



Deliverable 2.3

Concept Report

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Introduction

In the following chapters we describe the concept and the project of the app infrastructure and of the user interface proposal.

Overview

First of all we have defined the different targets and dedicated instruments.

TARGETS

1 admin users: these are systems admin user, they are part of the NOAH organization and they need tools to setup, administer, and deliver different NOAH environments for different installations.

2 caregiver: this user is a caregiving organization manager or administrator. This user need tools to setup the caregiving organization environment, to create and give authorization to users, to view general system status, and to access to statistics and data analysis.

3. caregiver assistant: this user is the caregiver in charge to give assistance to the end users (elder people for example in an hospital of the caregiving organization) This user need a tool for a fast monitoring of the end users who is in charge for and to monitor the system status.

4 relative: this user is a relative of the elder end user. This user need a tool for a fast monitoring of the end users who is in charge for (for example the father or the mother).

5. end user: this is the elder people who need assistance and monitoring. He need a very easy to use tool to access simple alerts and to access simple communication systems.

GOALS

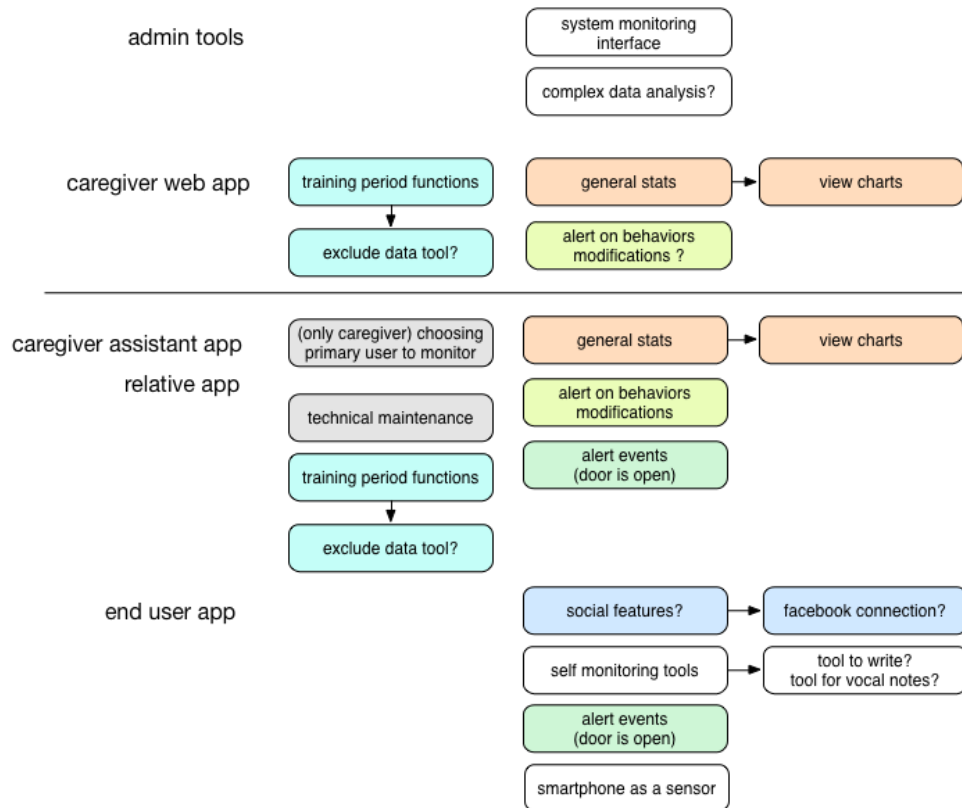
In the next chapter we describe the goals of the tools we will create.

TOOLS

To achieve the goals we have planned to create 4 different tools.

1. System admin environment
2. Caregiver organization admin suite
3. Caregiver assistant and relative mobile app
4. End user mobile app

In the next schema a recap of the tools matrix.



In this document we will describe the Caregiver assistant app and the end user app. The other tools will be analyzed in the next steps of the project.

Caregiver assistant app

As mentioned before the caregiver app is dedicated to the Caregiver in charge of the assistance to the end user.

The UX must be a simple to use clear and fast mix of monitor tools and alerts.

The alerts are the most important feature we will use, in fact we are thinking of a user that has to do his job during the day and does not have necessary the time to access to the app to verify the situation.

The alerts will be push notification coded by priority.

PRIMARY ACCESS

This is the access screen.

We have the future product logo and a brief description of the action to do: enter your user and password.

The app has a password recovery system

Access the Noah System

Enter username and password

Username

Password

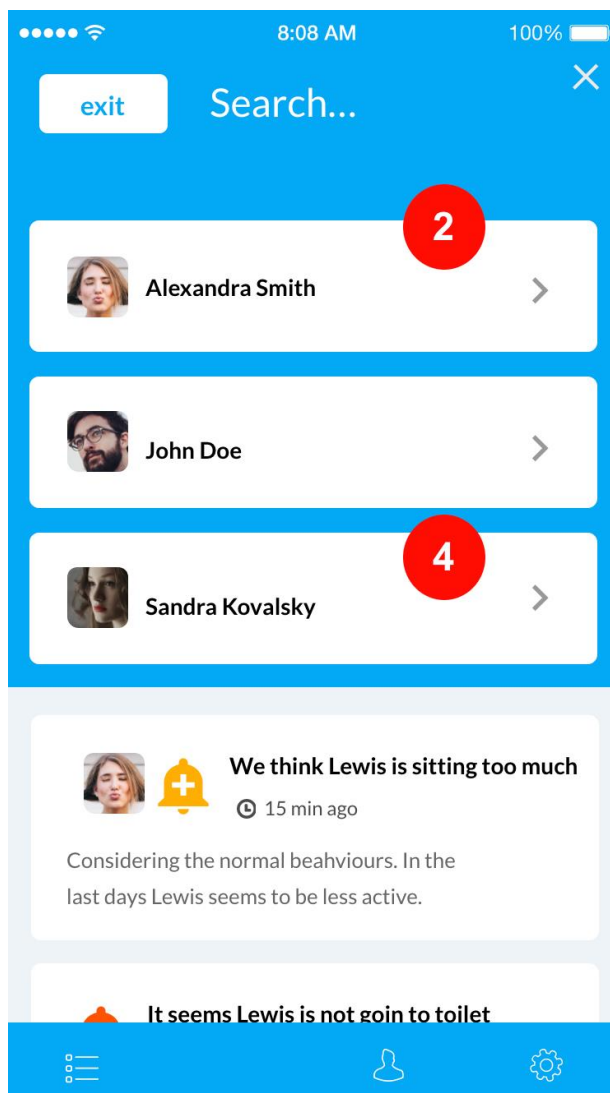
ENTER

Forgot your password? recover it

FIRST SCREEN

The first screen is mix of two features:

1. the list of the user in charge for. This list show in a red dot the alert pending for each end user and is a link to access the end user view.
2. Under this the caregiver assistant or the relative can see the resume fo all the alerts in order of date.

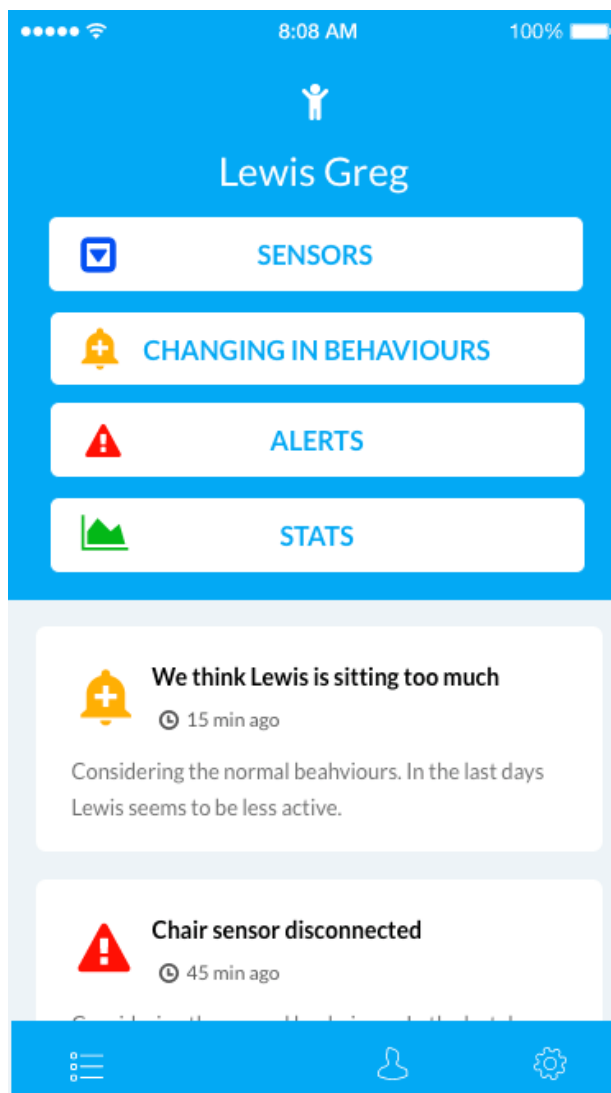


END USER VIEW SCREEN

At the access to the end user view the caregiver can access with a simple buttons list to the basic features of the monitoring.

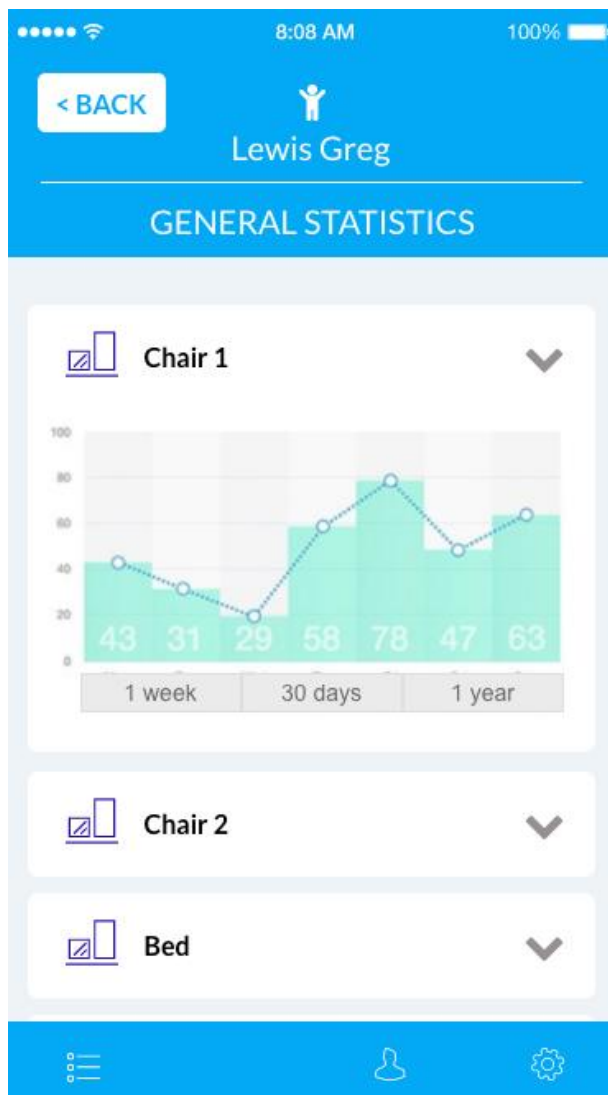
1. **SENSORS.** Access to the page to monitor the sensor list and their status
2. **CHANGING IN BEHAVIORS.** Access to the list of alerts for changing in behaviors.
3. **ALERTS.** Access to the list of technical alerts.
4. **STATS.** Access to a simple view of general statistic about the end user behaviors.

Under this list the user have a resume of all the alerts relative to the end user of this screen



GENERAL STATISTIC SCREEN

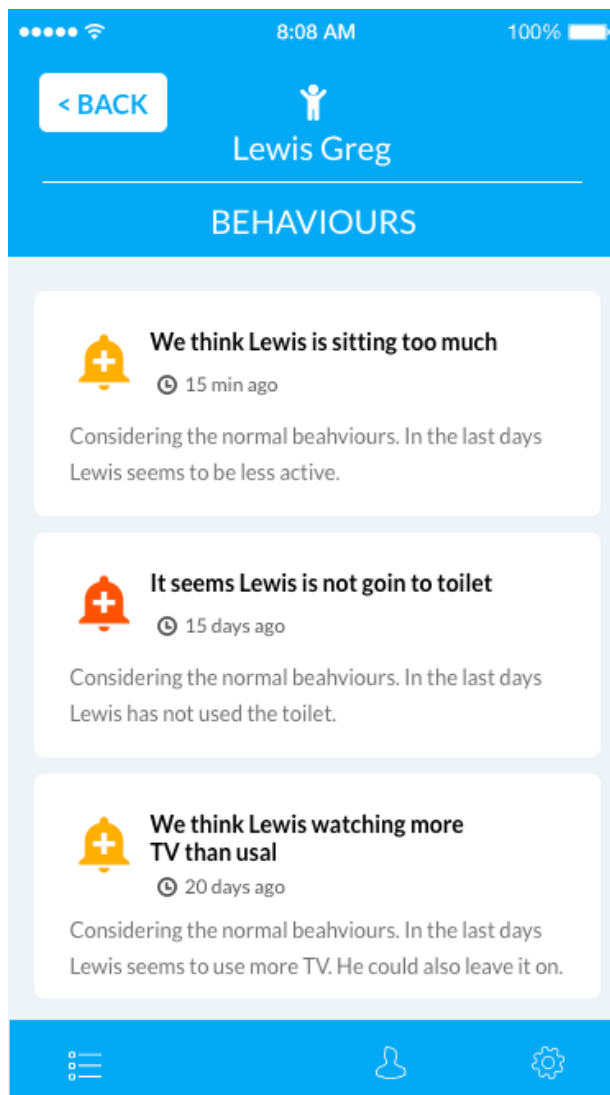
IN this screen the caregiver can access to every single sensor and open the view of general usage stats. The statistic can be selected per last week, last 30 days, last year.



CHANGING IN BEHAVIORS SCREEN

In this screen the caregiver will find the list in data order of the alerts in changing of behaviors.

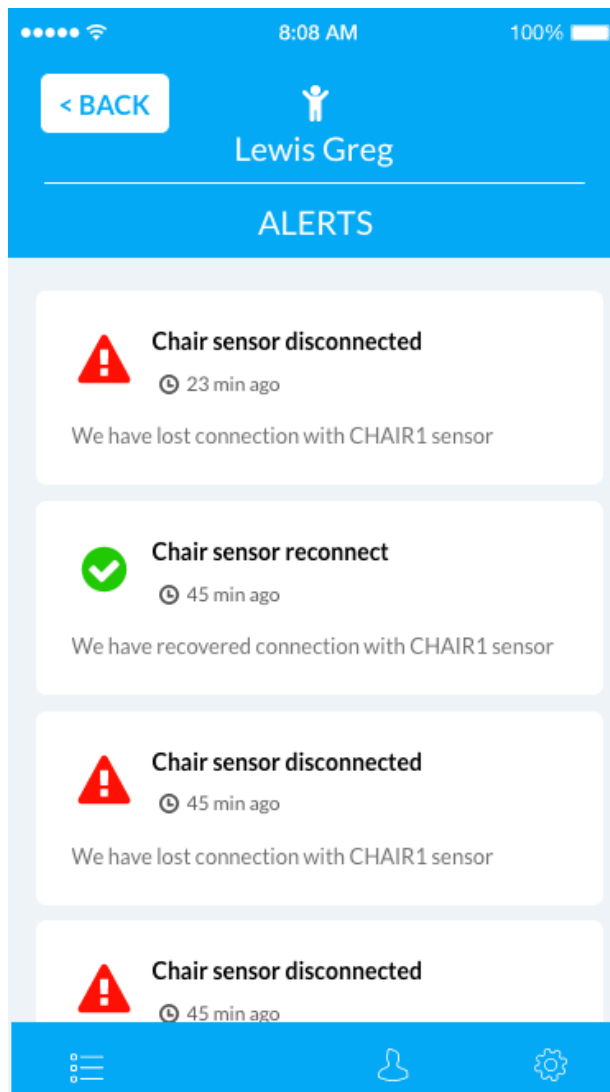
Every alert has an icon syntax to represent the priority.



TECHNICAL ALERTS SCREEN

In this screen the caregiver will find the list in data order of the technical alerts.

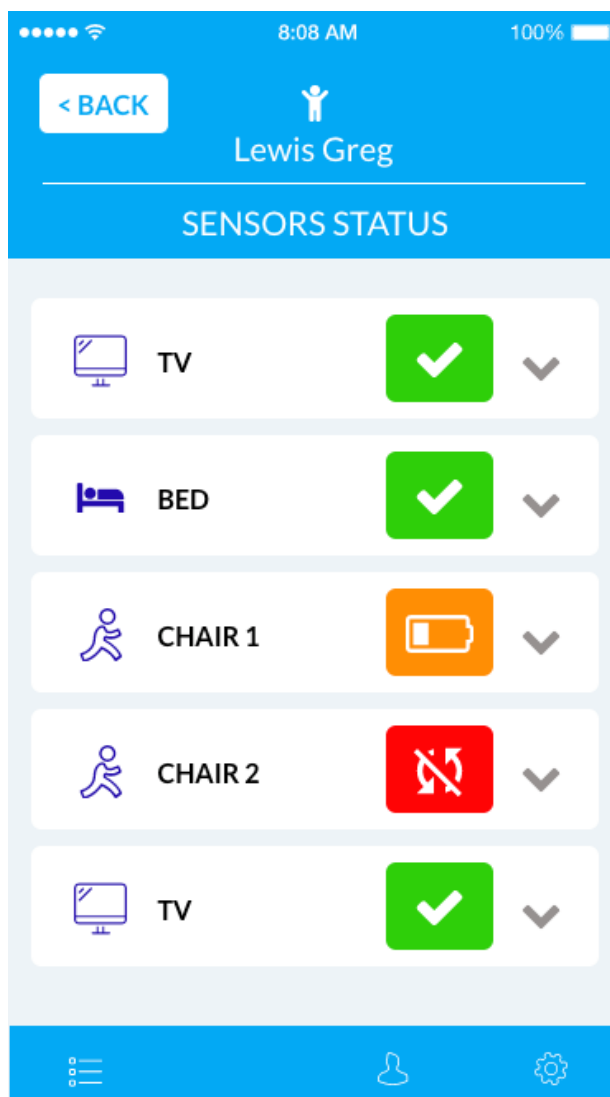
Every alert has an icon syntax to represent the priority.



VIEW SENSORS SCREEN

In this screen the caregiver will find the list of sensors and their status.

The app represent the status with icon semantic. Every sensor tab can be opened to read a brief text summary of the current status.



End user app

This app is dedicated to the end user (elder people) monitored.

The goal of this app is double:

1. provide a simple alert system to inform about very basic alerts (example "you have leaved the door open)
2. Connect the user to other with fast phone call access or connection to social networks. This last feature is not at the moment under developing.

The User Interface in this case is very simple and usable, we use big fonts and buttons and very visible messages.

The chosen colors are similar to the caregiver app to maintain a common look and feel; these colors are very much accessible. The FONT is also a very easy to read font, with a minimum 16pt body.

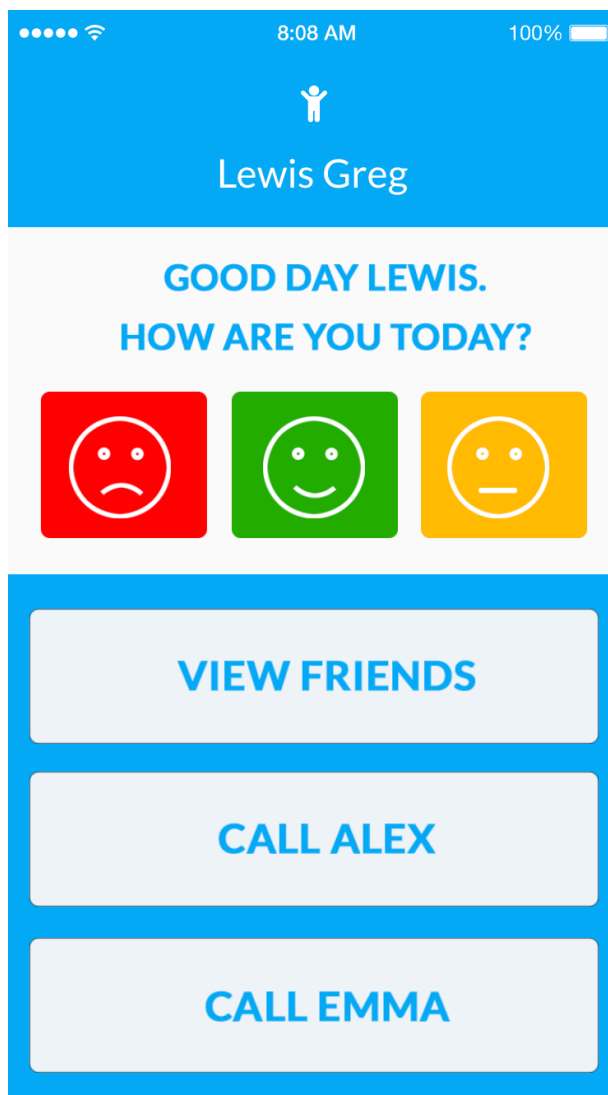
A bibliographical study was made to identify the best practices in designing a user interface for the elderly, taking into account the capabilities decline due to old age. Based on this study, some limitations were identified concerning color-scheme, number of elements on the screen, model of navigation (one-thing-at-one-time). Some of the guidelines emerged from this study are:

- one of the most appropriate texts for information display is sans-serif fonts with the size between 12 and 14 points
- the older people have less sensitivity to color contrast especially in the blue green range; designers should not use colors to communicate meaning, but should use for supporting information presentation
- the average of the related items to be shown on a display panel used for the older people should be around 5.5 items - for older people, use of long term memory is much more effective than short term memory
- the use of relevant graphics and pictures are more significant than the use of detailed decorations; multitasking operations should not be applied as well - older adults have problems maintaining attention over long periods of time

- the design of the interaction should avoid complexities, for example using short and long press, using combination keys, using multi fingers, using multi touch, etc - simpler is more useable for elderly users
- clearly separated task is the factor that may increase usage performance for elderly - single task per page reduce attention load for older users
- the devices that require sound as alarm, instruction or any activity that require attention from the elderly users should use the lower range of frequency (between 500 and 1000 Hz) - high pitched sounds with peaks over 2500 Hz are mostly missed by the elderly

HOME SCREEN

In this screen the ENDUSER can access to all the functions of the app. The top part of the home screen is dedicated to a “human virtual sensor”. The goal of this part is to collect the mood of the Enduser: sad - normal - happy. At the click on a single smile icon the app shows a text message input form to collect brief text message from the user. The bottom part of the app is dedicated to the “connect” functions. We have a first button to go to the “social features” screen and two further buttons to call memorized phone numbers of relatives or caregivers.

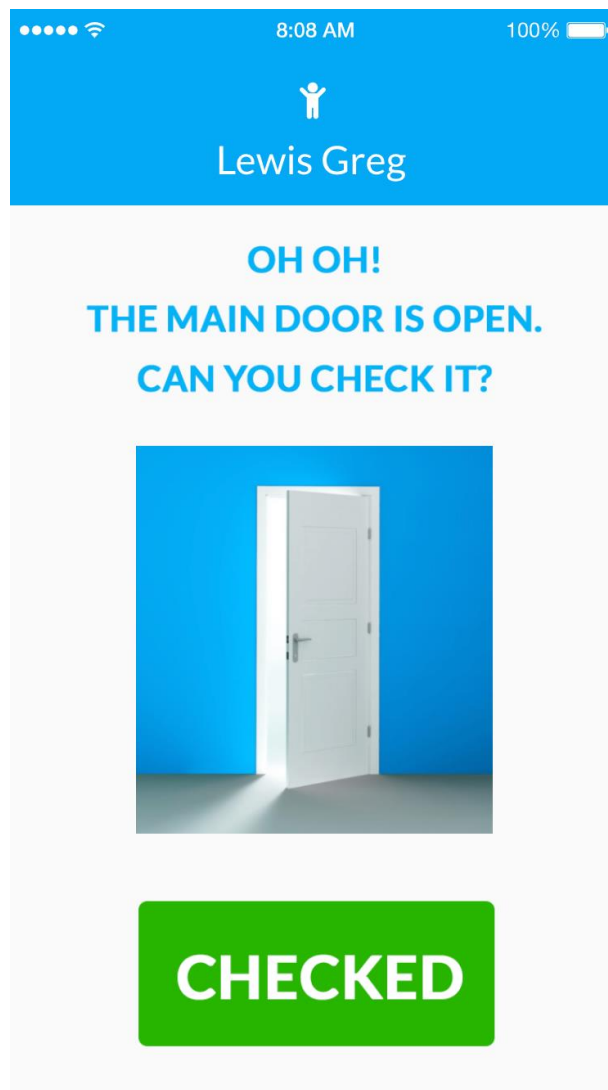


ALERT SCREEN

In this screen the APP shows a simple single alert in push mode. The alert is accompanied with a sound message to be notified to the end user in the most clear and notable way.

The alert is connected to one or more sensors and, for example, it can be a forgotten open door or a window, or some malfunctions in the monitored objects of the house.

The end user can check it with a big green button when the origin of the alert has been checked.



Conclusion

At this point of the project some characteristics of the concept and some features must be verified with the first pilot and need to be subjected to a final design.

The social connection feature is not yet implemented so we have not included it in this document. It need a further analysis to be implemented.

