Users' Manual

version 1.0

October 2016

Walk & the City: Mobile Application

Licensed under the EUPL V.1.1

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Official Website at http://geochoros.survey.ntua.gr/walkandthecity

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Contents

Description

"Walk & the City" is consisting of a mobile application and a website. The "Walk & the City" idea have been developed by the GeoCHOROS Research Group at National Technical University of Athens and received funding under the MyGEOSS project from the European's Union HORIZON 2020 research and innovation programme. To that end, feel free to contact us in order for you to pose any question or to inform us about any specific technical problem you are dealing with our applications.

In general, "Walk & the City" collects and presents several open data about the walking environment of European cities. This mobile application is used firstly by citizens to record and assess walking routes according to their preferences and secondly it is used as a tool to pinpoint the problematic and dynamic characteristics of the pedestrian environment. Our website gives access to the collected data as well as to the results of our objective measured walkability index[1]. Finally, it is crucial to underline that users of our application submit their data under the European Union Public Licence V1.1, which means that our dataset is open, free and accessible (access only via our website).

Application installation

"Walk & the City" app is a mobile application which can be installed on any mobile device running **Android 4.2 or higher**.

First, go to Google Play Store and secondly search for "Walk & the City".

Read carefully the pop-up window and if you agree with the conditions, allow the application to use some features of your device (e.g GPS, Camera etc.).

When the application has been installed successfully on your device and press to open it you will see the adjacent starting screen.

However, you should wait for roughly 4 seconds in order for the application's homepage to be loaded.

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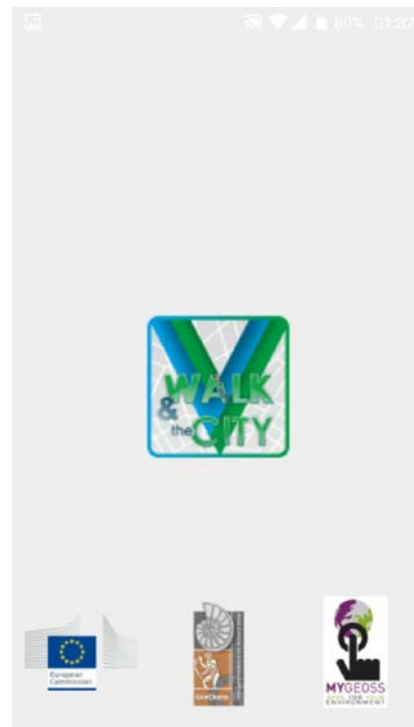
[1] *The Walkability Index have been calculated by using several open datasets. Particularly, it is constituted by the following parameters: 1) Land Use Mix (An Entropy Index calculated by using the Urban Atlas European Dataset) 2) Population Density (GEOSTAT 2011 Population Grid provided by EUROSTAT) 3) "Walkable" Streets Connectivity (Openstreetmap.org) 4)"Walkable" Streets Density 5) Pedestrian Streets Density (Openstreetmap.org) 6) Access (400m buffer zone) to basic food stores (Openstreetmap.org) 7) Access (400m buffer zone) to Public Transport facilities and 8) Surface's Slope (EU DEM v.1 available at land.copernicus.eu)*

Homepage

The homepage is constituted by a map where you can view the available results of our objectively[2] measured walkability index. If you are in a city where walkability scores are missing, a splash screen will inform you about the available cities in your country. However, you can select to view the European city you prefer by clicking on the drop down list.
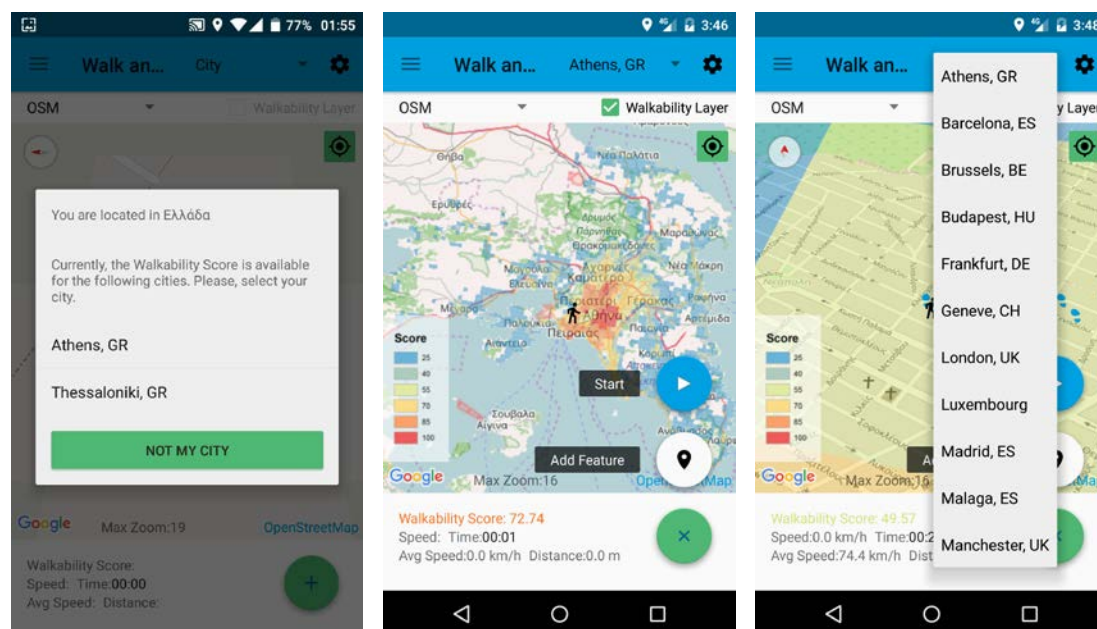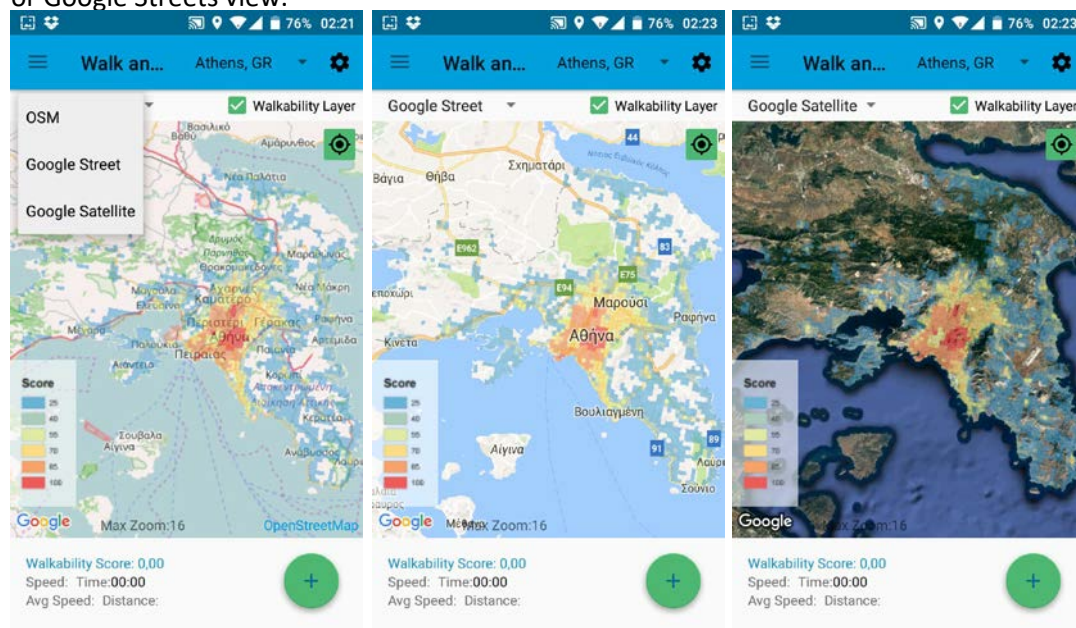

On the top left side, you will find the Menu button. In the Menu, which is an essential part of our application, you will find all the data you have saved and the relevant information about our project. What is more, by entering in the Menu you can sign out/in your profile.


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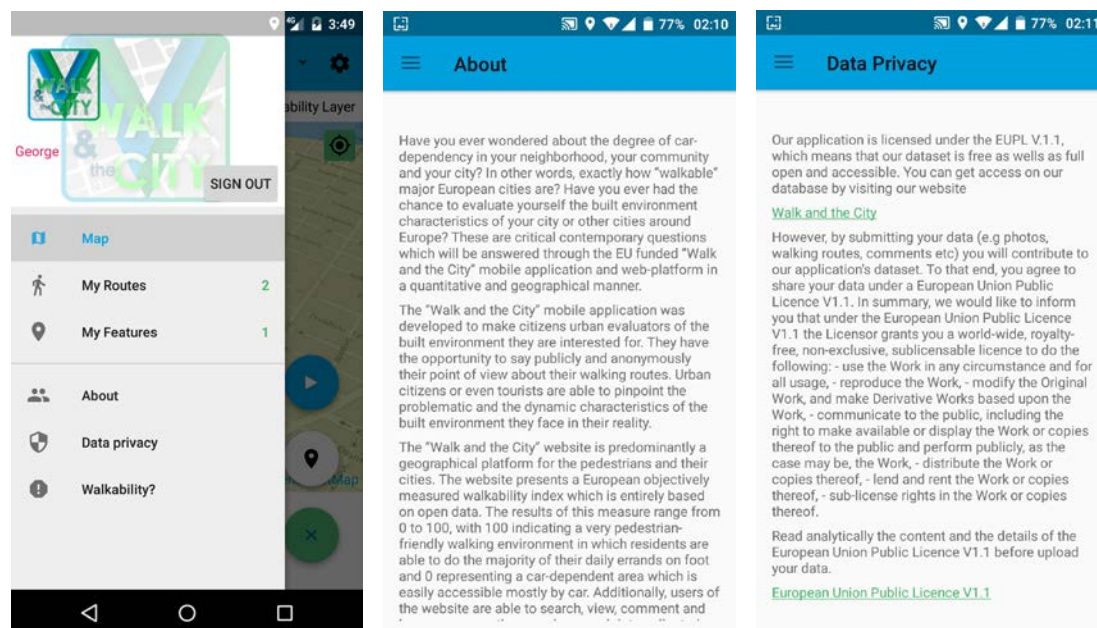
[2] *An objectively measured walkability index is a measure based on a Geographical Information System (G.I.S), which has been calculated by using impartial measured data such as population, surface's slope, land use categories, road networks etc.*

Under the Menu button, you will find a drop down list with regard to the available basemap view choices you have. You can select the OSM (Openstreetmap) view, Google Satellite View or Google Streets view.

On the top right side, you will find the Preferences button where you can mainly change the
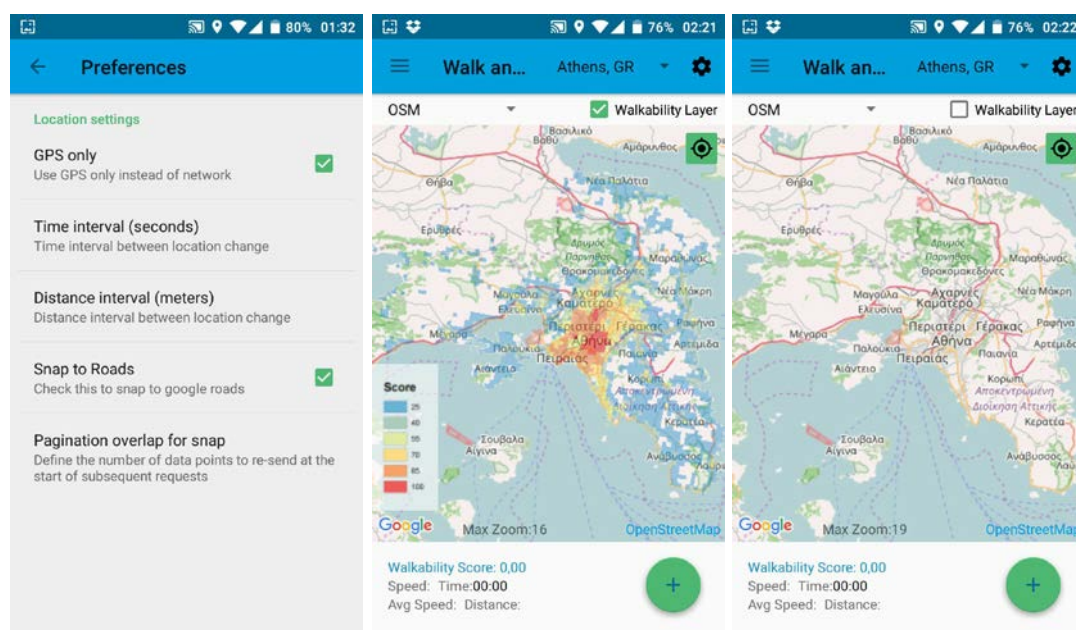

location settings. We suggest to check the GPS only and Snap to Roads fields.

Under the Preferences button you will find the Walkability Layer button. If you uncheck it, the layer with the city's walkability scores will be disappear from the map.

On the top right side of the Map you can press the "My Location" button. If you press it, the map will be redirected to your current location.

*The stick man depicts your current location on the map*
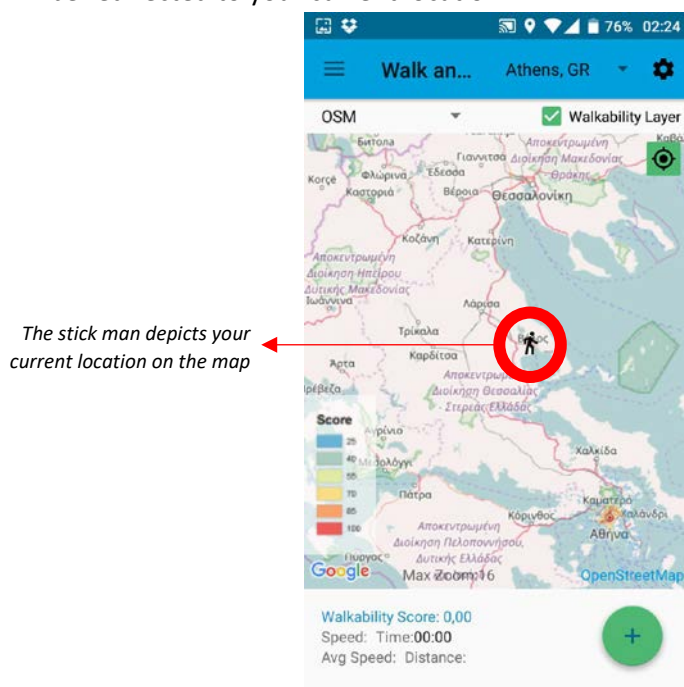
On the down left side of the Map you will find the map's legend regarding the scores of the walkability index. If you want to learn more about the Legend, click the Menu and select the Walkability? section. Moreover, you should know that the higher the score of a given area is, the more walkable (Red) might be.
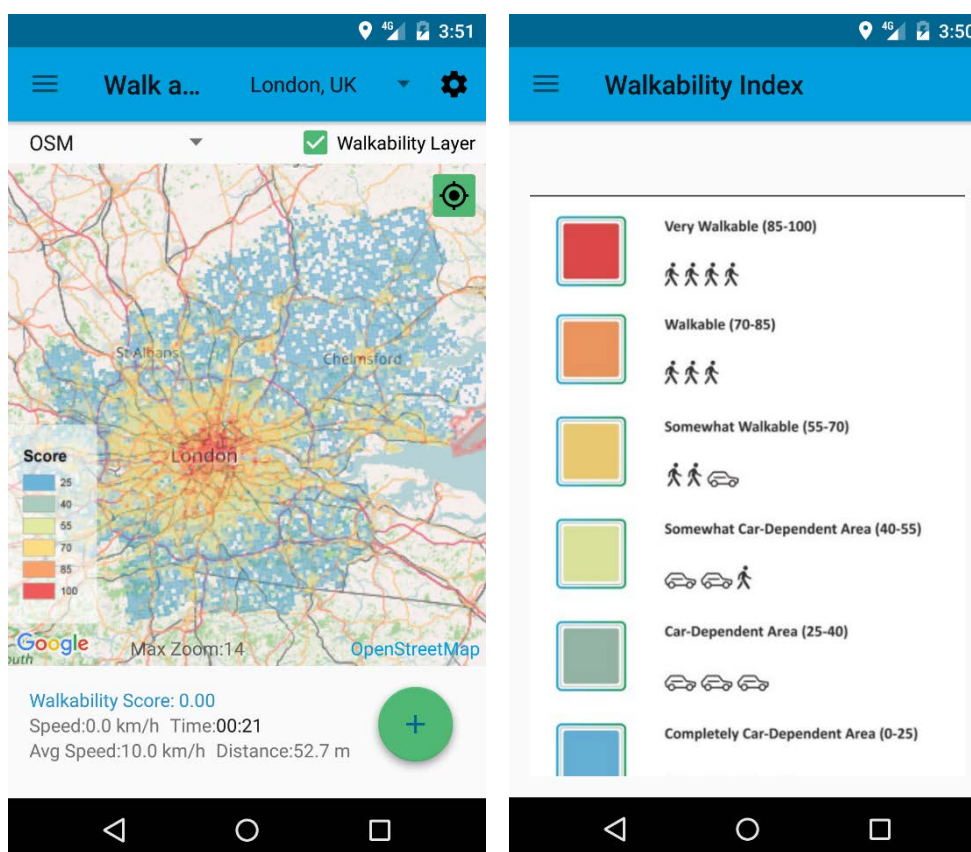
If you press the cross in the green circle on the down right side, then the Start and Add Feature buttons will be shown up on the map.
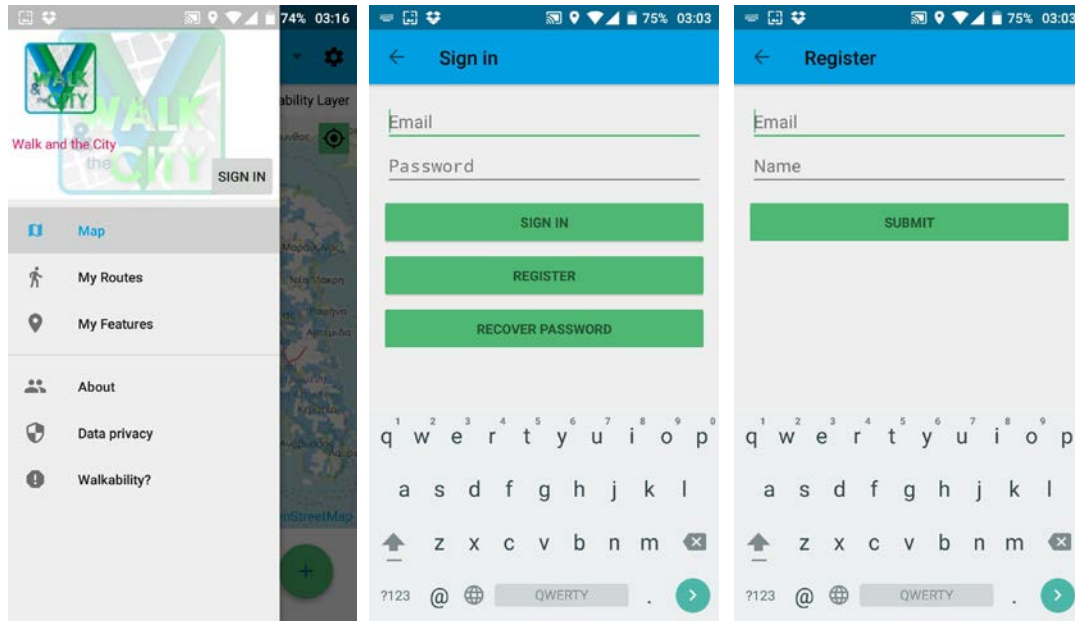
However, these functions will be presented analytically later.
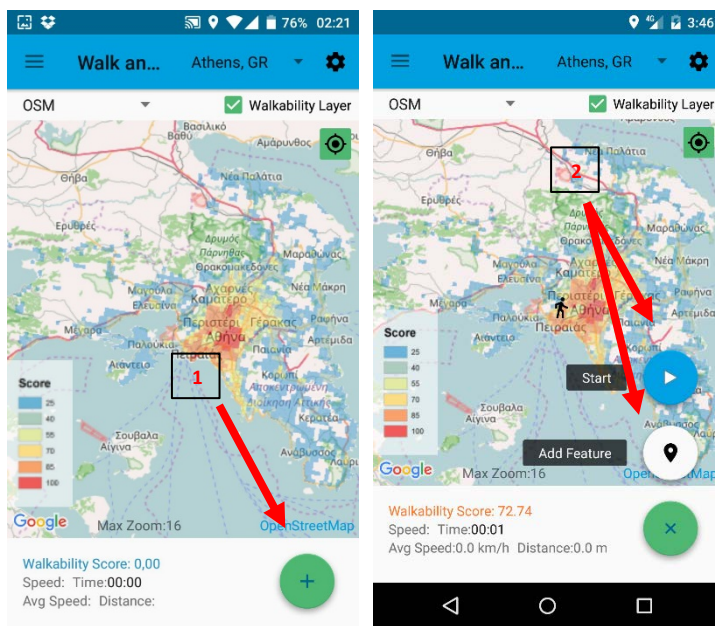
Sign In/Register

If you want to submit your walking data and contribute to our open database, you need first to Sign In with your personal account. Thus, click the Menu and press the Sign In button. If you are using the application for first time, you should Register an account.

So, click the Register button and type your E-mail address and your User Name and then click the Submit button. After that, you will receive an e-mail with a link in order for you to complete your registration.
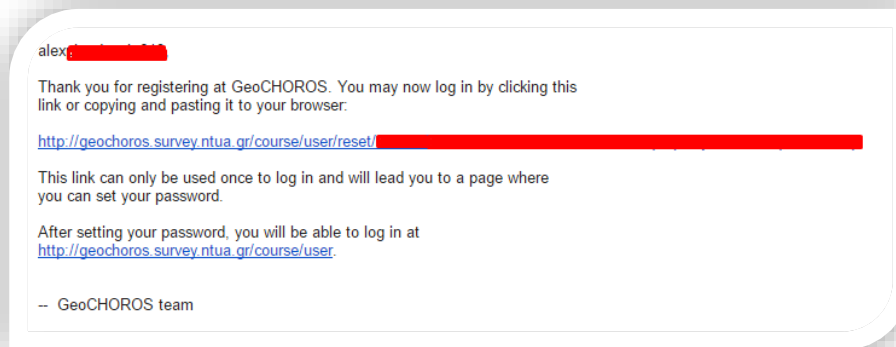

Click the link and you will be diverted instantly to the "Walk & the City" website. On the first time, you will be asked to set your password. Subsequently, fill in some basic information about your profile, such as Sex, Age, Height, Weight, Home Address, Work Address and your Income per month. Keep in mind that we need this kind of information only for spatial analysis and scientific reasons, so fill in the requested details in an approximate framework. After you have completed your registration you should return back to the application. Now, type your E-mail and your Password and press the Sign In button on the Menu. By doing this, you are able to contribute with your data to our open dataset.

Route Recording & Assessment

In order to begin with the recording process of a walking route please press the cross on the green circle and then click on the Start button.
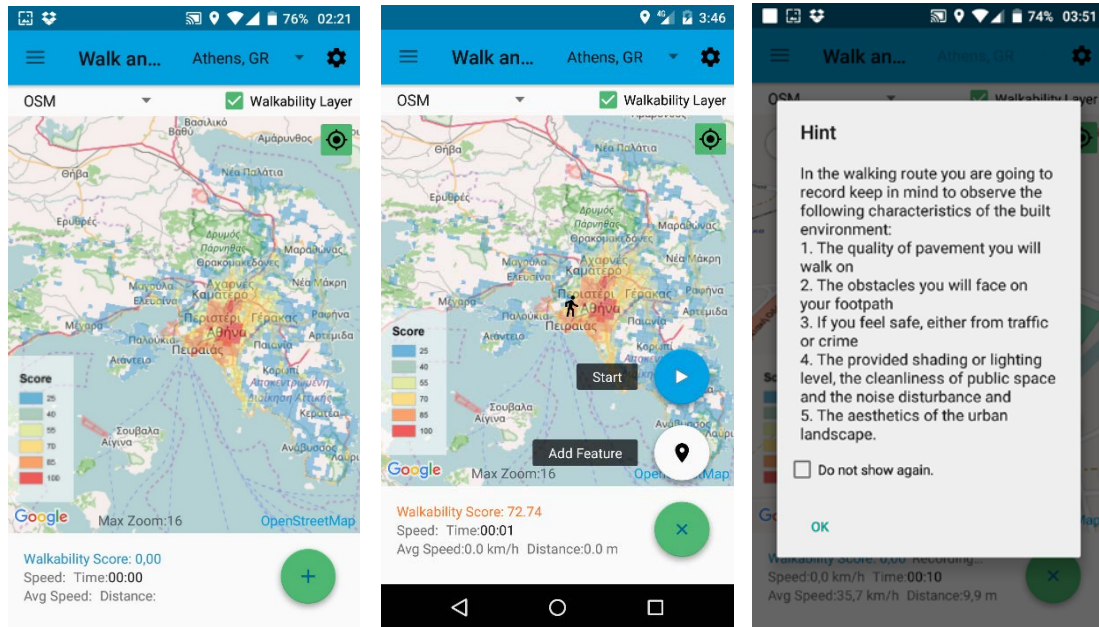
A pop-up window with a hint will be shown up on your screen with regard of what you should observe during the route you are going to walk on. Thus, read it carefully and proceed to the next steps.

Afterwards, you have two options. First you could press the Restart button to start again the tracking process and second to press the Stop & Save button in order to save the route you walked on previously.

Moreover, you should know that the application is able to run on the background even if you lock your screen, but you should remember to press the Stop & Save button at the proper time and when the walking route has been done.

The stick man on the map symbolizes your current location and the graphic with blue footsteps depicts your route. If you observe that the location of the footsteps on the map

are inappropriate, then press the Preferences button on the top right side and change the time or/and distance interval[3]. Additionally, at the bottom side you will find some objective measured details about your trip, such as your current speed, the time you have done, the average speed and the distance you have walked on so far.

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[3] We suggest to set the distance interval field between 10 and 20 meters.

If you save your route, first you could optionally write a comment in the description field about your walking experience and next you will be invited to answer some questions about the characteristics of the walking environment. The questionnaire will not take more than 2 minutes.

The first 2 or 3 questions are about the trip purpose, if you are a city-dweller an additional question will be shown up pertaining to the frequency you do this walking trip.

Afterwards, you will be asked to evaluate some basic aspects of the walking environment you observed during the route. First you will find the question and after that the available numbered answers you have to opt for. Hence, in order to answer the question, you should choose as many stars as the number you see before the answer you have selected.

When you are done, press on the top right side the Save button. In order to Upload your route with your answers on our open database, you should press the menu button first and go to My Routes section. The number you see after the My Routers section depicts the number of saved but not uploaded routes. If you upload or delete all the saved routes, then this number will disappear.

Moreover, if you enter the My Routes section, you will find all the recorded routes you have done and you will be able to upload or delete them. If you want to Upload your data on the database, you should press the Upload button. However, you should accept the terms and conditions stemming from the European Union Public Licence V1.1.

Additionally, you are able to view on the map the polyline of your walking route by clicking the Walkability Score of the selected route.

Nevertheless, at this time the only available way to edit your submitted data (either the answers in the questionnaire or the shape of the route on the map) is to log in our website and click the My Submissions button.

Remember, on our website you are able to view, search and download the collected data, as well as to comment on other users' submissions.

Add Feature

The Add Feature function is used in order for the user to pinpoint, by capturing a geotagged photo, the pedestrian friendliness or unfriendliness of a particular place in his/her city.

To that end, in order to add a feature please press the cross on the green circle at the down right side and then click on the Add Feature button. After that, your phone's camera will be enabled.
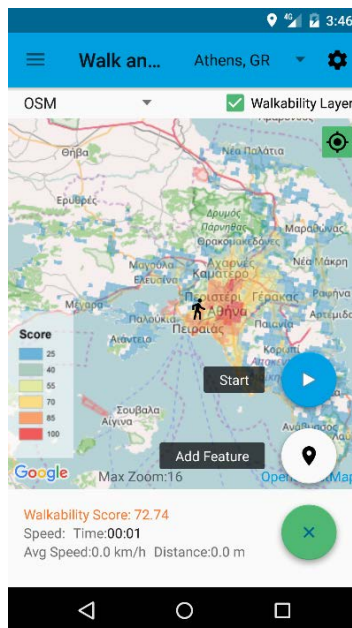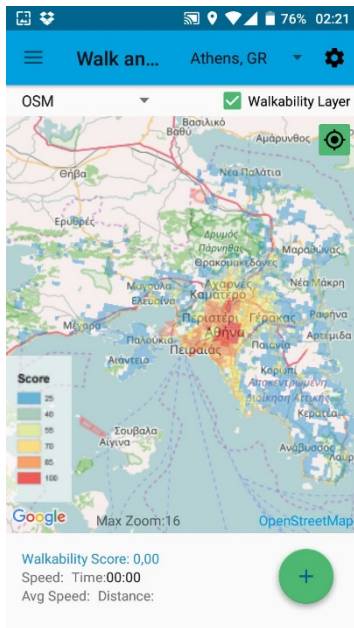
With this function you are able to capture a photograph related to the walking environment issues and pedestrians' needs. When your photo has been captured, then the details window will be shown up.

Give a descriptive title (in the title field) to your icon and write a small description of the depicted concept (in the description field). Inform others about the built environment's issues or the dynamic characteristics you believe that it has and encourages walking travel behavior.

Next, press the Get Location button to be sure that your photo will be tagged at the right position on the map and last but not least categorize your photo by selecting if the concept of your image is friendly or not to pedestrians. Finally, click the save button on the top right side and continue with the following steps for the final uploading phase.
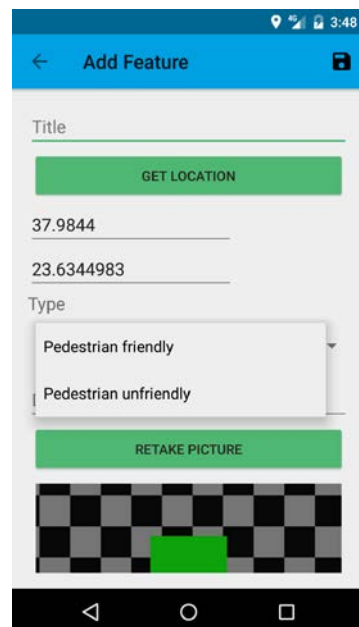
In order for you to upload your photos on the map, you should click the Menu and select the My Features section. In this section you will find all the photos you have saved. If you want to upload a photo and make it available on our open database, you should press the Upload button. If you press on the image's title, you will check the location of the image on the map.
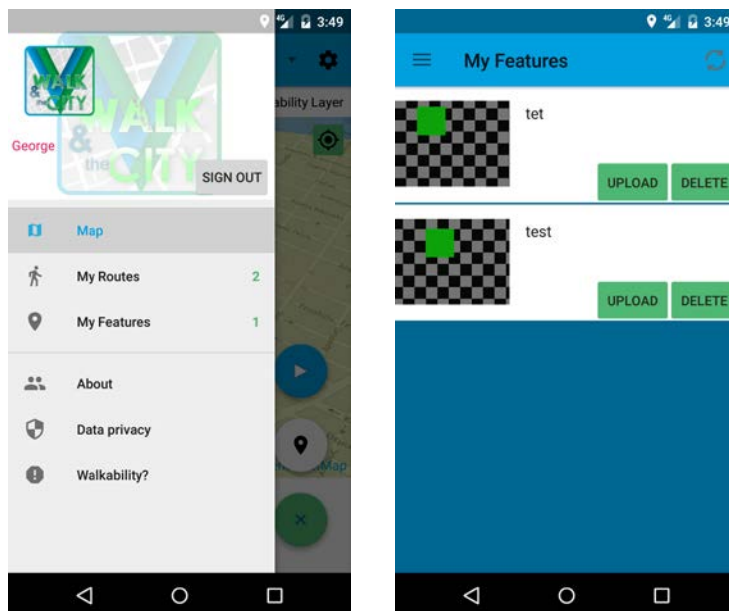
Nevertheless, if you think that you have to edit something regarding your photo's details or even the point of the image on the map, you should first upload the icon by using the app and next to log in our website and click on My Submissions button in order for you to change whatever you want.

Remember, on our website you are able to view, search and download the collected data, as well as to comment on other users' submissions.