



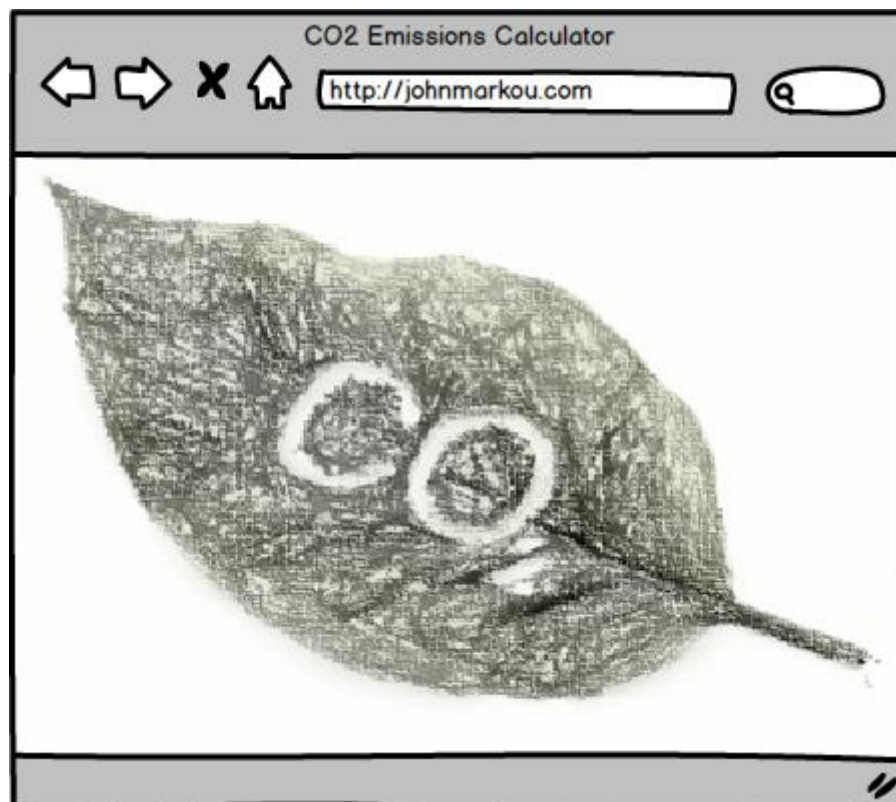
UNIVERSITY OF THE AEGEAN  
SCHOOL OF SCIENCE  
DEPARTMENT OF INFORMATION  
& COMMUNICATION SYSTEMS ENGINEERING

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Course: Human-Computer Interaction

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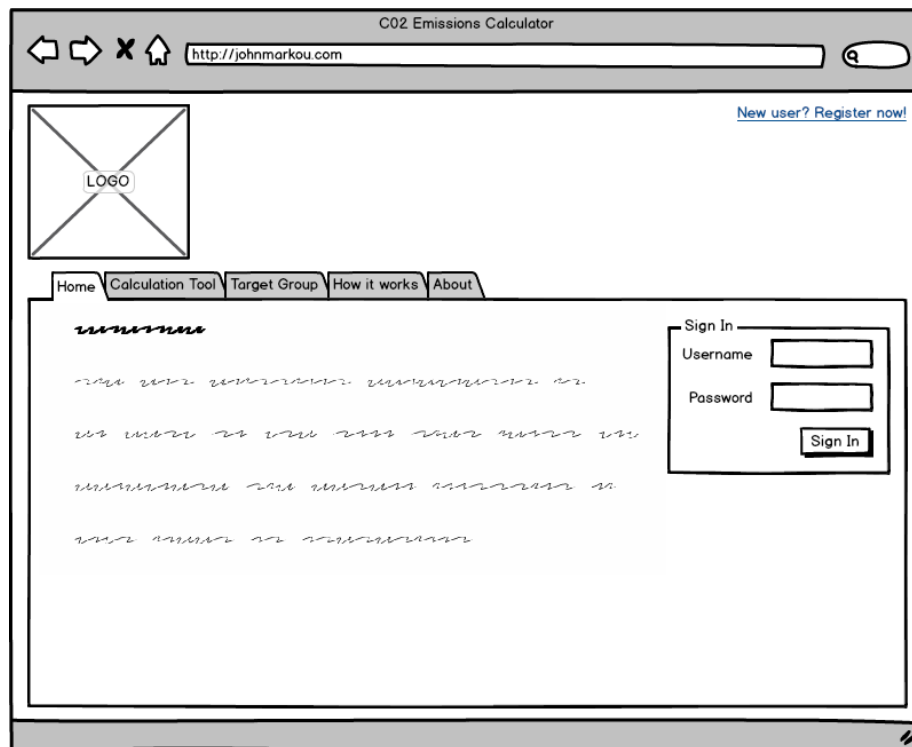
Assignment: **CO<sub>2</sub> Emissions Calculator** (phase 2)



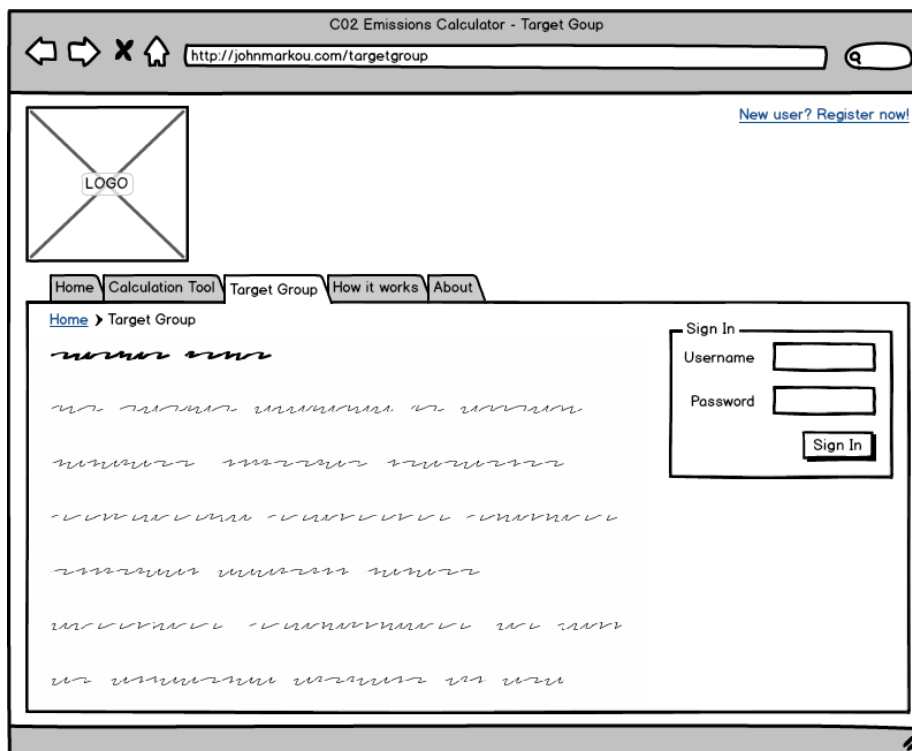
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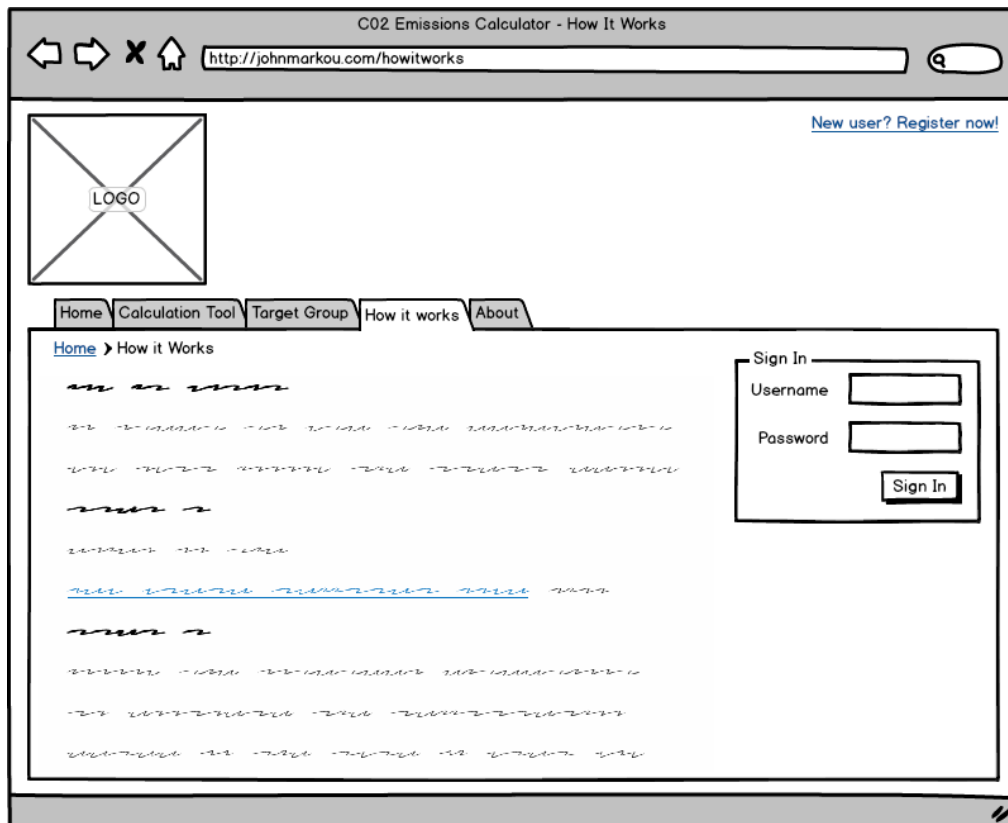
# WEBSITE WIREFRAMES



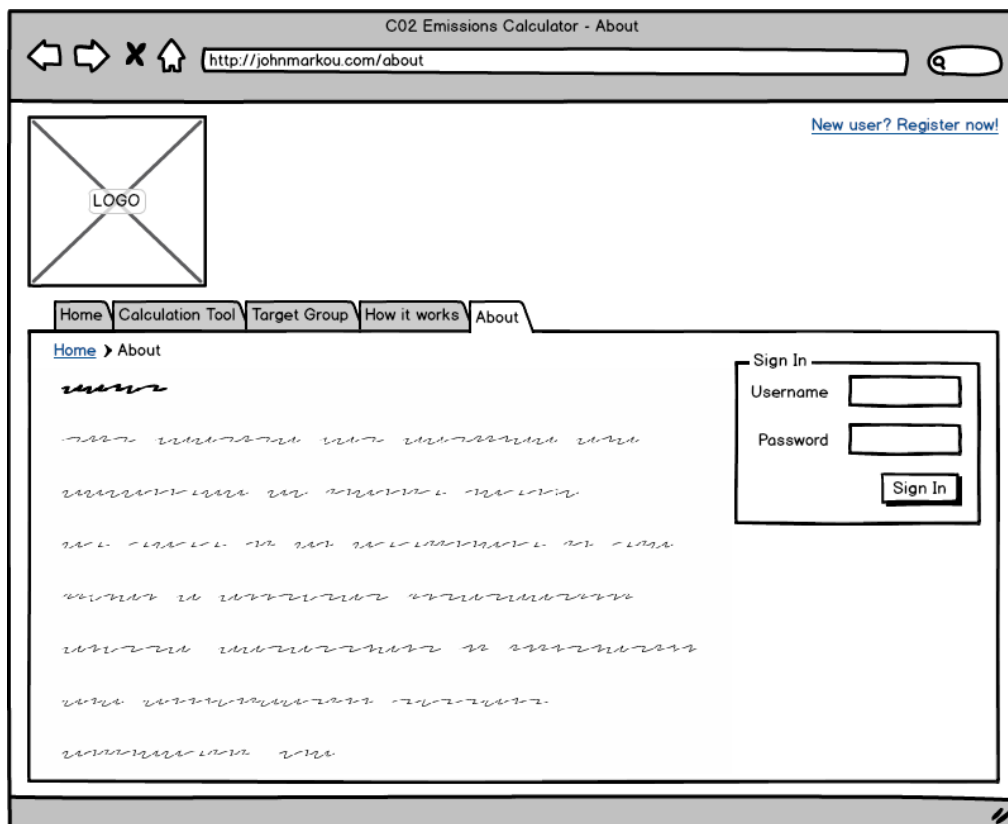
*Mockup 1 Home page, when visiting as a guest*



*Mockup 2 The target group page*



Mockup 3 Instructions on how to use the calculation tool



Mockup 4 Information about the tool creator

C02 Emissions Calculator - Registration

http://johnmarkou.com/register

LOGO

Home Calculation Tool Target Group How it works About

Account Type

Carrier ? Next

Don't know which account type is best for your needs?

- Individual
- Company
- Government
- Non-profit
- Other

Search

*Mockup 5 The 1<sup>st</sup> step of user registration includes defining the account type (carrier, shipper, etc.)*

C02 Emissions Calculator - Registration

http://johnmarkou.com/register

LOGO

Home Calculation Tool Target Group How it works About

Personal Information

Name ?

Surname ?

Occupation ?

Organisation ?

Date of birth / / ?

City ?

Country ?

Back Clear Next

*Mockup 6 The 2<sup>nd</sup> step of user registration includes filling the user's personal information*

C02 Emissions Calculator - Registration

http://johnmarkou.com/register

LOGO

Home Calculation Tool Target Group How it works About

### Sign in Information

Account Type ☒

Personal Information ☒

Sign in Information ☐

E-mail

Username

Password

Repeat password

☐ I want to receive this website's newsletter at my current e-mail address

Back Clear Next

**Mockup 7** The 3<sup>rd</sup> step of user registration includes setting an email and password for logging in to the website

C02 Emissions Calculator - Registration

http://johnmarkou.com/register

LOGO

Home Calculation Tool Target Group How it works About

### Review your information

Account Type ☒

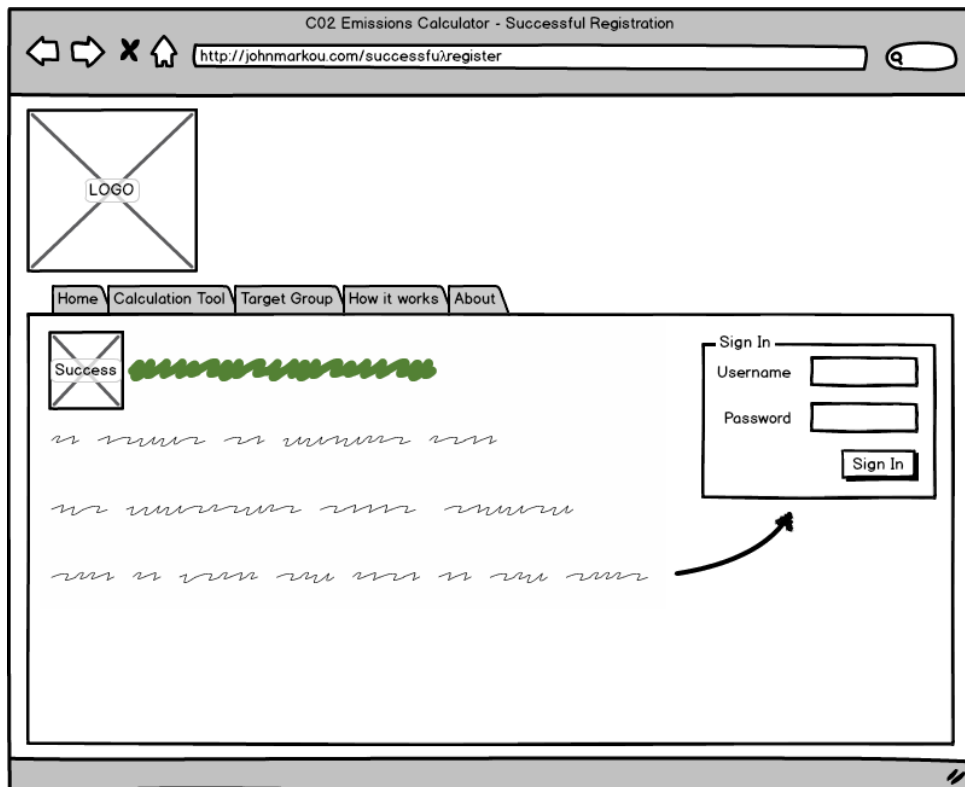
Personal Information ☒

Sign in Information ☒

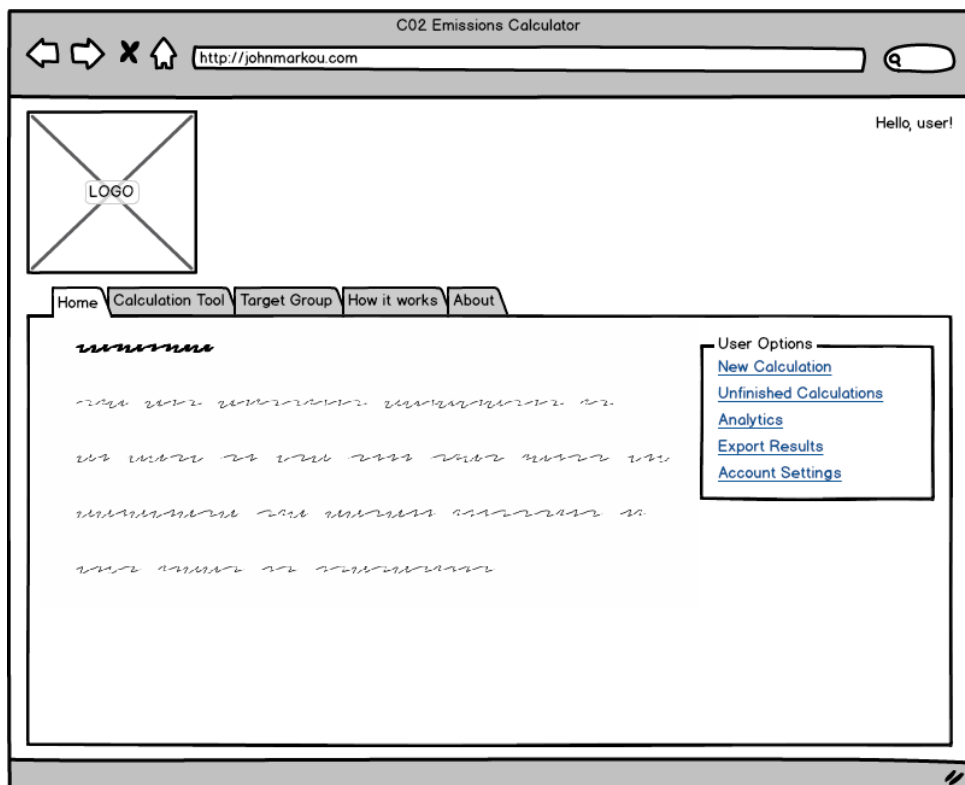
☐ I agree to the [Terms of Use](#)

Change your information Complete registration

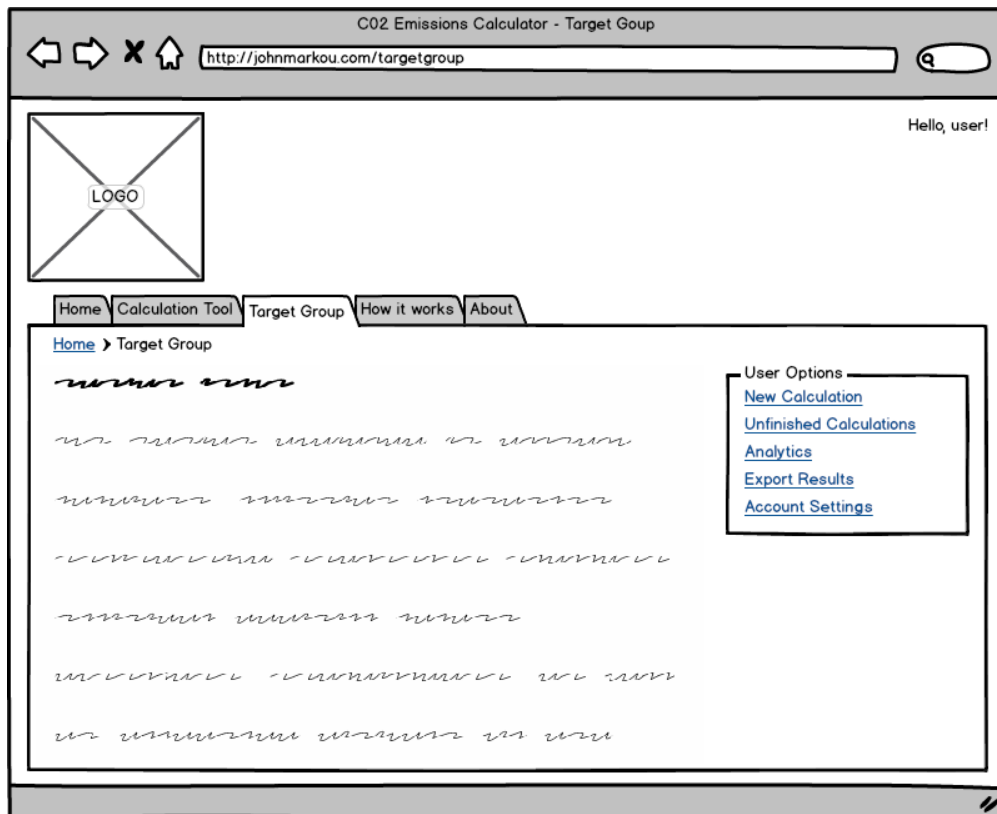
**Mockup 8** The last step of user registration includes a review of submitted information as well as accepting the terms of use



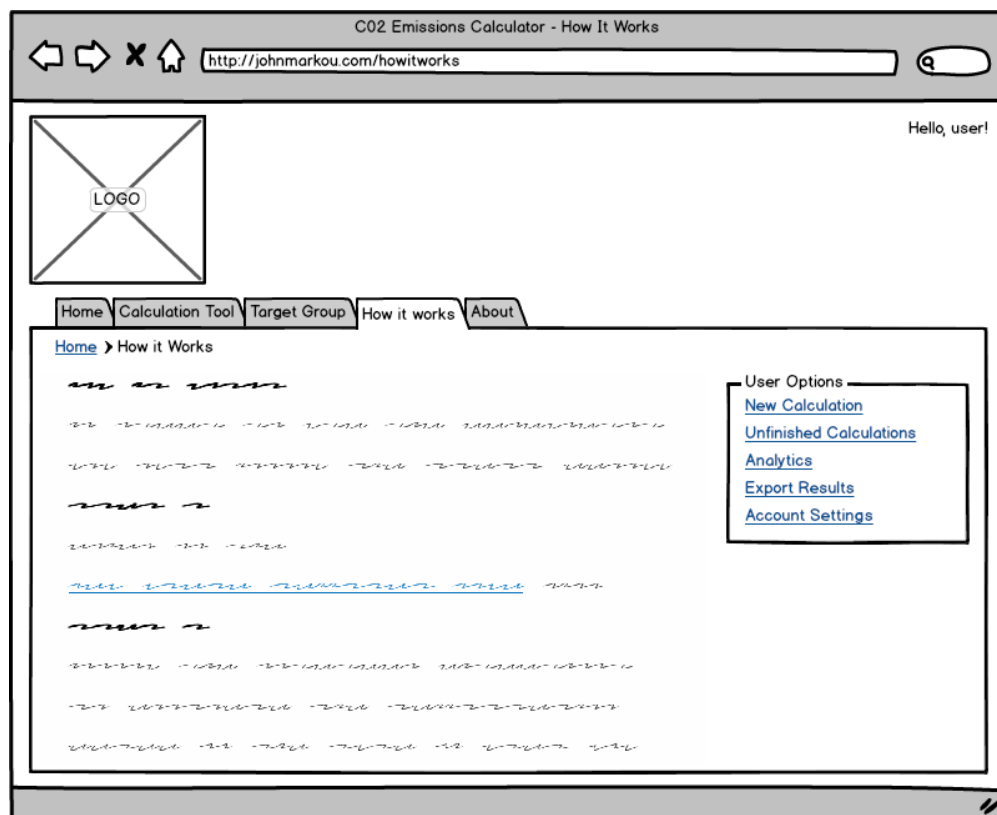
**Mockup 9** After successful registration, the user is redirected to a page with a success message



**Mockup 10** The home page when a user is logged in

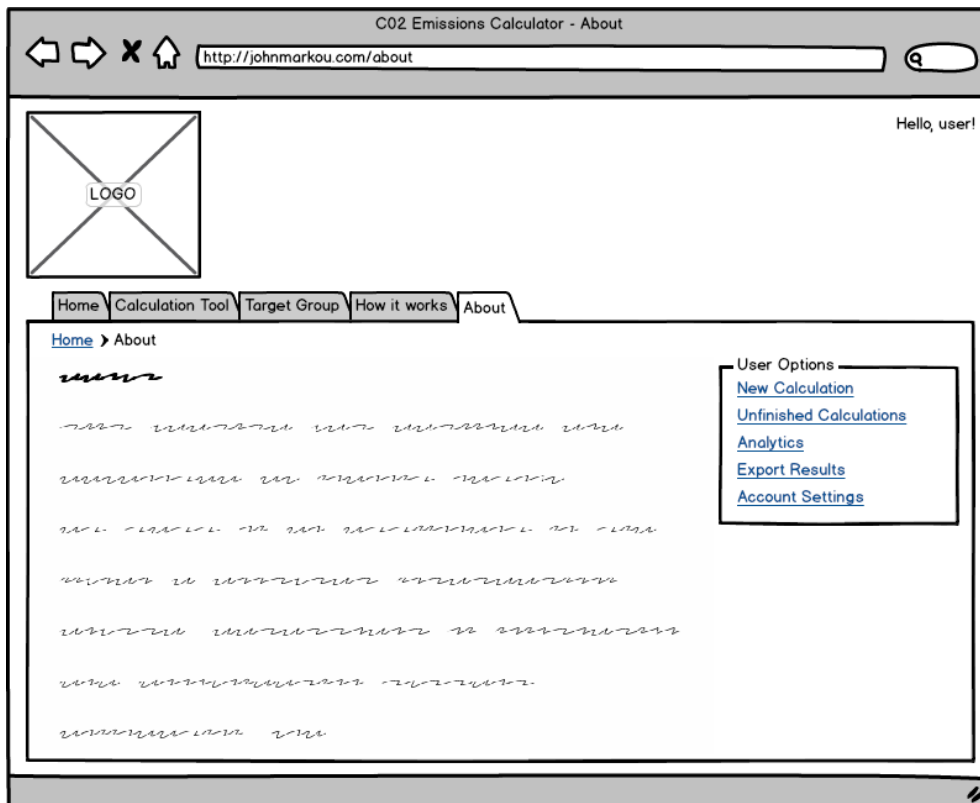


Mockup 11 The target group page, visited by a logged-in user

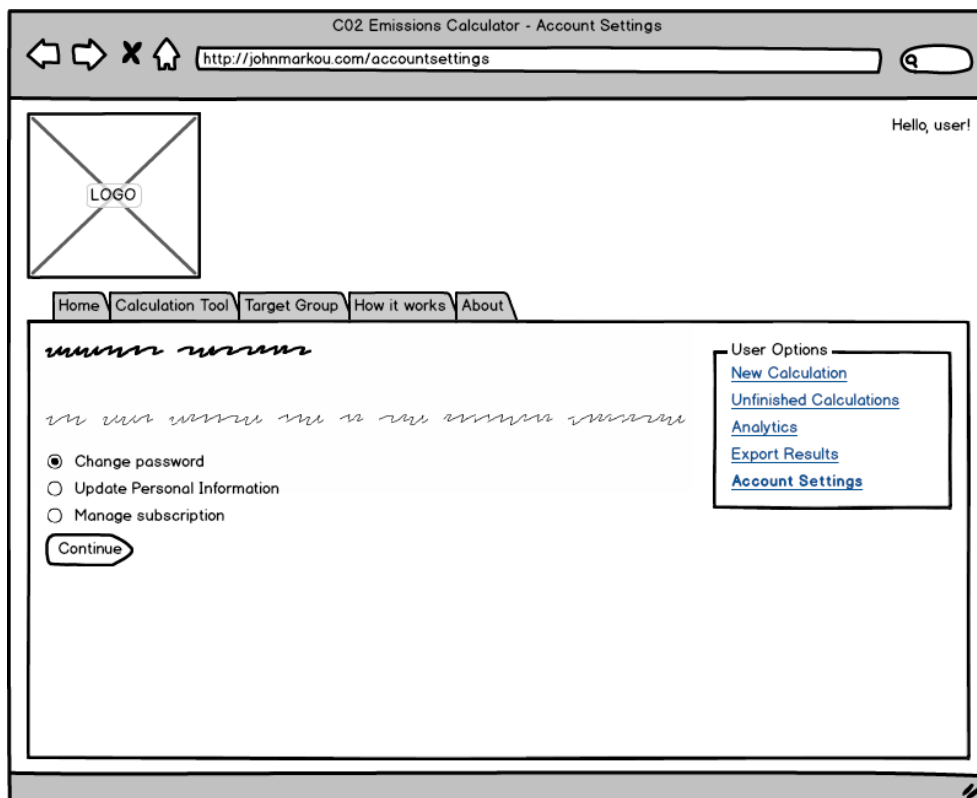


Mockup 12 The "How it works" page visited by a logged-in user





Mockup 13 The "About" page visited by a logged-in user



Mockup 14 The account settings page

C02 Emissions Calculator - Change Password

http://johnmarkou.com/changepass

LOGO

Home Calculation Tool Target Group How it works About

### Change password

Current password

New password

Retype new password

User Options

- [New Calculation](#)
- [Unfinished Calculations](#)
- [Analytics](#)
- [Export Results](#)
- [Account Settings](#)

Mockup 15 The page for changing password

C02 Emissions Calculator - Update Personal Information

http://johnmarkou.com/updatepi

LOGO

Home Calculation Tool Target Group How it works About

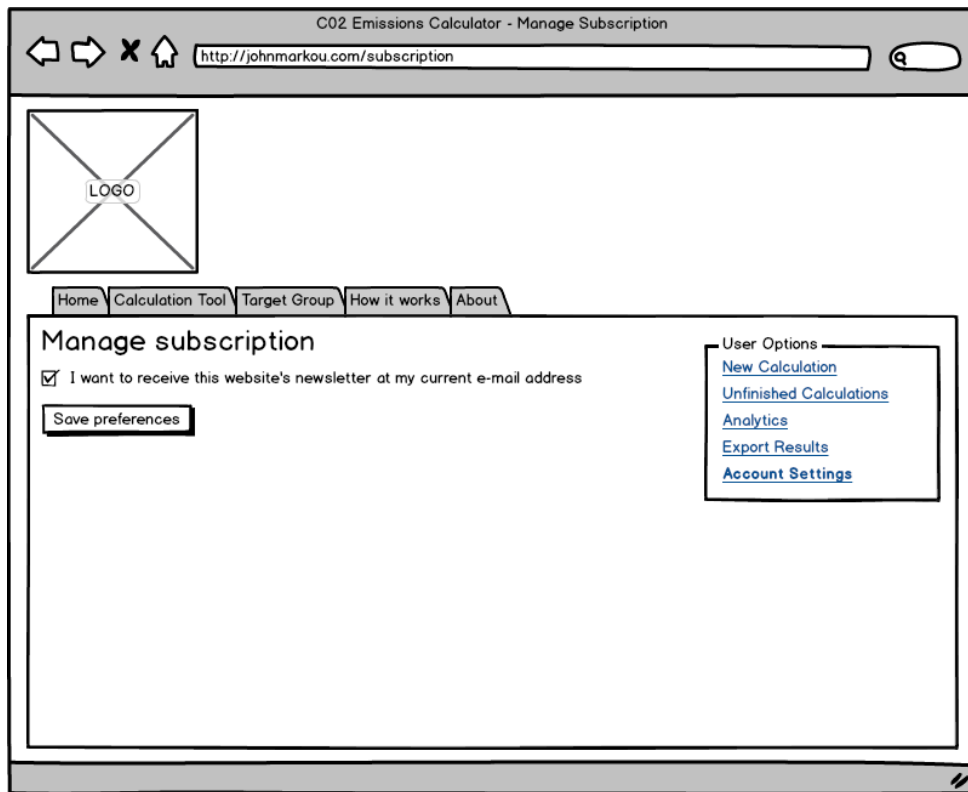
### Update Personal Information

Field Name	Current Value	Update	New Value
Occupation	Student	<input type="checkbox"/>	
Organisation	UOA	<input type="checkbox"/>	
City	Karlovassi	<input checked="" type="checkbox"/>	<input type="text" value="Athens"/>
Country	Greece	<input type="checkbox"/>	

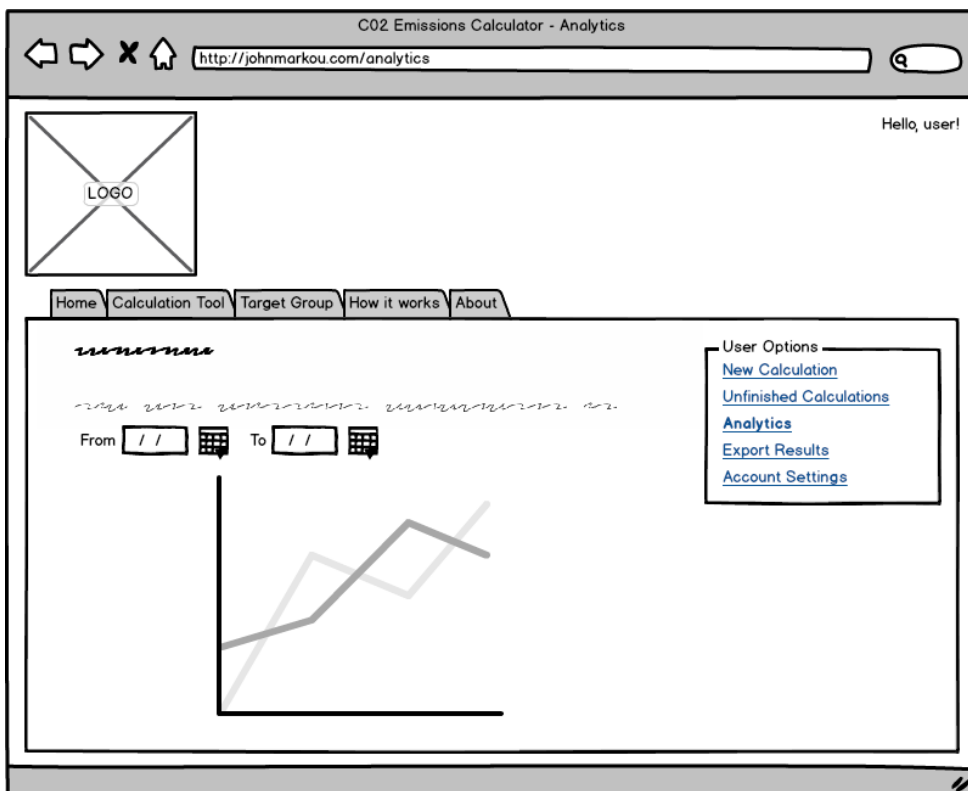
User Options

- [New Calculation](#)
- [Unfinished Calculations](#)
- [Analytics](#)
- [Export Results](#)
- [Account Settings](#)

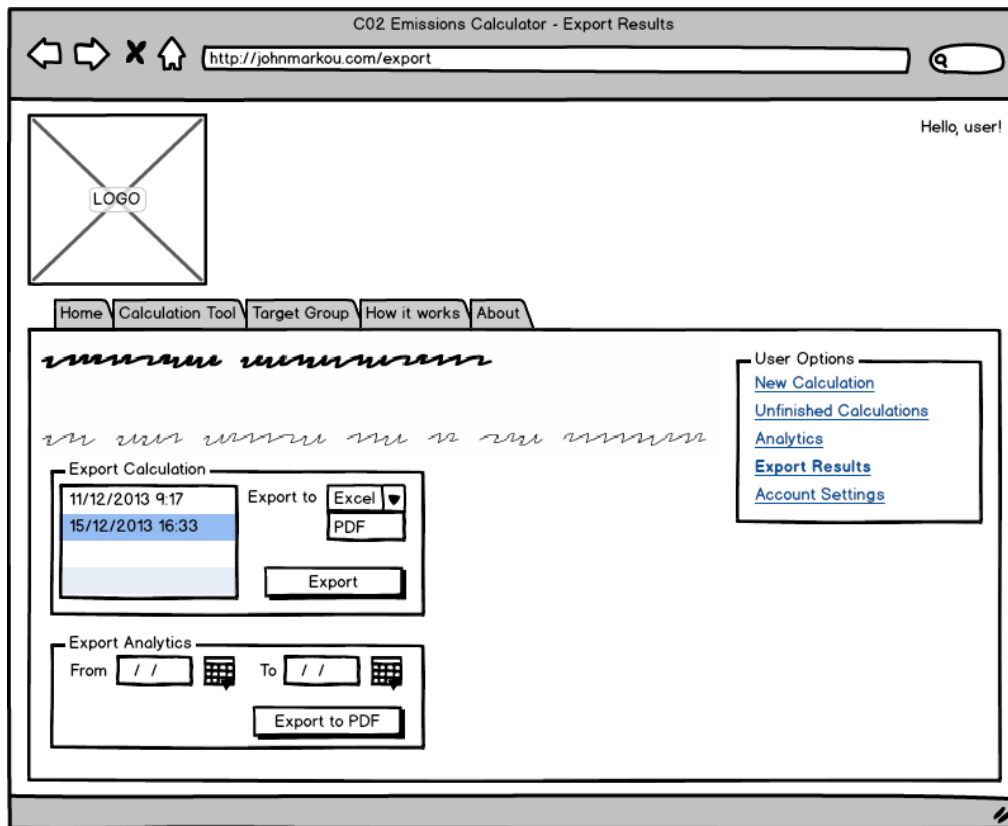
Mockup 16 The page for updating the user's personal information



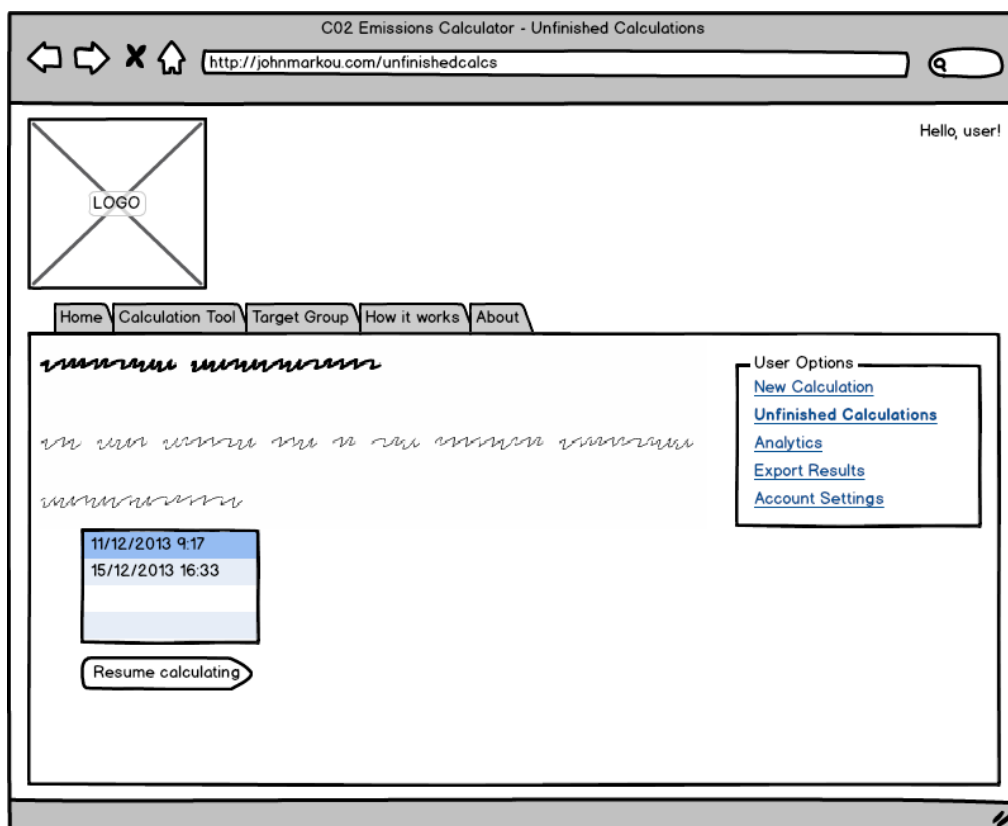
*Mockup 17 The page for changing e-mail subscription settings*



*Mockup 18 Analytics page, showing visualisations of calculated data*



Mockup 19 Data export page



Mockup 20 Page containing unfinished calculations

C02 Emissions Calculator - Calculation Tool

http://johnmarkou.com/calculationtoolL1

Hello, user!

LOGO

Home Calculation Tool Target Group How it works About

**Consumption period**

From  /  /  To  /  /

**Location information**

Departure

Destination

☒ Auto-calculate distance based on map

Distance

**Means of Transport**

Type  Model

GVW

**Goods**

Weight  Kg

No. of units

**User Options**

[New Calculation](#)

[Unfinished Calculations](#)

[Analytics](#)

[Export Results](#)

[Account Settings](#)

The distance field is disabled if the check box is selected

Save Calculate Emissions

Mockup 21 Page for calculating emissions for civilians (Level 1)

C02 Emissions Calculator - Calculation Tool

http://johnmarkou.com/calculationtoolL2

Hello, user!

LOGO

Home Calculation Tool Target Group How it works About

**Consumption period**

From  /  /  To  /  /  } < 3 years

**Consumption information**

Total distance travelled  km

No. of fleet owned

Fuel purchases  l

**Means of Transport**

Type  Model

GVW

**User Options**

[New Calculation](#)

[Unfinished Calculations](#)

[Analytics](#)

[Export Results](#)

[Account Settings](#)

Save Calculate Emissions

Mockup 22 Page for calculating emissions for shippers and non-governmental organisations (Level 2)

C02 Emissions Calculator - Calculation Tool

http://johnmarkou.com/calculationtoolL3

Hello, user!

LOGO

Home Calculation Tool Target Group How it works About

**Consumption period**

From  /  /  To  /  /  } < 3 years

**Agencies**

Inter-agency carrier

No. of agencies  3

Agency	Type	Model	GVW	Distance	No. of units
Agency 1	Truck	Straight	12T	<input type="text"/>	<input type="text"/>
Agency 2	Train	Electric	90T	<input type="text"/>	<input type="text"/>
Agency 3	Truck	Straight	12T	<input type="text"/>	<input type="text"/>

Save Calculate Emissions

**User Options**

- [New Calculation](#)
- [Unfinished Calculations](#)
- [Analytics](#)
- [Export Results](#)
- [Account Settings](#)

Mockup 23 Page for calculating emissions for public services, , 3PL, forwarders andshippers with multiple distribution channels (Level 3)

C02 Emissions Calculator - Calculation Tool

http://johnmarkou.com/calculationtoolL4

Hello, user!

LOGO

Home Calculation Tool Target Group How it works About

**Consumption period**

From  /  /  To  /  /

**Location information**

Departure

Destination

By clicking on a text field, a Google Maps box appears in order for the user to select accurate location

**Consumption**

Fuel consumption

Fuel emission conversion factor

[Need help filling in the emission conversion factor?](#)

**Beneficiaries**

☒ Single ☐ Multiple

**Modes of transport**

☒ Single ☐ Multimodal

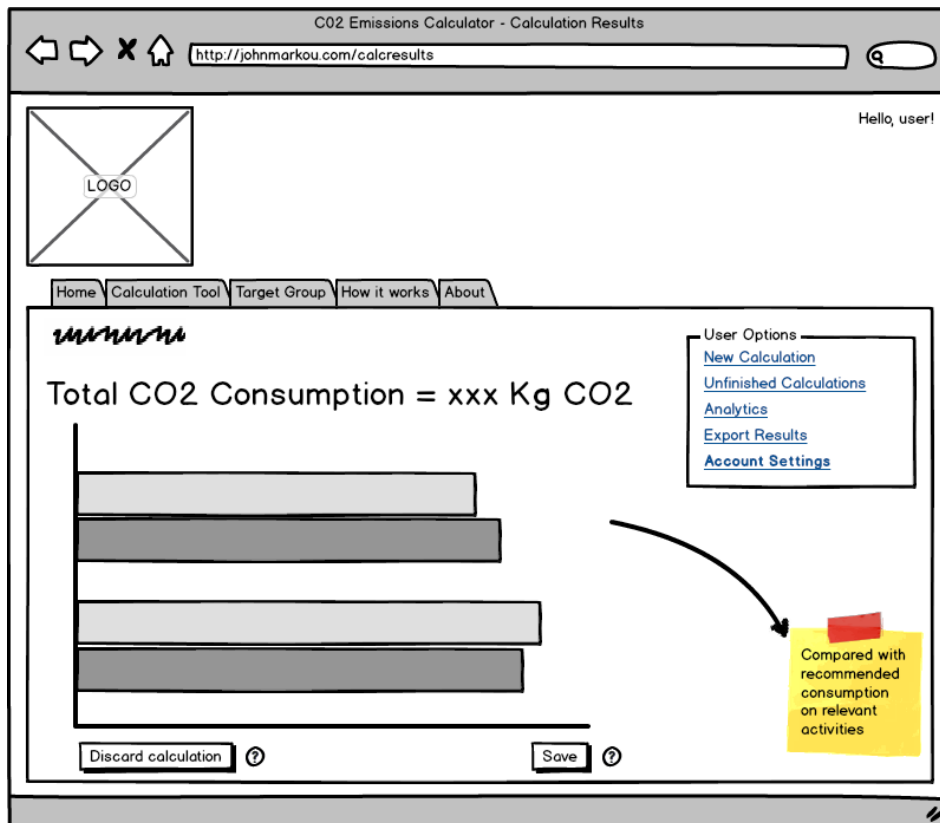
For multiple beneficiaries and multimodal transport, the calculation forms changes dynamically, according to the selection

Save Calculate Emissions

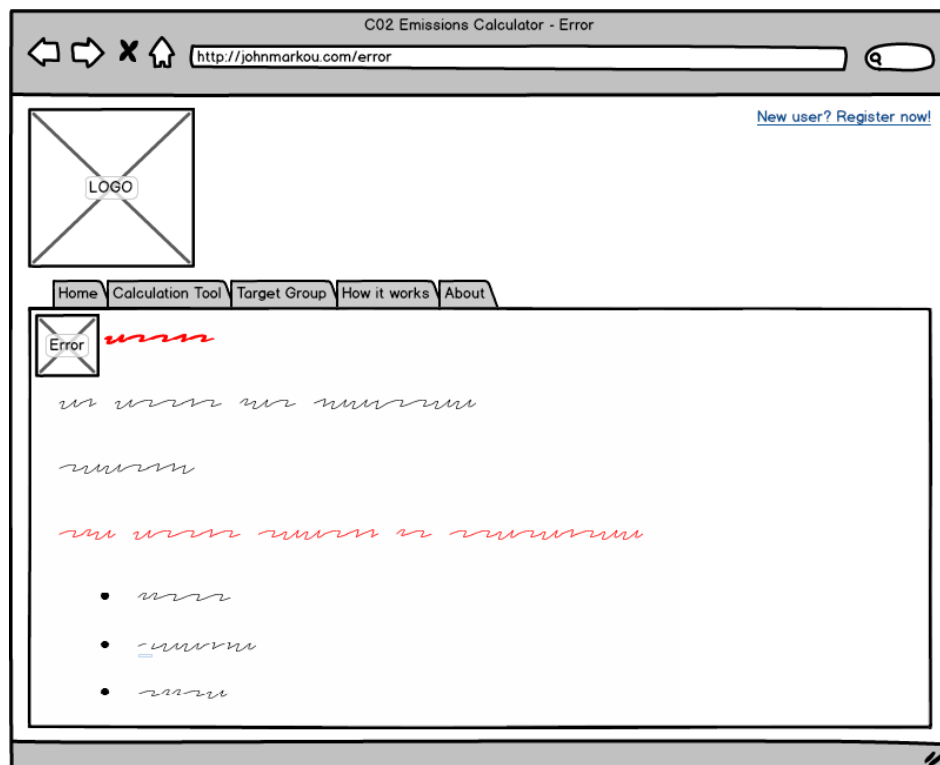
**User Options**

- [New Calculation](#)
- [Unfinished Calculations](#)
- [Analytics](#)
- [Export Results](#)
- [Account Settings](#)

Mockup 24 Page for calculating emissions for carriers (Level 4)



Mockup 25 Page displaying calculation results for all categories (Levels 1, 2, 3, 4)

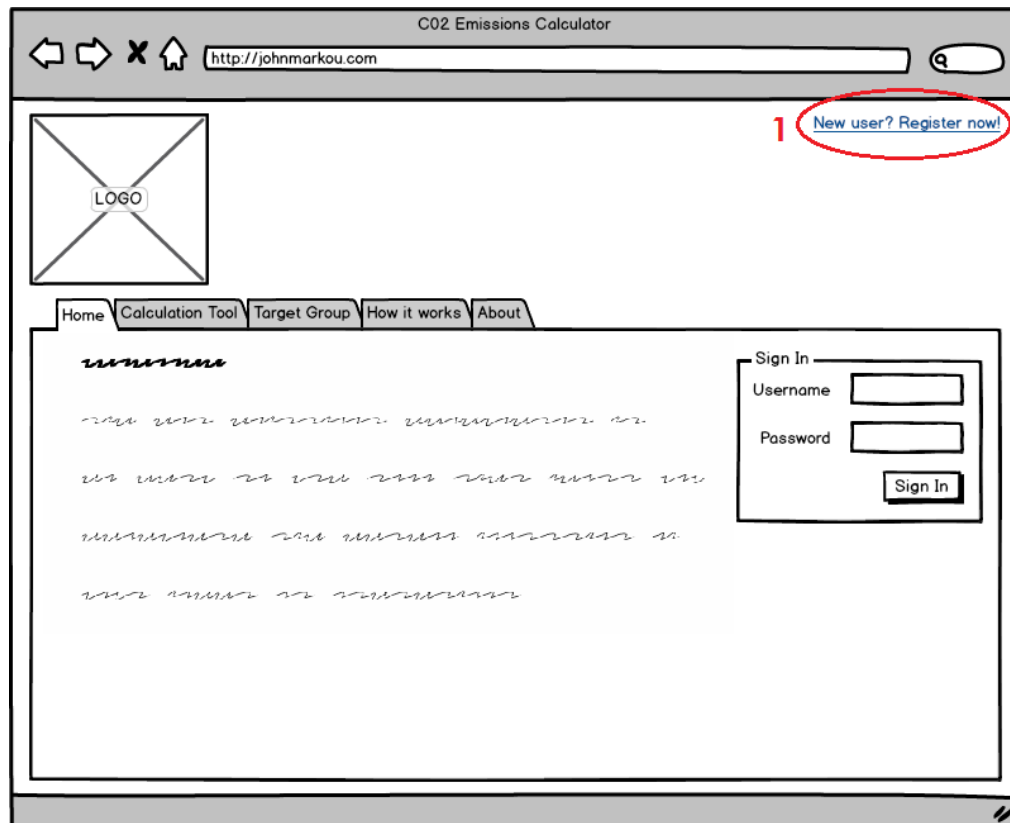


Mockup 26 Error page, showing a different error message and solutions depending on the error

# STORYBOARDING

This scenario describes:

- The process of registering a guest as a **Carrier**
- The user logging in to the page
- Calculating CO<sub>2</sub> emissions for a specific time period for that user (Level 4 – **Energy based**)
- Showing results



*Panel 1 Selecting the registration link*

1. The page visitor selects the link that points to the registration page



Panel 2 Selecting account type

1. The guest selects the **Carrier** account type
2. The guest selects **Next** to proceed to the next step of the registration process

Panel 3 Input of personal information

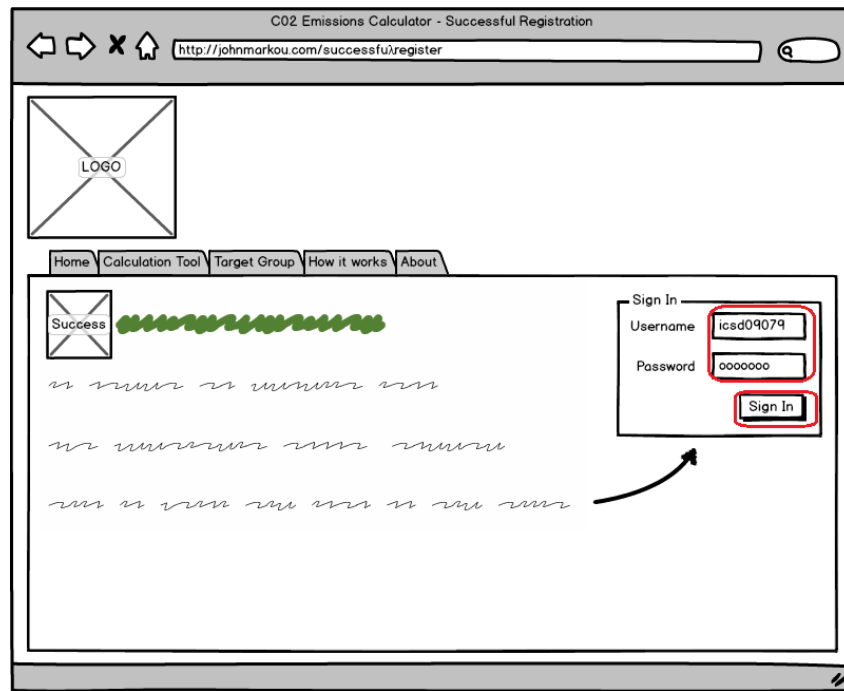
1. The guest inputs personal information
2. The guest selects **Next** to proceed to the next step of the registration process

Panel 4 Input of sign-in information

1. The guest inputs sign-in-related information
2. The guest selects to subscribe to the page's newsletter
3. The guest proceeds to the next step of the registration process

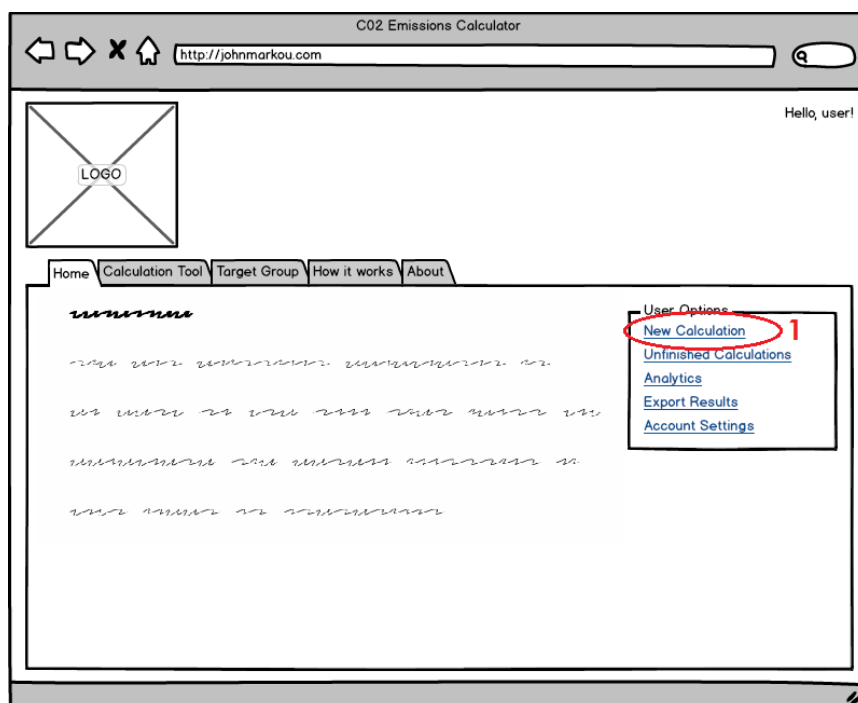
Panel 5 Review of information and completion of the registration process

1. The guest checks that all information is correct and accepts the terms of use
2. The guest selects **Complete registration**



Panel 6 Success message and signing-in

1. The user is informed that the registration process has been completed successfully. Then the user enters his/her username and password in the corresponding fields
2. The user selects **Sign In** for authenticating the user credentials and logging in to the system

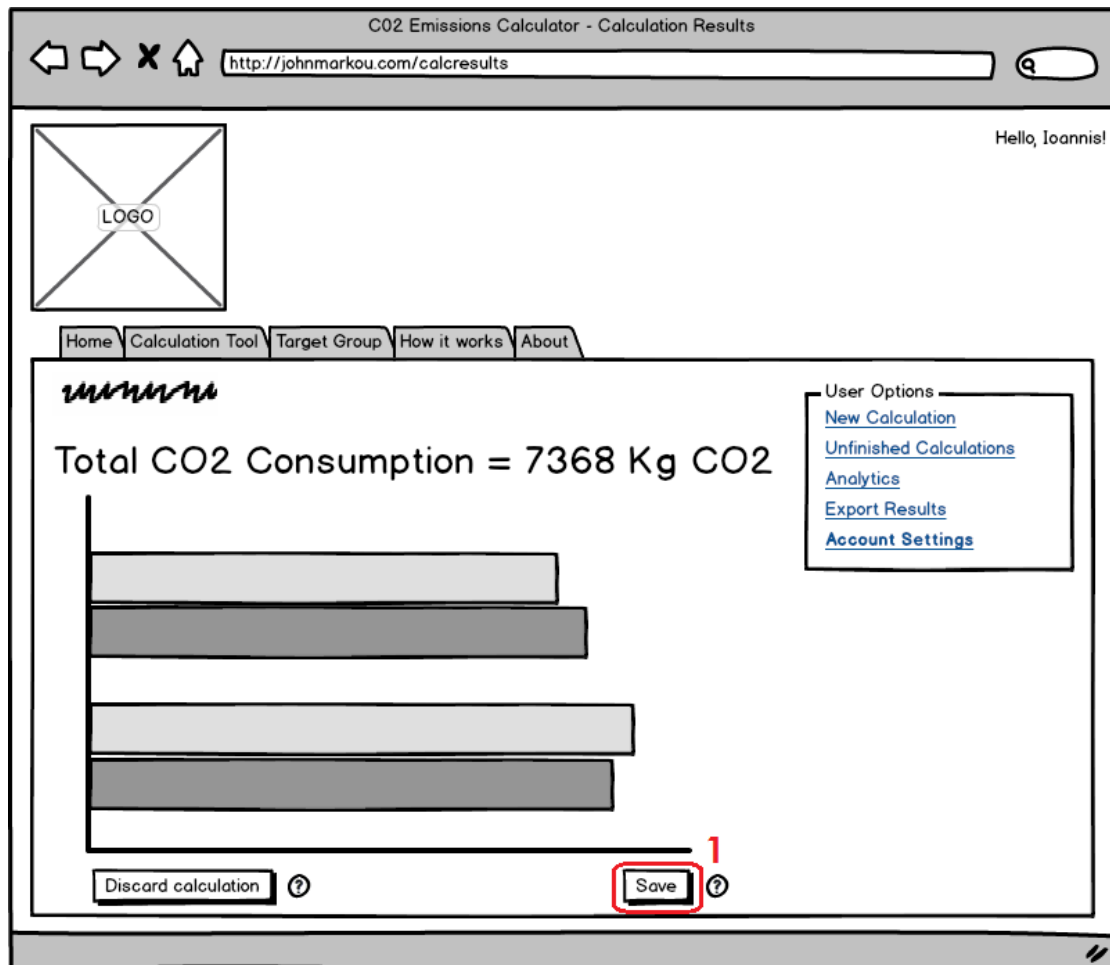


Panel 7 Selection of new calculation

1. After the user has logged in, he/she chooses to start a new calculation

Panel 8 Filling in calculation fields

1. At first, the user enters a consumption period that corresponds to the consumption to be calculated
2. Location information is only filled in if only a single trip is made at the defined consumption period (this is made clear in the corresponding question mark that the user can “mouse-over”  
When the user selects each of the location fields (departure, destination), a Google Maps window appears and the user can select the exact point of departure/destination
3. The user selects a single beneficiary (transferring products for a single provider/client)
4. The trip includes a single mode of transport so the user specifies that
5. The user fills the fuel consumption field, as it is accurately calculated by the carrier, based on the vehicle load, empty trips, etc.
6. The user fills the fuel emission conversion factor field, as it is documented by the vehicle carrier
7. The user selects the button for calculating emissions



Panel 9 Calculation results page

1. The user sees the consumption results and selects to save the calculation, so it can later be included in the visualisations in the **Analytics** page.