



## LIFE E-VIA

“Electric Vehicle noise control by Assessment and optimisation of tyre/road interaction”

LIFE18 ENV/IT/000201

<b>Content</b>	Report on website design and statistics on visits
<b>Action/Sub-action</b>	C1
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## Table of contents

<i>Executive Summary .....</i>	<i>1</i>
<i>1 Action D1.2 – LIFE E-VIA WEBSITE specifics and design .....</i>	<i>1</i>
1.1 Specific from the project proposal .....	1
1.2 Website design and activation .....	1
1.2.1 Website’s architecture .....	2
1.2.2 Website’s managing .....	3
<i>2 Action D1.2 – LIFE E-VIA WEBSITE statistics on users’ visits .....</i>	<i>4</i>
2.1 Statistics for the period 1 <sup>st</sup> January – 31 <sup>st</sup> March 2020 .....	5
2.2 Statistics for the period 1 <sup>st</sup> April – 30 June 2020 .....	11
<i>3 Acknowledgments .....</i>	<i>17</i>

## Executive Summary

Exposure data from the European Environment Agency (EEA) demonstrate that more than 100 million EU citizens are affected by high noise levels negatively impacting human health. Traffic noise alone is harmful to the health of almost every third person in the WHO (World Health Organization) European Region. 20% of Europeans are regularly exposed to night sound levels that could significantly damage health, especially in urban areas. As emerged in Noise in Europe Conference (April 2017) and in the WHO guidelines published in October 2018, the increased stringency of EU at source standards needs to be balanced against other effective measures such as road surface and/or tyre improvements and urban planning measures as well.

One of the solutions universally recognized as the best to reduce noise in urban areas, from both the point of view of noise and air quality, is the introduction of electric mobility. Similar effects can also be observed for the contribution of the tyre rolling resistance to the vehicle's energy consumption.

Thus, for the changed requirements of Electric Vehicles (EVs) there is a need for in-depth investigations of tyre/road interaction. Last but not least, even for the application of the Directive 2002/49/EC, the coefficients to apply the CNOSSOS model (Directive 996/2015/EC) to new traffic spectra and new vehicles are completely missing.

Therefore, the LIFE E-VIA project intends to:

- tackle noise pollution from road traffic noise focusing on a future perspective in which electric and hybrid vehicles will be a consistent portion of flow;
- combine knowledge of road optimization and tyre development in order to test an optimized solution for reducing noise in urban areas and Life Cycle Cost with respect to actual best practices.

The main project objectives are:

1) To reduce noise for roads inside very populated urban areas through the implementation of a mitigation measure aimed at optimizing road surfaces and tyres of EVs. Two road surfaces, at least 5 different EV types, one reference ICE Vehicle (ICEV) and at least 3 types of tyres per vehicle type (including tyres specifically designed for EVs) will be tested.

- 2) To estimate the mitigation efficiency and potential of tyres, pavements and traffic (traffic spectrum, speeds, handling conditions) at a higher and comprehensive level: a Life Cycle Analysis (LCA) and a Life Cycle Cost Analysis (LCCA) will be performed to demonstrate the individual and synergistic efficiency of pavement surfaces, tyres and vehicles (including the comparison between internal combustion vehicles, mixed traffic, and EV traffic).
- 3) To contribute to EU legislation effective implementation (EU Directives 2002/49/EC and 2015/996/EC), providing rolling noise coefficients within the Common Noise Assessment Method (CNOSSOS-EU), specifically tuned for EVs which are actually in need of data for practitioners, agencies, and departments aiming at developing future scenarios.
- 4) To contribute to national and Italian regional policies, issuing guidelines about use and application of the methodology output of the project, which will be adopted, through the Regional Env. Agency (ARPAT), supporting the project, by Tuscany Region, strongly interested in noise issues. Calabria Region and Città of Reggio Calabria also expressed their interest.
- 5) To raise people's awareness of noise pollution and health effects explaining the opportunities provided by EVs through specific dissemination and promotional events, also investigating people perception regarding noise in terms of soundscape methodology and involving them in noise data acquisition.
- 6) To demonstrate and promote sustainable road transport mobility (electric), reducing noise emission by 5 dB(A) at receivers roadside and achieving also CO<sub>2</sub> emissions reduction (21%), based on the Italian context (LPG, CNG, Hybrid, EV, petrol cars, diesel cars) and the concerned literature.
- 7) To encourage low-noise surfaces implementation in further EU and extra-EU scenarios, demonstrating durability and sustainability, through in-depth LCA&LCCA.

A Project milestone is associated to Action D1 which is the object of the present report and it consists in the LIFE E-VIA website launching foreseen by 31<sup>st</sup> December 2019.

This milestone has been reached according to the established deadline and the LIFE E-VIA website URL is <https://life-evia.eu/>. The website design has been commissioned to an external company, while the managing is directly in charge of Vie en.ro.se and it is carried out by a back-end service.

According to the Key Project Level Indicators, among the “Communication, dissemination, awareness rising” sections also some specific indicators for the website are established.

In addition to the mandatory statistics to be provided according the Project’s proposal, also the following information will be periodically analysed and reported:

- typology of device used by visitors to connect
- typology of access: direct to the website link or indirect
- country of origin of the device
- most visited pages
- average duration of the visit session
- documents download

Specifically, statistics on the website are managed from the back-end service and from the Google analytics application after the creation of a dedicated email address linked to the Project’s website.

Collected data will be analysed and reported every three months.

## **1 Action D1.2 – LIFE E-VIA WEBSITE specifics and design**

### **1.1 Specific from the project proposal**

The website is one of the keys for a good dissemination action and for monitoring the Project impact.

The structure of the LIFE E-VIA website was expected to be designed within the first 6 months of the Project's activity, then continuously updated and maintained after the end of the Project for 3 years. It is in English language and it is addressed to present Project's goal, main objectives, partnership, foreseen actions and expected results. Moreover, a "news" section reports the most recent events related to the Project development and it will be updated at least monthly. The website will also include the official LIFE logo, linked to the LIFE web page and it will be structured in different sections/pages:

- without password, containing: News and Project events advertisements, Link to Project partners' web pages and of other actors involved in the Project implementation, Link to the website of other projects such as LIFE NEREIDE, FOREVER and PERSUADE whose results will be in part adopted by the current Project, A FAQ section.
- a password protected area, available only to registered users (information on accesses will be treated at different levels for impact monitoring and assessment). In this area it will be possible to download: Project reports, Dissemination and Information materials selected and approved by the scientific committee.
- a Project work area, password protected only to LIFE E-VIA partners, allowing for easy and fast communication between partners, including a section in which progressive and final results with statistics and data related to people participation in the actions and a section containing Reports from the partners/other relevant documents. A discussion forum will be made available to guarantee networking activities.

According to the Project's milestones, the LIFE E-VIA website was expected to be online within 31<sup>st</sup> December 2019.

### **1.2 Website design and activation**

The LIFE E-VIA URL is <https://life-evia.eu/> and it has been activated since 31<sup>st</sup> December 2019.

Figure 1 shows how the Home Page looks like.

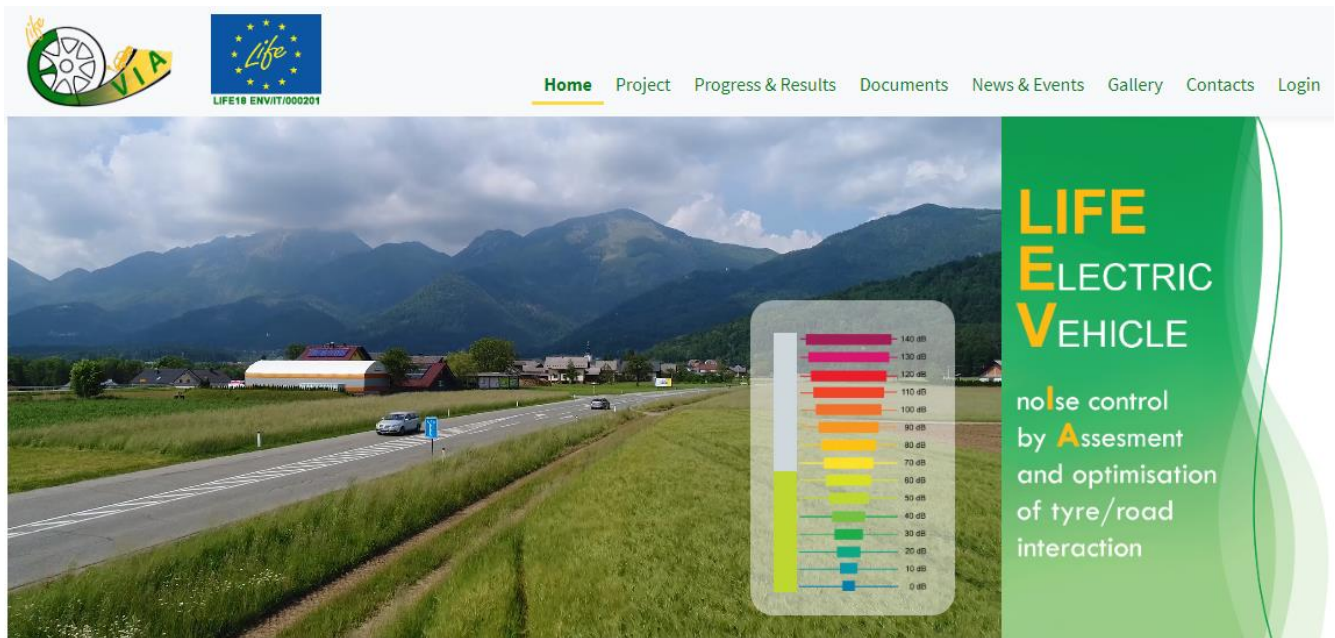


Figure 1- LIFE E-VIA website Home Page.

### 1.2.1 Website's architecture

The website architecture is structured as it follows.

«Home page»: LIFE/project/partners logos, project's description, news and events (the last three in evidence), related links to other projects or initiatives, links to social networks.

«Project»: description, beneficiaries, objectives, foreseen actions, expected results, actions' description.

«Progress and Results»: Gantt chart, list of deliverables, list of milestones, progress of single actions (planned starting/ending date, actual starting/ending date, percentage of completion, ...).

«Documents»: publications, deliverables, reports, presentations.

«News and events»: last news in evidence and archive organized with monthly folders.

«Gallery»: photos and brief description of dissemination events.

«Contacts»: references of people involved in the project for each partner (email address, office phone number).

“Reserved area” for partners.

After the Monitoring meeting held on 21<sup>st</sup> February 2020 in Florence, it was agreed with the Project's monitor to add a “FAQs” and a “Stakeholders” folders for the Networking activities and it has been done accordingly (Fig. 2).

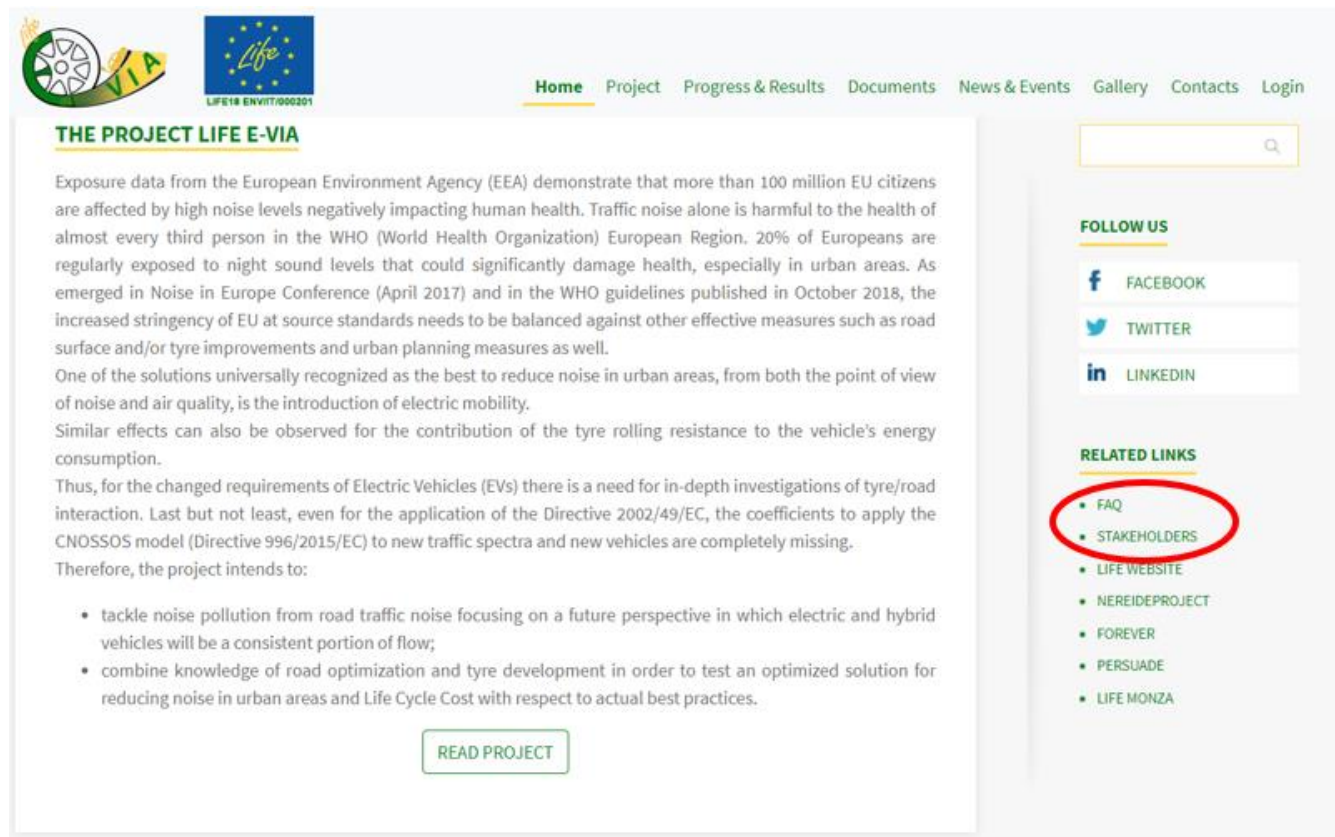


Figure 2- LIFE E-VIA website – FAQ and Stakeholders sections.

With respect to specifics reported in Paragraph 1.1 it has been considered unnecessary to make a section protected via password to users since all useful documents (free available papers, project's reports, presentations, etc.) will be made available to all website's visitors.

### 1.2.2 Website's managing

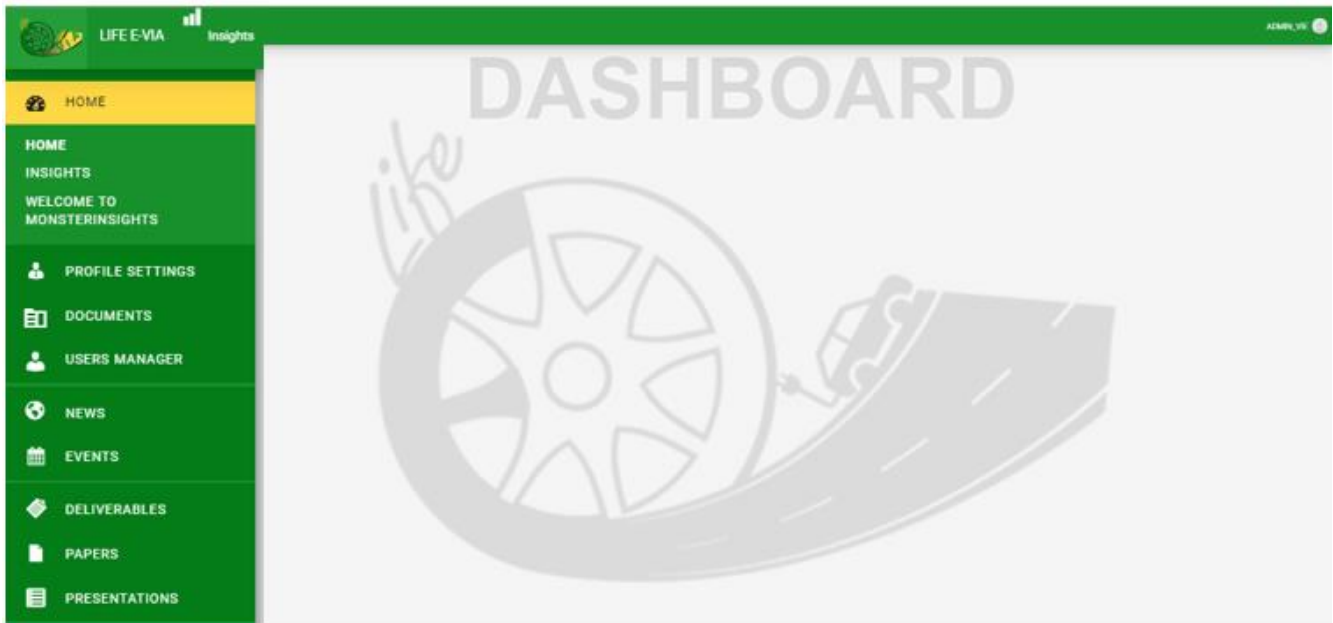
The LIFE E-VIA website has been designed by Smarts S.r.l. (Vie en.ro.se external contracting) with inputs and contents assistance provided by Vie en.ro.se Ingegneria and project's partners in order to respect specifications indicated in the project.

A back-end service is available, and online lessons have been organized between Smarts S.r.l. and Vie en.ro.se, so that Vie en.ro.se can be autonomous in:

- Managing website registrations and decide users' role (manager/simple user)
- Uploading documents/pictures
- Adding and editing news/events
- Updating project's results
- Changing logos, etc.



In Figure 3 a picture of the back-end home page service is shown.



*Figure 3- LIFE E-VIA website, interface of back-end service.*

## 2 Action D1.2 – LIFE E-VIA WEBSITE statistics on users' visits

According to the Key Project Level Indicators, among the “Communication, dissemination, awareness rising” sections also some specific indicators for the website are established.

In particular, by the end of the Project the number of expected **website's visits** is 70000.

This estimation is based on the hypothesis that, thanks to the activities to be carried out during actions D1 and D2 and to the letters of support sent to the project coordinator, there will be a changing in the citizens' behaviour in terms of sensibilization to EV and possibly purchasing of an EV in case of need to change their private or business car.

Moreover, within 3 years after the project's conclusion, 100000 website's visits are expected.

The estimation has been based on the experience made on previous carried out LIFE projects, the collection of data about the website visits will be assured for 3 years after the end of the project.

Finally, according to the filled LIFE KPI indicators, the values of the following indicators are requested to be provided at the end of the project and three years after its conclusion:

- n° of unique visits
- n° of individuals

- n° of download
- average visit duration

In addition to the mandatory statistics to be provided according the Project's proposal and the KPI, also the following information will be periodically analysed and reported:

- typology of device used by visitors to connect
- typology of access: direct to the website link or indirect
- country of origin of the device
- most visited pages

Specifically, statistics on the website are managed from the back-end service and from the Google analytics application (Fig. 4) after the creation of a dedicated email address linked to the Project's website.

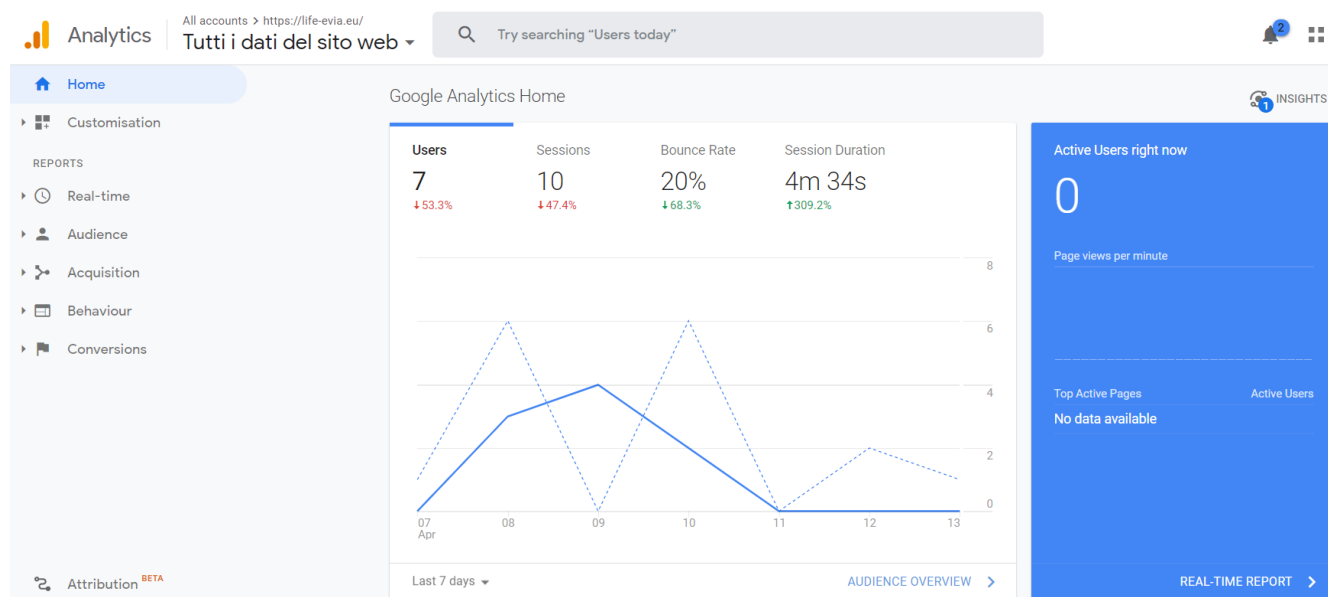
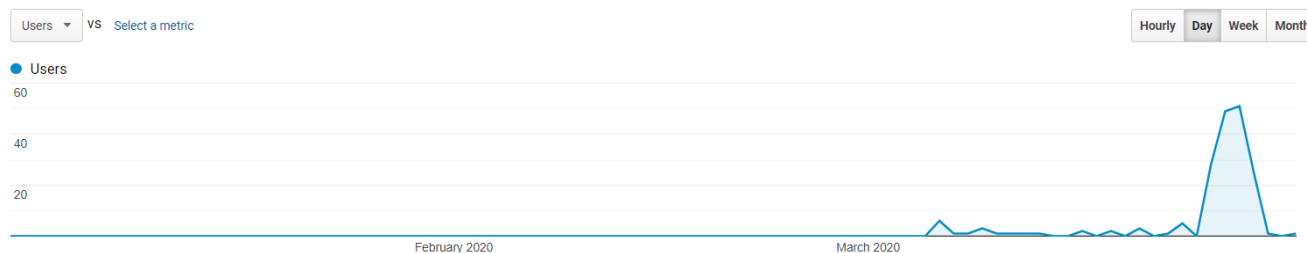
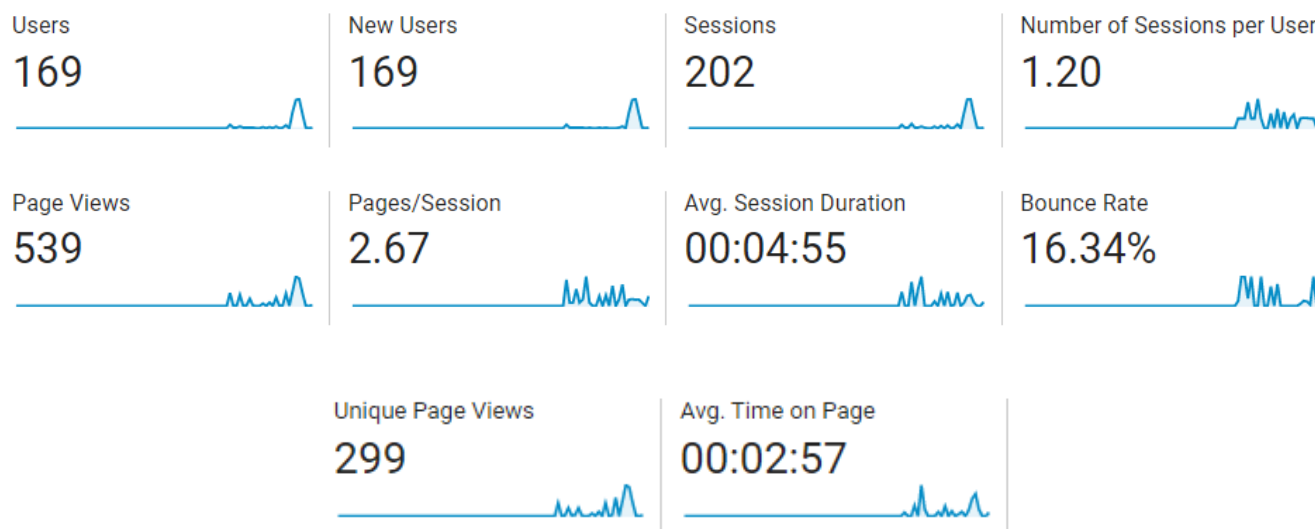


Figure 4- LIFE E-VIA website – Google Analytics interface.

## 2.1 Statistics for the period 1<sup>st</sup> January – 31<sup>st</sup> March 2020



*Figure 5- Trend of website visits – Google Analytics.**Figure 6- Number of users, sessions, page views, average session duration, bounce rate – Google Analytics.**Figure 7- Percentage of New visitor vs Returning visitor – Google Analytics.*

Language	Users	% Users
1. en-us	54	 31.95%
2. en-gb	33	 19.53%
3. it-it	15	 8.88%
4. de-de	11	 6.51%
5. it	8	 4.73%
6. de	7	 4.14%
7. es-es	6	 3.55%
8. fr-fr	6	 3.55%
9. es	4	 2.37%
10. fr	4	 2.37%

Figure 8- Language of origin country of the connected devices – Google Analytics.






Country	Users	% Users
1.  Italy	25	 14.79%
2.  United Kingdom	20	 11.83%
3.  Germany	19	 11.24%
4.  Spain	12	 7.10%
5.  Poland	11	 6.51%
6.  France	8	 4.73%
7.  Ukraine	8	 4.73%
8.  Netherlands	7	 4.14%
9.  Hungary	5	 2.96%
10.  Czechia	4	 2.37%

Figure 9- Country of origin of the connected devices – Google Analytics.

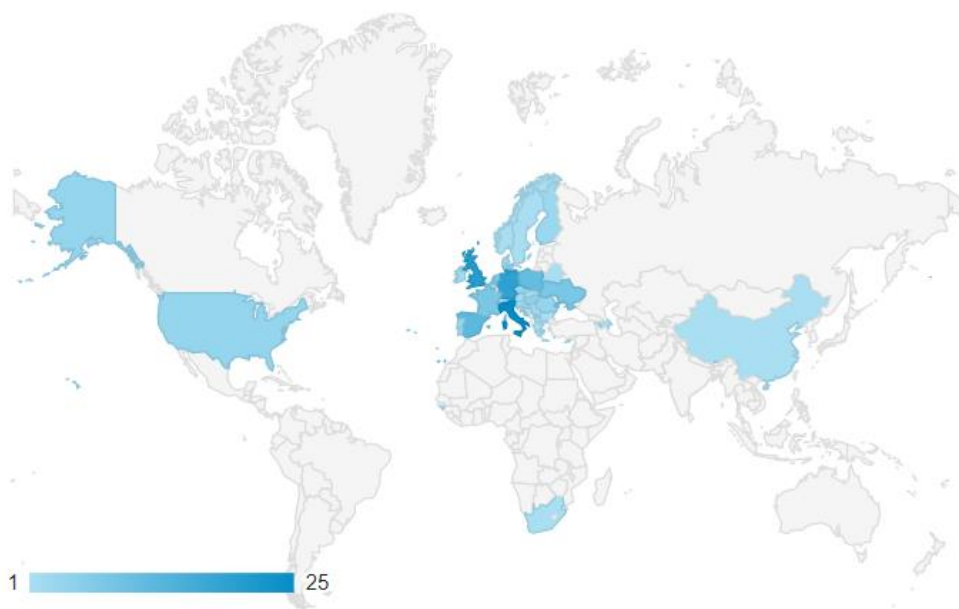


Figure 10- Map of Countries of origin of the connected devices – Google Analytics.

City	Users	% Users
1. (not set)	20	11.56%
2. Warsaw	5	2.89%
3. Kyiv	5	2.89%
4. London	4	2.31%
5. Florence	4	2.31%
6. Turin	4	2.31%
7. Prague	2	1.16%
8. Berlin	2	1.16%
9. Frankfurt	2	1.16%
10. Madrid	2	1.16%

Figure 11- City of origin of the connected devices – Google Analytics.

Operating System	Users	% Users
1. Android	77	45.56%
2. Windows	77	45.56%
3. Chrome OS	9	5.33%
4. Macintosh	4	2.37%
5. iOS	2	1.18%

Figure 12- Typology of operating system of the connected devices – Google Analytics.

Operating System	Users	% Users
1. Android	77	97.47%
2. iOS	2	2.53%

Figure 13- Typology of operating system of the connected (mobile) devices – Google Analytics.

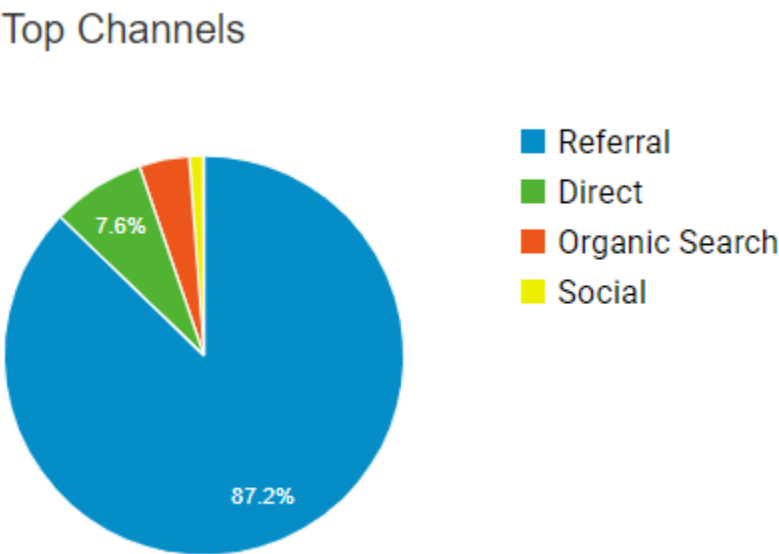


Figure 14- Percentage of direct vs indirect connections – Google Analytics.

<input type="checkbox"/>	Page ?	Total Events ?	↓
		18	% of Total: 100.00% (18)
<input type="checkbox"/>	1. /	8 (44.44%)	
<input type="checkbox"/>	2. /papers/papers-1-lorem-ipsum/	3 (16.67%)	
<input type="checkbox"/>	3. /presentations/life-e-via-project-partners-meeting-february-20-2020/	2 (11.11%)	
<input type="checkbox"/>	4. /deliverables/dissemination_album_actions-d1-d2/	1 (5.56%)	
<input type="checkbox"/>	5. /deliverables/dissemination-plan_action-d1/	1 (5.56%)	
<input type="checkbox"/>	6. /event/test-news-4/	1 (5.56%)	
<input type="checkbox"/>	7. /presentations/official-welcome-meeting-bruxelles-november-2019/	1 (5.56%)	
<input type="checkbox"/>	8. /presentations/presentation-2-lorem-ipsum/	1 (5.56%)	

Figure 15- Most visited sections – Google Analytics.

<input type="checkbox"/>	Event Action ?	Total Events ?	↓
		6	% of Total: 33.33% (18)
<input type="checkbox"/>	1. <a href="https://life-evia.eu/wp-content/uploads/2020/03/Presentations_meeting_february.pdf">https://life-evia.eu/wp-content/uploads/2020/03/Presentations_meeting_february.pdf</a>	2 (33.33%)	
<input type="checkbox"/>	2. <a href="http://life-evia.eu/wp-content/uploads/2020/01/LIFE-E-VIA_Bruxelles_nov_19.pdf">http://life-evia.eu/wp-content/uploads/2020/01/LIFE-E-VIA_Bruxelles_nov_19.pdf</a>	1 (16.67%)	
<input type="checkbox"/>	3. <a href="http://life-evia.eu/wp-content/uploads/2020/01/Presentation_LIFE18-E-Via_OSLO_Eurocities.pdf">http://life-evia.eu/wp-content/uploads/2020/01/Presentation_LIFE18-E-Via_OSLO_Eurocities.pdf</a>	1 (16.67%)	
<input type="checkbox"/>	4. <a href="https://life-evia.eu/wp-content/uploads/2020/03/Dissemination_Album_Feb_2020.pdf">https://life-evia.eu/wp-content/uploads/2020/03/Dissemination_Album_Feb_2020.pdf</a>	1 (16.67%)	
<input type="checkbox"/>	5. <a href="https://life-evia.eu/wp-content/uploads/2020/03/DISSEMINATION-PLAN_E-VIA_Feb_2020.pdf">https://life-evia.eu/wp-content/uploads/2020/03/DISSEMINATION-PLAN_E-VIA_Feb_2020.pdf</a>	1 (16.67%)	

Figure 16- Most downloaded documents – Google Analytics.

In Table 1, values of indicators reported in the project proposal and KPI ones are reported for the evaluated period.

Table 1: Project indicators values

N° of website visits	539
N° of unique visits	299
N° of individuals	169
N° of downloads	6
Average visit duration	00:04:55

## 2.2 Statistics for the period 1<sup>st</sup> April – 30 June 2020

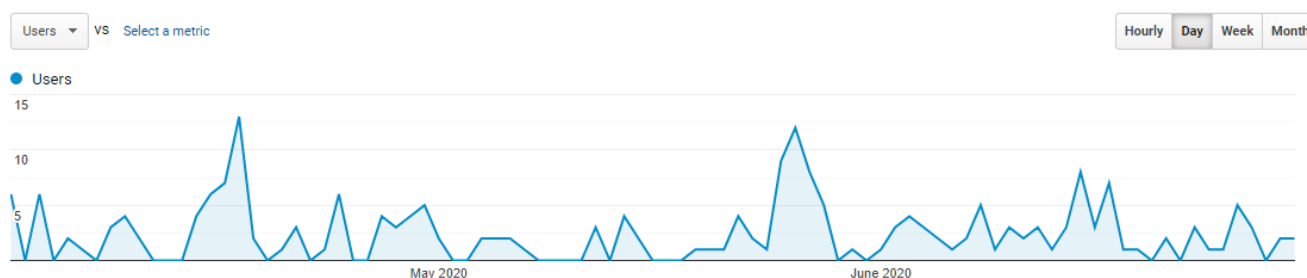


Figure 17- Trend of website visits – Google Analytics.

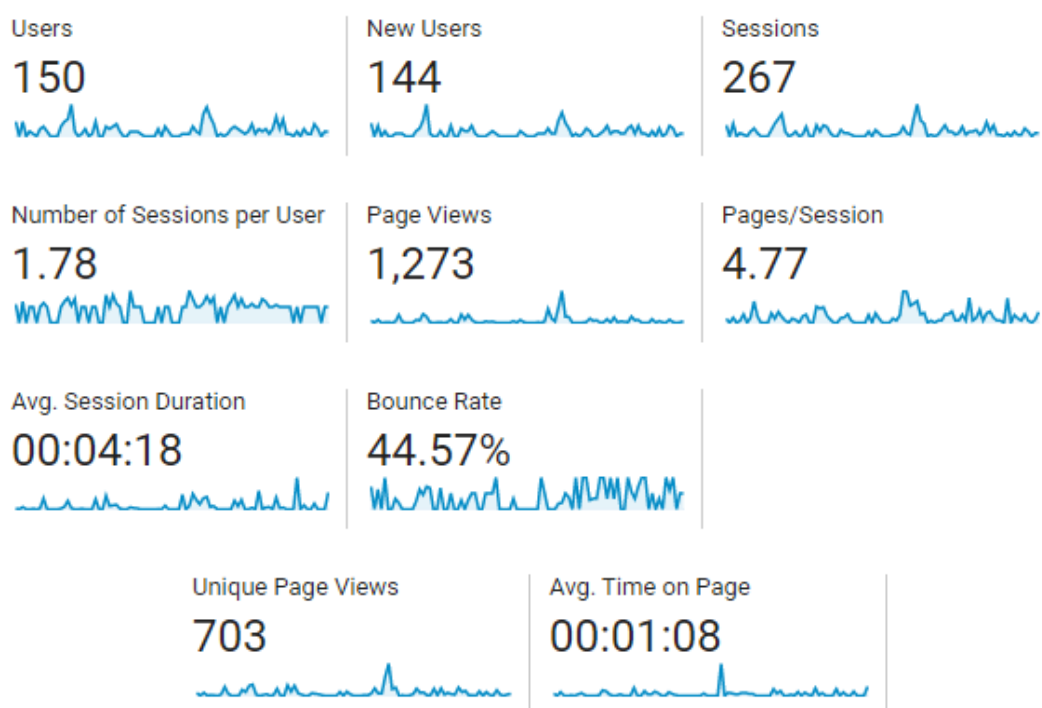


Figure 18- Number of users, sessions, page views, average session duration, bounce rate – Google Analytics.



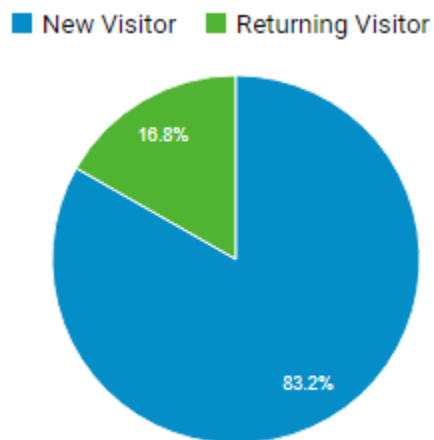


Figure 19- Percentage of New visitor vs Returning visitor – Google Analytics.

Language	Users	% Users
1. it-it	57	37.75%
2. en-us	42	27.81%
3. zh-cn	10	6.62%
4. fr	8	5.30%
5. en-gb	7	4.64%
6. fr-fr	6	3.97%
7. it	6	3.97%
8. es-es	3	1.99%
9. nl-nl	2	1.32%
10. de	1	0.66%

Figure 20- Language of origin country of the connected devices – Google Analytics.



















Country		Users	% Users
1.	 Italy	59	 38.82%
2.	 United States	33	 21.71%
3.	 France	19	 12.50%
4.	 China	7	 4.61%
5.	 Belgium	4	 2.63%
6.	 Germany	3	 1.97%
7.	 Finland	3	 1.97%
8.	 United Kingdom	3	 1.97%
9.	 Canada	2	 1.32%
10.	 Japan	2	 1.32%

Figure 21- Country of origin of the connected devices – Google Analytics.

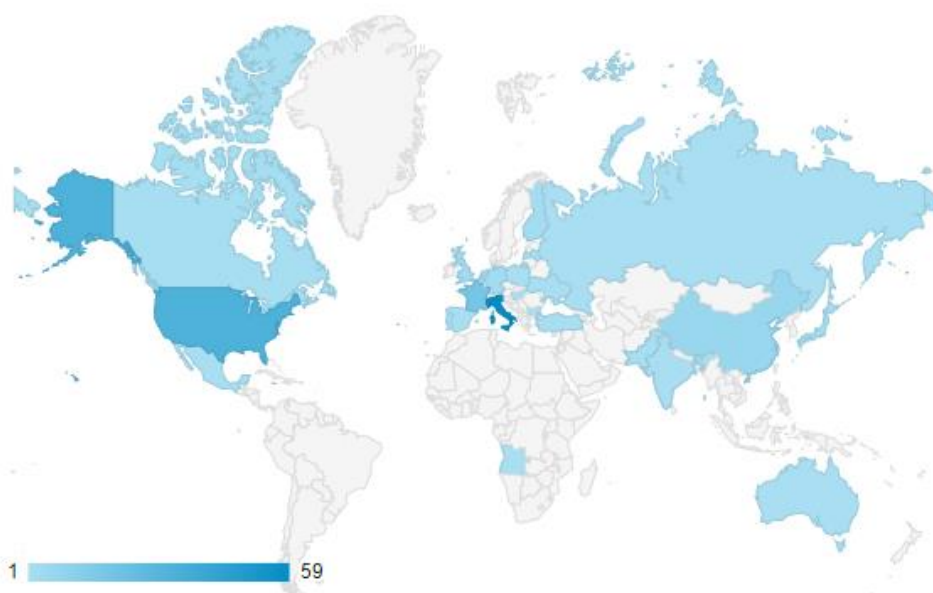








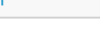


Figure 22- Map of Countries of origin of the connected devices – Google Analytics.

City	Users	% Users
1. (not set)	26	 15.20%
2. Chicago	11	 6.43%
3. Florence	10	 5.85%
4. Paris	6	 3.51%
5. Prato	6	 3.51%
6. Beijing	5	 2.92%
7. Cosenza	5	 2.92%
8. Lucera	5	 2.92%
9. Rome	5	 2.92%
10. Lille	4	 2.34%

[view full report](#)*Figure 23- City of origin of the connected devices – Google Analytics.*

Operating System	Users	% Users
1. Windows	89	 59.33%
2. Android	34	 22.67%
3. iOS	16	 10.67%
4. Macintosh	10	 6.67%
5. Chrome OS	1	 0.67%

*Figure 24- Typology of operating system of the connected devices – Google Analytics.*

Operating System	Users	% Users
1. Android	34	 68.00%
2. iOS	16	 32.00%

*Figure 25- Typology of operating system of the connected (mobile) devices – Google Analytics.*

### Top Channels

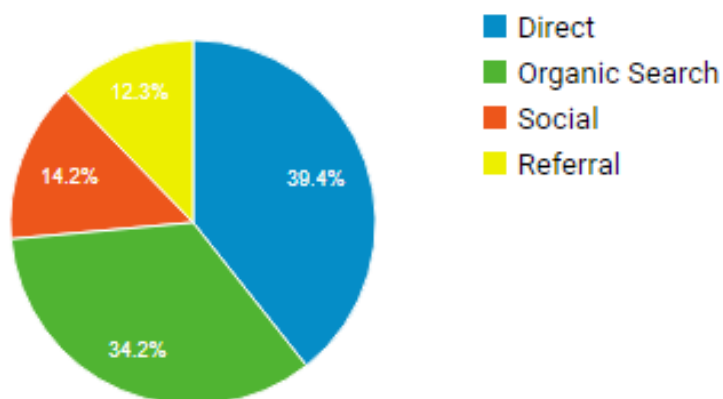


Figure 14- Percentage of direct vs indirect connections – Google Analytics.

Page ?	Total Events ? ↓
	<b>63</b> % of Total: 100.00% (63)
1. /	<b>28</b> (44.44%)
2. /deliverables/dissemination_album_actions-d1-d2/	<b>6</b> (9.52%)
3. /presentations/life-e-via-project-partners-meeting-february-20-2020/	<b>5</b> (7.94%)
4. /papers/papers-1-lorem-ipsum/	<b>4</b> (6.35%)
5. /presentations/jtav-2020-journees-techniques-acoustique-et-vibrations-france-march-2020/	<b>4</b> (6.35%)
6. /event/eurocities-environment-forum/	<b>3</b> (4.76%)
7. /presentations/eai-smartcity-360-2019-international-summit-portugal-december-2019/	<b>3</b> (4.76%)
8. /presentations/official-welcome-meeting-bruxelles-november-2019/	<b>3</b> (4.76%)
9. /presentations/presentation-1-lorem-ipsum/	<b>2</b> (3.17%)
10. /documents/	<b>1</b> (1.59%)

Figure 15- Most visited sections – Google Analytics.

Event Action ?	Total Events ? ↓
	26 % of Total: 41.27% (63)
1. <a href="https://life-evia.eu/wp-content/uploads/2020/04/DISEMINATION-ALBUM_MARCH_2020.pdf">https://life-evia.eu/wp-content/uploads/2020/04/DISEMINATION-ALBUM_MARCH_2020.pdf</a>	6 (23.08%)
2. <a href="https://life-evia.eu/wp-content/uploads/2020/03/JTAV-2020-LIFE-E-VIA-Cesbron-Pallas-et-al.pdf">https://life-evia.eu/wp-content/uploads/2020/03/JTAV-2020-LIFE-E-VIA-Cesbron-Pallas-et-al.pdf</a>	4 (15.38%)
3. <a href="https://life-evia.eu/wp-content/uploads/2020/03/Presentations_meeting_february.pdf">https://life-evia.eu/wp-content/uploads/2020/03/Presentations_meeting_february.pdf</a>	4 (15.38%)
4. <a href="http://life-evia.eu/wp-content/uploads/2020/01/LIFE-E-VIA_Bruxelles_nov_19.pdf">http://life-evia.eu/wp-content/uploads/2020/01/LIFE-E-VIA_Bruxelles_nov_19.pdf</a>	3 (11.54%)
5. <a href="https://life-evia.eu/wp-content/uploads/2020/03/WD-03.1-Draft-agenda-WG-Noise-Oslo-2019.v1.7-1.pdf">https://life-evia.eu/wp-content/uploads/2020/03/WD-03.1-Draft-agenda-WG-Noise-Oslo-2019.v1.7-1.pdf</a>	3 (11.54%)
6. <a href="https://life-evia.eu/wp-content/uploads/2020/01/LIFE-E-VIA-Kick-off-meeting-presentations.pdf">https://life-evia.eu/wp-content/uploads/2020/01/LIFE-E-VIA-Kick-off-meeting-presentations.pdf</a>	2 (7.69%)
7. <a href="https://life-evia.eu/wp-content/uploads/2020/04/SC4Life_title-slide-Keynote-Speech-PRATIC-ver-02.pdf">https://life-evia.eu/wp-content/uploads/2020/04/SC4Life_title-slide-Keynote-Speech-PRATIC-ver-02.pdf</a>	2 (7.69%)
8. <a href="https://life-evia.eu/wp-content/uploads/2020/03/Agenda.pdf">https://life-evia.eu/wp-content/uploads/2020/03/Agenda.pdf</a>	1 (3.85%)
9. <a href="https://life-evia.eu/wp-content/uploads/2020/06/Presentations_meeting_february_pub.pdf">https://life-evia.eu/wp-content/uploads/2020/06/Presentations_meeting_february_pub.pdf</a>	1 (3.85%)

Figure 16- Most downloaded documents – Google Analytics.

Table 2: Project indicators values

N° of website visits	1273
N° of unique visits	703
N° of individuals	150
N° of downloads	26
Average visit duration	00:04:18

In Figure 17 the progressive trend of the values assumed by the indicators is shown.

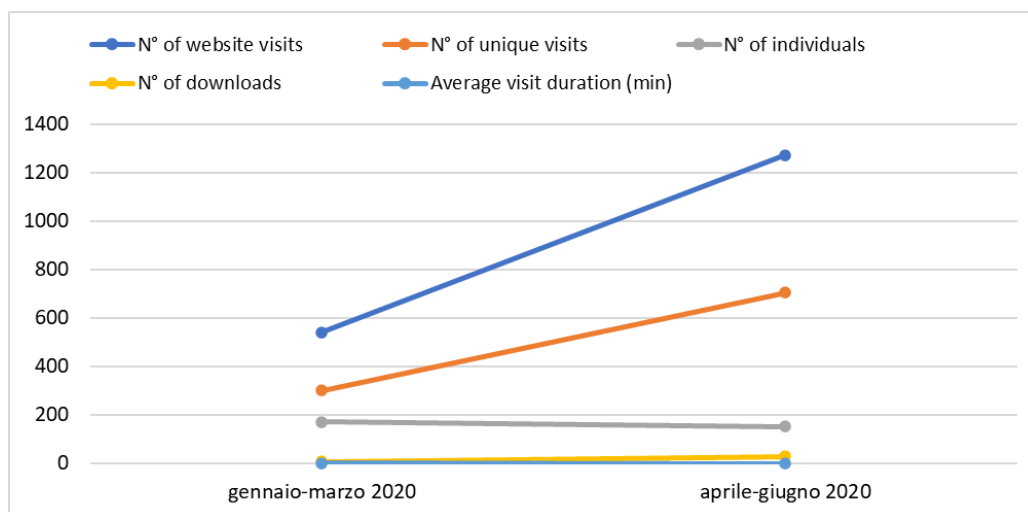


Figure 17- Indicators trend.

### **3 Acknowledgments**

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