



D3.2 ESTABLISH GUI

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2. Introduction

This document serves as an user's guide for those who want to understand how the ESTABLISH demonstrator works.

The document presents the pages displayed by the application to the user, depending on the user role, and on the tasks expected.

3. Demonstrator execution

Starting URL

The application currently works at the URL: <http://35.178.115.254:8680/EstablishCoordinator-1.0>

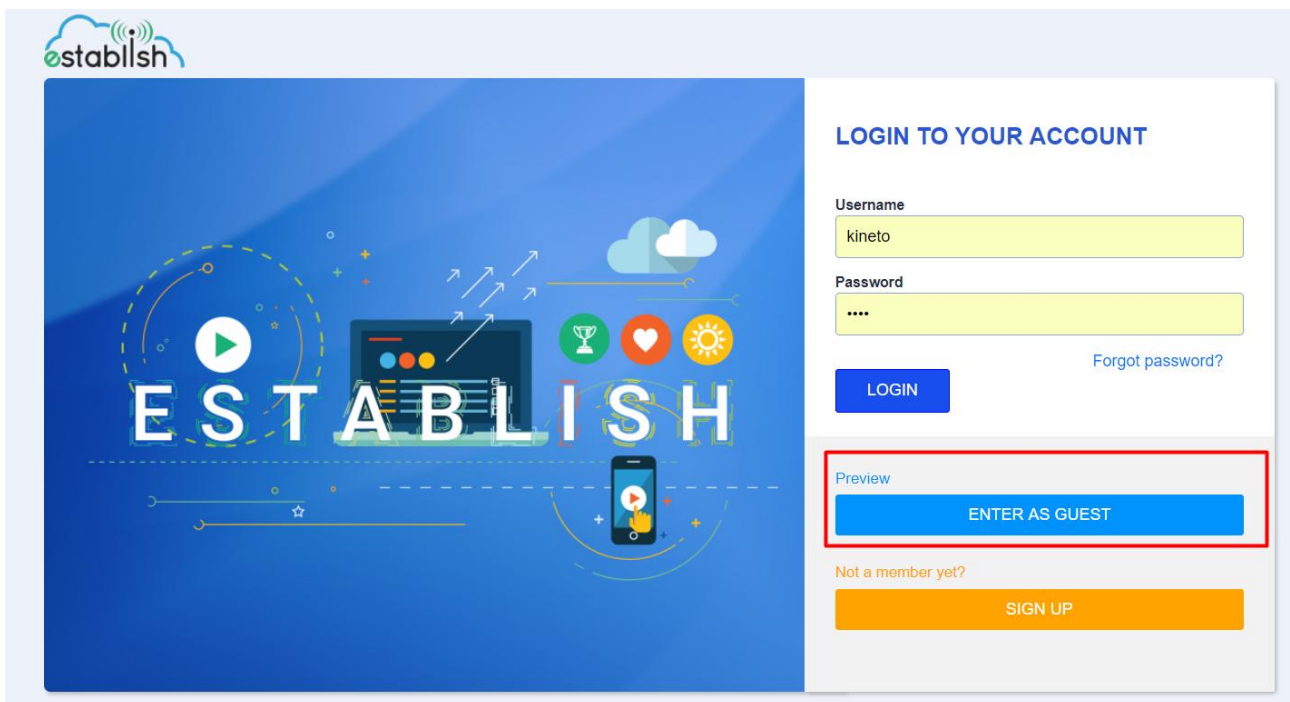
Starting page

User will use the demonstrator to visualize data and graphic elements for the 3 roles available in the Establish platform. He could access the platform as a **guest**, a **patient** or a **kinetherapist**.

The user will be directed to the correct functionality depending on the role assigned.

Enter as guest

User clicks on **Enter as guest** button. The **Dashboard** page is displayed. A menu having only the option **Dashboard** is displayed on the left side. The graphical components that represent averages of measurements of some sensors are displayed in the reduced view (link **View more** is available to expand). By default, the tab **Current Data** is displayed. This tab is supposed to display real-time measurements from up to 8 environmental sensors and weather data. User could select a specific location to display values (each location is associated to many sensors or weather values).



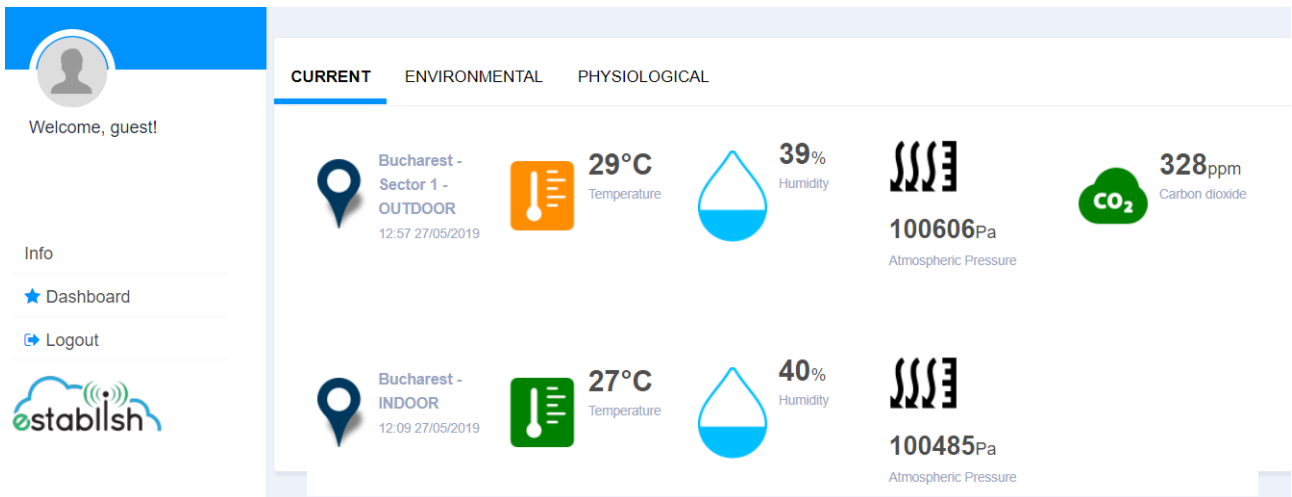


Figure 1 – Dashboard page for **guest** role

View more

User clicks on **View more** link. The graphical components that represent averages of measurements of some sensors are displayed in the expanded view (link **View less** is available to collapse).

Display Environmental Data tab

User clicks on **Environmental Data** tab. A chart of all measurements recorded for the current day (since 00:00 hour to now) is displayed.

The weather condition related to temperature, pressure and humidity, and a comfort index are displayed.



Figure 2 – Historical environmental data tab for **guest** role

More detailed data and filtering can be reached by pressing the title of a chart, then select Edit, like in the next figures.

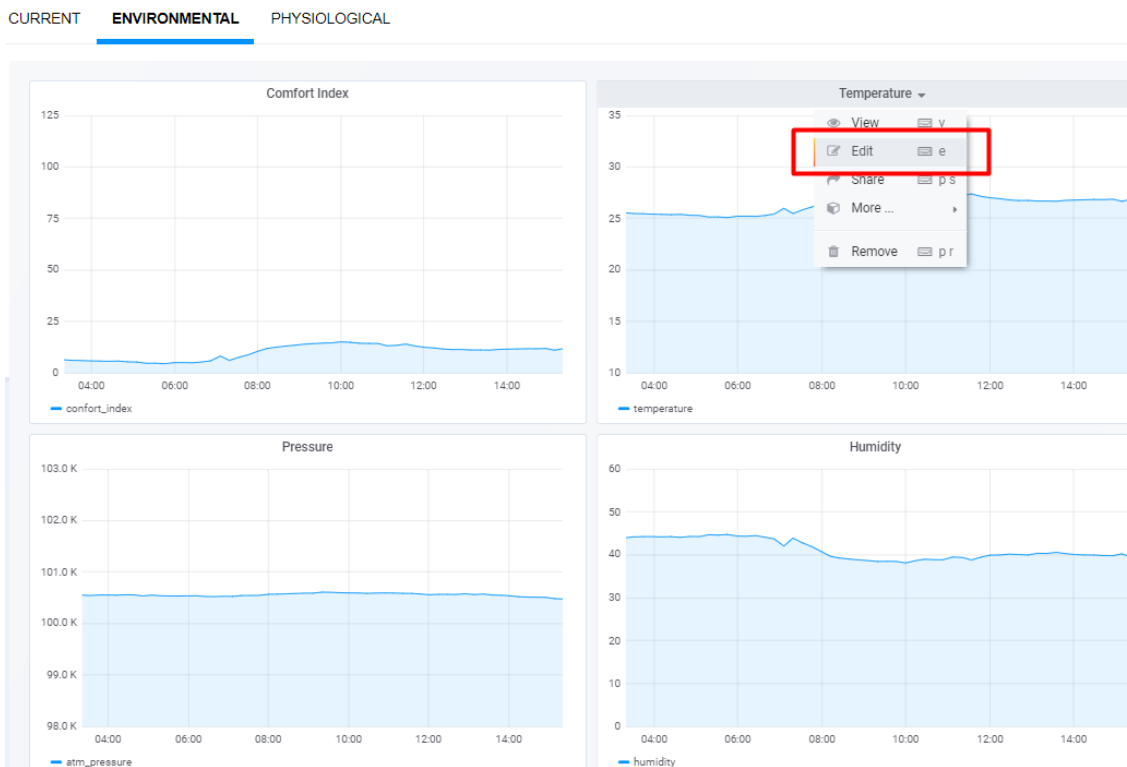


Figure 3 – Historical environmental data tab edit

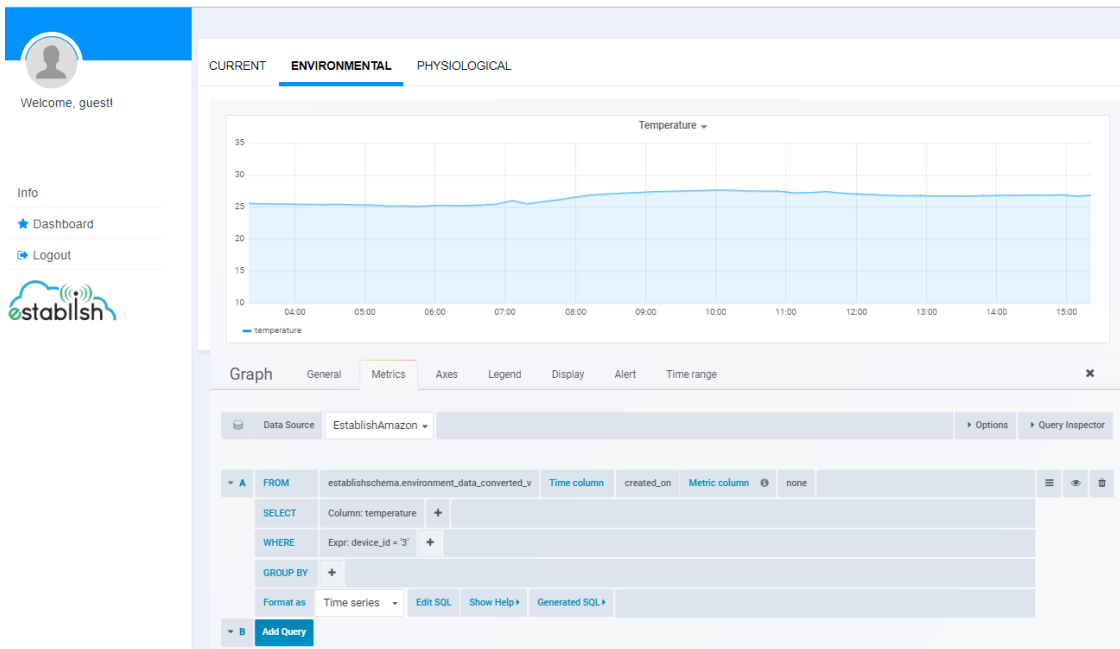


Figure 4 – Historical environmental data tab edit

Sign-up as patient

User clicks on **Sign Up** button. The sign-up form is displayed.

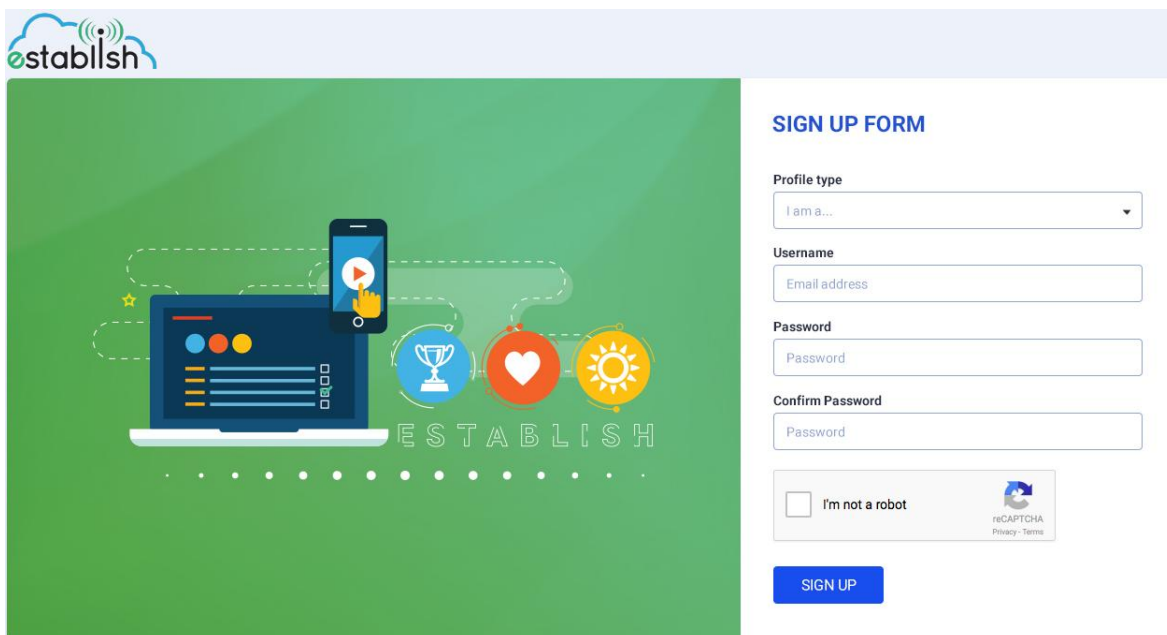


Figure 5 – Sign-up form

User can enter the following values in the fields

- Profile type
- Username
- Password
- Confirm Password
- Captcha code

And clicks the **Sign up** button. User is redirected to the **Login** page.

Login as a patient

User can enter the following values in the fields

- Username
- Password

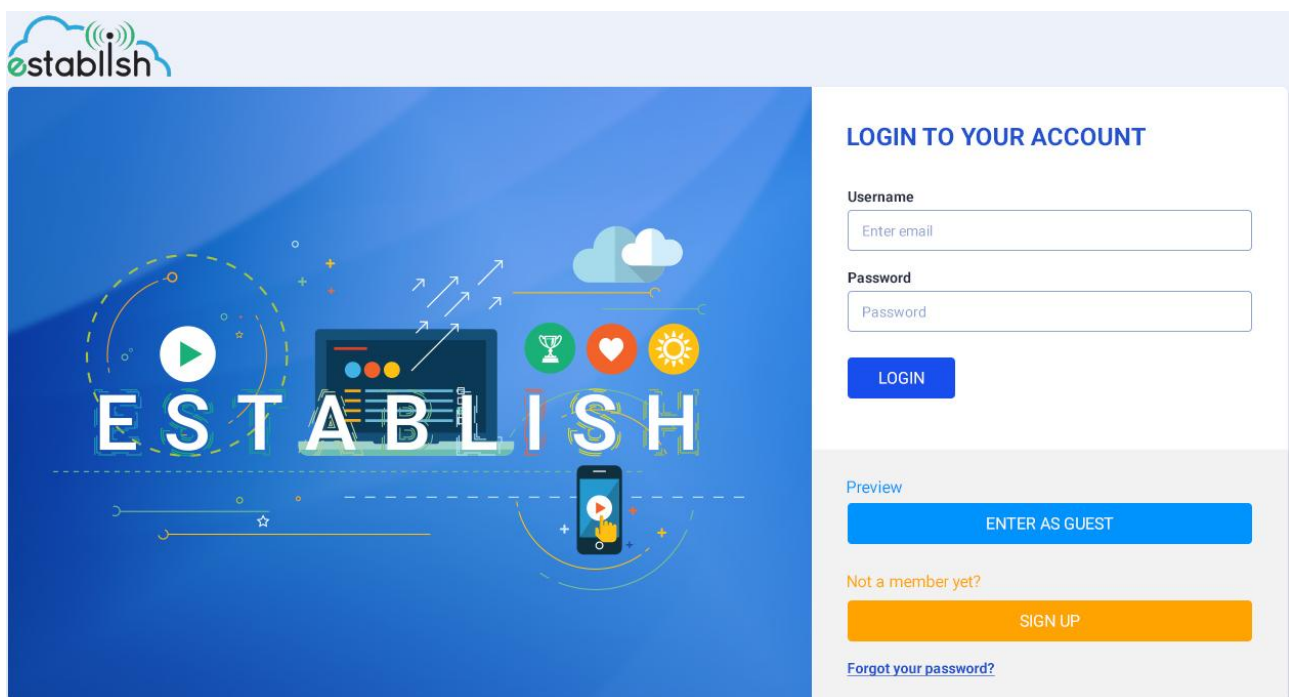


Figure 5 – Login form

And clicks the **Login** button. User is redirected to the **Pin number** page. User could enter the **Pin number** value and then press on **Submit** button.

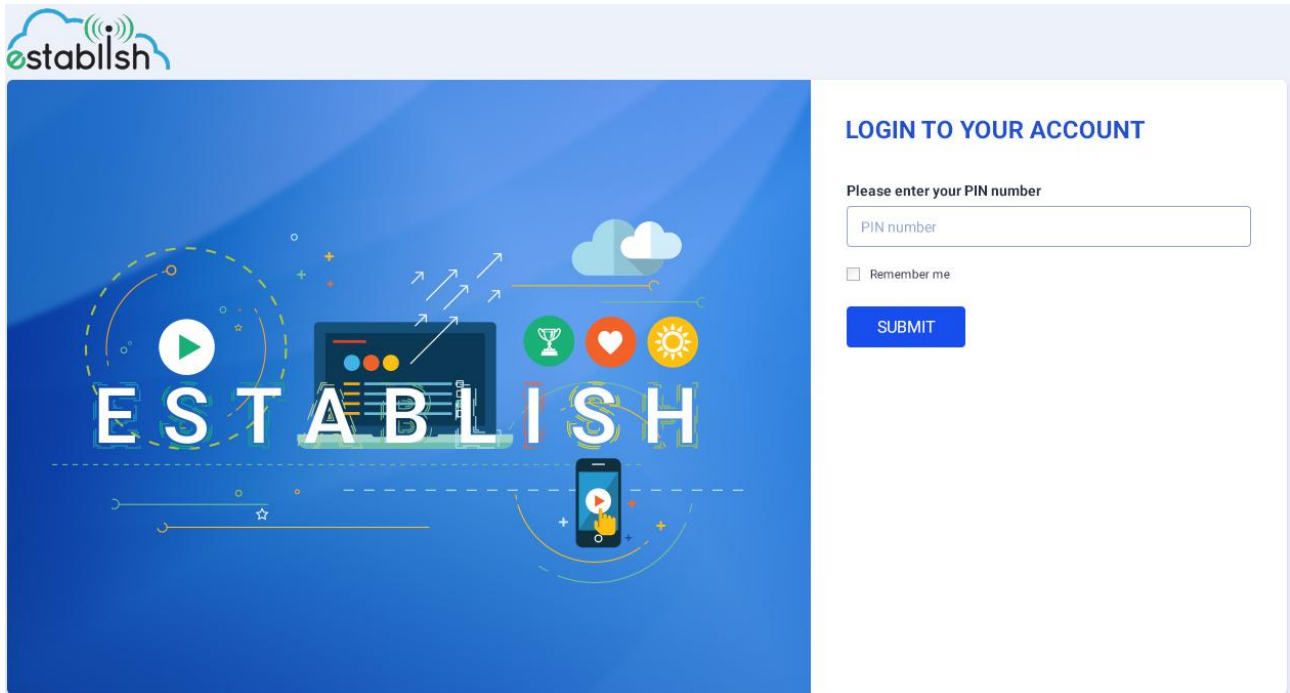


Figure 6 – Pin number authentication form

Display Dashboard page for patient role

The **Dashboard** page is displayed. A menu having the options **Dashboard, Alerts, Activities, Settings and Log-out** is displayed on the left side.

The number of not yet read alerts and the number of the scheduled activities for the current user are shown to the right of the menu items **Alerts** and **Activities**.

On the blue banner on the top of the page there is the **contact data** of the kinetotherapist who works with the current patient.

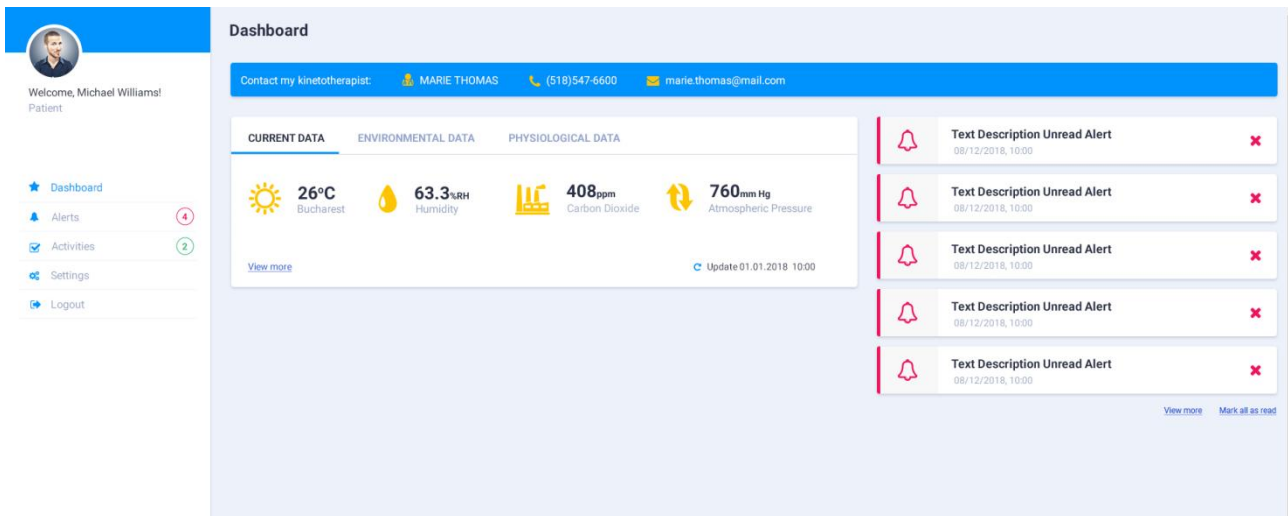


Figure 7 – Dashboard page for *patient* role

The graphical components that represent averages of measurements of some sensors are displayed in the reduced view (link **View more** is available to expand). By default, the tab **Current Data** is displayed. This tab is supposed to display real-time measurements from up to 8 environmental sensors and weather data. The displayed values are measured by sensors associated to the current location of the patient (measured by GPS tracker of the smartphone).

The last 5 alerts are displayed on the right side of the page.

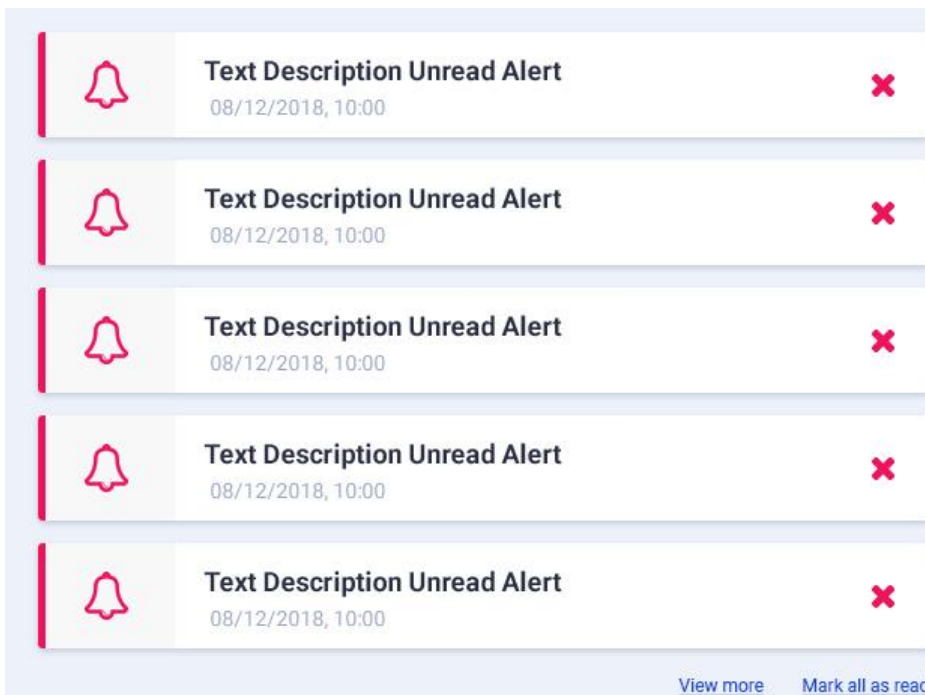


Figure 8 – The last 5 alerts section of the patient dashboard

View more measurements

User clicks on **View more** link below the measurements section. The graphical components that represent averages of measurements of some sensors are displayed in the expanded view (link **View less** is available then to collapse).

Display Environmental Data tab

User clicks on **Environmental Data** tab. A chart of all measurements recorded for the current day (since 00:00 hour to now) is displayed.

The weather condition related to temperature, pressure and humidity, and a comfort index are displayed.

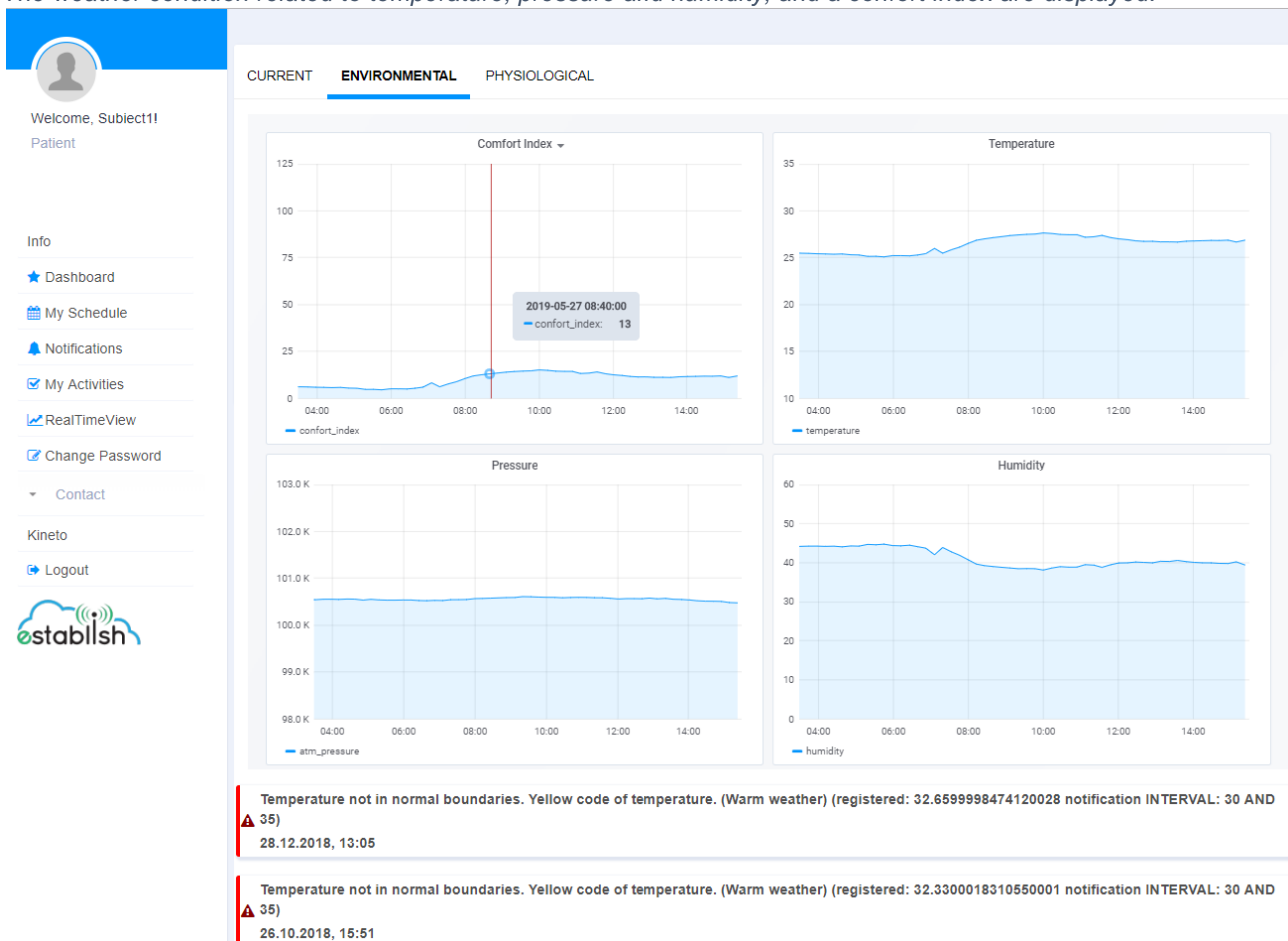


Figure 9 – Environmental data

The displayed values are measured by sensors associated to the current location of the patient (measured by GPS tracker of the smartphone).

More details, filter and editing is possible like it was described for the guest user. Display Physiological Data tab

User clicks on **Physiological Data** tab. A list of all measurements recorded for the current day (since 00:00 hour to now) is displayed.



Figure 10 – Heat individual data

Display calendar

In the calendar there are presented all activities of a patient. The activities can have many statuses, and the presentation is using a color scheme for that. Whenselected an activity, then details of the activity are displayed, and the user can do specific actions depending on the status of an action.

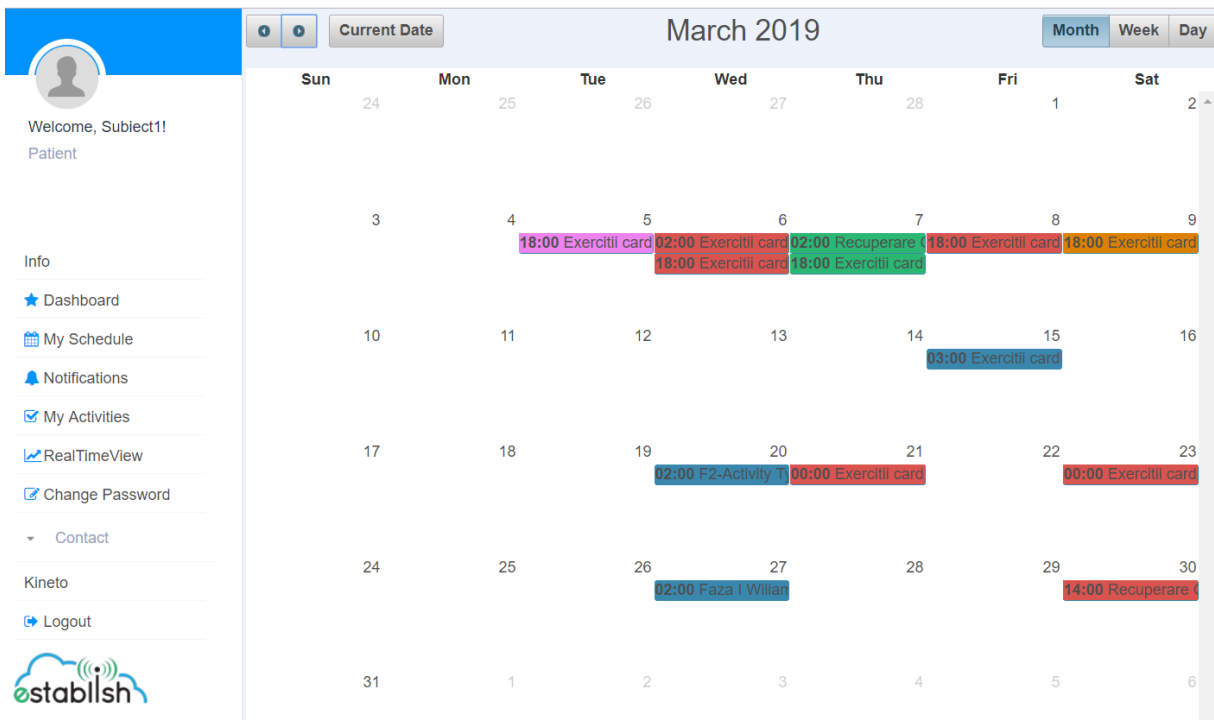


Figure 11 - Display Calendar

Display activities

The planned activities are displayed here.

User can filter based on time windows or activity statuses.

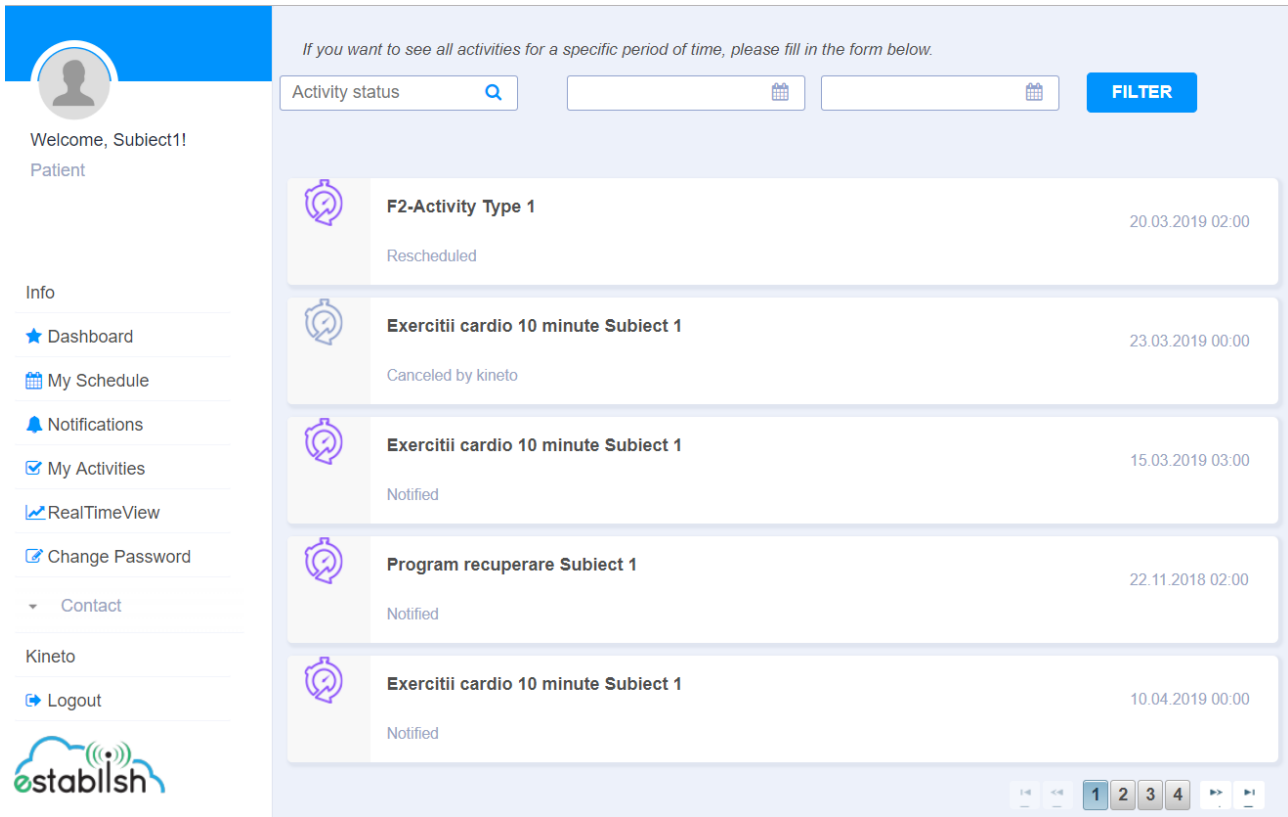


Figure 12- Display activities

Real time view

This view displays the real time data received from sensors, and valid for the last period of time. It refers to weather data, air quality data,



Figure 13- Real time view

Login as a kinetotherapist

User can enter the following values in the fields

- Username
- Password

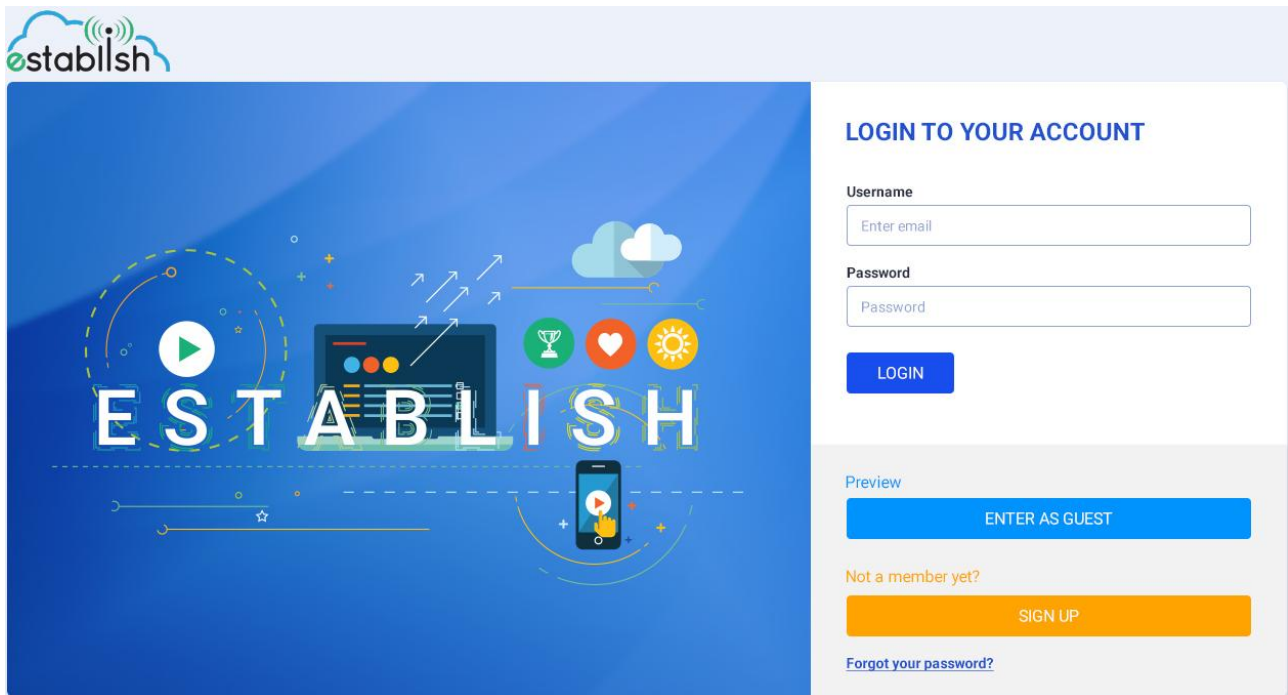


Figure 14 – Login form

And clicks the **Login** button. User is redirected to the **Pin number** page. User could enter the **Pin number** value and then press on **Submit** button.

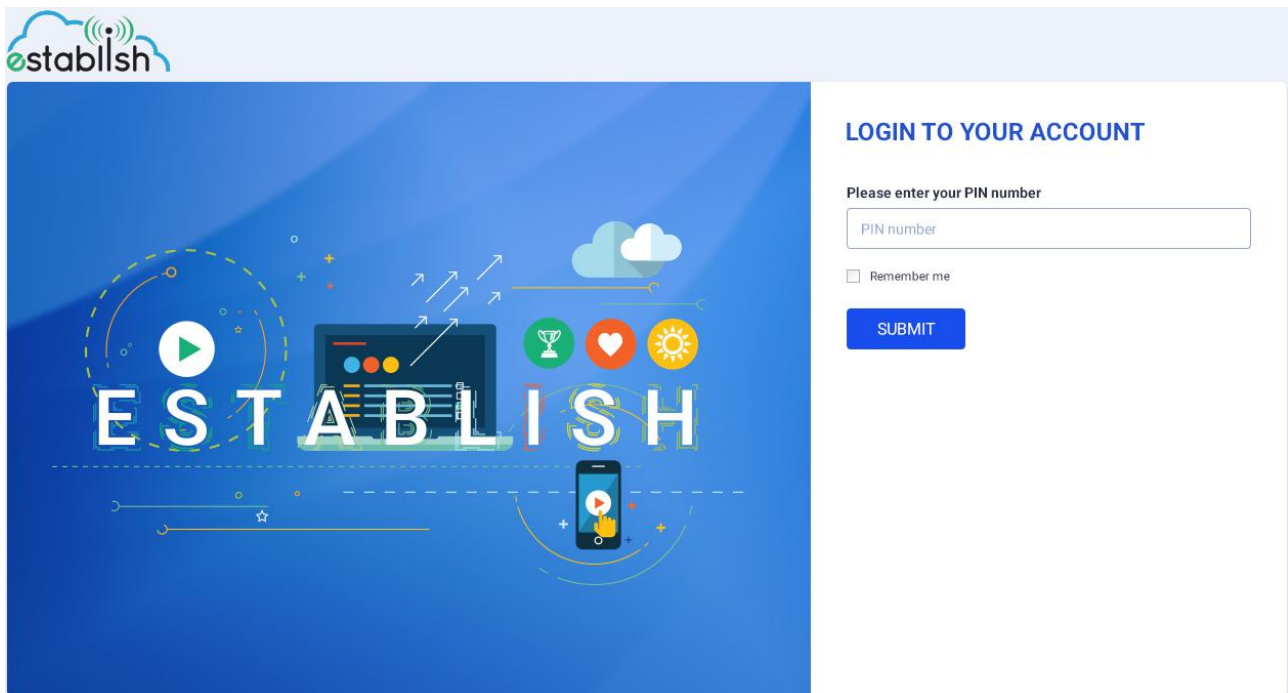


Figure 15 – Pin number authentication form

Display Dashboard page for kinetotherapist role

The **Dashboard** page is displayed. A menu having the options **Dashboard, Alerts, Patients, Activities, Settings and Log-out** is displayed on the left side.

The number of not yet read alerts and the number of the scheduled activities for the current user are shown to the right of the menu items **Alerts** and **Activities**.

The displayed dashboard data is associated to a selected patient. The selection is done in the selection list named **Select a patient**. On the blue banner on the top of the page there is displayed the name of the current selected patient.

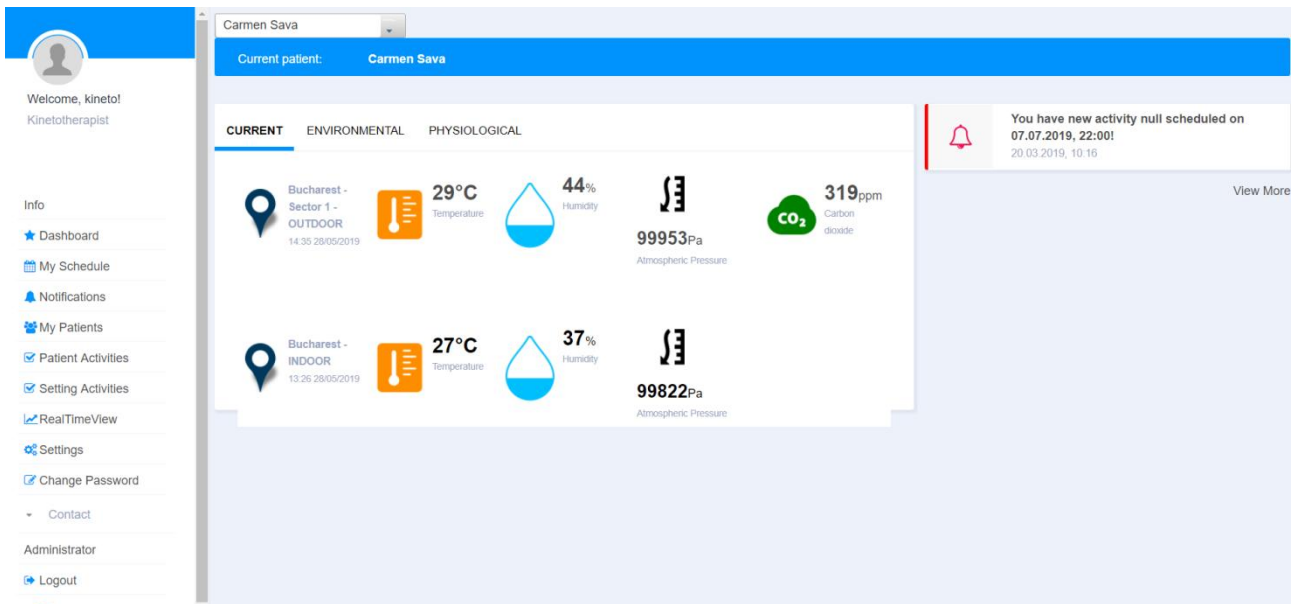


Figure 16 – Dashboard for the kinetotherapist role

The graphical components that represent averages of measurements of some sensors are displayed in the reduced view (link **View more** is available to expand). By default, the tab **Current Data** is displayed. This tab is supposed to display real-time measurements from up to 8 environmental sensors and weather data. The displayed values are measured by sensors associated to the current location of the patient (measured by GPS tracker of the smartphone, if available).

The last 5 alerts are displayed on the right side of the page.

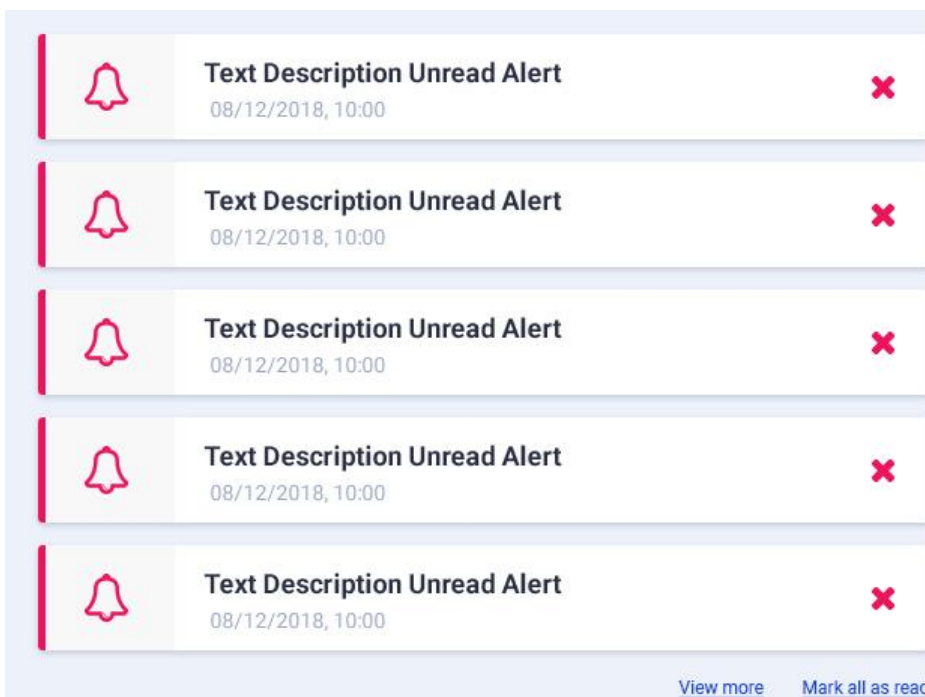


Figure 17 – The last 5 alerts section of the kinetotherapist dashboard

Display Environmental Data tab

User clicks on **Environmental Data** tab. A list of all measurements recorded for the current day (since 00:00 hour to now) is displayed.

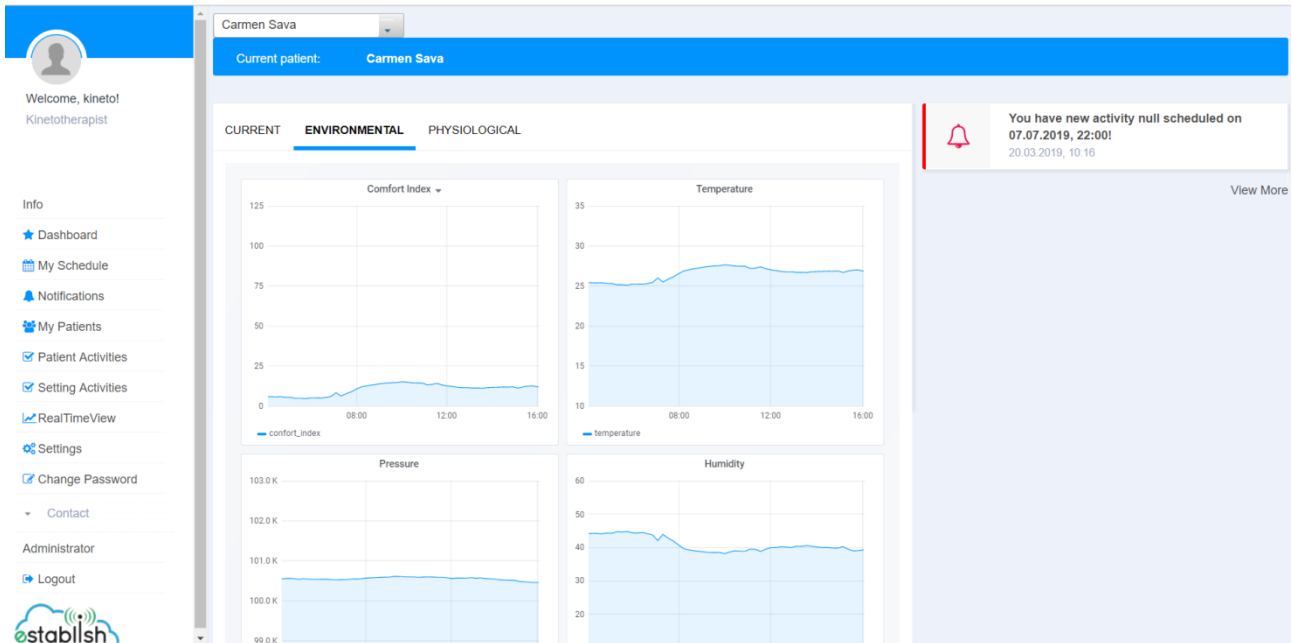


Figure 18 – The last 5 alerts section of the kinetotherapist dashboard

The displayed values are measured by sensors associated to the current location of the patient (measured by GPS tracker of the smartphone, if available).

The number of displayed records and a navigator control set is displayed at the bottom part of the screen.

More details, filter and editing is possible like it was described for the guest user.

Display Physiological Data tab

User clicks on Physiological Data tab. A list of all measurements recorded for the current day (since 00:00 hour to now) is displayed. The data refers to the selected patient. This patient should be assigned to the logged kineto.

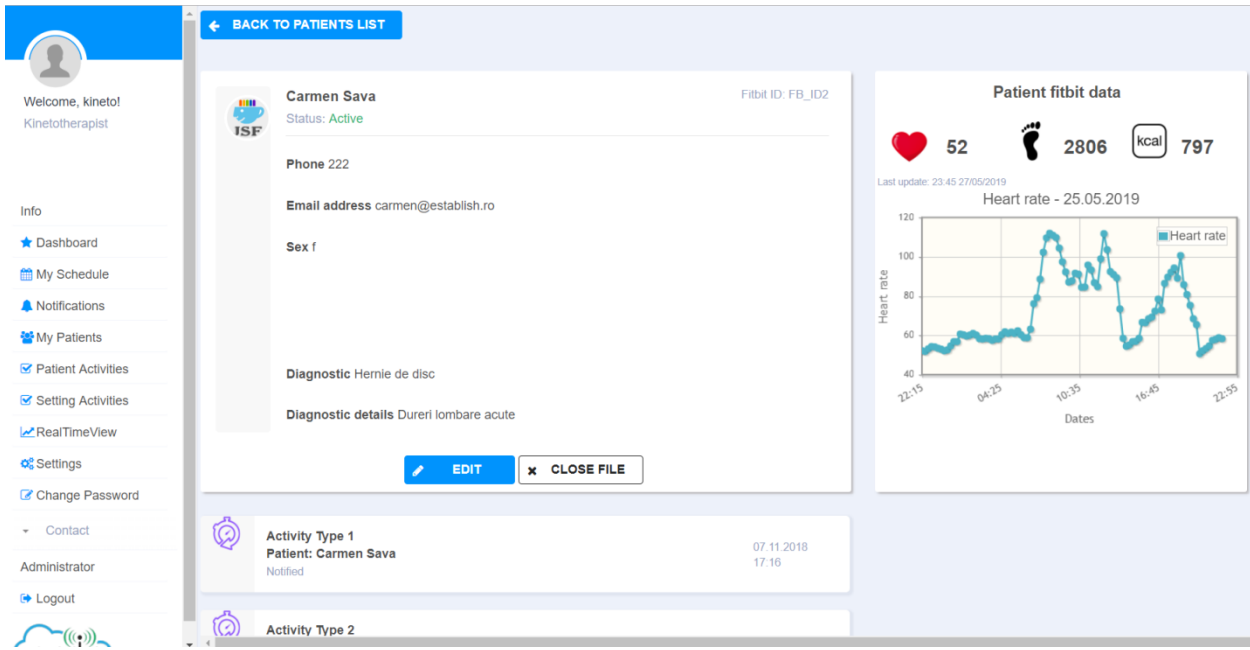


Figure 19 – Physiological Data tab

The displayed values are measured by wearable devices.

More details, filter and editing is possible like it was described for the guest user.

View more alerts

Clicking on **View more** link below the alerts section, redirects the user to the page **Alerts**.

View Notifications

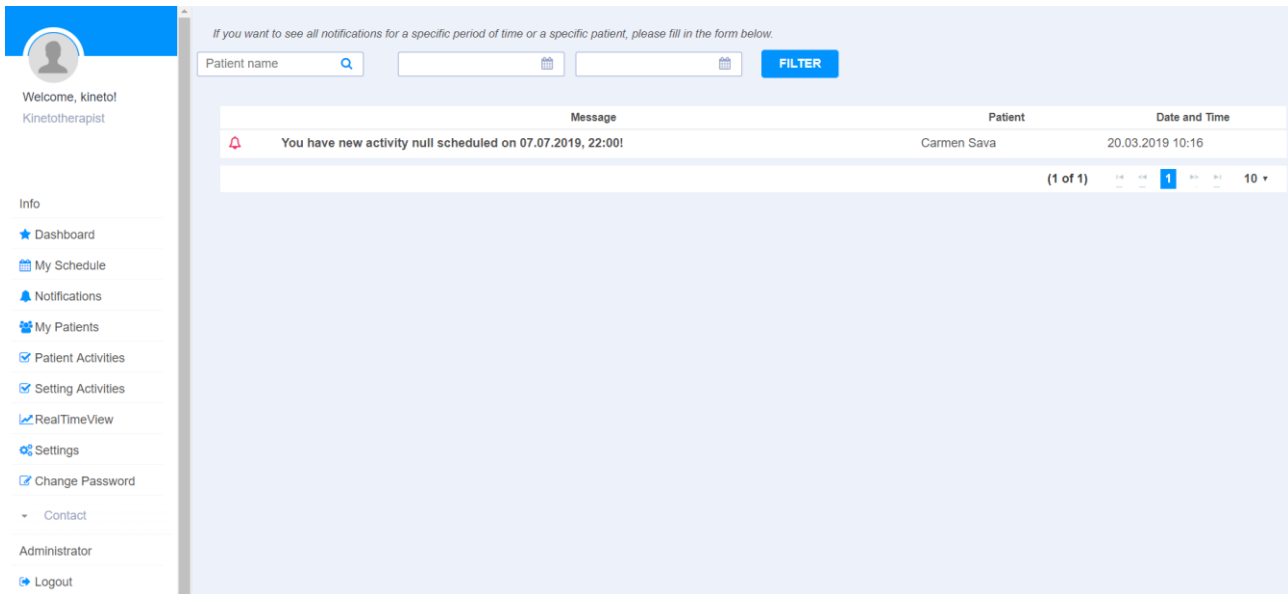


Figure 20 – Notifications view

View calendar

In the calendar there are presented all activities of a patient. The activities can have many statuses, and the presentation is using a color scheme for that. When selected an activity, then details of the activity are displayed, and the user can do specific actions depending on the status of an action.

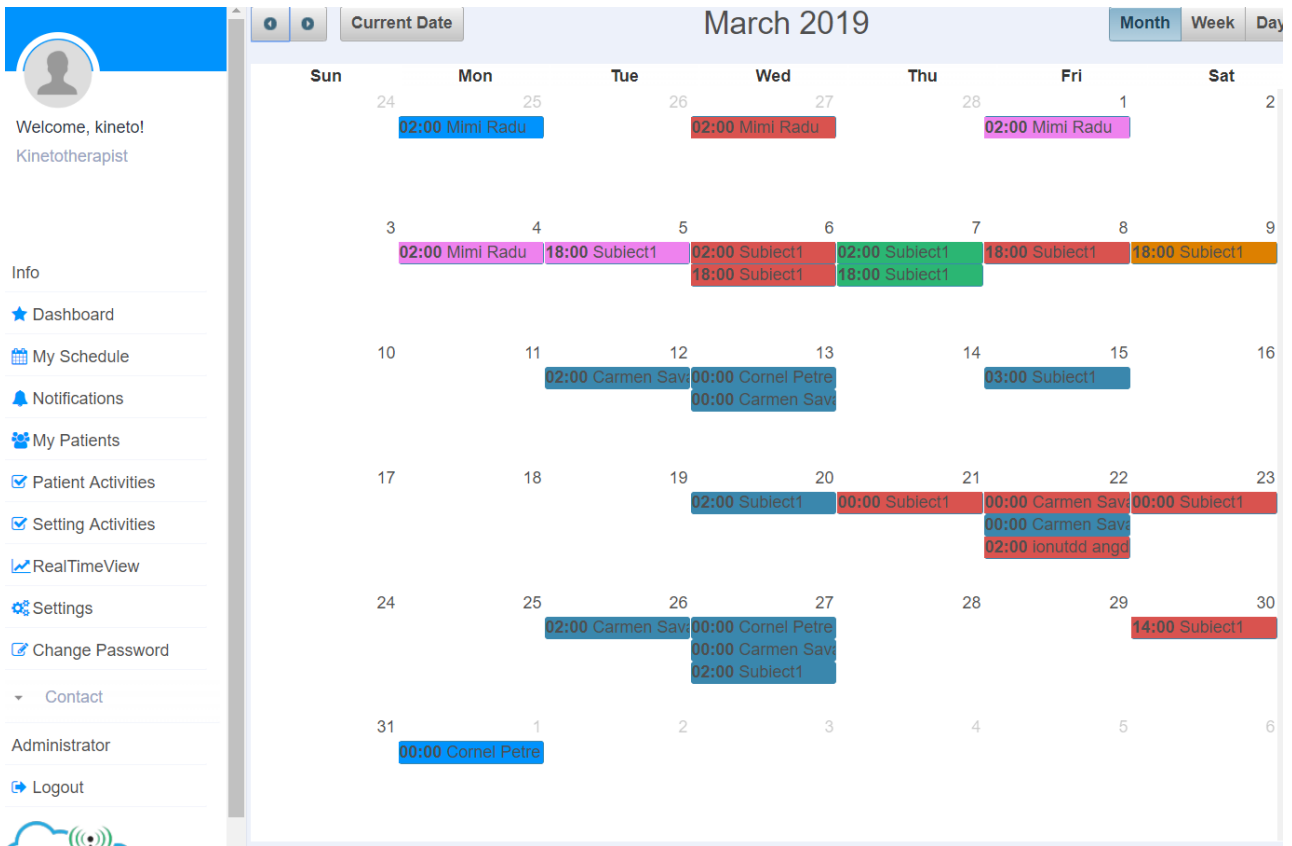


Figure 21 – Calendar

View My Patients

The list displays all the patients assigned to a kinetoterapeut.

Then the user can select a patient and see the activities, the status, and the evolution. The details of activities are also visible

Search your patient **FILTER**

+ ADD NEW PATIENT

| | |
|---|---|
| Carmen Sava Status: Active Phone: 222 | Ionel Doru Status: Active Phone: 555 |
| Cornel Petre Status: Active Phone: 232 | Mihaela Toader Status: Active Phone: 0734555111 |
| Marian Dobre Status: Active Phone: 341 | Lili Enache Status: Active Phone: 0723 |
| Rox Ana Status: Active Phone: 0788888888 | Mimi Radu Status: Active Phone: 0700000000 |
| Subject1 Status: Active Phone: 0212341794 | Subject2 Status: Active Phone: 0212341794 |
| Subject 3 Establish Status: Active Phone: (021) 234-1794 | aaaa Angheldd Status: Active Phone: (888) 888-8888 |
| ionutdd andgheld Status: Active Phone: (072) 268-7992 | Carmen Anghel Status: Active Phone: (222) 222-2222 |
| 99 999 Phone: (555) 555- | rrr1 rrr Phone: (333) 333- |

Figure 22- Patients view

If you want to see all activities for a specific period of time, please fill in the form below.

Patient name Activity status **FILTER**

+ ADD NEW ACTIVITY

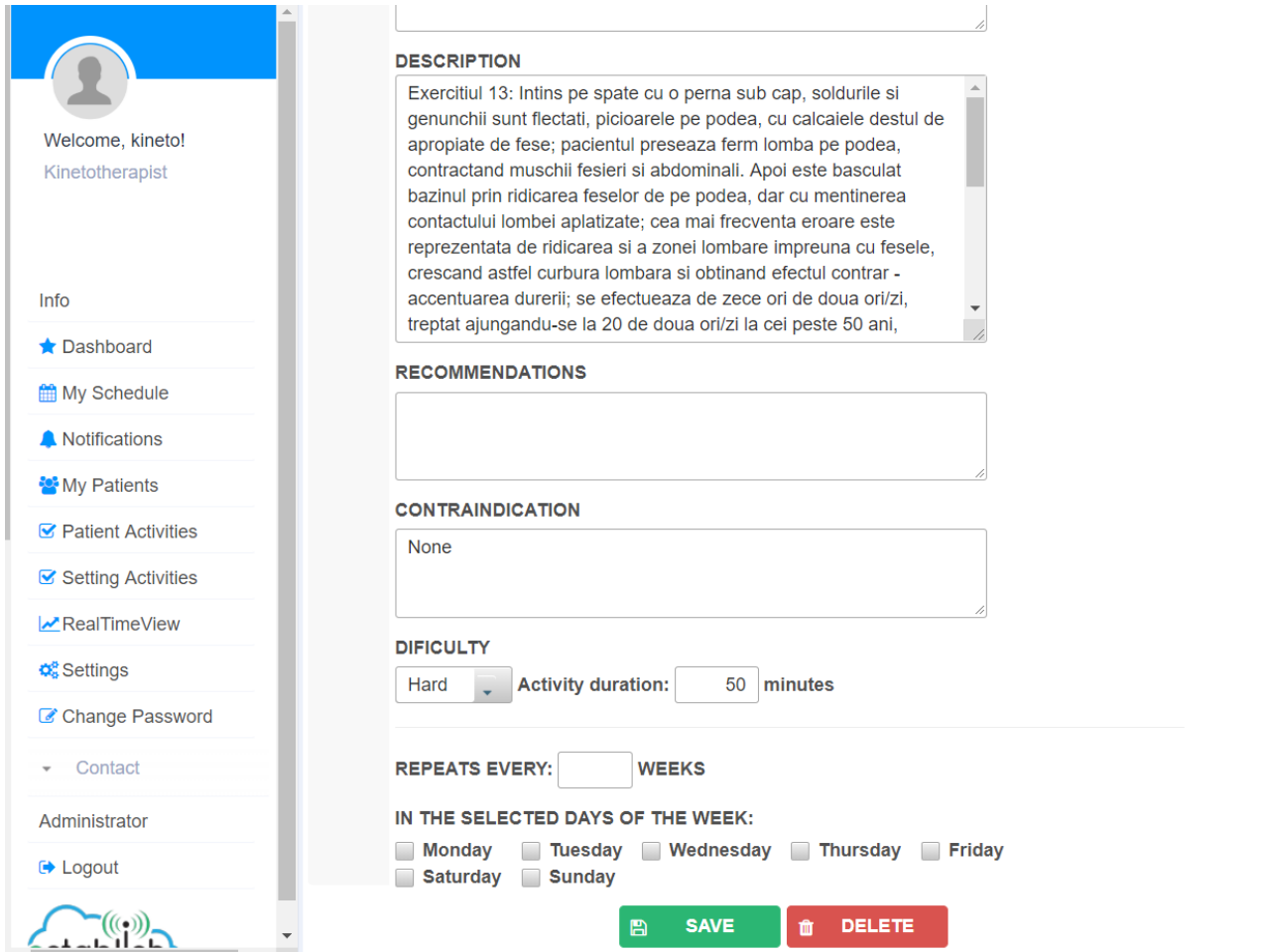
| | |
|---|------------------|
| Tone & fit Patient: Carmen Sava Rescheduled | 14.02.2019 02:00 |
| Exercitii cardio 10 minute Subject 1 Patient: Cornel Petre Completed | 01.04.2019 00:00 |
| Activity Type 1 Patient: Rox Ana Canceled by patient | 10.11.2018 10:00 |
| Program de 10 minute Subject 3 Patient: Subject 3 Establish Notified | 18.01.2019 17:00 |
| Tone & fit Patient: Carmen Sava Notified | 17.02.2019 02:00 |

1 2 3 4 5 6 7 8 9 10

Figure 23- Patients activities

Setting Activities

In this view, the user can define for each patient the activities to follow.



DESCRIPTION

Exercitiul 13: Intins pe spate cu o perna sub cap, soldurile si genunchii sunt flectati, picioarele pe podea, cu calcaiele destul de apropiate de fese; pacientul preseaza ferm lomba pe podea, contractand muschii fesieri si abdominali. Apoi este basculat bazinul prin ridicarea feselor de pe podea, dar cu mentinerea contactului lombei aplatizate; cea mai frecventa eroare este reprezentata de ridicarea si a zonei lombare impreuna cu fesele, crescand astfel curbura lombara si obtinand efectul contrar - accentuarea durerii; se efectueaza de zece ori de doua ori/zi, treptat ajungandu-se la 20 de doua ori/zi la cei peste 50 ani,

RECOMMENDATIONS

CONTRAINDICATION

None

DIFICULTY

Hard Activity duration: 50 minutes

REPEATS EVERY: 1 WEEKS

IN THE SELECTED DAYS OF THE WEEK:

Monday Tuesday Wednesday Thursday Friday
 Saturday Sunday

SAVE **DELETE**

Figure 24 –Setting activities

Evaluate activity

The user with Kinetto role has full access to the activities for the patients assigned to him. They can start, reschedule, stop, cancel, or evaluate the activities.

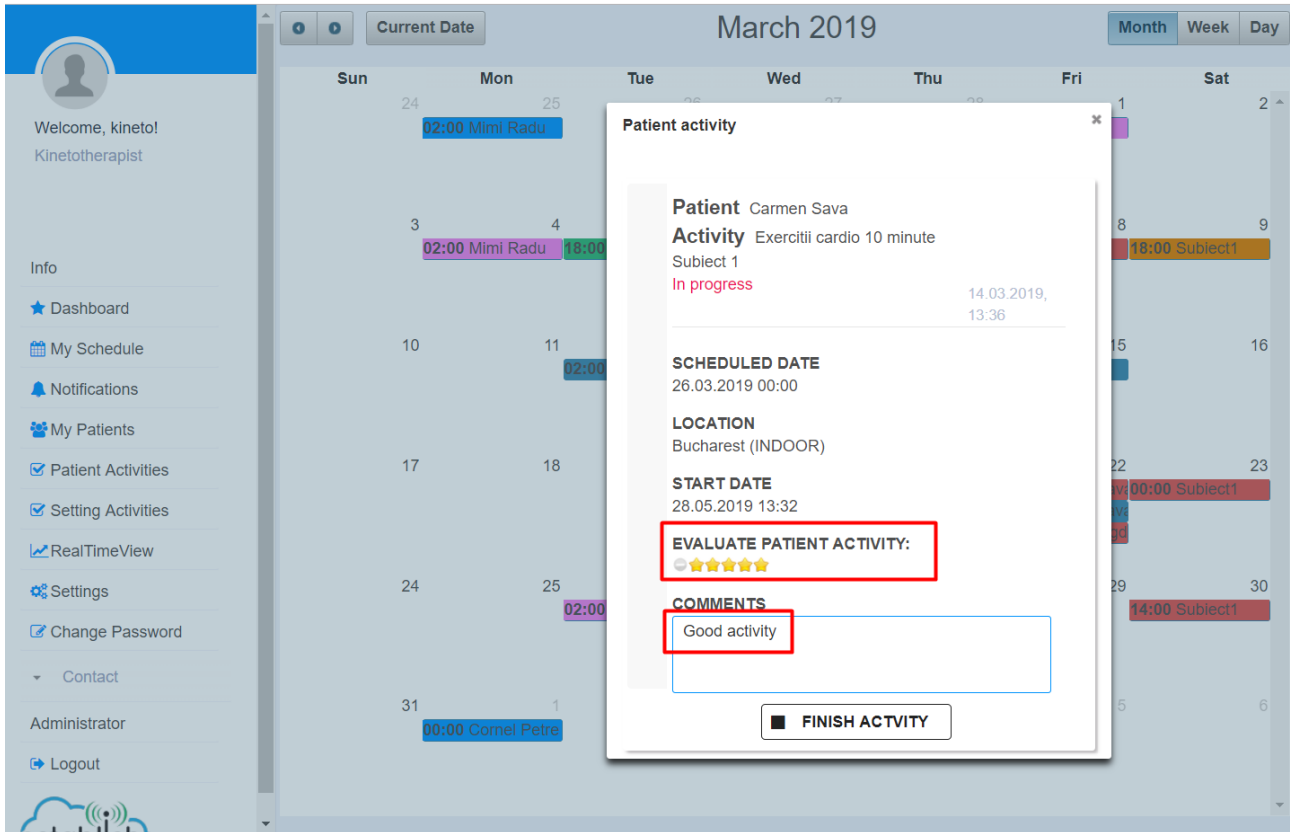


Figure 25- Evaluate activity

Real Time View

Like for patients, the kineto role has access to the real time view of parameters evolution as registered by sensors.



Figure 26- Real time view

Rule definitions

In this page, the user can define notification rules used. The rules are applied to sensor data and also to wearable data.

The screenshot shows the 'Rule definition' interface. A table in the background lists rules with columns for ID, Name, Operator, Valid1, Valid2, CreatedOn, LastUpdatedOn, ValidityStart, ValidityEnd, NumberOfRegistrations, StartCronFormat, EndCronFormat, PatientId, FitbitId, EnvironmentDeviceId, Severity, Message, RuleType, Operand1, and Operand2. An 'Edit Rules' dialog box is open, showing the following details for rule 'TC_RED_WARM':

- RuleName:** TC_RED_WARM
- Operator:** BETWEEN
- Valid1:** 40.0
- Valid2:** 100.0
- CreatedOn:** 10/25/2018 10:33:36
- LastUpdatedOn:** 10/25/2018 10:33:36
- ValidityStart:** (empty)
- ValidityEnd:** (empty)
- NumberOfRegistrations:** 1
- StartCronFormat:** (empty)
- EndCronFormat:** (empty)
- PatientId:** (empty)
- FitbitId:** (empty)
- EnvironmentDeviceId:** (empty)
- Severity:** 1
- Message:** Red code for high temperature
- RuleType:** Outdoor
- Operand1:** Temperature
- Operand2:** Select One...

The dialog box has 'CANCEL' and 'SAVE' buttons at the bottom.

Figure 27-Rule definition

4. Conclusions

This deliverable is a user guide for those who want to know how Establish GUI works. The detailed functionality of each area is presented through images and explanation, in order to provide an overview of the functionalities available for monitoring in the healthcare domain.

Furthermore, the content of the pages above presents how environmental, physiological, and behavioural sensor data empower patients in a rehabilitation stage with decision support tools for behavioural choices and treatment options. Data from ambient sensors (air quality, atmospheric pressure, temperature, humidity) and biometric, physiological, and behavioral sensors (heart rate and respiratory number of steps) offer a real help to patients in clinical rehabilitation/keeping fit programs with decision support tools related to behavior and treatment options.

Deliverable 3.2 shows how this decision support system can specifically target the patient's functional aspect of integration in everyday life, environment, and work.