# NaviLens App

# User Manual

# Table of Contents

# What is NaviLens?

NaviLens is a new system of intelligent digital codes that help make spaces more accessible.

It consists of color codes similar to QR codes but with technical characteristics that enable their reading in conditions that no other code has.

NaviLens codes help users obtain useful information (such as lines passing through a stop, next departure times, stop descriptions, service incidents, etc.) in the format and language most suitable for the user profile, helping to improve the accessibility of any environment/service and enhance the user experience in its use.
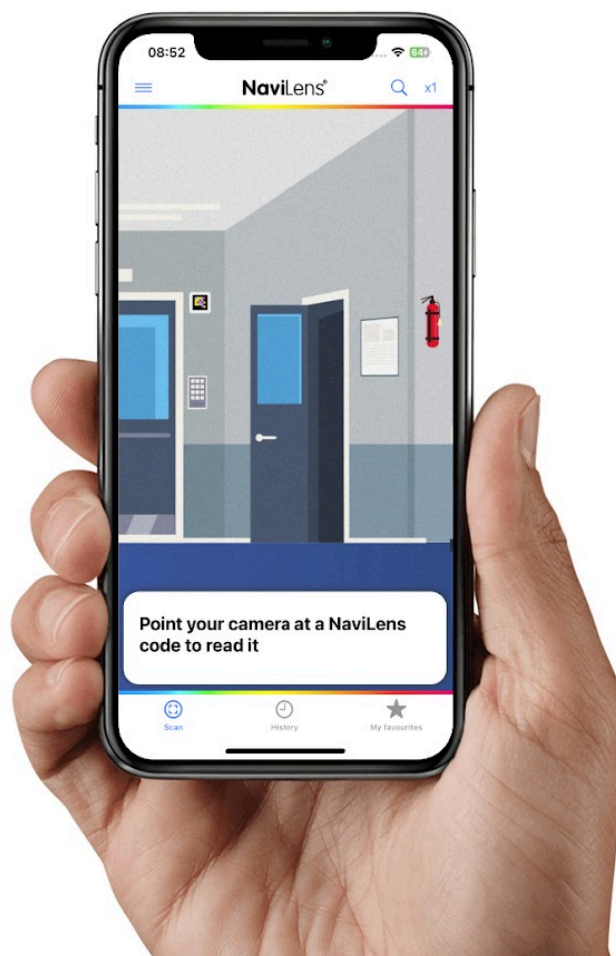
# How to Use NaviLens (Quick Guide)

Install the free NaviLens app.

**DISPONIBLE EN Google Play**

**Disponible en el App Store**
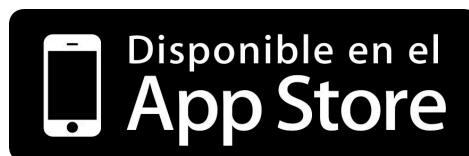
Run the application, **Allow** camera permissions, and **Accept** the terms of use.

**NaviLens®**

Thank you for downloading NaviLens.

NaviLens doesn't detect obstacles. NaviLens should never substitute a cane, a guide dog, good orientation or mobility. NaviLens is not always accurate, nor is it error free. It should not be used in situations where you could be hurt or injured. By proceeding, you understand this and agree to use NaviLens at your own risk and responsibility.

Please confirm you have read, understand and accept the,
Terms and Conditions of Use and Privacy Policy
Check the box below to agree and continue. If you do not agree, please remove this application.

☐ **I accept the terms of use**

**NEXT**

**"NaviLens" Would Like to Access the Camera**
The app needs to access the camera to detect the NaviLens codes. No image is sent outside of the mobile device. The computer vision algorithm works in local mode.

Don't Allow        OK

**Point your camera at a NaviLens code to read it**

Scan        History        My favourites

3

## Basic Information to Start Using NaviLens

When you open the application, your mobile camera will activate so you can start exploring your immediate environment immediately. Just point the camera where you think there might be NaviLens codes. These can be anywhere: from walls to the ground, marking routes or signs.

When your phone captures a code, you'll hear a "click" sound. If this sound repeats, congratulations! It means you've found multiple codes. NaviLens is smart and will tell you the distance to each code from your position.

But that's not all, it will also read aloud the information that each code hides. It can range from details about your location to instructions on how to get to a destination. If there is more than one code within your reach, the app will notify you by saying how many codes it sees.

Once you know the information from the code, NaviLens won't leave you alone. It will guide you step by step to your destination, updating the distance as you move. Moreover, if you encounter a special code, like those at bus stops, NaviLens will deploy its magical 360° Vision mode. This feature immerses you in an augmented reality experience, making orientation easier and more interactive.

In summary, NaviLens is your perfect companion for exploring and moving through the world in an innovative and accessible way. Just by opening the app and looking around, you'll embark on a journey full of discoveries. You'll listen, learn, and follow the directions provided by NaviLens, all smoothly and engagingly.

# NaviLens Settings (Advanced Guide)

NaviLens allows you to configure many options regarding the behavior of the application to adapt to your needs. You can access these settings from the application menu.
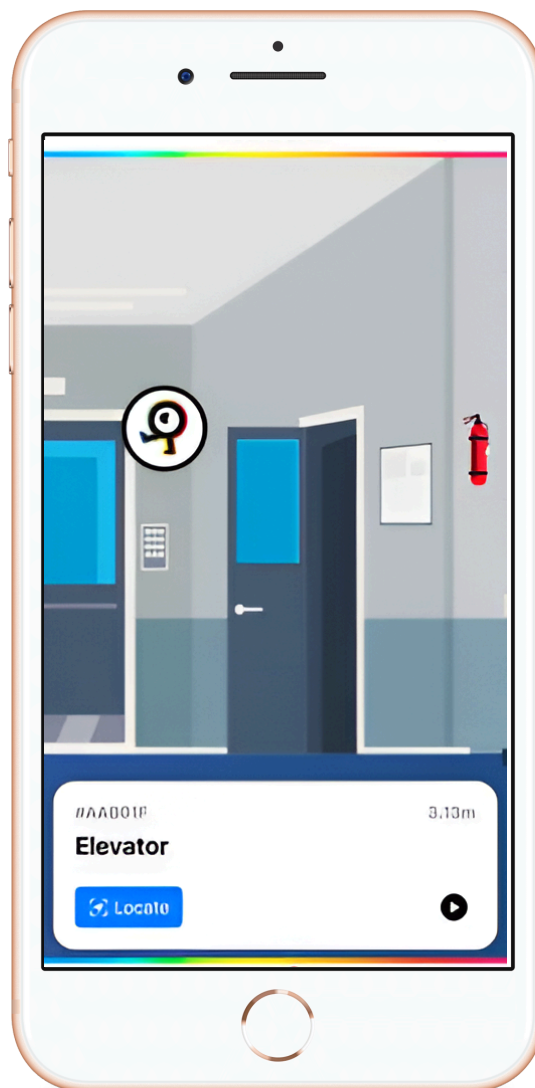


*Main Screen: Code Scanning*

# User Guide

The NaviLens interface features a central screen where detected codes appear and a bottom menu with buttons. You can interact with the codes by double-tapping them using your screen reader.

NaviLens codes are detected using the mobile device's camera. Make sure to aim the camera outward and in the appropriate direction according to the location of the codes (walls, floor, height, etc.).

When the camera detects a code, you'll hear a "click" sound indicating the presence of a NaviLens code signaling an item. The code reading will start automatically, providing information about the item.

You can stop the reading by making a "Shake" gesture, quickly moving the device horizontally and vertically.

After reading the code information, NaviLens will provide voice instructions (right, left, forward, backward, up, etc.) to help you reach the flagged item.

If multiple codes are detected, the application will vocalize the codes it sees through the camera, indicate the distance from your mobile phone to the code in question, and then read the most centered code to your camera.

If the camera detects a "magnet" code at a bus stop, the application will automatically activate 360 Vision mode, guiding you to the stop code through sounds, voice instructions, and haptic vibrations. The 360 mode continues to indicate the code's location even if the camera is no longer seeing it.

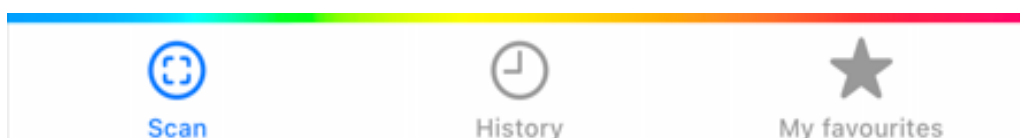You can find more information about how NaviLens works in this video:

## Main Screen

On the main screen of NaviLens, the detected codes are displayed along with buttons for accessing different options at the bottom.

There are three buttons at the bottom:

● **Scan:** Access the screen to scan codes.

● **History:** Access the history of viewed codes.

● **Favorites:** Access your favorites.



*Buttons on the Main Screen Bottom Section*

Other three buttons at the top:

- **Main Menu:** Access the main menu screen.

- **Filter:** You can filter codes by letters/words.

- **Zoom:** Increase or decrease the camera's zoom level.



*Buttons on the Main Screen Upper Section*

# Main Menu

The main menu allows access to all configuration options and other available features. From the main menu, you can access these options:

- **Settings:** Access to all application settings.
- **360 Vision:** Access NaviLens 360 Vision.
- **Siri Shortcuts:** Allows you to create your own quick actions with Siri (iPhone).
- **Request NaviLens codes:** Request codes for personal use.
- **NaviLens Friends & Family**: Share and back up your codes.
- **Problems or suggestions?**: Contact NaviLens.
- **Write a review:** Write a review on the app store.
- **Help:** Brief user manual for the application.
- **Terms and conditions:** NaviLens terms and conditions of use.
- **What's new:** New additions in version 5.0.0
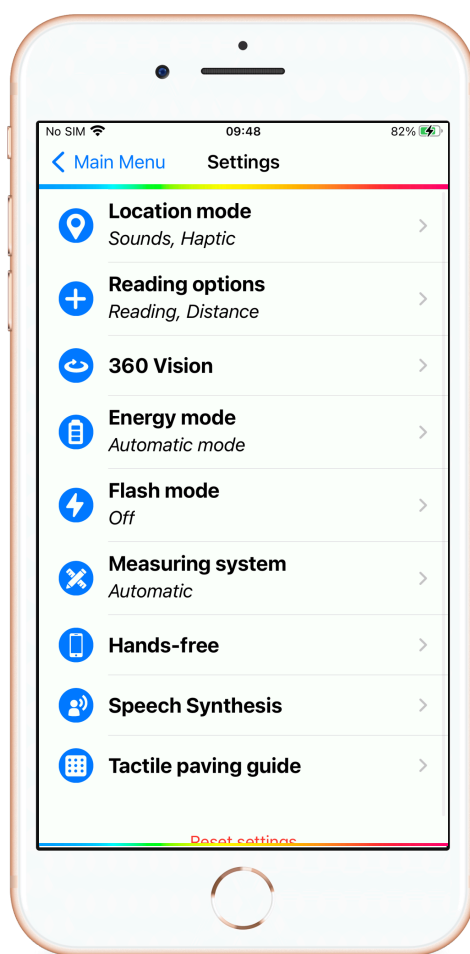- **About:** Information about the application.
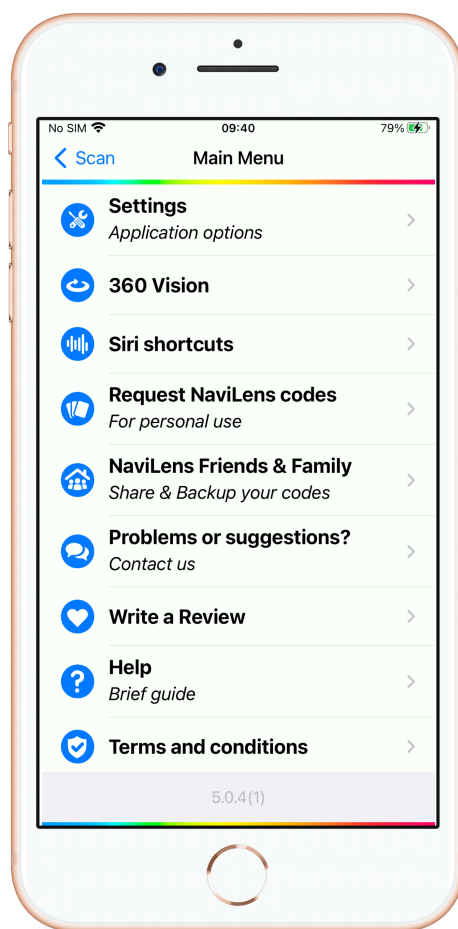
*Main Menu*

# Settings

From the settings section, you can modify the behavior of the application to adapt it to user preferences. From settings, you can access the following options:

- **Location mode :** Method by which the application will guide you to the codes.
- **Reading options :** Behavior of the application when detecting a code.
- **360 Vision :** Configuration of the 360 vision mode.
- **Energy Mode :** Power mode configuration.
- **Flash mode :** Flash behavior.
- **Measuring system :** Measurement system to be used.
- **Hands-free :** Hands-free mode.
- **Speech Synthesis :** Application speaking speed
- **Tactile paving guide :** Guided through podotactile.



*Settings Menu*

# Location Mode

It allows you to choose how NaviLens provides help information during guidance. We have the following options:

- **Sounds:** The application will indicate the location of the code through three-dimensional and panned sounds.
- **Voice instructions:** The application will indicate the location of the code through voice instructions and suppress sounds (suitable for beginners but slower in interaction).
- **Haptic:** The phone vibrates when detecting a code.
- **Background sound during scanning:** Background sound on the NaviLens code scanning screen.

These four options can be combined.
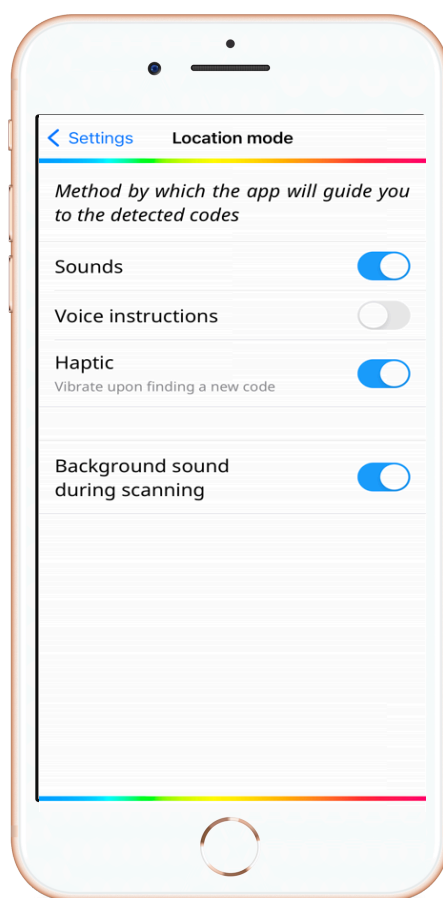


*Location Mode*

## Reading Options

It allows you to choose how NaviLens vocalizes information about the codes. It is divided into two sections: behavior when reading content and additional information provided besides the code's content.

In "Read Content," the following options are available:

- Read upon detection: Selecting this option vocalizes the content of the code as soon as it is detected, without the need for a shake gesture.

- Interrupt speech with new codes: If this option is activated, the ongoing vocalization of a code's content will be interrupted when other codes are detected. If the option is deactivated, the vocalization of a code will continue until the end, even if other codes are detected during the speech.

- Prefer short texts: If this option is activated, it will vocalize the short text of a code if such text is configured in the panel when detected. Tapping on the code accesses its details, and the normal text is vocalized. The complete text is also vocalized by shaking the device when detecting the code.

In "Additional Information," we can enable or disable the following 3 options:

- **Announce distance:** When reading the code, it will verbalize the distance from our device.

- **Announce angle:** When this option is active, we will be informed through acoustic signals of the angle at which the code is relative to our device, and the inclination of the angle will be verbalized.

- **Announce time since last read:** Here we can activate/deactivate the verbalization of the time elapsed since we detected the code.
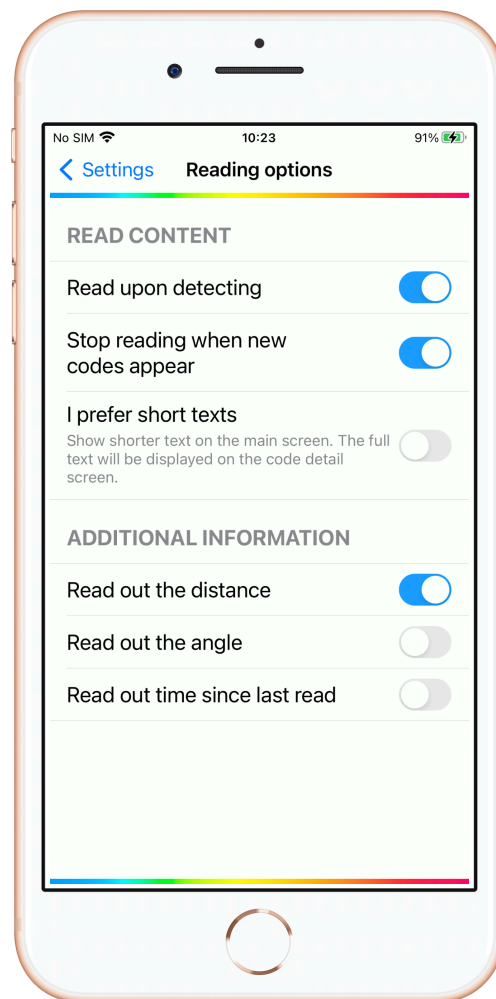


*Reading Options*

# 360º Vision

Allows you to configure the behavior of NaviLens' 360º Vision mode. It is divided into several sections:

## Magnet

If the magnet option is enabled, it automatically switches to 360º Vision mode when detecting a code configured as a magnet. If it is deactivated, it only switches to 360º mode if the user does it manually.

## Location Mode

Allows you to choose how NaviLens provides help information during guidance. We have the following options:

- **Sounds:** The application will indicate the location of the code through three-dimensional and panned sounds, indicating if it is centered or on which side it is located.

- **Voice instructions:** The application will indicate the location of the code through voice instructions.

- **Mixed system:** The phone vibrates when detecting the code, allowing vibration to detect if the code is being detected.

These three options can be combined.

## Orientation Instructions:

Allows you to configure how orientation instructions for locating the code are received. The following options are available:

- **Clockwise Indications:** Locates the code using clock hour instructions ("at your two o'clock," "at your nine o'clock," etc.). Only for routes.

- **Simplified Instructions:** Locates the code using simple instructions ("to your left," "to your right," etc.)."
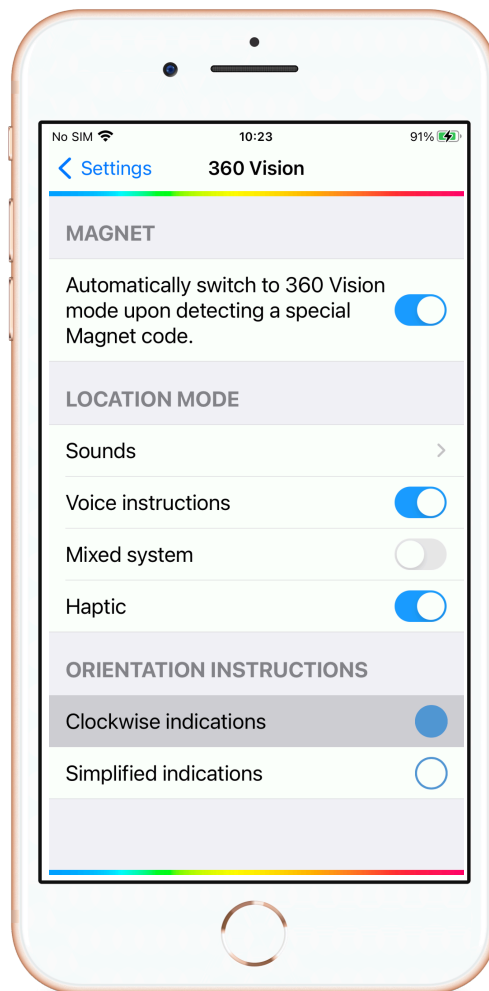
*360° vision*

## 3D Sound Algorithm

Allows you to select how you want to listen to the 3D sound for locating a code if the sound localization mode is enabled. The following options are available:

- ● Mono Sound: Contains only one sound signal.
- ● Stereo Pan: Contains two sound signals.
- ● 3D Sound (HRTF): Positional 3D audio.

## Centered Code Sound

Allows you to select the sound that indicates the code is centered if sound localization is enabled. There are four options:

- ● **Tibetan Bell:** Sound of a bell.
- ● **Sound 1:** Sonar sound.
- ● **Sound 2:** Sonar sound.
- ● **Sound 3:** Sonar sound.
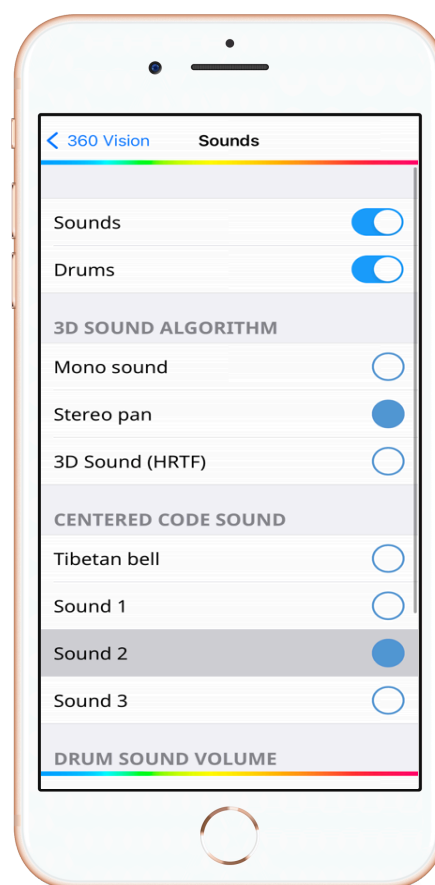
*Sounds*

# Energy mode

Allows you to configure the power management of the application. We can choose between the following options:

- **High-performance mode**: Maximum performance with higher energy consumption.
- **Automatic mode** : When the automatic option is activated, the application will go into power saving mode when needed
- **Energy saving mode** : Moderate performance with low power consumption.
- **Inactivity warning:** the scan will stop when NaviLens codes have not been detected for a while
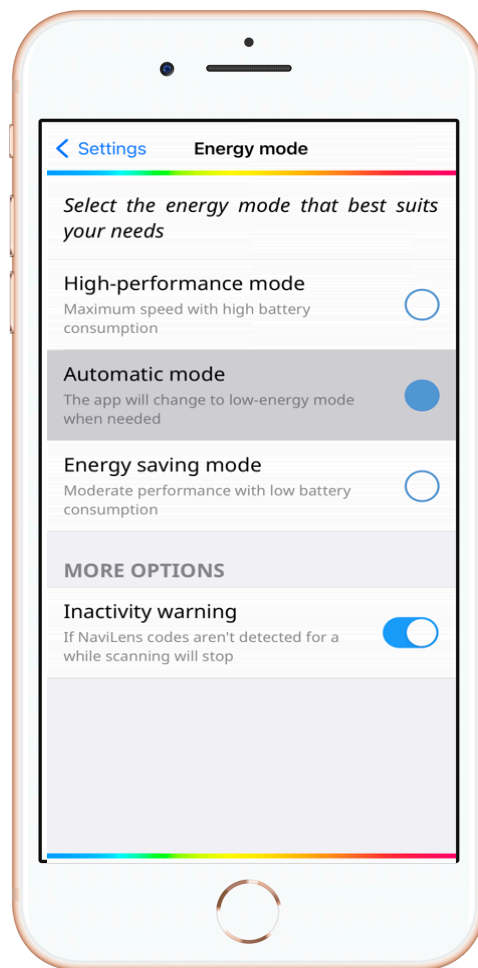


*Power Mode*

# Flash Mode

In this section we can manage the flash function. We can choose between:

- **Off** : Flash disabled.
- **On** : Flash on continuously.
- **Automatic** : The automatic mode is used to activate the flash automatically in low light environments.
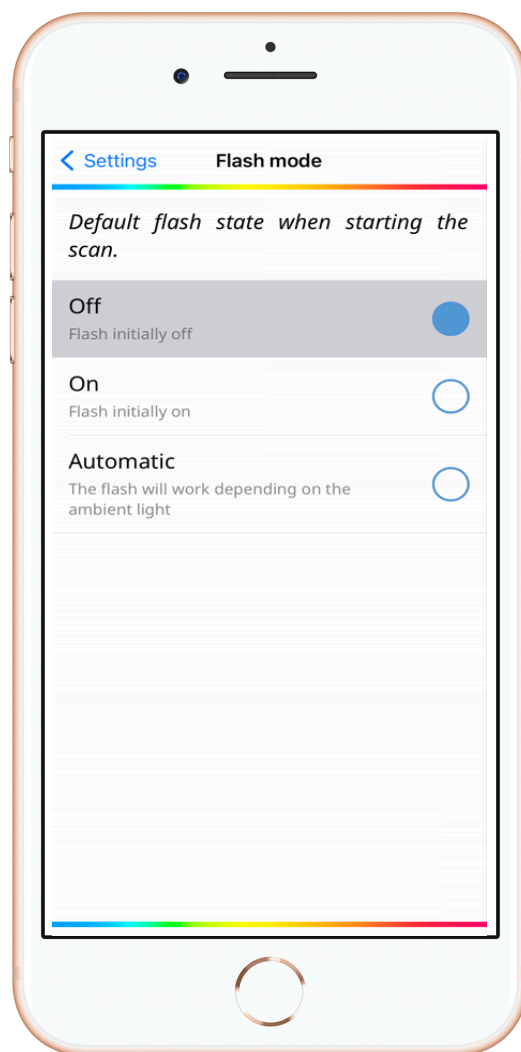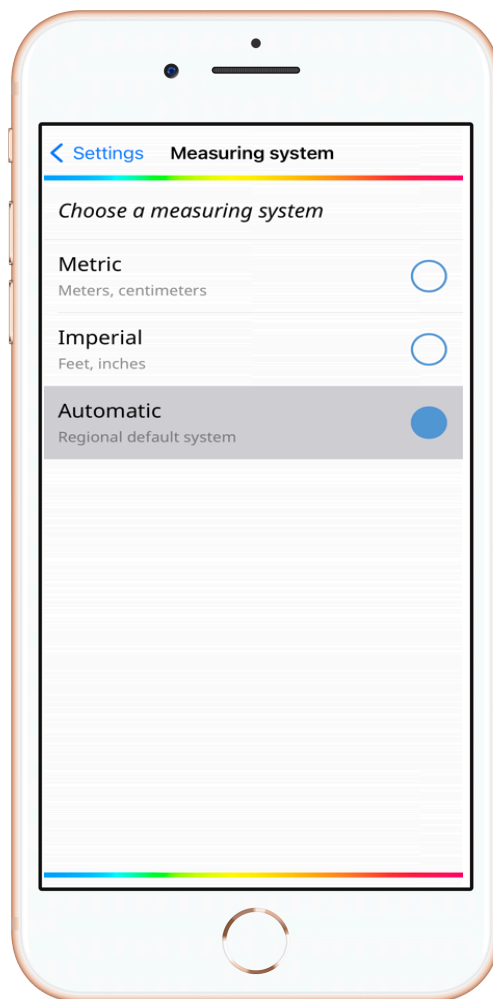


*Flash Mode*

# Measuring system

In this section we will choose the way in which the application speaks the distance to the code. We can choose between:

- **Metric** : Distance is always displayed in meters or centimeters.
- **Imperial** : Distance is always displayed in feet or inches.
- **Automatic** : The distance is displayed based on the phone's regional settings.
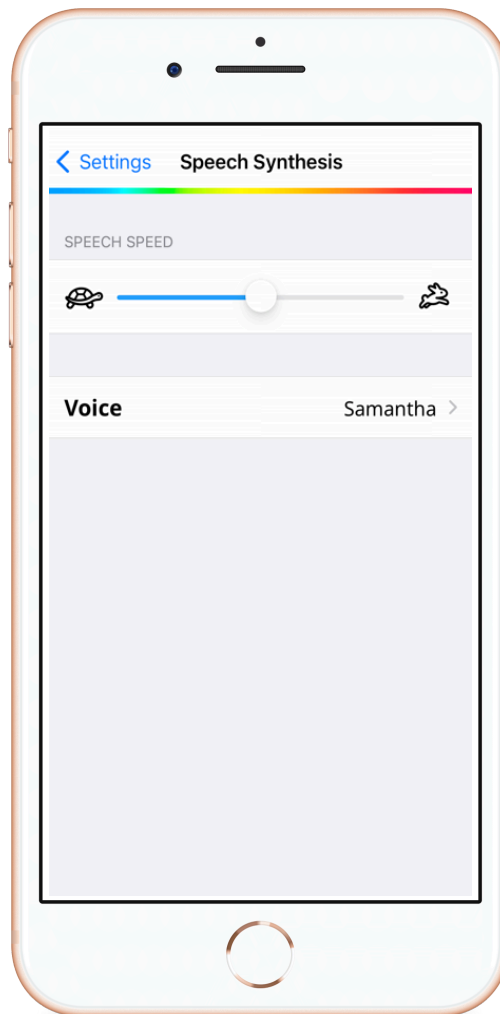


*Measuring system*

# Hands-free

In this section you can configure if you want the screen to turn off when detecting proximity to the front sensor or if the screen always stays on.
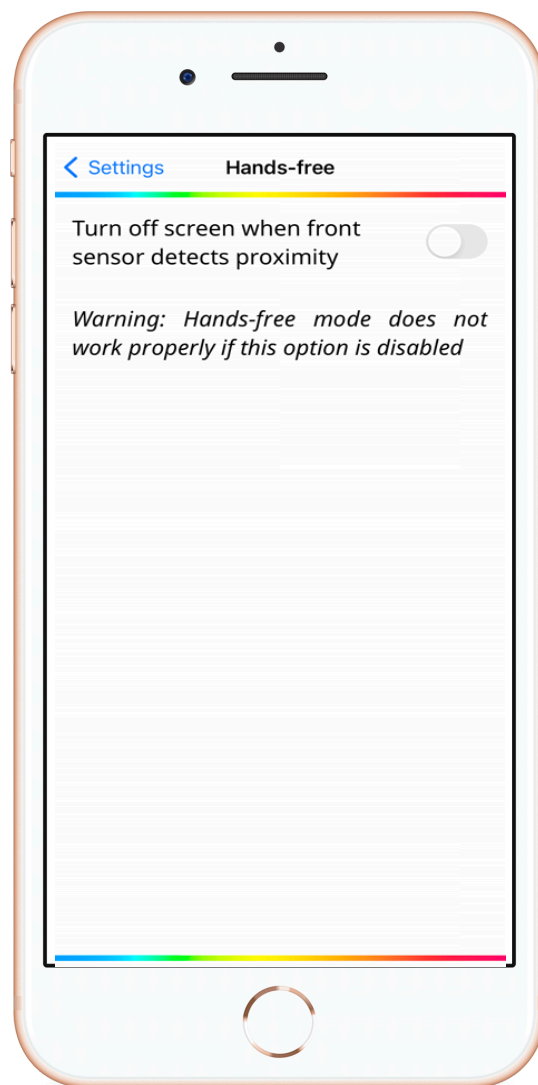


*Hands-free*

# Speech Synthesis

In this section you configure the speed with which the application speaks, this speed is only taken into account if the screen reader is not activated.



*Speech Synthesis*

# Tactile paving guide

In the NaviLens settings, there is an option to enable or disable guidance through tactile pavement in the codes at intersections of routes.

Guidance through tactile pavement involves providing tactile guidance through raised lines on the ground, allowing visually impaired individuals to follow a defined and safe path.

By activating this option, NaviLens will utilize the tactile pavement codes present at intersections to provide additional directions during navigation.
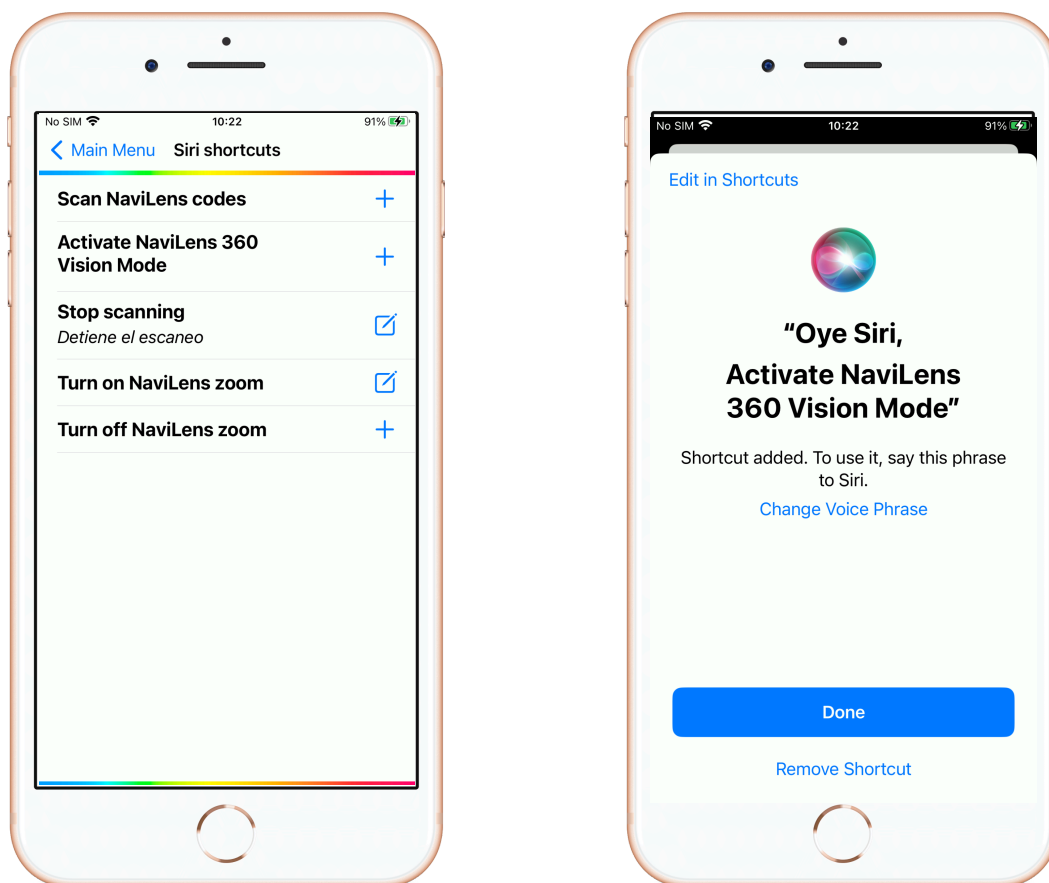
This can be especially useful for improving orientation and precision in pedestrian traffic environments.
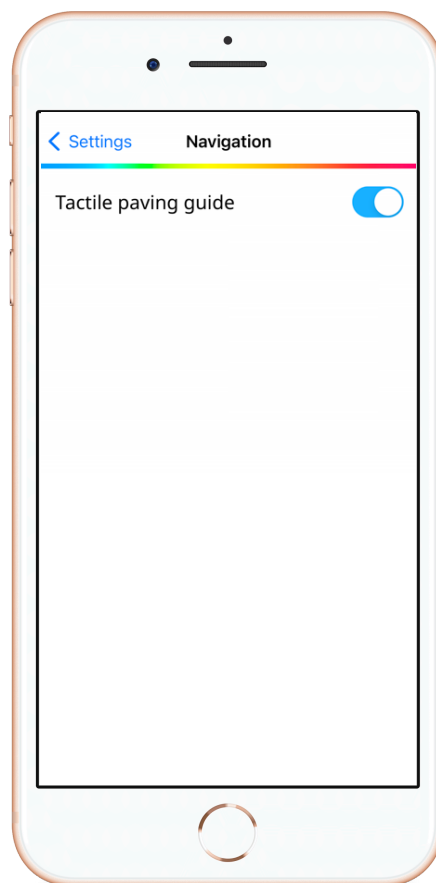


*Tactile paving guide*

# Siri Shortcuts (Iphone devices only)

Siri Shortcuts in NaviLens for iPhone devices provide a convenient way to quickly access NaviLens functionalities and features.



*Siri Shortcuts*

Siri Shortcuts allow you to create customized commands that can be activated through voice commands or from the home screen.

# Request NaviLens codes

In this option we will be able to request that they send us a package of codes totally free to be able to label elements of daily use of our environment.

These codes are blank codes so that you can enter the information you want from the application for your personal use.
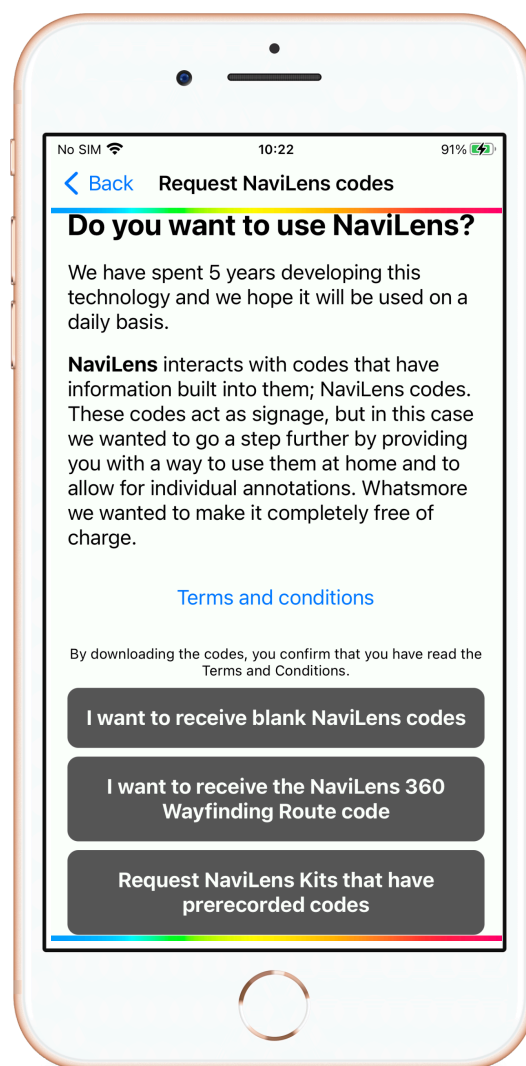


*Request NaviLens codes*

# NaviLens Friends & Family

NaviLens Friends & Family offers the functionality of sharing personal annotations with other users, allowing you to collaborate and share information efficiently.

Furthermore, thanks to **NaviLens Friends & Family**, you will have the ability to store all your personal annotations in the cloud, ensuring their backup and access from any connected device.
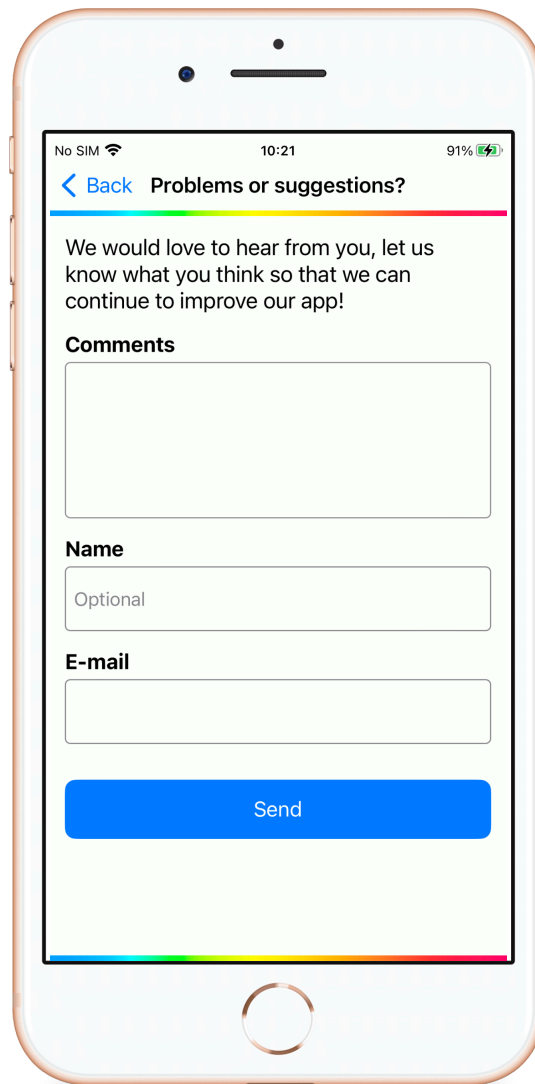
This feature promotes collaboration and knowledge sharing among NaviLens users.
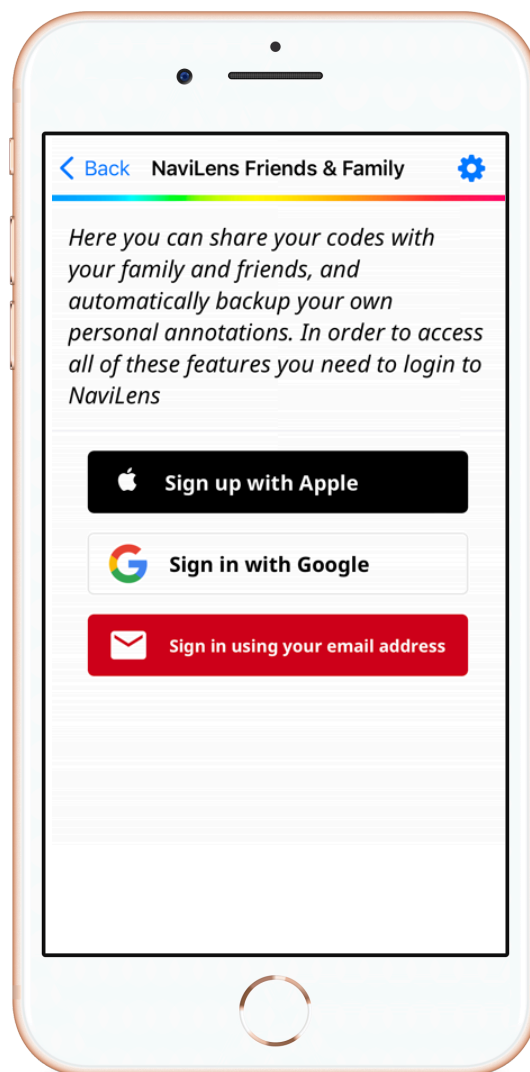
*NaviLens Friends & Family*

# Problems or suggestions?

If you have any problem that you want to send us or any suggestion to make, from this option you can access a contact form to send your comments.
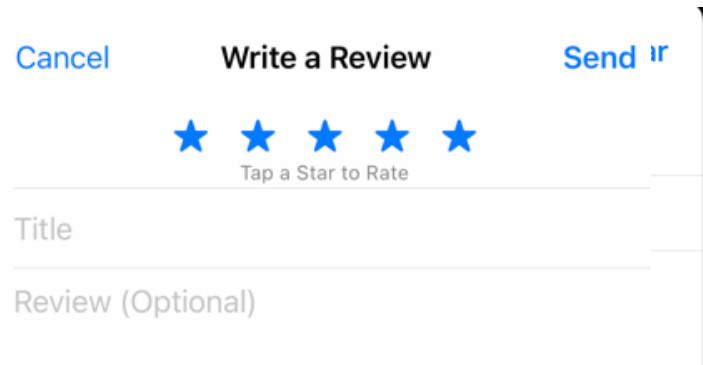


*Problems or suggestions?*
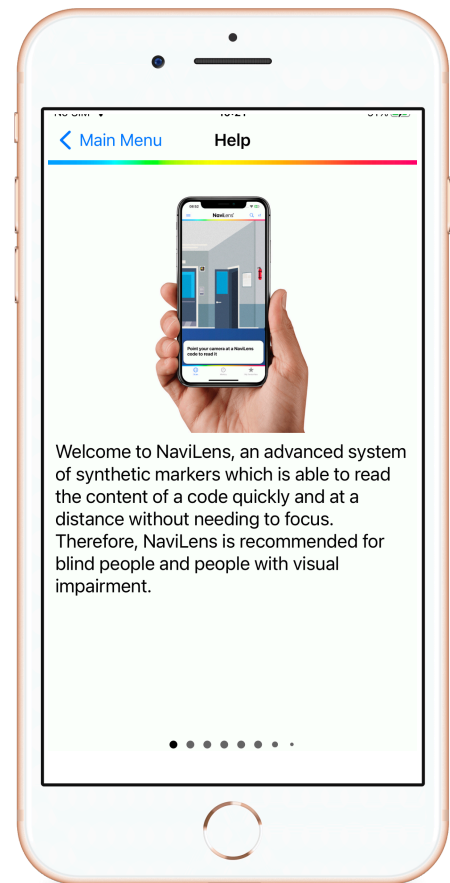
# Do you like NaviLens?

From this option you can access the application stores to be able to write a review about NaviLens.



# Help

In this section, you will have access to a brief tutorial that will provide you with a concise explanation of how the application works.
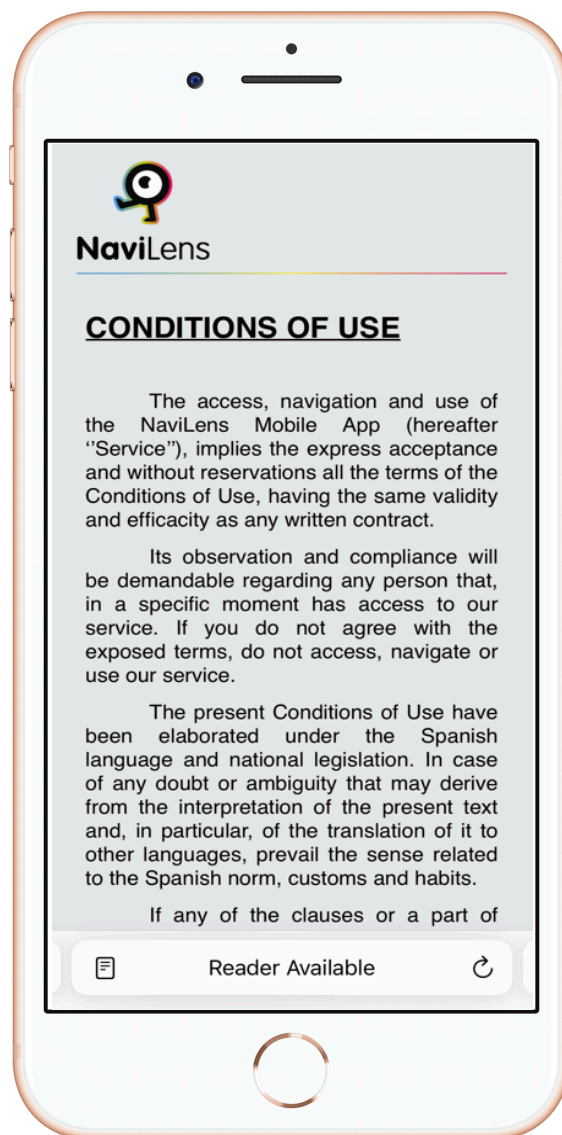
The tutorial is designed to give you a quick overview and understanding of how to use the app effectively.
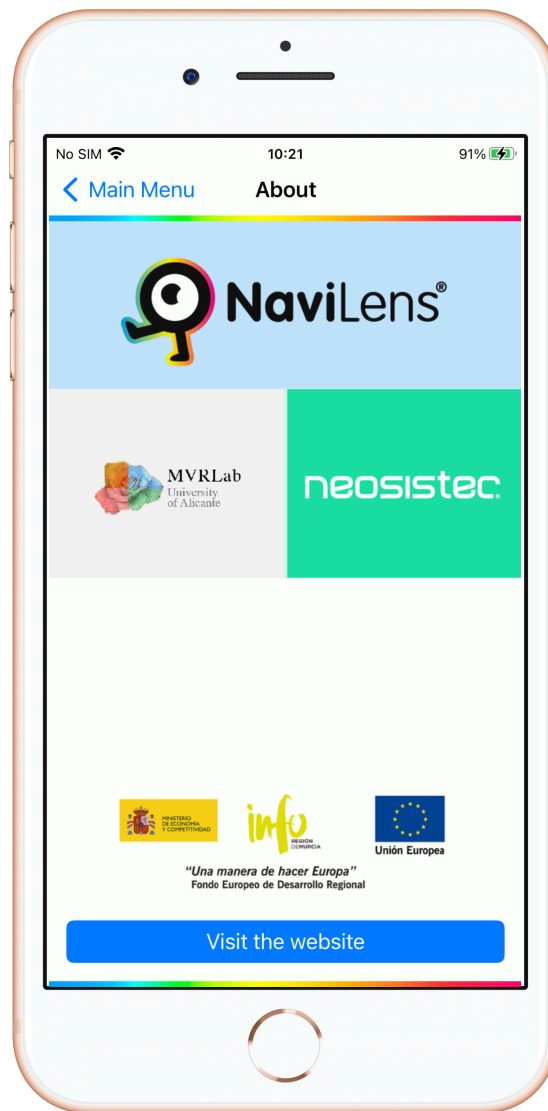


*Help*

# Terms and Conditions

From this section you can access the terms and conditions of the application, which must be accepted the first time you use it to access it.



*Conditions of use*

## About

This option displays information about NaviLens and its developers.



*About*

# Personal Use Codes

NaviLens offers various utilities, including the use of home or personal codes to facilitate the location of items in our home or workplace.

These blank codes can be customized by entering the desired information from the application. To get a free pack of color codes, simply go to the "Request personal use codes" option in the quick start menu and provide your name and email address.

Once printed, the codes can be placed on various objects. To add information to a code, follow these steps: scan the code, select it on the screen, tap on "Personal Annotation," and write the desired text. Finally, accept and close the code selection.

It is also possible to add information to the codes using the "Annotation" option found in the code list.

# NaviLens Friends & Family

NaviLens Friends & Family is a feature that allows NaviLens users to share their personal code annotations with others and have a cloud backup of all annotations.

To access NaviLens Friends & Family, go to the settings menu and select the corresponding option. You must log in with your email or with your Google or Apple ID account in the case of iPhone devices to share your codes with other users.

Once logged in, you can view information about shared annotations, the users you follow, and the followers you have. You can have up to 5 followers and follow a maximum of 5 users.

To share your annotations, simply press the "Share my annotations" button and show the special NaviLens code that appears on your screen to the person you want to share with. The other user must scan the code with the NaviLens app on their device to complete the process.

You can manage your followers and followed users from the NaviLens Friends & Family screen. You can access your followers, remove followers by swiping left and tapping "delete". Similarly, you can unfollow users by swiping left and selecting "delete".

You can also directly access your personal annotations from the "My annotations" section where you can view and edit their content.

NaviLens Friends & Family also offers configuration options to tailor its operation. You can choose to show only your personal annotations, prioritize your annotations over those of your followed users, and hide the last update date of your annotations.

If you want to stop using NaviLens Friends & Family, you can log out from the main screen. You can choose to keep a local copy of your annotations or delete them completely. When you log out, you will lose access to the NaviLens Friends & Family features and shared personal annotations.

Remember that when you log in again, your personal annotations will be synchronized with the cloud, preserving the most recent changes made.