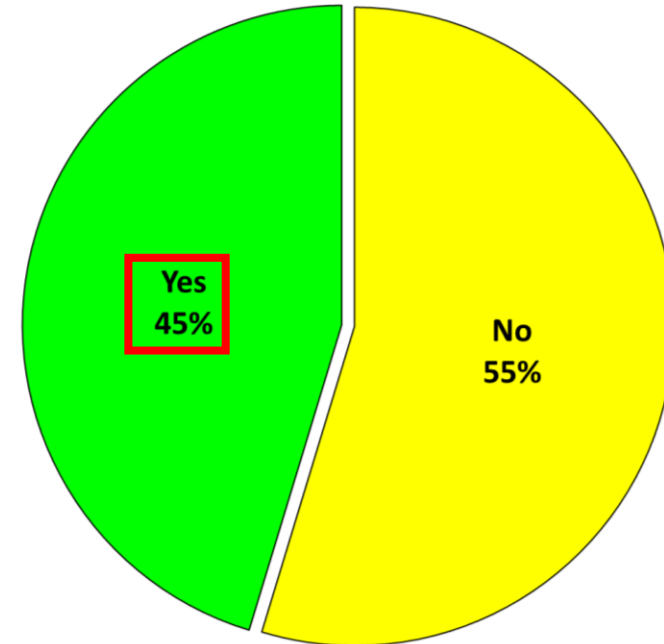
filled questionnaires collected

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If you had known, would you have visited the UNESCO site?



If you had known, would you have used the greenway to reach the UNESCO site or explore the territory?

2) Study of the needs and the behaviors of the tourists

- Greenway users questionnaire

filled questionnaires collected

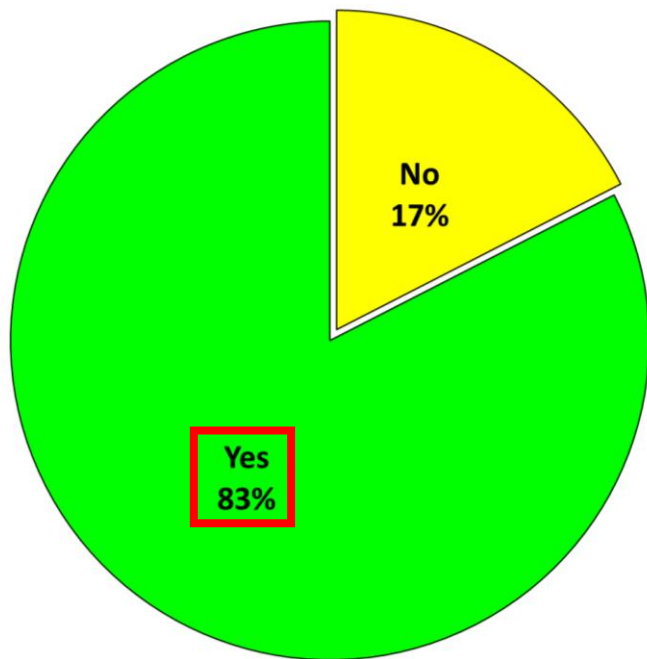
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- UNESCO site users questionnaire

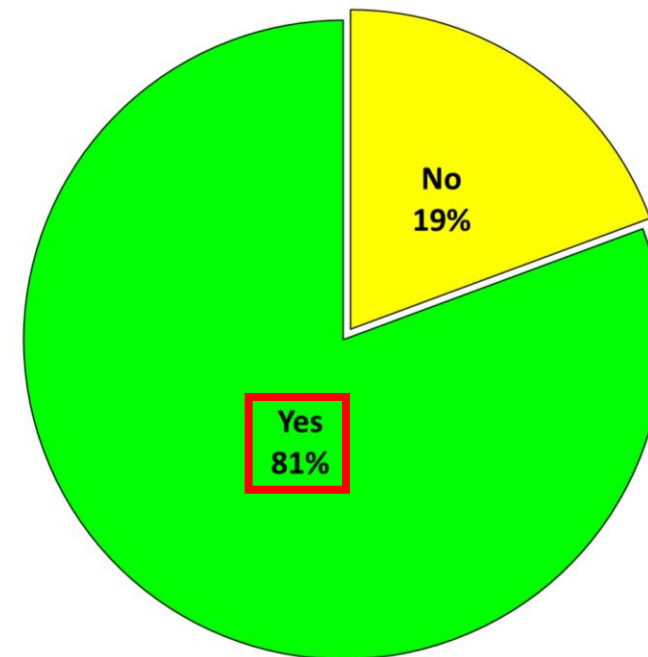
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Are you interested in visiting a UNESCO site near other greenways?



If you had known, would you have used the greenway to reach the UNESCO site or explore the territory?

2) Study of the needs and the behaviors of the tourists

- Greenway users questionnaire

filled questionnaires collected

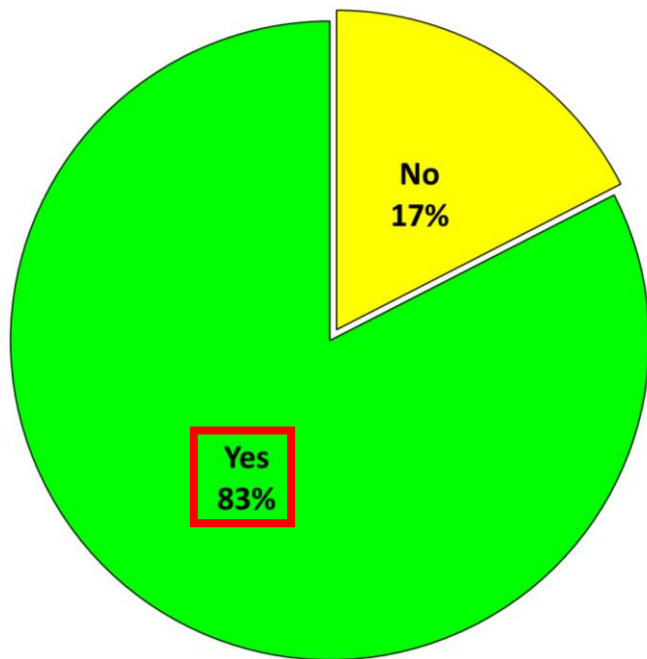
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- UNESCO site users questionnaire

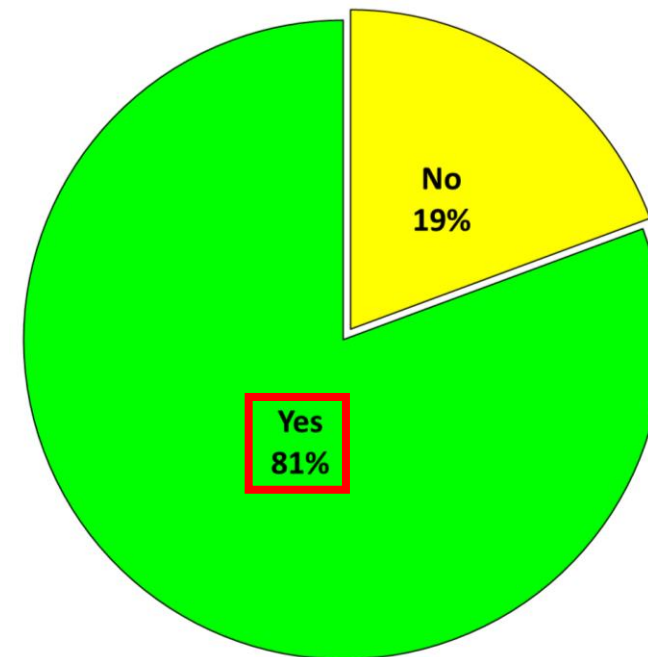
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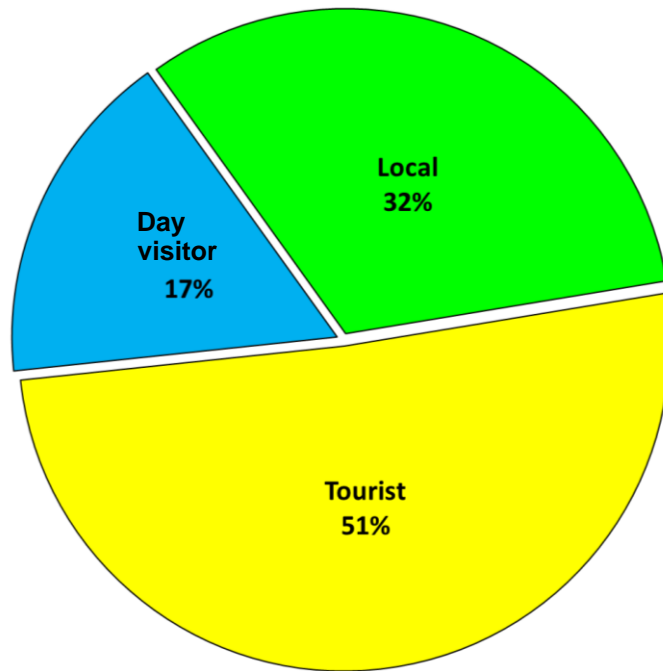
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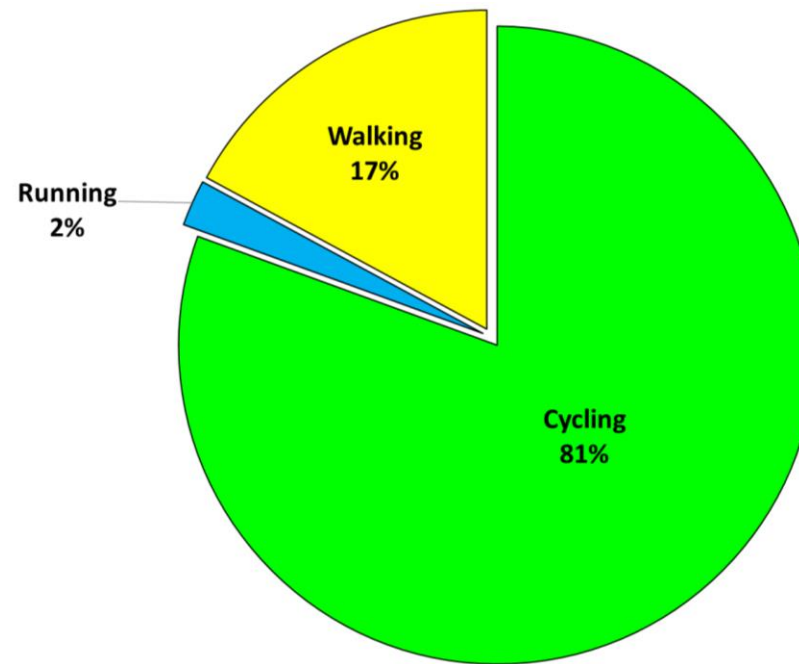
- Greenway users questionnaire

filled questionnaires collected

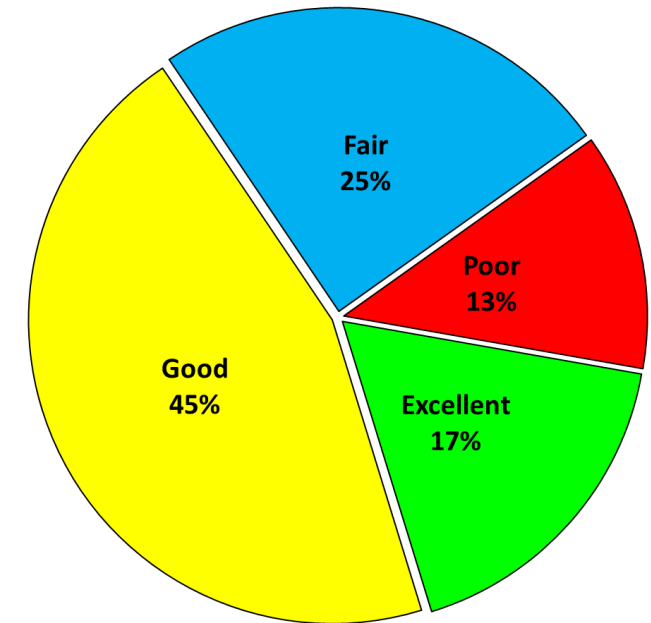
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User type



In which way are you enjoying the greenway?



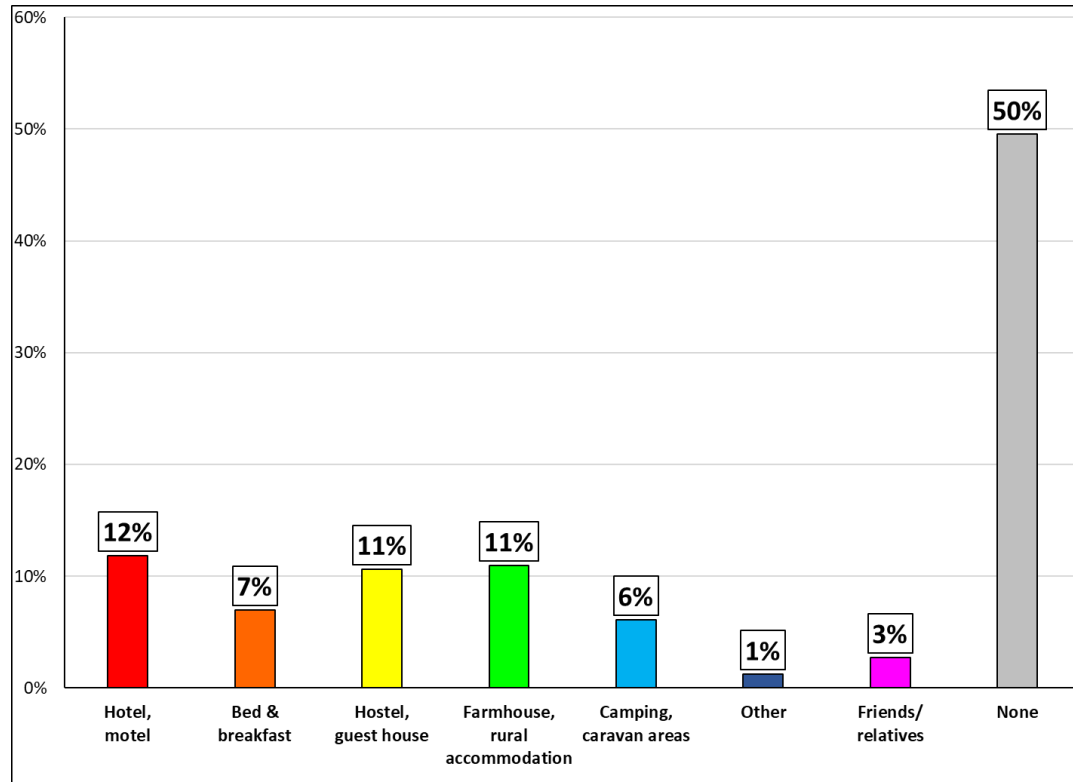
How do you evaluate the overall greenway quality?

2) Study of the needs and the behaviors of the tourists

- Greenway users questionnaire

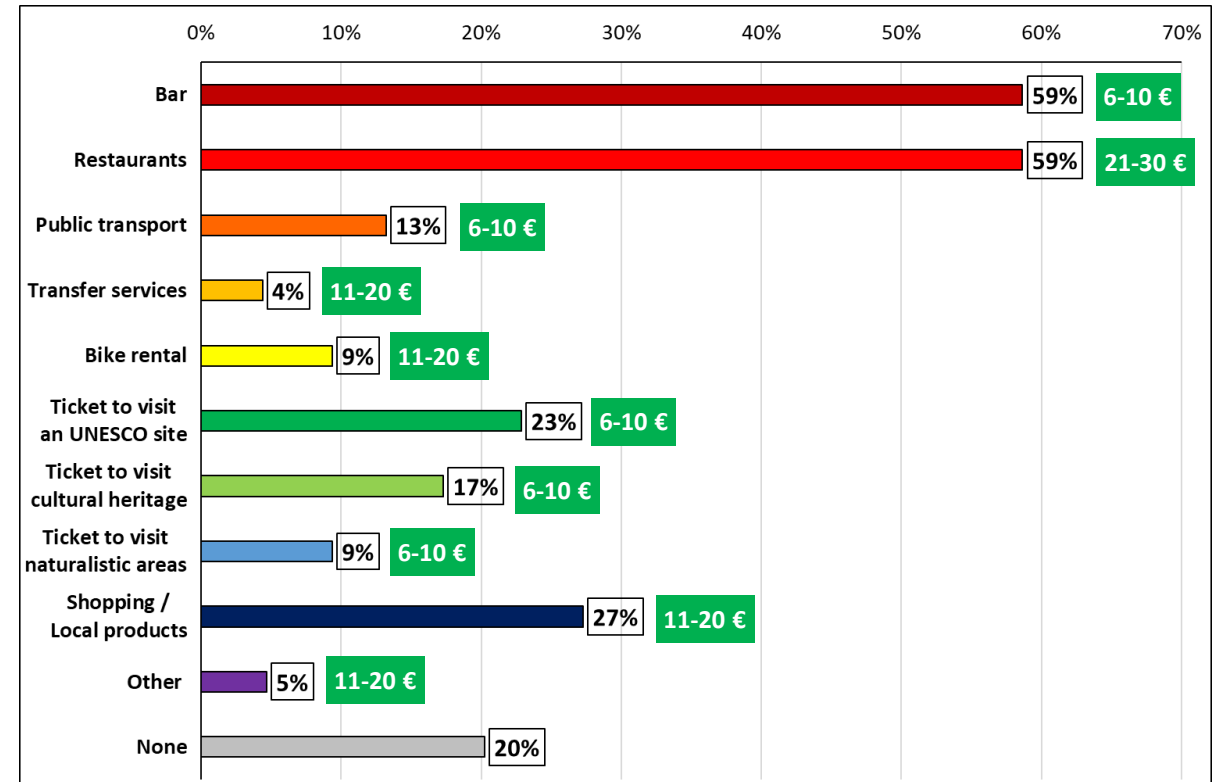
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Overnight stay

On average **3 nights**, spending **55 €/pers/night**



Expenses for services on the greenway

On average, **32 €** on the greenway and **24 €** for accommodation, for a total average of **56 €/user**

3) Evaluation of tourists increase and economic impact

We used the collected data for defining a very draft **estimation of the tourists increase and the relative economic impact** due to the diffusion of the “Greenways Heritage” brand.

The starting point



Journal of Transport Geography

Factors influencing greenways use: Definition of a method for estimation in the Italian context

Giulio Senes^{a,*}, Roberto Rovelli^a, Danilo Bertoni^b, Laura Arata^c, Natalia Fumagalli^a,



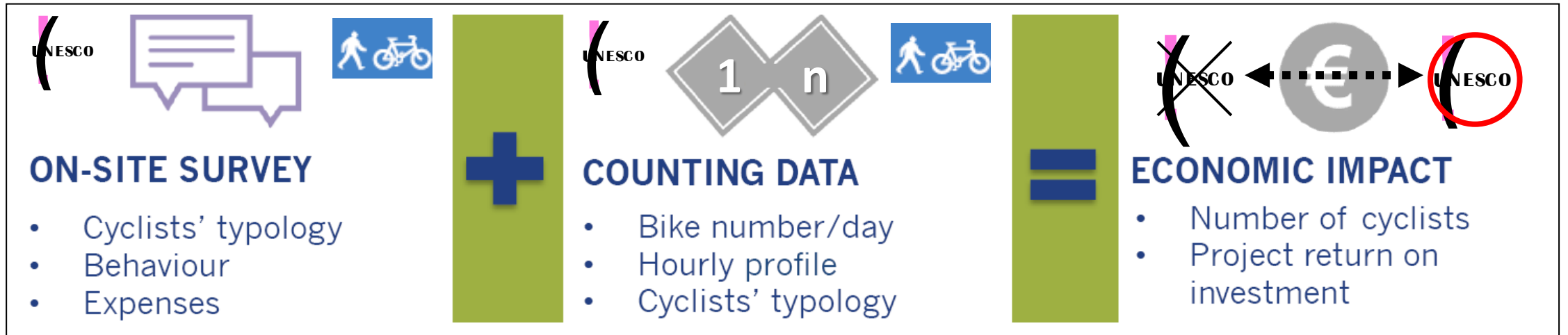
Description of the variables considered in the study.

Variable names	Definition
Dependent variable	
Users	The monthly traffic of each counter
Socio-demographic variables	
Density	Population density (inhabitants per sq. km of land area)
%young	% of the population aged < 15 years
%old	% of the population aged > 64 years
Education	% of the population having an education level ISCED 3 or upper
Income	Per capita Gross Domestic Product (€)
Tourism	Annual number of overnight stays in tourist accommodations per sq. km of land area
Accessibility variables	
Road density	Length of roads per sq. km of land area (km)
Intersections	Number of intersections between greenways and roads
Railways	Number of railway stations
Highways	Number of highways toll-booths
Landscape variables	
Parks_small	% of total land area covered by protected areas
Parks_large	% of total land area covered by protected areas
Forests_small	% of total land area covered by woodlands
Forests_large	% of total land area covered by woodlands
Lakes_small	% of total land area covered by lakes
Lakes_large	% of total land area covered by lakes
Rivers_small	Length of rivers per sq. km of land area
Rivers_large	Length of rivers per sq. km of land area
Urban_small	% of total land area covered by urbanized areas
Urban_large	% of total land area covered by urbanized areas
Elements of interest	Number of elements of historical and cultural interest
Orography	Standard deviation of elevations
Bicycle trails	Presence of other bicycle trails in the study area (yes/no)
Temporal variables	
Holiday	% of holidays in the month



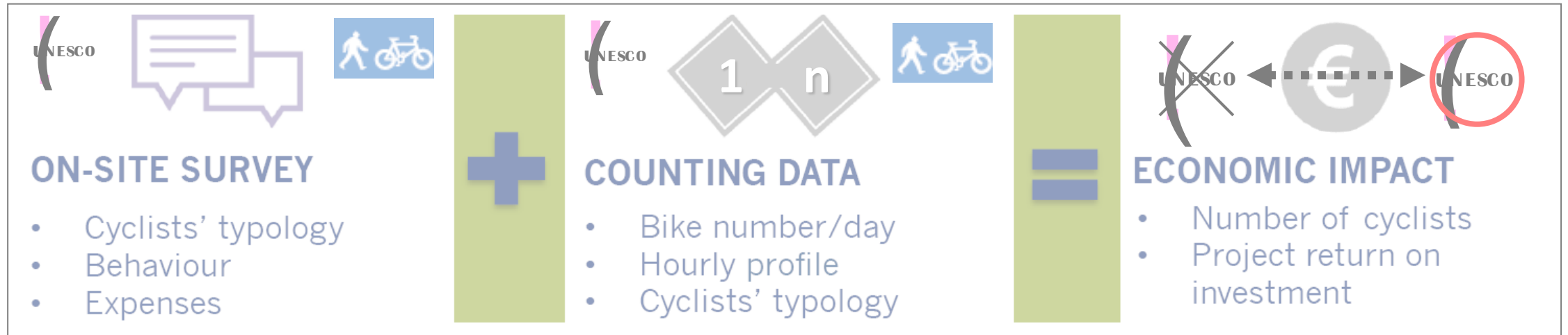
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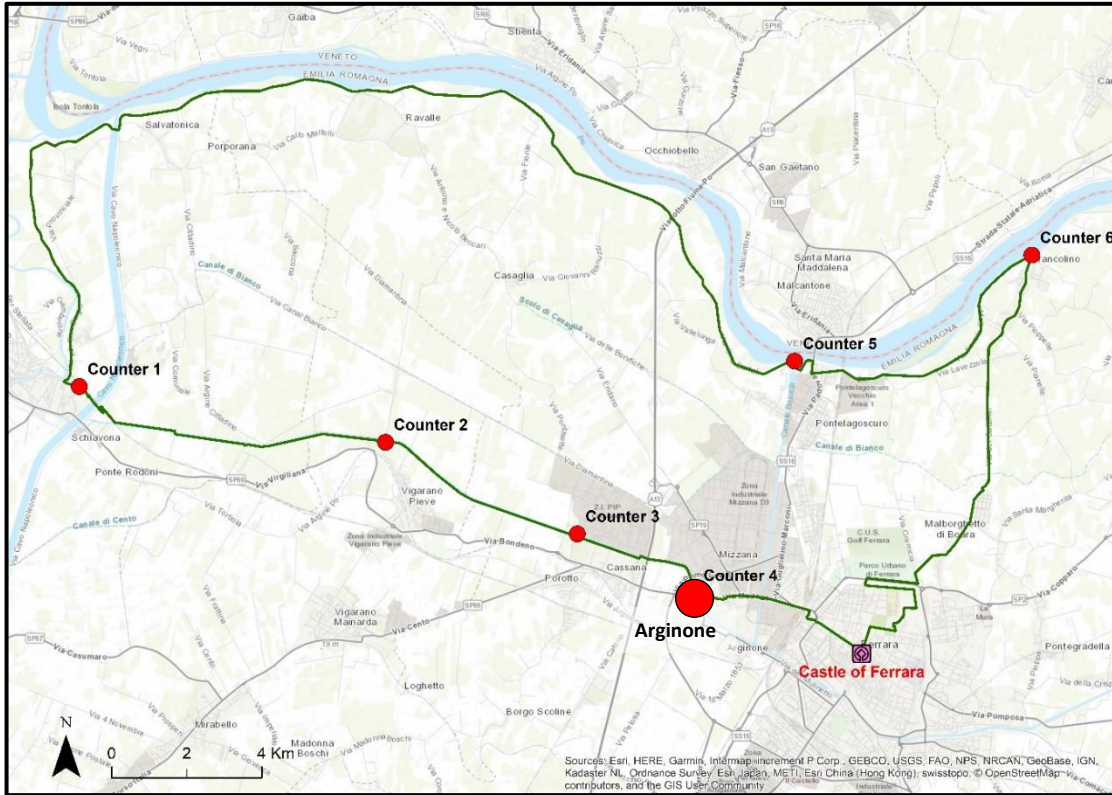
Greenway users

+ 9.2%

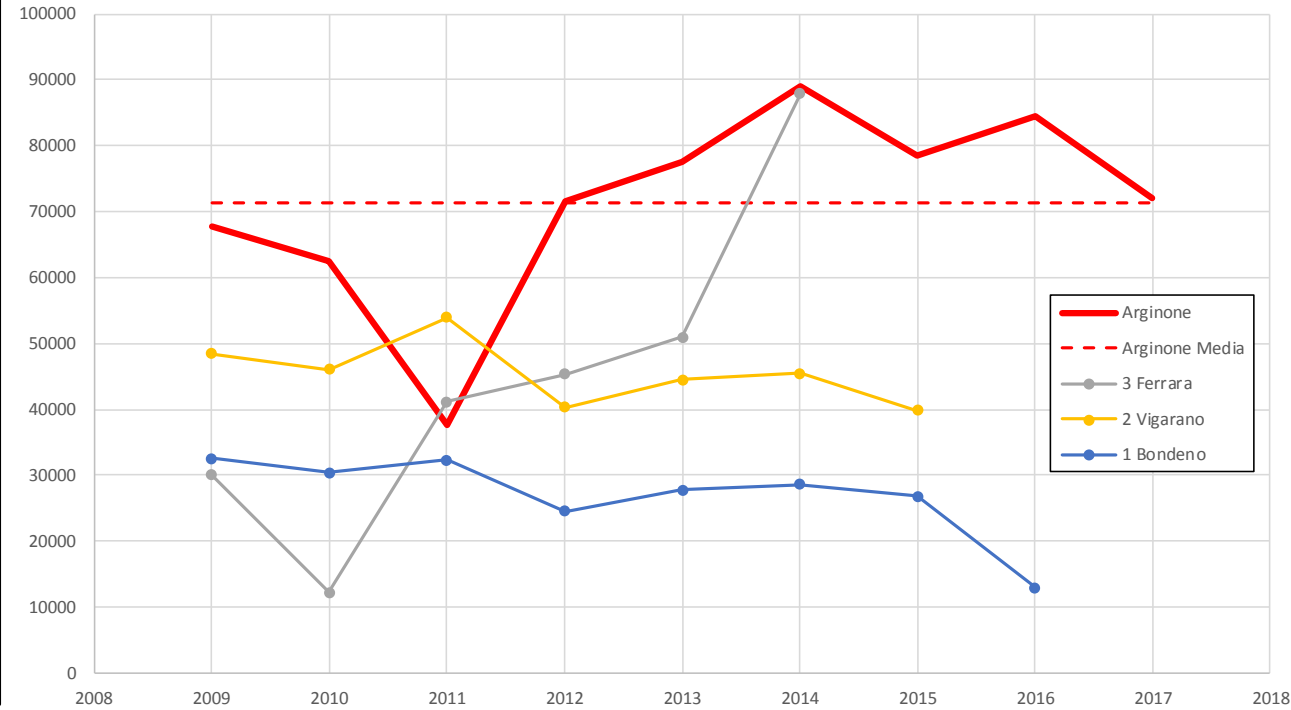
UNESCO site users

+ 12%

3) Evaluation of tourists increase and economic impact



Application to the UNESCO site of Ferrara



Greenway users

+ 18 000 users/year

+ 1.1 M€/year

UNESCO site visitors

+ 8 500 visitors/year

+ 0.12 M€/year



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Thanks for the attention
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Grazie per l'attenzione

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