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PedCount

User Guide

High accuracy and efficiency pedestrian counting

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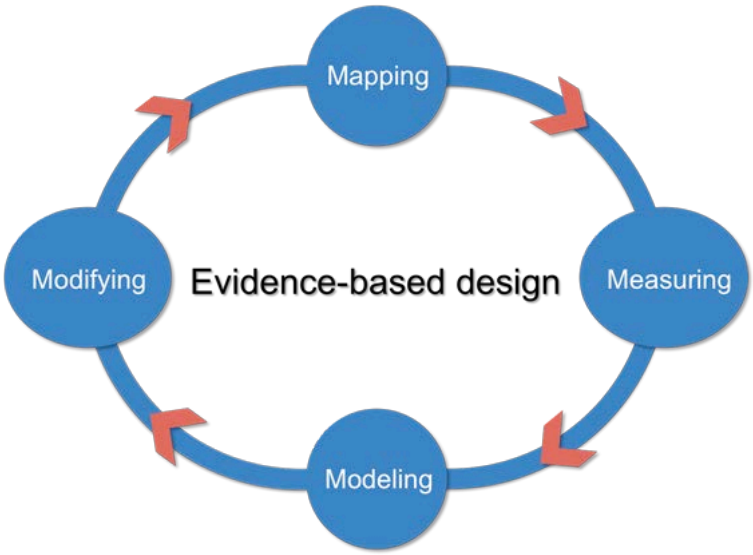
PedCount is the most powerful tool currently on the market to accurately measure pedestrian movement through qualitative observation, which can't be matched by automated counting methods. PedCount is a Web-based, fully integrated software-as-a-service (SaaS) solution available across many platforms.

PedCount covers the two first steps of an evidence-based design process.



•Mapping - In the 1st stage we are creating a spatial representation of the environment by drawing the network of public space to which data will be attributed in the next measuring stage.

•Measuring - In the 2nd stage we are measuring the amount of movement within the network of public space by capturing specific information in relation to the use of this space which will then provide the basis for the next stage modelling.

•Modeling - In the 3rd stage we are identifying the patterns of movement within the public space which will enable us to identify the UNDER and OVER usage of the network which allows us to predict the impact of modifications that will take place in the next stage.

•Modifying - In the last stage we create different scenarios which can be modified to provide you with various impact implications allowing you to best optimize the objectives of your project.

The latter 2 steps (Modeling and Modifying) are covered by the extension PedPlus.

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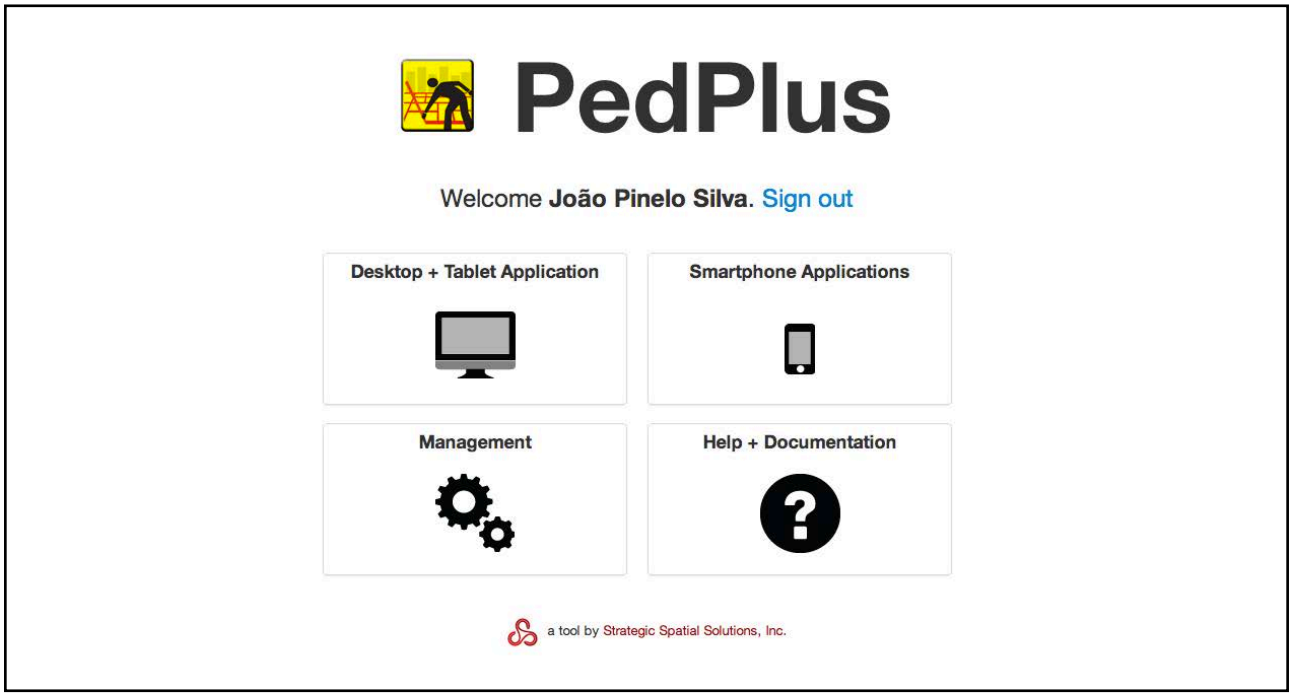
Access and Login

PedCount can be accessed at http://pedcount.s3sol.com. All functionality, including different access modes (desktop/tablet/smartphone), account management and documentation, is accessible from the main dashboard (see image below). However, the software will recognize the type of access mode used and adjust the functionality and menus accordingly (see table Features and Access Modes below).



Features and Access Modes

	Mapping	Measuring	Modeling	Assessing	Modifying
Smartphone	No	Yes	No	No	No
Tablet	Yes	Yes	Yes	Yes	Yes
Desktop	Yes	No	Yes	Yes	Yes

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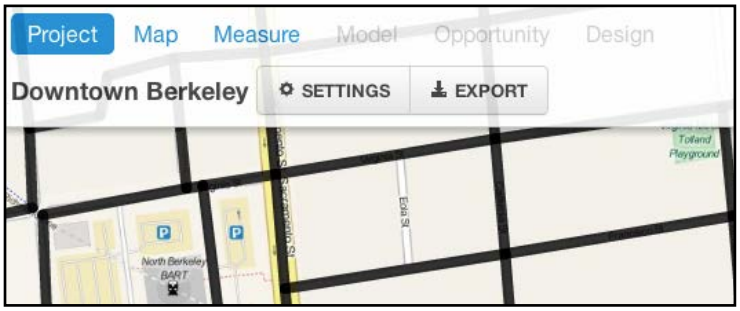
Interface

The interface displays five tabs:

Project I Map I Measure I Model I Opportunity I Design

PedCount users will be able to access the first two tabs. The Model, Opportunity & Design Tabs are available in the extension PedPlus.

Project I Map I Measure I Model I Opportunity I Design



Project settings, such as choosing the base map to display.

Export data as KML file (export feature is described below).

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Map

Draw a map of the spatial structure (street segments, which are portions of a pedestrian pathway between two nodes).

Measure

Plan, carry out, and view counts of movement for the different segments on the map.

Model

PedPlus analyzes the spatial configuration of your map according to two accessibility algorithms and classifies (coloring) the segments according to their extrinsic potential. This means that each segment is classified according to its direct and indirect connections to the whole network, rather than to its own local characteristics such as pavement width, shading, amenities, etc. This comprehensive analysis of the pedestrian network can reveal formerly hidden patterns in pedestrian movement and land use.

Opportunity

The opportunity map is an automatic assessment feature that highlights the areas of the network which are not optimized, being over-used (under stress) or under-used (their potential is not being used). These represent opportunities for improvement, guiding design and planning solutions.

Design

Allows for the creation of design scenarios which can then be assessed based on the model and evidence (measures/counts) that were previously collected. This powerful step gives the user a measure of the impact of each scenario, facilitating decision making based on strategic objectives.

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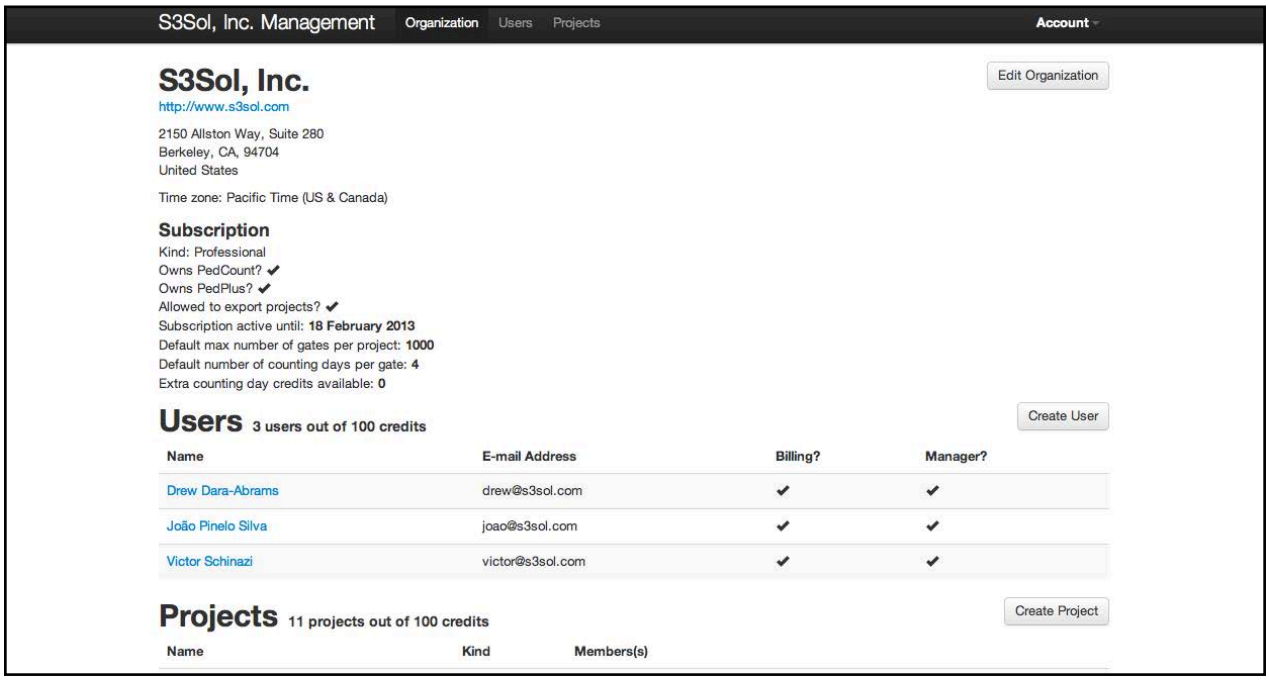
Subscription and Account Management

Account Management

Allows the user to view and edit general account details and to create/manage users and projects. This is accessible from the dashboard and from Account (always visible on top right corner from within a project)(see image below).

Organization

Click here to edit organization details, create and delete users and projects and to manage individual permissions for users at the organizational level.



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Creating and Managing User Accounts

Create and delete users for the organization, and manage individual permissions.

Billing- User can make changes that imply additional costs, such as package or project upgrades.

Manager- User can do all other administrative tasks apart from the ones that imply billing. Managers can, for instance, create users and projects.

Creating and Managing Projects

Creating and deleting projects as well as managing user permissions per project:

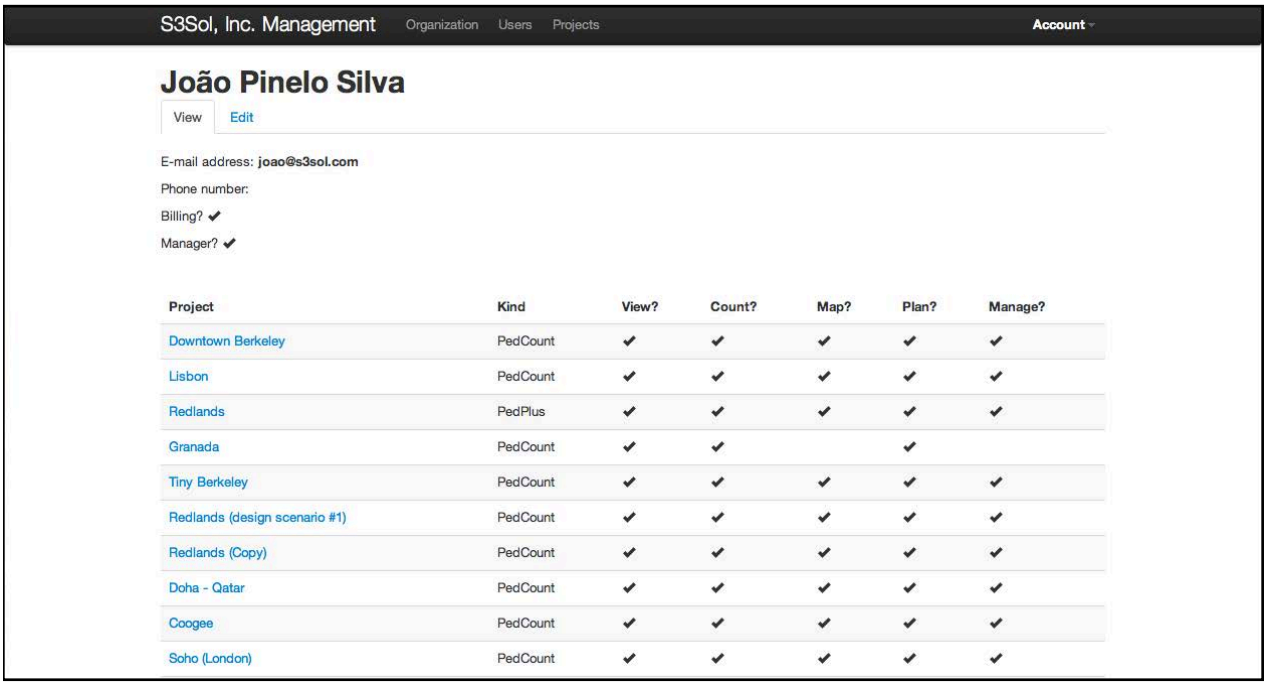
View- User has view-only access to project.

Count- User has permission to carry on counts.

Map- User has permission to edit map.

Plan- User has permission to create and edit counting plan.

Mange- User has permission to do all of the above and to manage the account at organizational level.



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Project types and upgrading

There are currently two types of projects:

•PedCount

•PedPlus

Upgrading can be done by a user with billing permissions in the management interface.

Password

Password can be changed through Account > User Settings.

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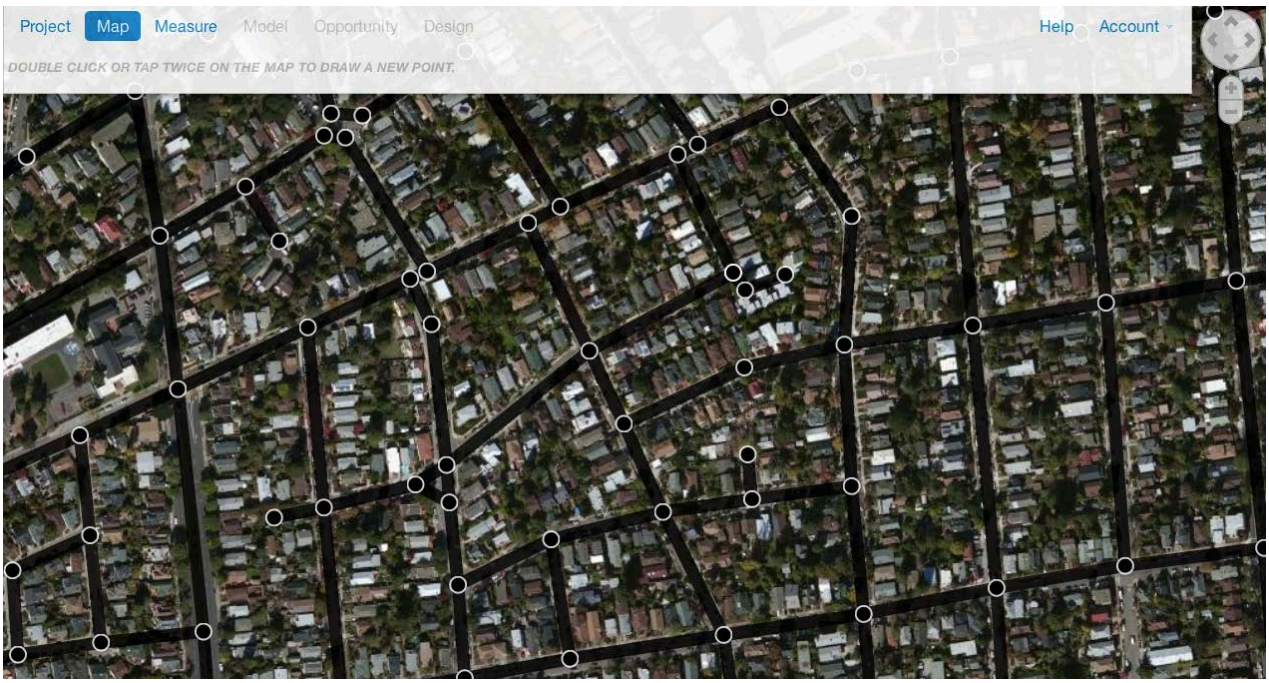
Mapping

Allows the user to create a map (or update and imported map) based on up-to-date cartography including satellite imagery. The map shall include all pedestrian paths (exclusive or not) of the study area, and exclude non-pedestrian ones. For a more detailed analysis, one can represent both sidewalks of each street and all crossings. However, it is fundamental that the whole map is consistent in terms of the detail of representation.



Map

The map is in “edit” mode when the nodes are visible (as depicted above).

Panning: To pan the map click and drag the map (on tablets tap and drag).

Create feature: To create a node double click on the desired intersection (or double tap). Once the node is created, or is selected (green highlight), double tapping it again will create a new node and segment connecting them.

Delete: To delete a segment or node select if from the map and click (tap) the delete button.

Move: Select the node you want to move and double tap at a new desired location. Note that all segments to which that node belongs to will also be transformed. This facilitates the task of drawing and prevents mistakes such as having isolated nodes or segments and apparent connections.

Connect: Select node, choose Connect from menu, click (or tap) node to connect to and segment will be created between the two.

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Drawing the map

Draw the segment map over up-to-date cartography. Maps can also be imported from GIS or CAD and updated within PedCount (see Importing and exporting data).
Draw each street segment (portion of street between two intersections, or one end and one intersection). Remember to include footways even if they aren't part of a street.

Importing and Exporting Data

PedCount exports the map and associated data in KML format, so you can easily use it with other tools such as Depthmap, Google Earth, Esri ArcGIS, and MapInfo.

Export

To export a map and all its data open your project and under tab Project select Export.
Maps can be imported from GIS or CAD and updated within PedCount. If you would like to import a map, please contact us at support@s3sol.com and we will convert and import your files.

Measuring

Movement can be measured for all or a subset of segments of the map. To create a good set of observations that constitute a good sample of the actual movement you should plan the count sessions in order to cover the area and the period to be characterized (such as daily or weekly cycle, monthly, etc.). It is important to cover as much area and time as possible. However this is often limited by time and budget constraints, as well as the number of observers available.
It is recommended that each counting session lasts 10 minutes. In a typical 1 hour counting scenario observers will count at 5 locations (counting gates). In this manner, allowing for 10 minutes to move between gates. These cycles can then be repeated up to 24 hours per day per gate. Each counting gate corresponds to one segment. To assist in the laborious process of planning counts PedCount includes a planning assistant. This feature will be saving you hours of planning the execution of the counts.

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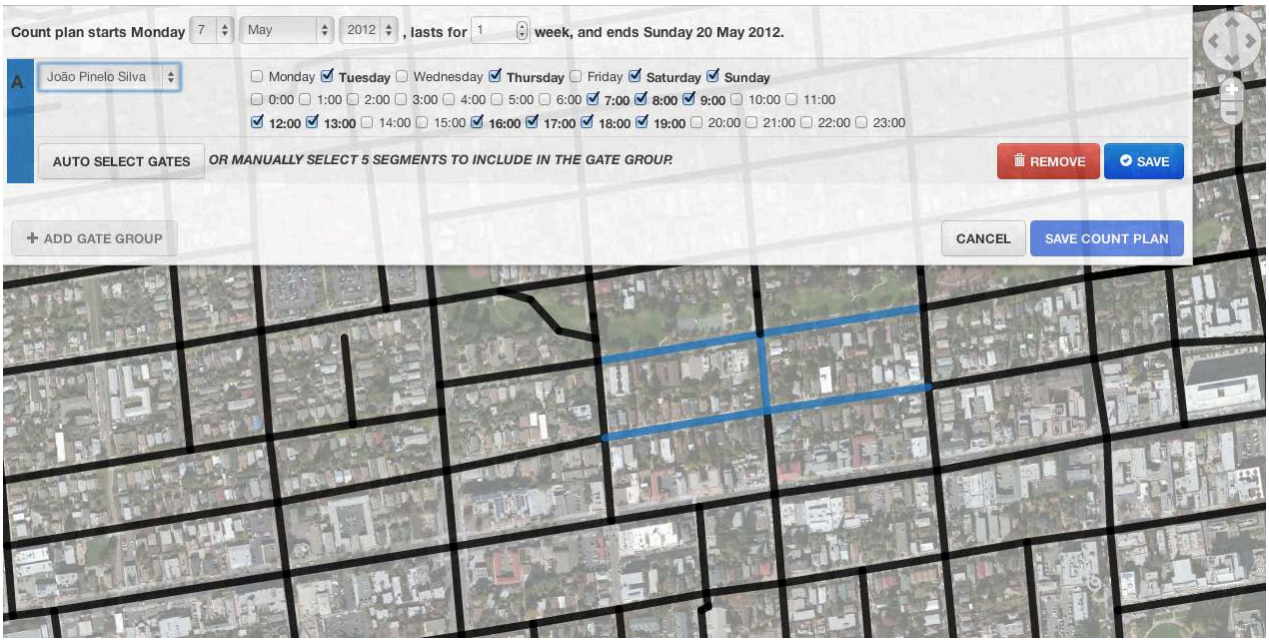
Plan

This can be found under Measure tab. It allows a project manager to create a plan to carry out counts by choosing the days and times of the week when the counts are to be made. The project manager can then assign five gates to each of the users listed (the ones assigned to that project under management). The planning assistant will email each observer with a detailed plan of action and allow the observer to accept the task. The planning assistant will notify the project manager if any of the observers did not confirm acceptance of the task, allowing for an effortless planning and supervision of the counting process.



Groups of five gates can be individually associated with each observer, overall creating a Count Plan (see below).

Auto-Plan (to be released soon)

Alternatively, the planning can be automatically done by the planning assistant (choose Auto Select Gates under same tab).

Based on the number of gates to count and the number of observers available, PedCount automatically analyses the configuration through algorithms that measure accessibility and chooses which segments (gates) to count on, automatically associating observers to gates. This feature also lets you manipulate the gate selection.

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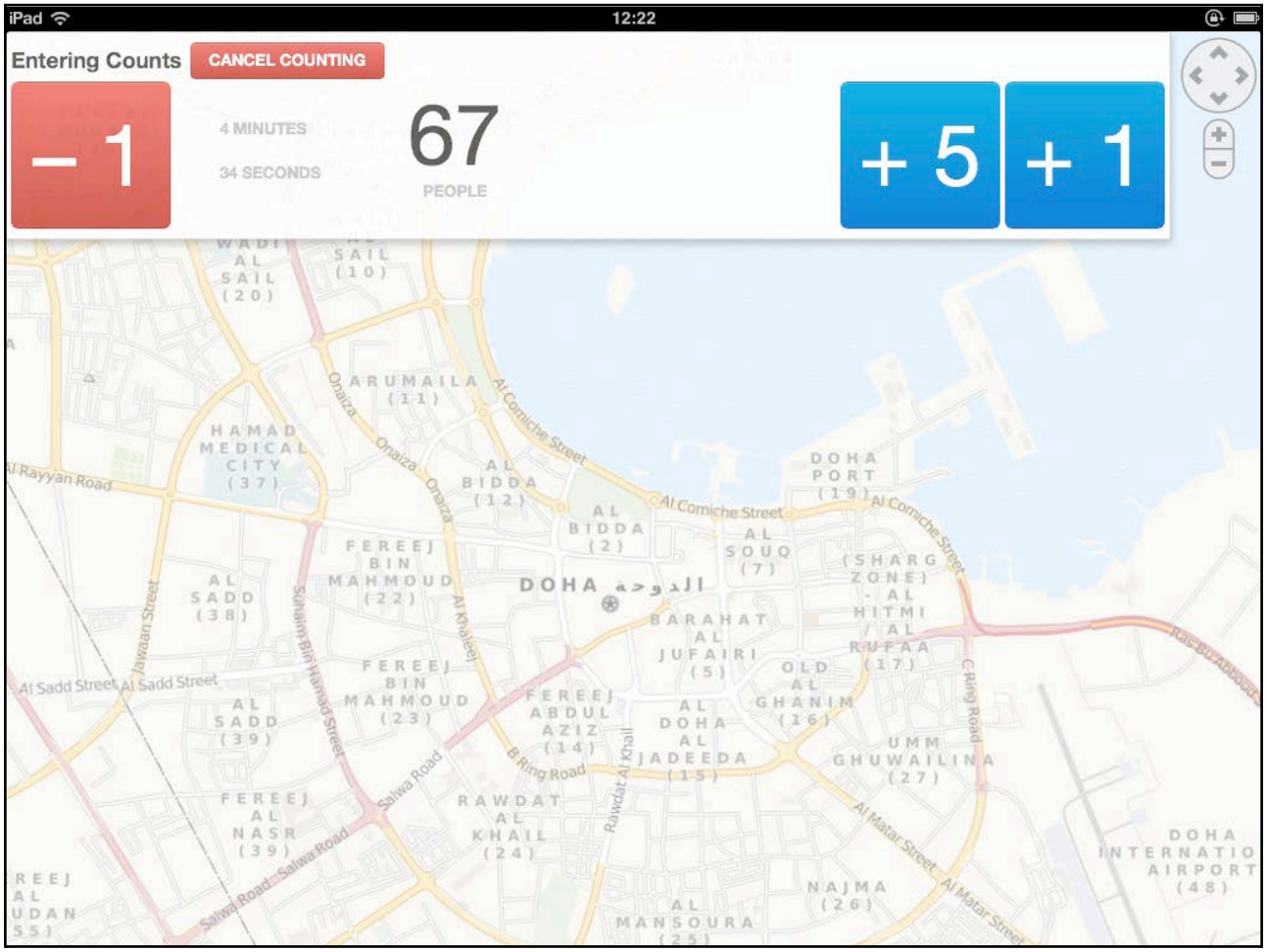
Count

When logging in PedCount (on tablet or smartphone) at http://pedcount.s3sol.com you'll be given a choice of projects (the ones you're assigned to). From these, the ones in which you're assigned gates to count will allow you to choose the date and time and gate where to count. When ready to start counting tap Start Session and tap to add movement. A timer will appear to help you stick to the 10 min. of each session. At the end of the session (signaled by the timer) tap to upload the data, or refuse the count if something happened that invalidated the session.

The counting interface (tablet) is depicted below.



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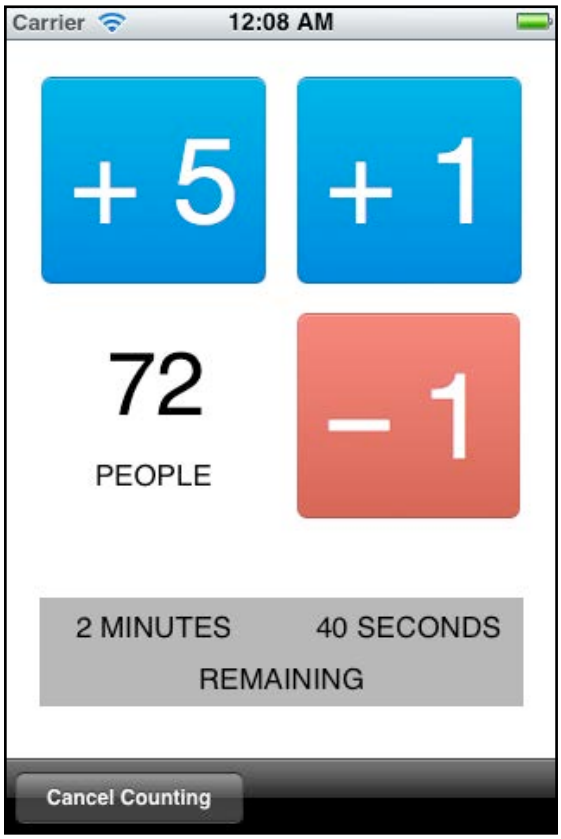
The counting interface (smartphone) is depicted below.



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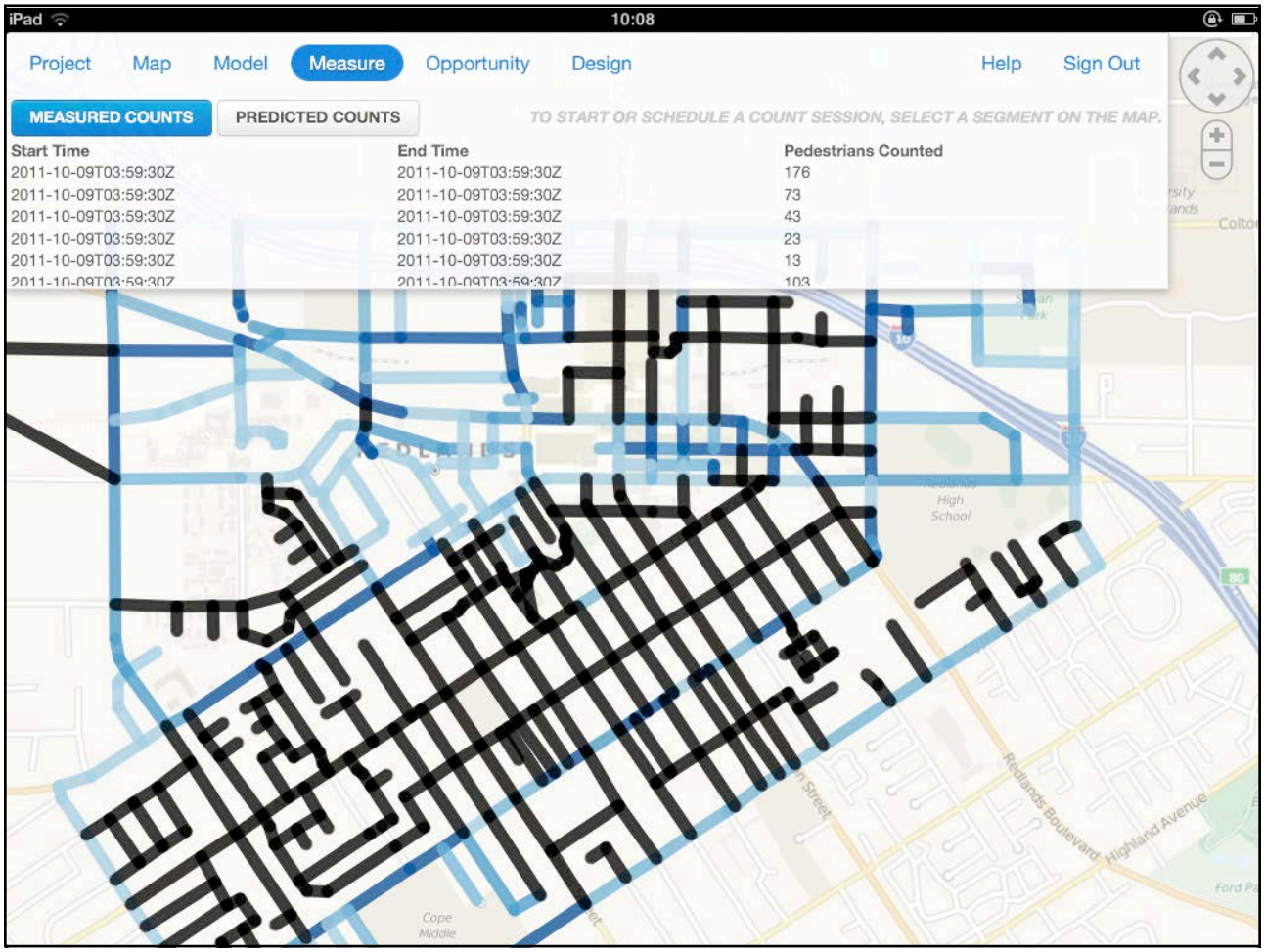
The results of count sessions are automatically displayed and mapped (see below).



Count - Offline Mode

If your mobile device does not have internet connection all the data form the counts will be uploaded to the server once the device is able to connect to the internet (via 3/4G or Wifi).

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Getting in touch

We will be pleased to help, so please do not hesitate to contact us at support@s3sol.com

We would be glad to hear about this document. How helpful was it to you? How could it be improved?

We always like to hear about your projects, whether for advice, to share findings, or to listen to your suggestions. info@s3sol.com

Thank you for using PedCount.

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