Pilot service follow up

D.4.2. Dynamic travel planner for seamless intermodal solutions

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1. The pilot in Emilia-Romagna

The pilot in Emilia-Romagna (D.4.2.6 Dynamic travel planner for seamless intermodal solutions) consisted in a development of an IT solution for integrated mobility connected to the dynamic travel planner. It was addressed to reach the following objectives:

- *estimate air pollution emissions due to the use of a private car. This is a first step to show the users the quantity of pollutant emissions they produce and a point to motivate and convince them to use alternative means of transport and limit the use of private cars whenever possible;*
- *Show the savings in pollution emissions when public transport mean (bus or train) is used, in this way the users can have a measure on how much has been saved;*
- *provide a tool to the citizens to calculate their own savings, based on the data coming from the dynamic travel planner RogER. This tool is consisting in a web portal where citizens can easily see their own savings;*
- *provide aggregated data to the regional planning sector showing how much savings in pollution emissions can be estimated at regional level by using the public transport. The planning services of the region might use these data to promote new policies towards citizens addressing sustainable mobility strategies and goals;*
- *manage privacy and security issues. Privacy of users is of outmost importance and we needed to deal with the compliance to the GDPR at different levels (regional, relations with the suppliers, citizens themselves).*

2. The web portal RogerAmbiente

At technical level, we have developed an algorithm. First, we took some decisions on the type of pollution emissions to be considered. Together the Department of the air quality of the Region and Arpae (the regional agency for the environment), we have selected 4 emissions to be included in the calculation.

- CO_2 – Carbon dioxide
- PM10 – Fine particulate
- NOX – nitrogen oxides

- VOC - Volatile organic compounds

Data sources are related to those coming from the Roger App (use of the public transport, bus and train) of the TPER transport company. The pollutant savings calculation system is based on public transport data travel from the Roger app, data refer to the day the trip, the range of the kilometres that can be done with that ticket, the place of departure. Categories of vehicles are identified according to the European Environment Agency classification, indeed an authenticated users will be requested to enter the category of their own car and individual emissions are based on the data provided by ISPRA (http://www.sinanet.isprambiente.it/it/sia-ispra/fetransp).

The web portal has been called RogerAmbiente to stress the link with the Roger app and the regional transport system. It provides the following main sections

- The home page provides firstly aggregated data at regional level and their access is provided without any authentication.

- Individual access is provided through SPID, public digital identity system, authenticated users may see their own data on travelling and their personal savings.

- Section for news and thematic initiatives, a specific section has been provided to add news and special initiatives linked to sustainable development themes and transport.
- Section for Frequently asked Questions, it has been useful to guide the testers during the prize competition.

Each user can visit and check the regional savings in a selected period (day, week, month, year) if not authenticated, while authenticated users can see their own savings. With the aim to get an idea about the importance of the saving of emissions, for the pollutant emission related to CO_2, the portal displays the savings that have been quantified with the number of trees needed to absorb the amount of pollutant saved.

3. The launch and execution of the pilot

The recruitment of testers to experiment the portal RogerAmbiente has been realised through the organisation of a prize competition. The registration of the testers was scheduled from the middle of October until November 10th 2021, all involved actors in the pilot (mainly RER, ITL, TPER, LEPIDA) have published news in their websites.
The portal RogerAmbiente has been active since November 23rd. The participation in the prize competition has been regulated by the provision of a "regulation" that contains the terms and rules for participation and deadlines.
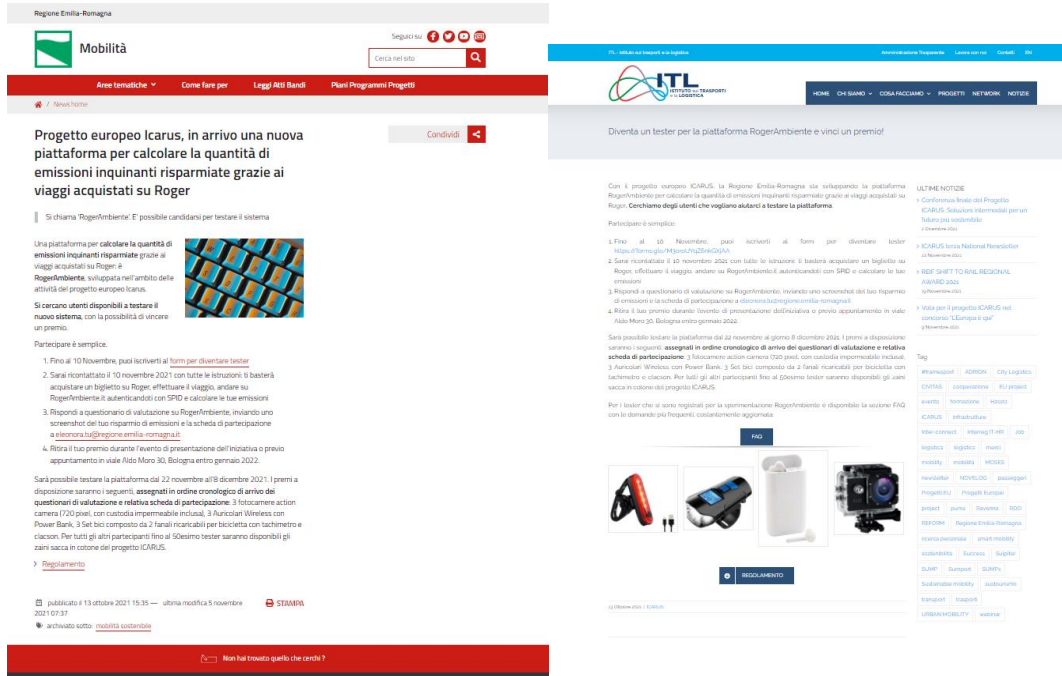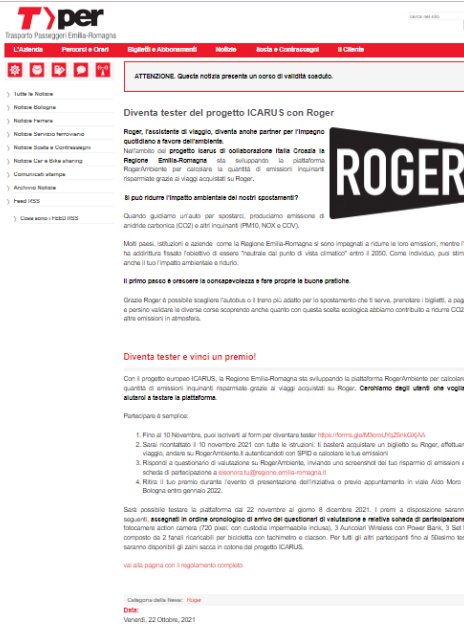
Figure 1 The news on the launch of the testing activity

Each participant was asked to buy a travel ticket through the Roger App and then register to the

portal RogerAmbiente, visualize the savings in pollution and send the organisers of the prize the screenshot by mail, the ranking was linked to the order of the mail arrival. In addition, each participant has been requested to answer an evaluation questionnaire.

The competition was open until December 8th. A final dissemination focused on the experiment and the award ceremony was organised on December 15th both in presence, at the building Terza Torre of the Emilia-Romagna Region and virtually.

4. The feedback from the testers of RogerAmbiente

Almost 100 citizens registered to the prize competition. They were asked to provide their consent to the use of their data coming from the Roger App. 76 citizens provided their consent and among them 70 were retained as final participants according to the established criteria of the prize. Finally, 34 participants have actively used the portal RogerAmbiente and provided their feedback as requested.
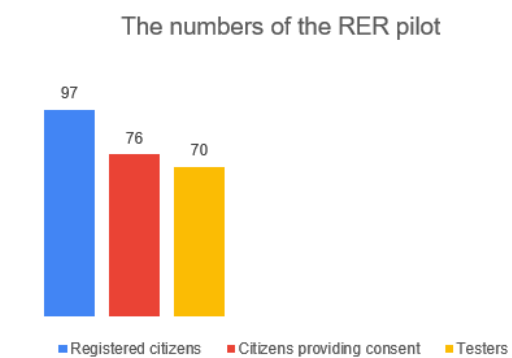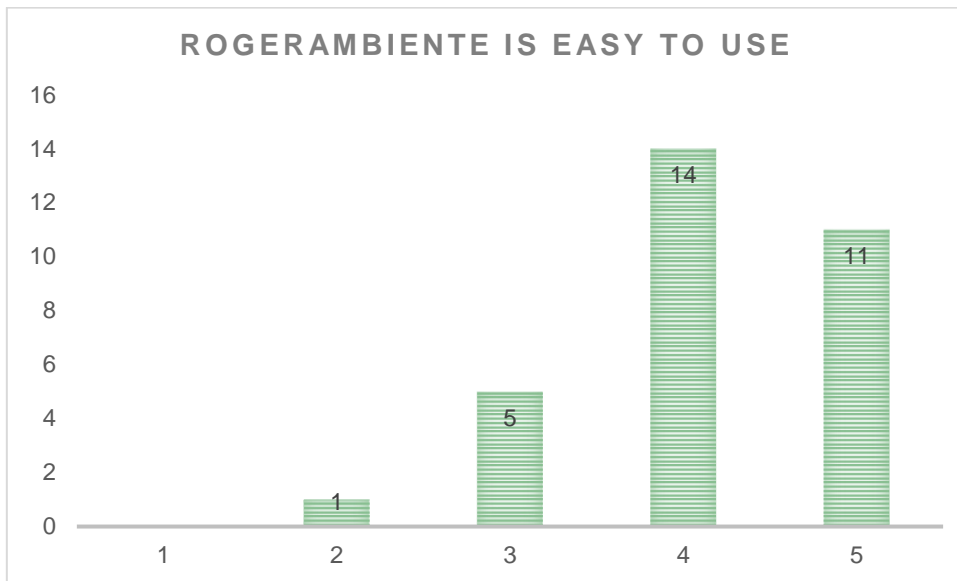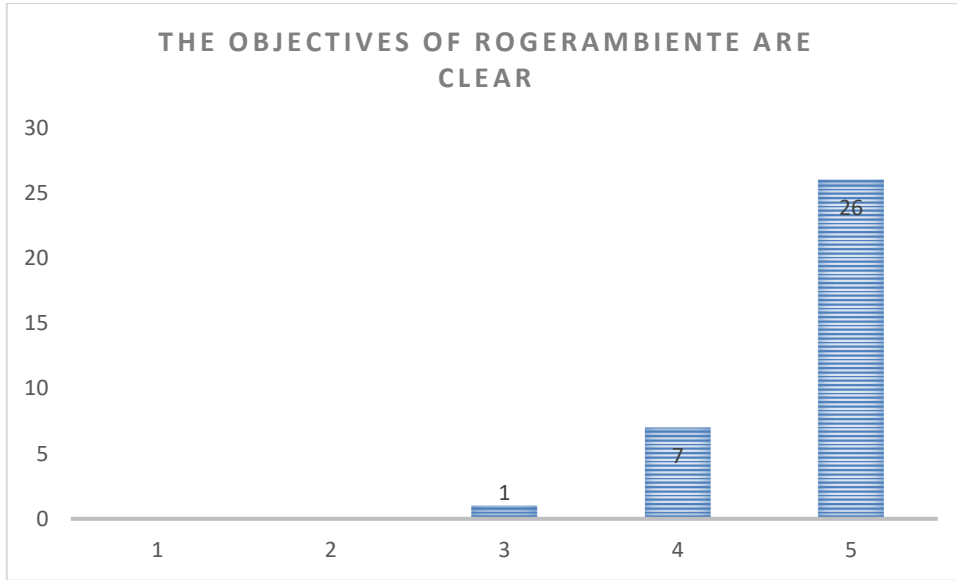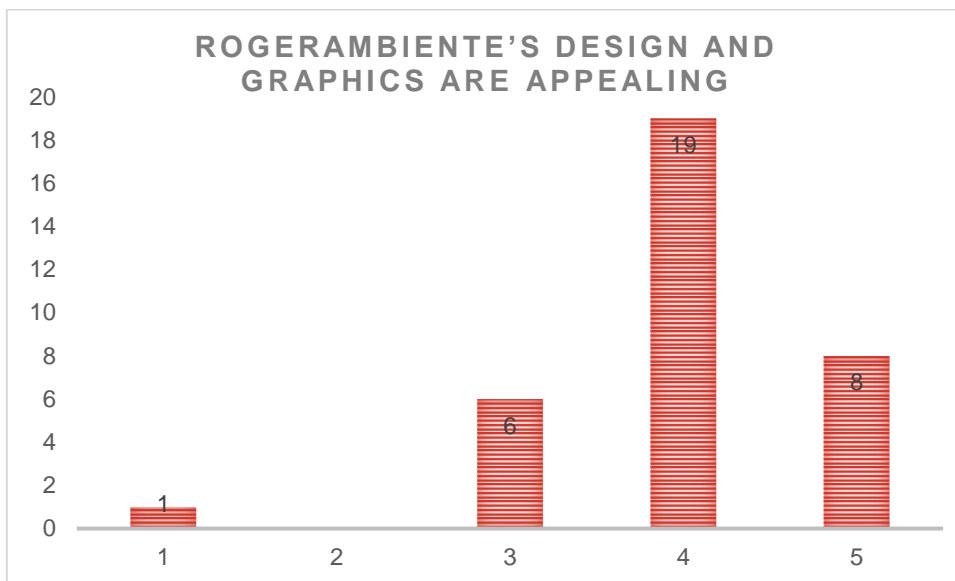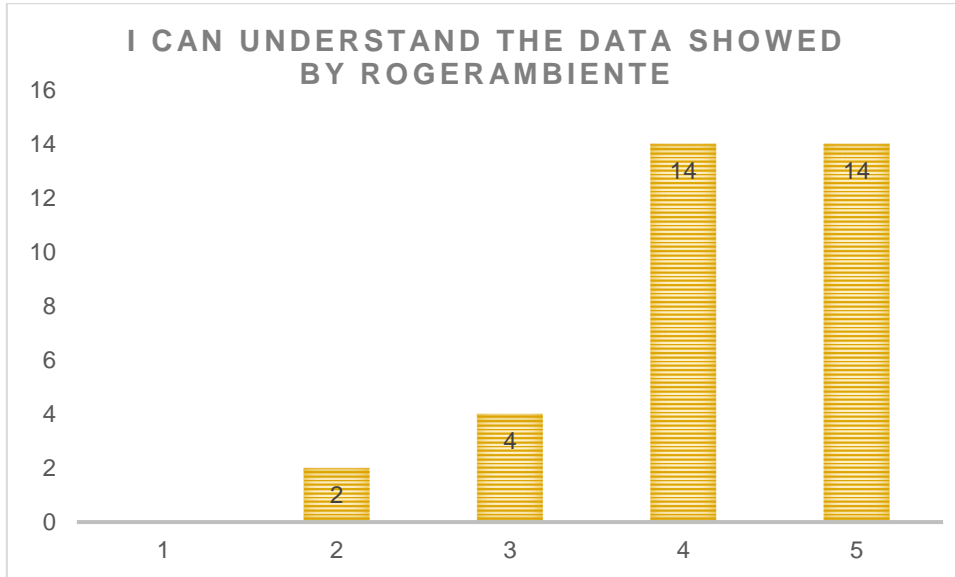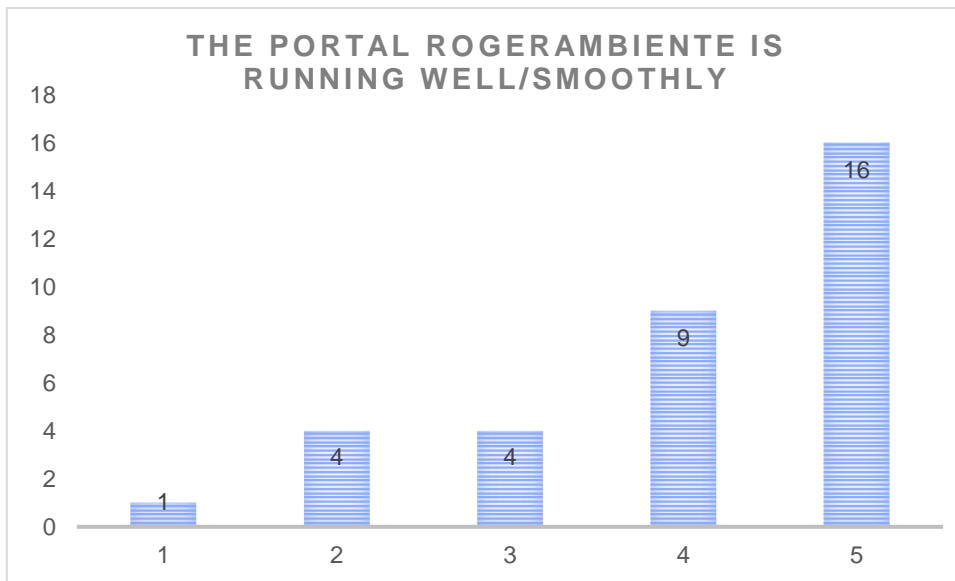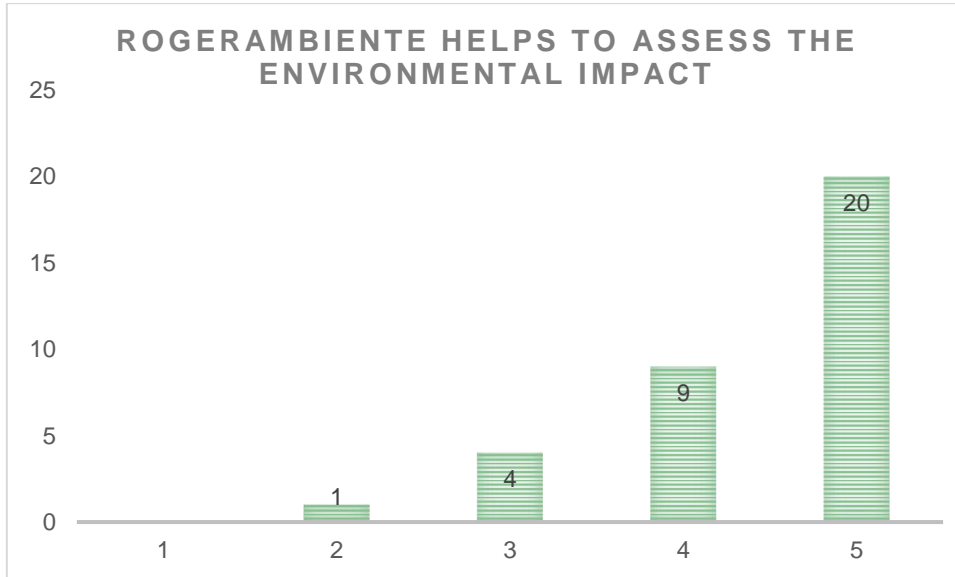
Figure 2 Numbers of the RER pilot

For the six questions based on the clarity of the objectives and usability of the platform, we have used closed ended questions based on a Likert scale and we analyze that most of the answers range from 4 to 5, being 5 the highest positive. In the tables below histograms are reported to show the different values.

THE OBJECTIVES OF ROGERAMBIENTE ARE CLEAR

ROGERAMBIENTE IS EASY TO USE

I CAN UNDERSTAND THE DATA SHOWED BY ROGERAMBIENTE

ROGERAMBIENTE'S DESIGN AND GRAPHICS ARE APPEALING

ROGERAMBIENTE HELPS TO ASSESS THE ENVIRONMENTAL IMPACT

THE PORTAL ROGERAMBIENTE IS RUNNING WELL/SMOOTHLY

A DEEPER AWARENESS ON POLLUTANT EMISSIONS MAY GUIDE TO CHOOSE MORE SUSTAINABLE TRANSPORT MODES

The open questions were focused on simple questions on the testers' feeling towards the platform and suggestions for further improvements. In the following, we summarize their views and expectations.

- ***What did you like about RogerAmbiente?***
    - *Raising awareness of environmental issues and fostering motivation to increase the use of the public transport*
    - *Possibility to calculate the pollutions' saving*
- ***What didn't you like about RogerAmbiente?***
    - *Data are coming just from the Roger App*
    - *Provision of just an estimation of the travelled distance in kilometres*
- ***Suggestions for the future***
    - *Making it available on smartphone*
    - *Introduction of additional vehicles like scooters and motorbikes.*

5. Conclusions

The pilot has shown a very positive review by those who tested it. We are particularly satisfied with the responses and the feedbacks that have indicated some of the next steps that the pilot could work on. Thanks for the PREPAIR project we have the opportunity to further capitalize RogerAmbiente, to include new data sets and to bring RogerAmbiente to a wider public by working on the privacy and GDPR provisions.