



**POLITECNICO**  
**MILANO 1863**

## **Hypermedia Applications Design Document**

Fabio Codiglioni - 10484720  
fabio.codiglioni@mail.polimi.it

Luca dell'Oglio - 10497928  
luca1.delloglio@mail.polimi.it

Alessandro Nichelini - 10497404  
alessandro.nichelini@mail.polimi.it

April 24<sup>th</sup>, 2020

# Contents

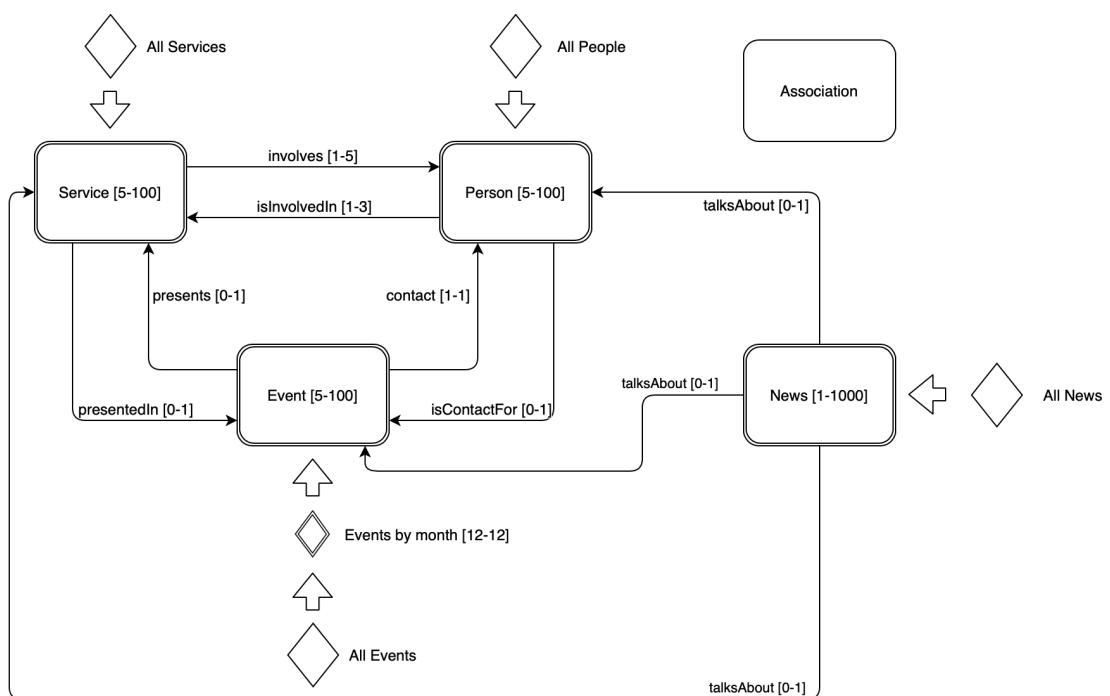
|          |                                       |           |
|----------|---------------------------------------|-----------|
| <b>1</b> | <b>Abstract</b>                       | <b>1</b>  |
| <b>2</b> | <b>Graphical representations</b>      | <b>2</b>  |
| 2.1      | C-IDM . . . . .                       | 2         |
| 2.2      | L-IDM . . . . .                       | 3         |
| 2.3      | P-IDM . . . . .                       | 4         |
| <b>3</b> | <b>Scenarios</b>                      | <b>5</b>  |
| 3.1      | Scenario 1 . . . . .                  | 5         |
| 3.2      | Scenario 2 . . . . .                  | 6         |
| 3.3      | Scenario 3 . . . . .                  | 8         |
| <b>4</b> | <b>Design in the small</b>            | <b>9</b>  |
| 4.1      | Home page . . . . .                   | 9         |
| 4.2      | Topic: Association . . . . .          | 11        |
| 4.3      | Kind of Topic: Person . . . . .       | 13        |
| 4.4      | Kind of Topic: Service . . . . .      | 15        |
| 4.5      | Kind of Topic: Event . . . . .        | 17        |
| 4.6      | Introductory page: People . . . . .   | 19        |
| 4.7      | Introductory page: Services . . . . . | 21        |
| 4.8      | Introductory page: Events . . . . .   | 23        |
| <b>5</b> | <b>Database design</b>                | <b>25</b> |
| 5.1      | ER . . . . .                          | 25        |
| 5.2      | Relational tables . . . . .           | 25        |

# **1 Abstract**

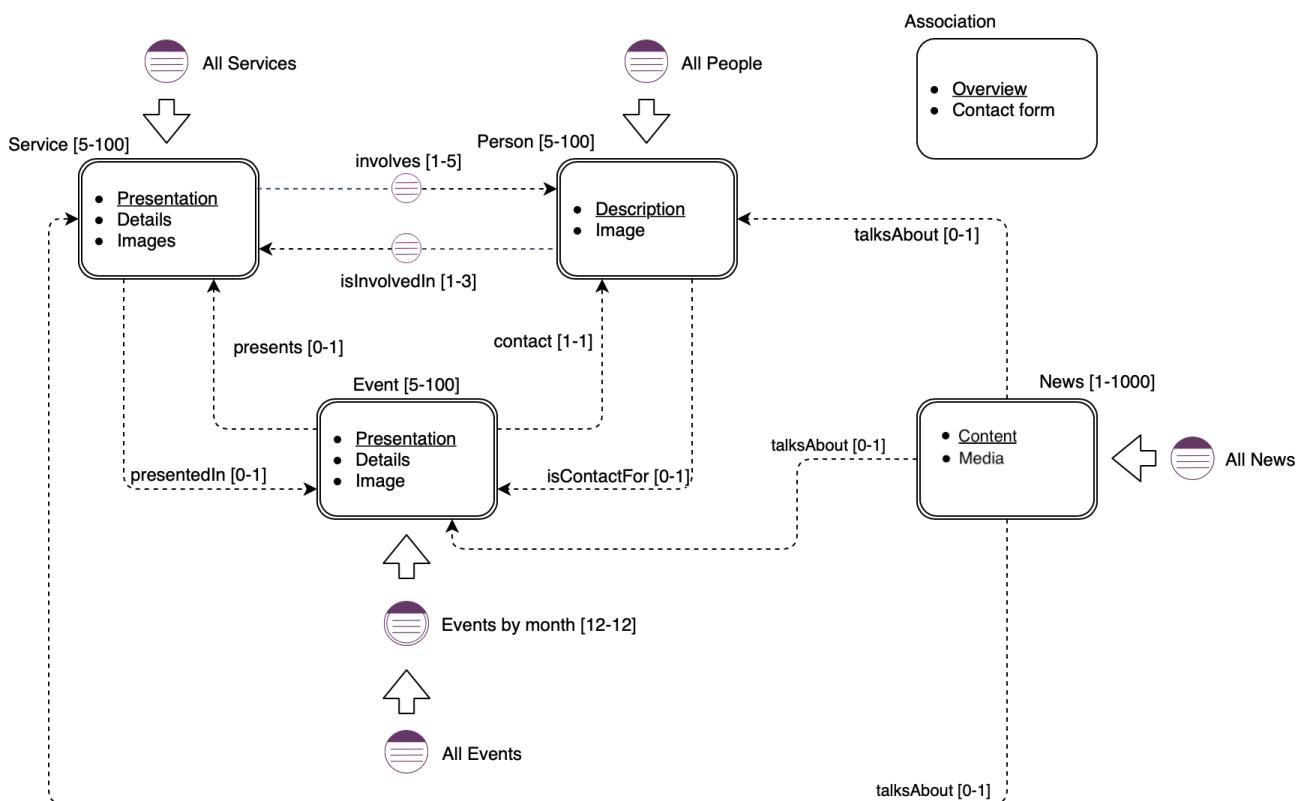
The subject of this document is the design of a website for a voluntary association, specifically a time bank. Section 2 contains the C, L, and P sub-models of the Interactive Dialogue Model (IDM). Section 3 lists 3 possible scenarios of use. Section 4 shows the design in the small for different pages. Finally, Section 5 contains the conceptual and logical database design.

## 2 Graphical representations

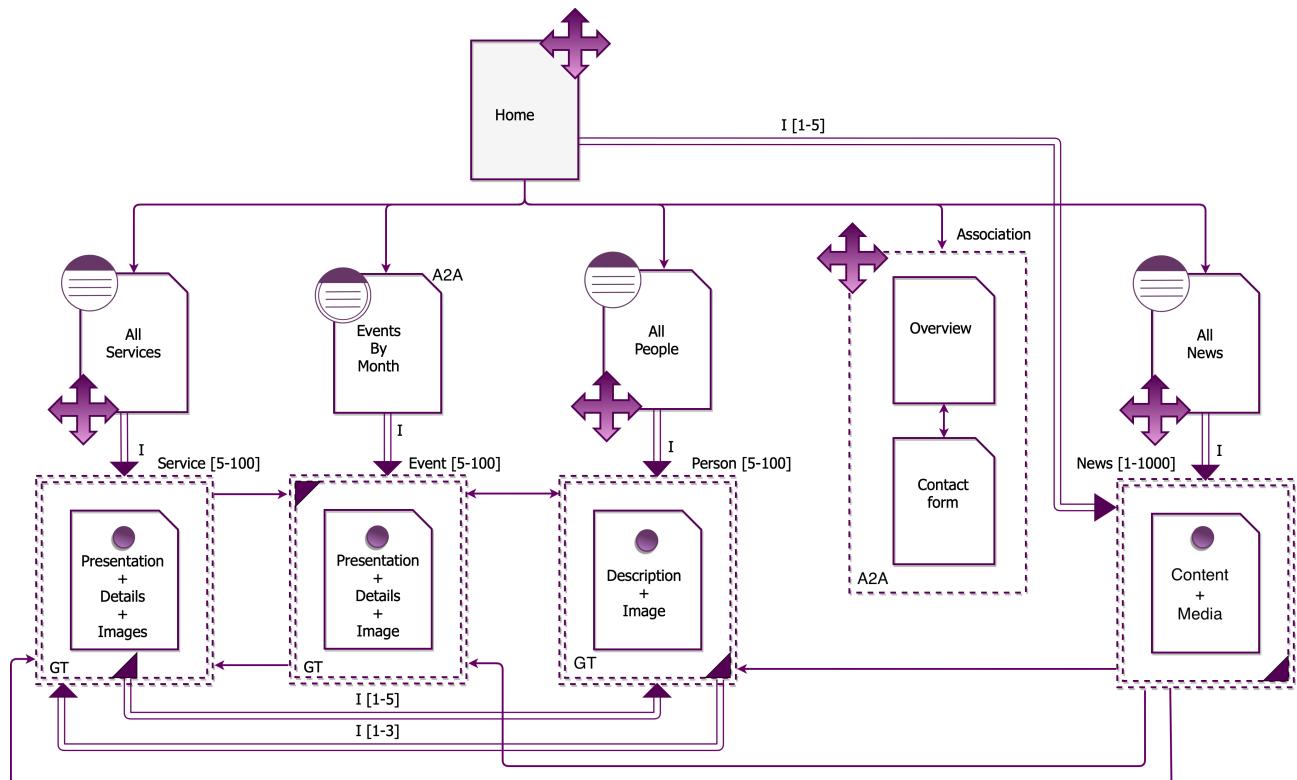
### 2.1 C-IDM



## 2.2 L-IDM



## 2.3 P-IDM



# 3 Scenarios

## 3.1 Scenario 1

Carol's parents think their daughter needs tutoring for school, so they look for a person who would be able to help her on the time bank website. They open the website and click on the "Services" button on the navigation bar (Figure 3.1). A list of the offered services will be then opened, including the link for the tutoring service (Figure 3.2). After clicking on the link, the parents will see the list of the volunteers that offer tutoring and, by opening the page of one of the volunteers (Figure 3.3), they can see his contact information (Figure 3.4).

The screenshot shows the homepage of the QualityTimeBank website. At the top, there is a navigation bar with links for Services, People, Events, About Us, and a search icon. Below the navigation bar, there is a section titled "New members!" featuring three profile cards for Natasha, Jane, and Wanda, each with a small photo and their joining date. The main content area features the QualityTimeBank logo and a quote: "TIMEBANK IS PASSIONATE ABOUT VOLUNTEERING AND BELIEVES THAT GOOD QUALITY VOLUNTEERING CAN MAKE A POSITIVE IMPACT ON OUR SOCIETY". Below the quote, there is a video thumbnail for a TEDx talk by Peter Scott about Timebanking in the UK. On the left side, there is a "News from the founders:" section with a link to "View all news". On the right side, there are sections for "People", "Services", and "Events". The "Services" section includes a "More" link. At the bottom, there is a footer with the QualityTimeBank logo, copyright information (© Quality TimeBank 2020), and social media links for Facebook and Twitter.

Figure 3.1

The screenshot shows the "Services" page of the QualityTimeBank website. The page has a header with a navigation bar and a "Services" link highlighted with a red box. Below the header, there is a section titled "Services" with a brief description: "Over the years, our organisation has expanded over various types of services in different fields. All of them are offered by people of all ages with extreme care and love for the others." There are four service categories displayed in boxes: "English Lessons", "Private Tutoring", "Carers Training", and "Tech Support". Each category box contains a small image, a title, and a brief description. The "Private Tutoring" box is also highlighted with a red border. At the bottom, there is a footer with the QualityTimeBank logo, copyright information (© Quality TimeBank 2020), and social media links for Facebook and Twitter.

Figure 3.2

The screenshot shows a service page for "Private Tutoring". At the top, there's a navigation bar with links for "Services", "People", "Events", "About Us", and a search icon. Below the navigation, a large image shows two people studying together. The text "Private Tutoring" is displayed, followed by "Presented in: [Studying Together](#)". A paragraph explains that QualityTimeBank groups volunteers who have been offering tutoring to young people for multiple years. It also states that users can decide when and where to meet, contacting a tutor. Below this, a section titled "Offered by:" lists two tutors: "Alessandro Nichelini" and "Anthony Stark". Each tutor has a profile picture, name, and a brief description of their offered subjects. At the bottom, there's a sidebar with categories like "Services", "People", "Events", and "About us", along with contact information (Email: info@qualitytimebank.com, Tel: 05478934) and social media links for Facebook and Twitter.

Figure 3.3

The screenshot shows a person profile page for "Alessandro Nichelini". At the top, there's a navigation bar with links for "Services", "People", "Events", "About Us", and a search icon. Below the navigation, a large circular profile picture of Alessandro Nichelini is shown. His contact information is listed: "Contact for: [Christmas Party](#)", "Computer Science Engineering student, geek, Apple addicted. Temporarily math teacher.", and "I'm available for private tutoring in scientific field, and for helping elderly with tech issues.". Below his profile, there are links for "Private Tutoring" (Math, Computer science, physics) and "Tech support" (For elderly). At the bottom, there's a sidebar with categories like "Services", "People", "Events", and "About us", along with contact information (Email: info@qualitytimebank.com, Tel: 05478934) and social media links for Facebook and Twitter.

Figure 3.4

## 3.2 Scenario 2

Giovanni has been an English teacher for the last twenty years, and his New Year's resolution is to share his knowledge with other people. He has heard from a friend that the QualityTimeBank is presenting an English lessons service in January, so he searches the event. By clicking the "Events" button on the home page (Figure 3.5), he reaches the page containing the events of the current month, which is December. By clicking on "January" (Figure 3.6), he reaches the page of that month, where he finds the event he's looking for (Figure 3.7). By clicking on the link, he reaches the page of the event (Figure 3.8).

The screenshot shows the homepage of the QualityTimeBank website. At the top, there's a navigation bar with links for Services, People, Events (which is highlighted with a red box), and About Us. Below the navigation is a section titled "New members!" featuring profiles of three new members: Natasha (Joined 15/10/2020), Jane (Joined 06/05/2020), and Wanda (Joined 13/06/2020). To the right, there's a quote: "'TIMEBANK IS PASSIONATE ABOUT VOLUNTEERING AND BELIEVES THAT GOOD QUALITY VOLUNTEERING CAN MAKE A POSITIVE IMPACT ON OUR SOCIETY'". Below this is a video thumbnail for a TEDx talk by Peter Port. Further down, there are sections for "People", "Services", and "Events", each with a "More" link. At the bottom, there's a footer with social media links for Facebook and Twitter, and copyright information: "© Quality TimeBank 2020".

Figure 3.5

This screenshot shows the events page for January. The navigation bar at the top has "Events" highlighted with a red box. Below the navigation, a calendar shows the month of January. Two events are listed: "Tech Together" on December 7th and "Christmas Party" on December 22nd. Each event has a thumbnail image, a title, a date, and a brief description. At the bottom, there's a footer with social media links for Facebook and Twitter, and copyright information: "© Quality TimeBank 2020".

Figure 3.6

This screenshot shows the events page for January. The navigation bar at the top has "Events" highlighted with a red box. Below the navigation, a calendar shows the month of January. Two events are listed: "Talking Together" on January 14th and "Caring Together" on January 23rd. Each event has a thumbnail image, a title, a date, and a brief description. At the bottom, there's a footer with social media links for Facebook and Twitter, and copyright information: "© Quality TimeBank 2020".

Figure 3.7

This screenshot shows a detailed view of the "Talking Together" event. The navigation bar at the top has "Events" highlighted with a red box. The event details include the title "Talking Together", a subtitle "Presenting: English Lessons", a description "We are proud to announce the launch of our new service, which will help people with little or no knowledge of English to learn the language.", and contact information: "Date: January, 14th", "Place: Via Porlezza 2, Milano (MI)", and "Contact: Bruce Banner". There are "Previous" and "Next" buttons at the bottom. At the very bottom, there's a footer with social media links for Facebook and Twitter, and copyright information: "© Quality TimeBank 2020".

Figure 3.8

### 3.3 Scenario 3

The organizer of the annual Christmas party of the association has lost the phone number of the contact for the event. She clicks the "Events" button on the home page (Figure 3.9), and she opens the event of the current month, which is December. There she reaches the page of the event (Figure 3.10), where she can find the link of the personal page of the contact for the event (Figure 3.11), which contains the phone number of the contact.

The screenshot shows the homepage of QualityTimeBank. At the top, there is a navigation bar with links for Services, People, Events (which is highlighted with a red box), and About Us. Below the navigation, there is a section titled "New members!" featuring profiles of three new members: Natasha, Jane, and Wanda, each with a small profile picture and their joining date. To the right of this, there is a large central image with the QualityTimeBank logo and the quote: "TIMEBANK IS PASSIONATE ABOUT VOLUNTEERING AND BELIEVES THAT GOOD QUALITY VOLUNTEERING CAN MAKE A POSITIVE IMPACT ON OUR SOCIETY". Below this central image, there is a video player showing a TEDx talk about timebanking. To the left of the video, there is a section titled "News from the founders:" with a brief description and a "View all news" link. At the bottom of the page, there are four main categories: People, Services, Events, and a footer section with links for Categories, Services, People, Events, and About us, along with social media icons for Facebook and Twitter.

Figure 3.9

The screenshot shows the events page for December. The top navigation bar includes a link for the "Events" category, which is highlighted with a red box. Below the navigation, there is a calendar with arrows for navigating between months. Two events are listed: "Tech Together" on December 7th and "Christmas Party" on December 22nd. Each event has a thumbnail image, a title, a date, and a brief description. At the bottom of the page, there are sections for Categories (Services, People, Events, About us) and social media links for Facebook and Twitter.

Figure 3.10

The screenshot shows the details page for the "Christmas Party" event. At the top, it says "Events > December". The main content area features a photo of two people at the event, the title "Christmas Party", a brief description encouraging people to celebrate Christmas, the date "Date: December, 22nd", the place "Place: Via del Bifrost 1, Asgard (CO)", and the contact information "Contact: Alessandro Nichelini" (which is highlighted with a red box). At the bottom, there are sections for Categories (Services, People, Events, About us) and social media links for Facebook and Twitter.

Figure 3.11

# 4 Design in the small

## 4.1 Home page

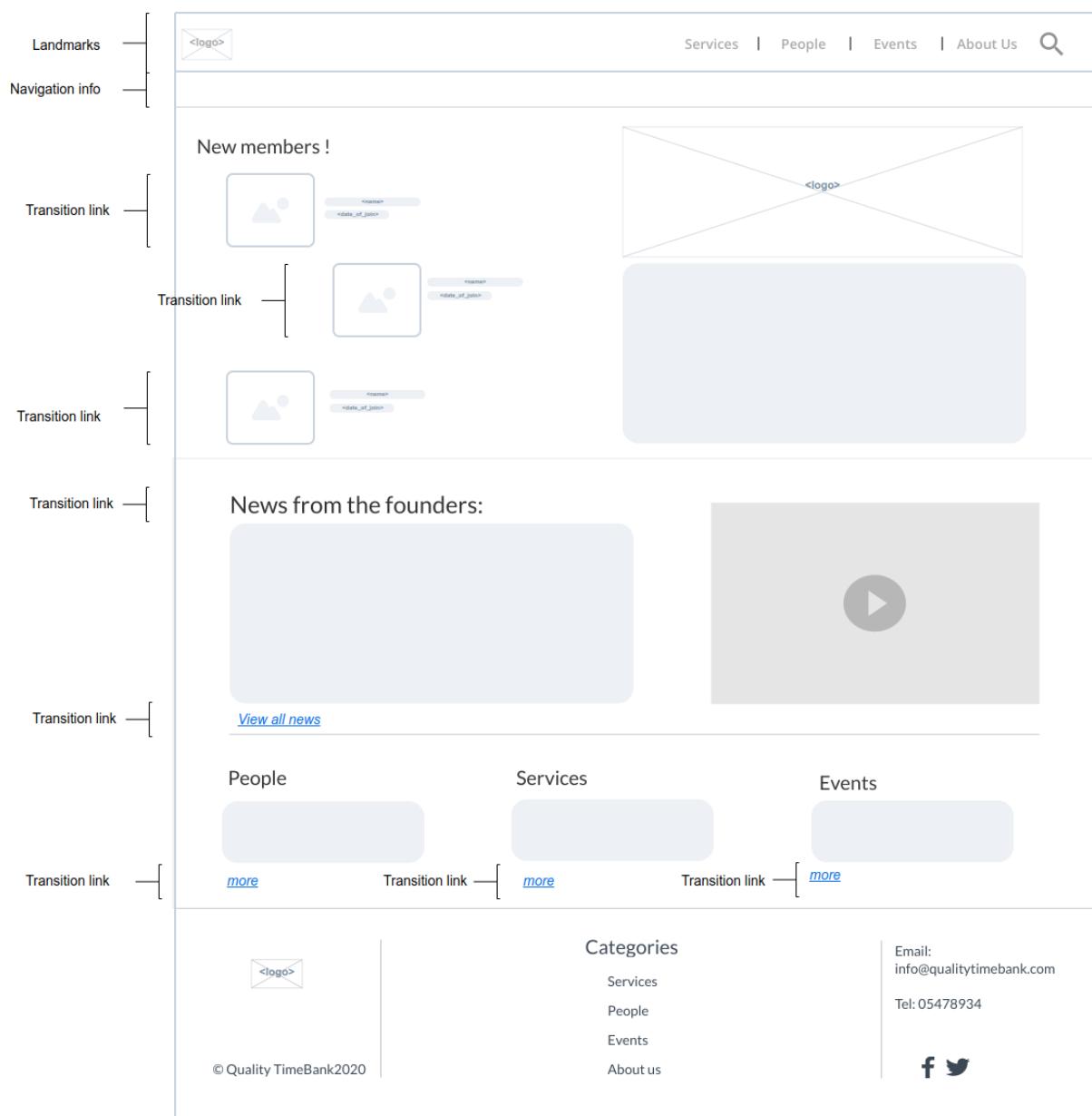


Figure 4.1: Wireframe

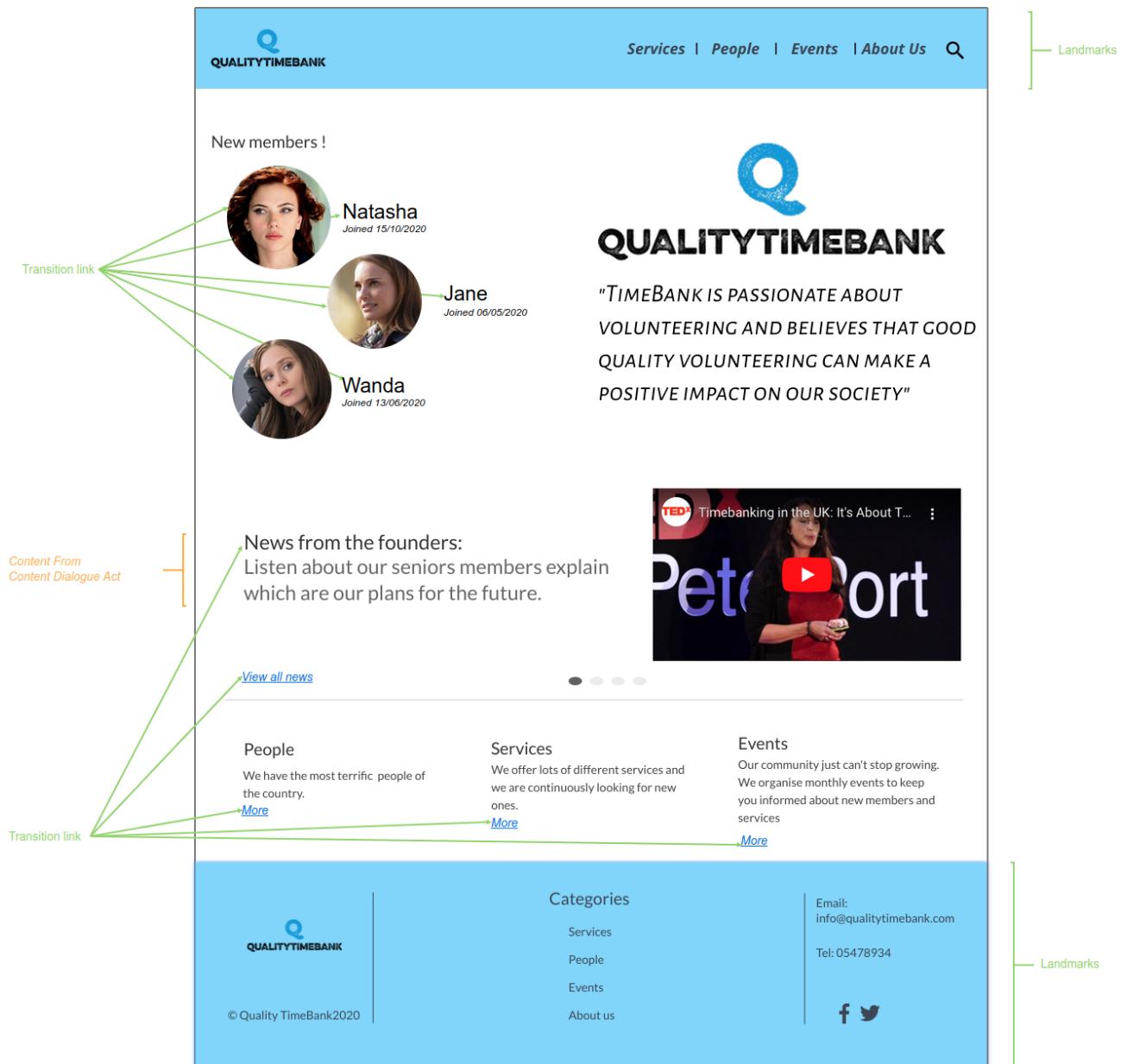


Figure 4.2: Mockup

## 4.2 Topic: Association

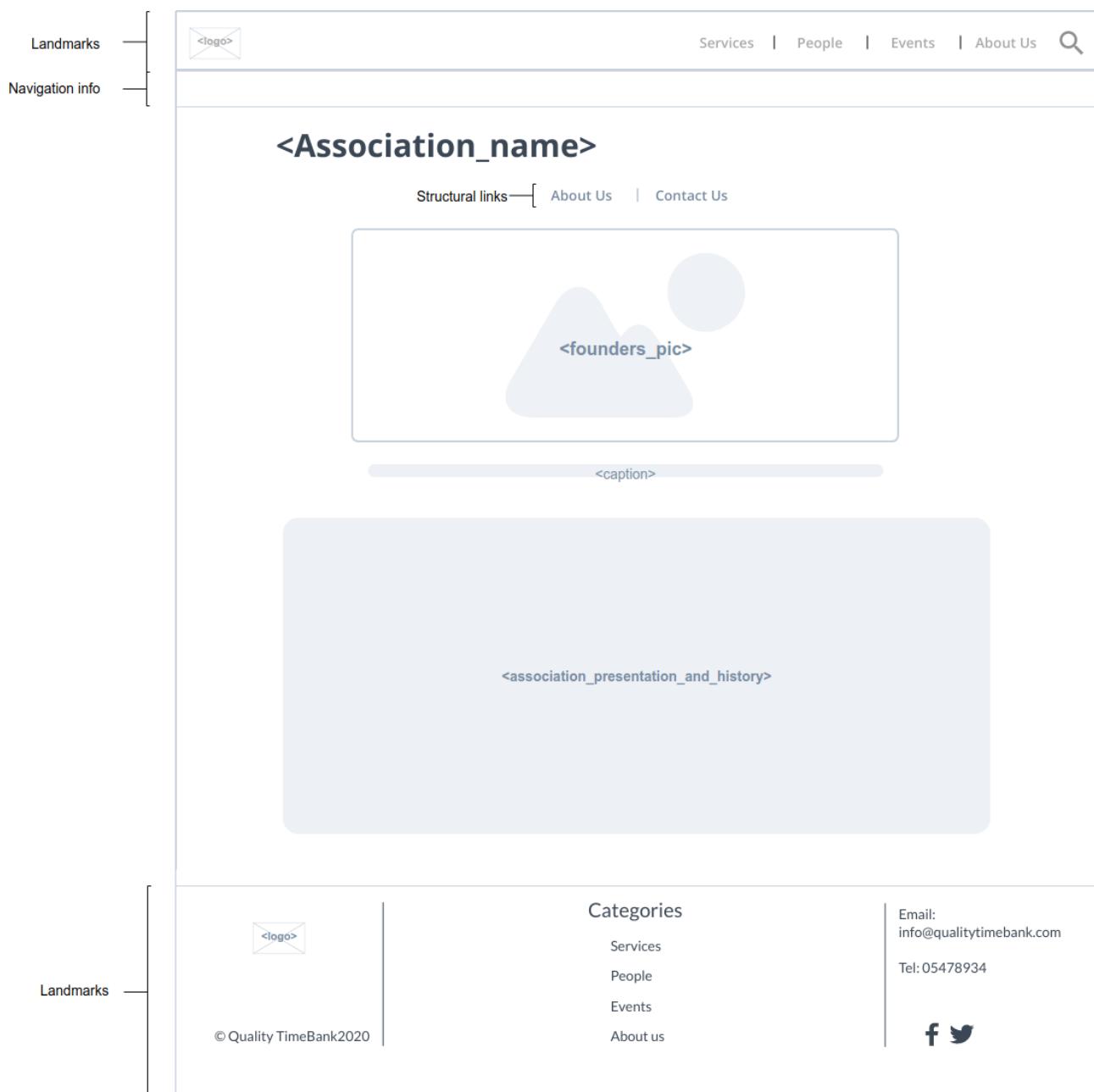


Figure 4.3: Wireframe

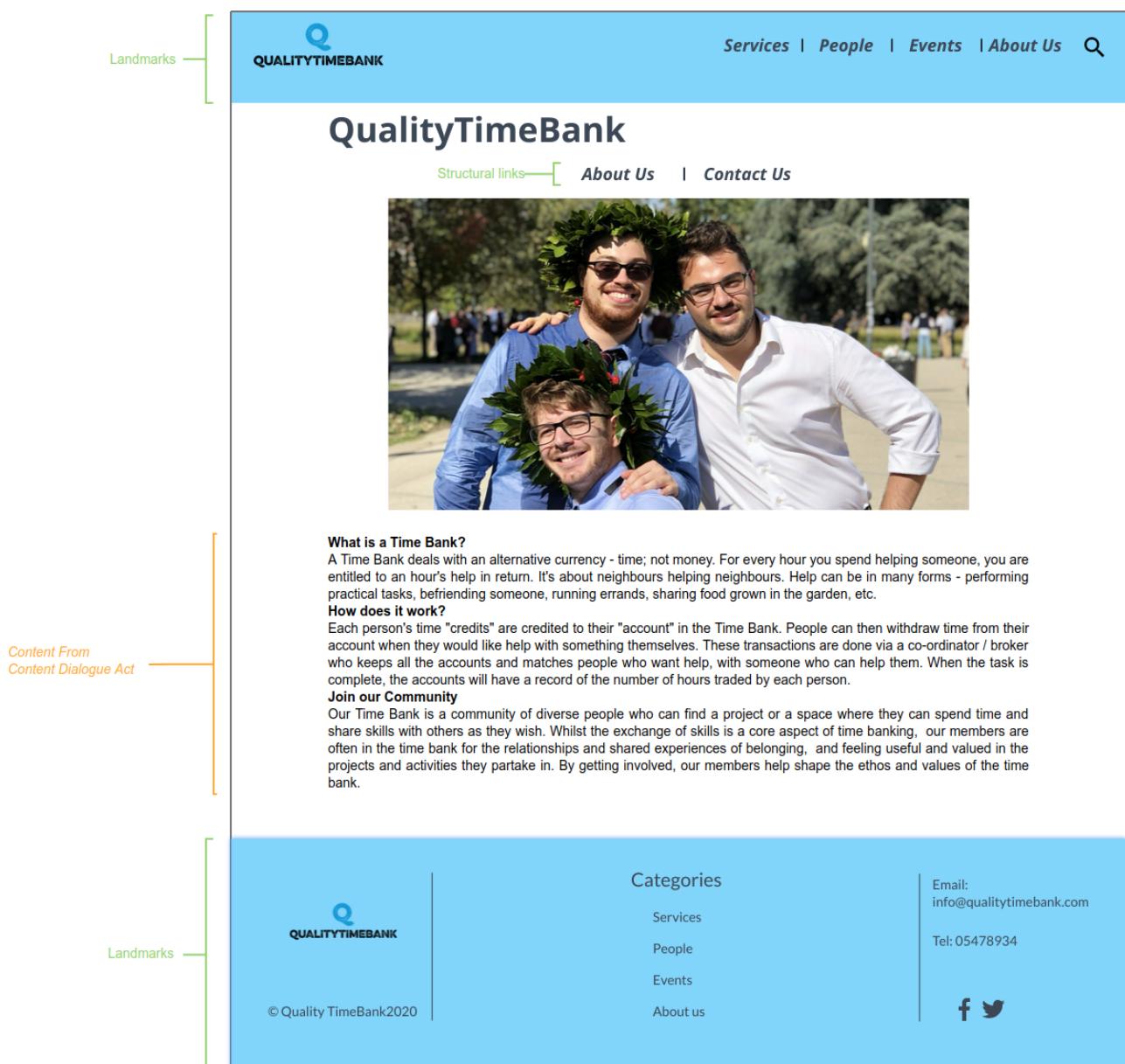


Figure 4.4: Mockup

## 4.3 Kind of Topic: Person

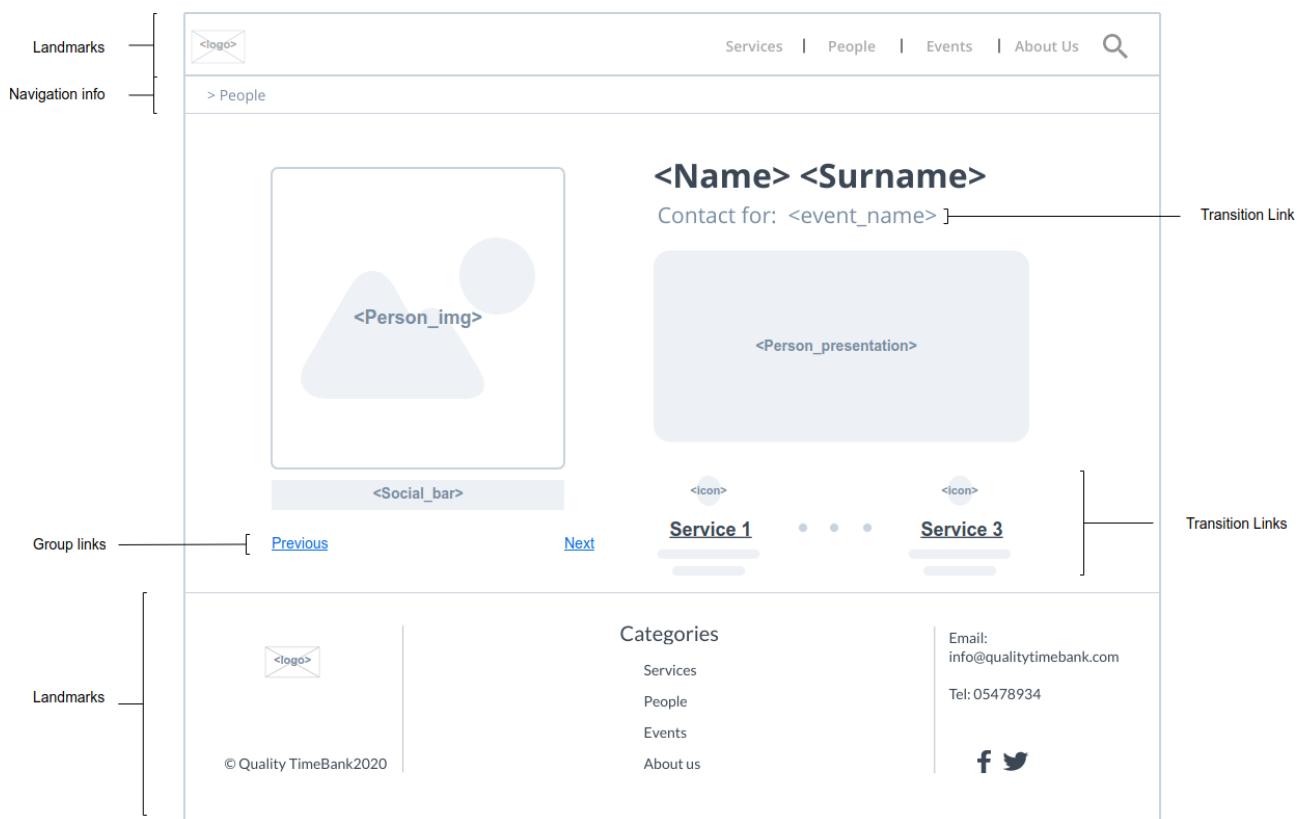


Figure 4.5: Wireframe

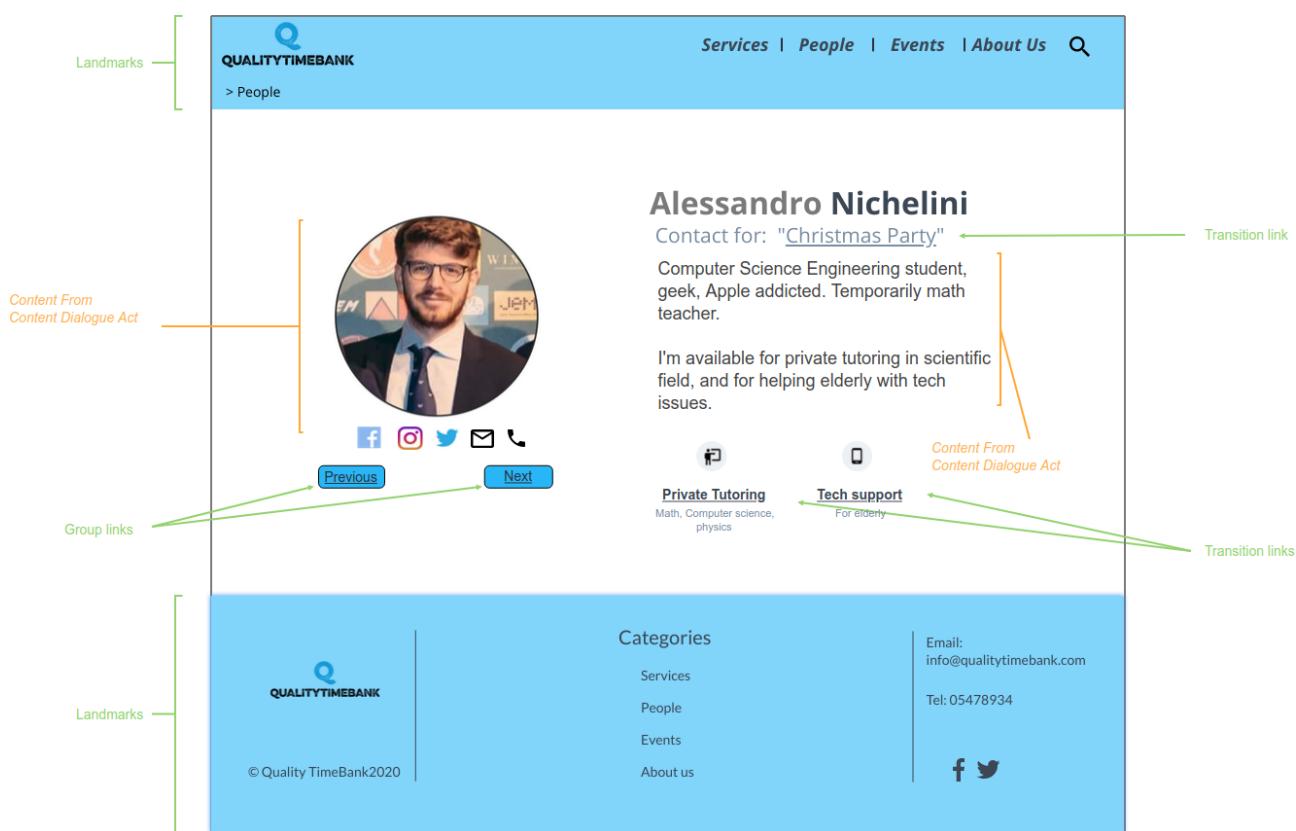


Figure 4.6: Mockup

## 4.4 Kind of Topic: Service

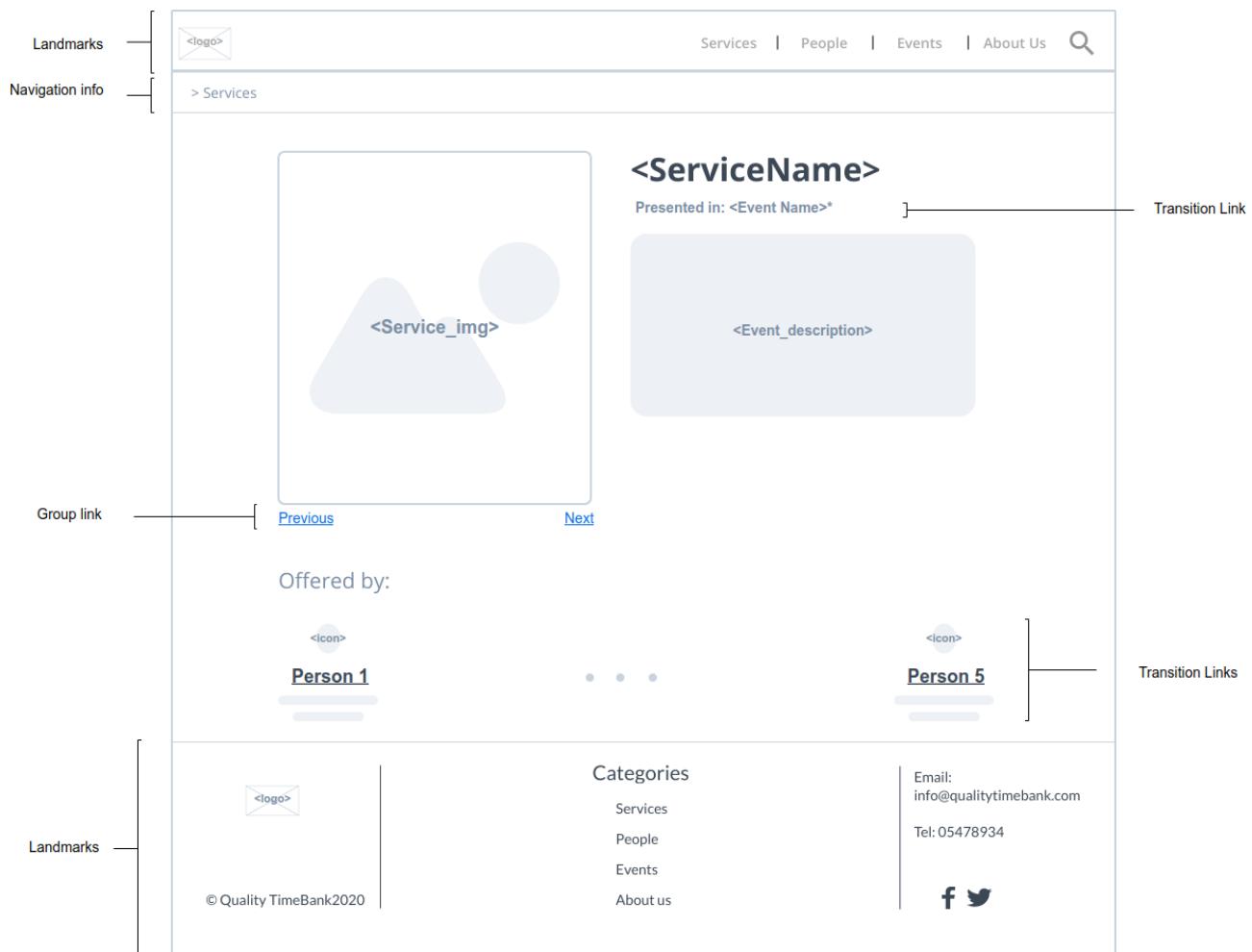


Figure 4.7: Wireframe

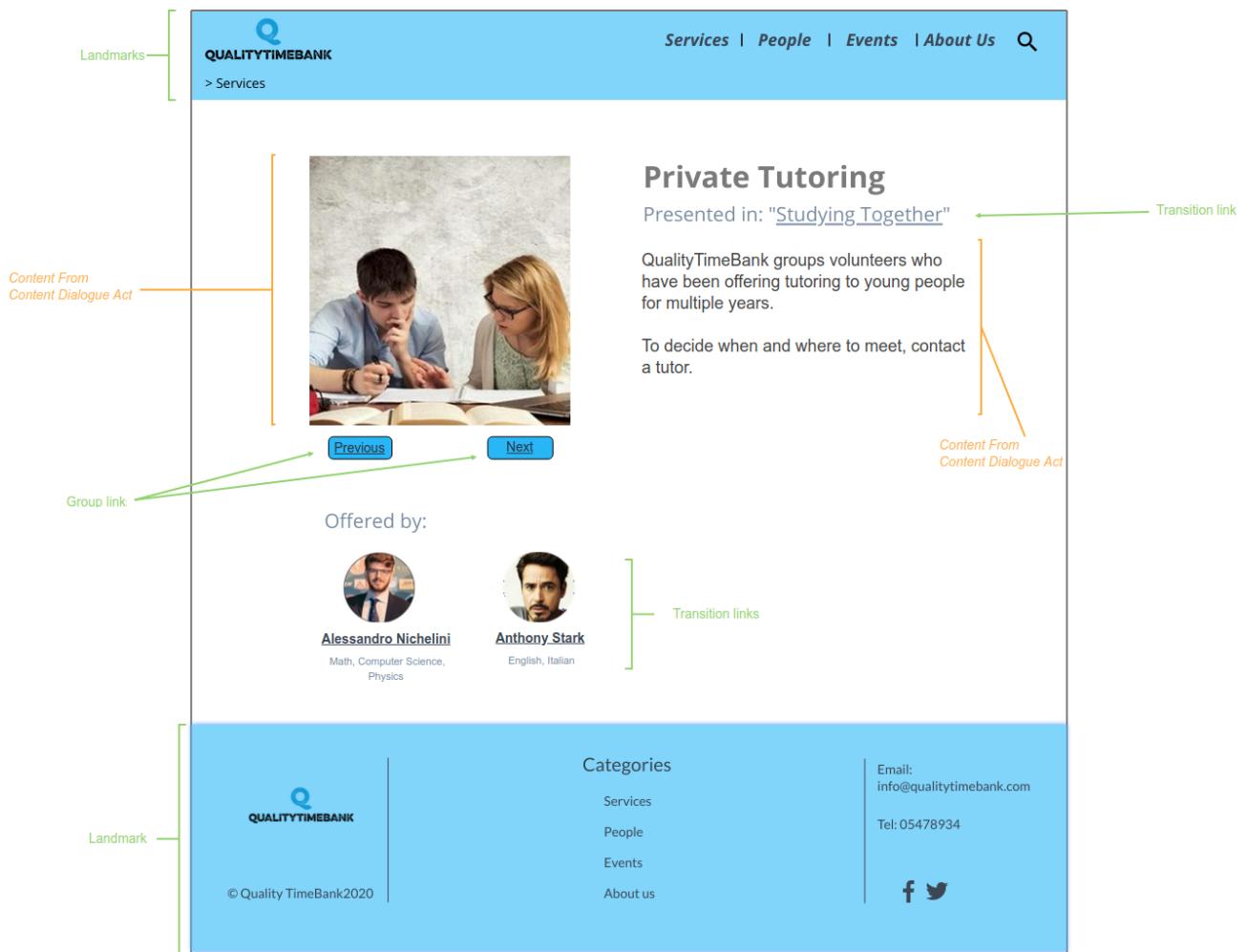


Figure 4.8: Mockup

## 4.5 Kind of Topic: Event

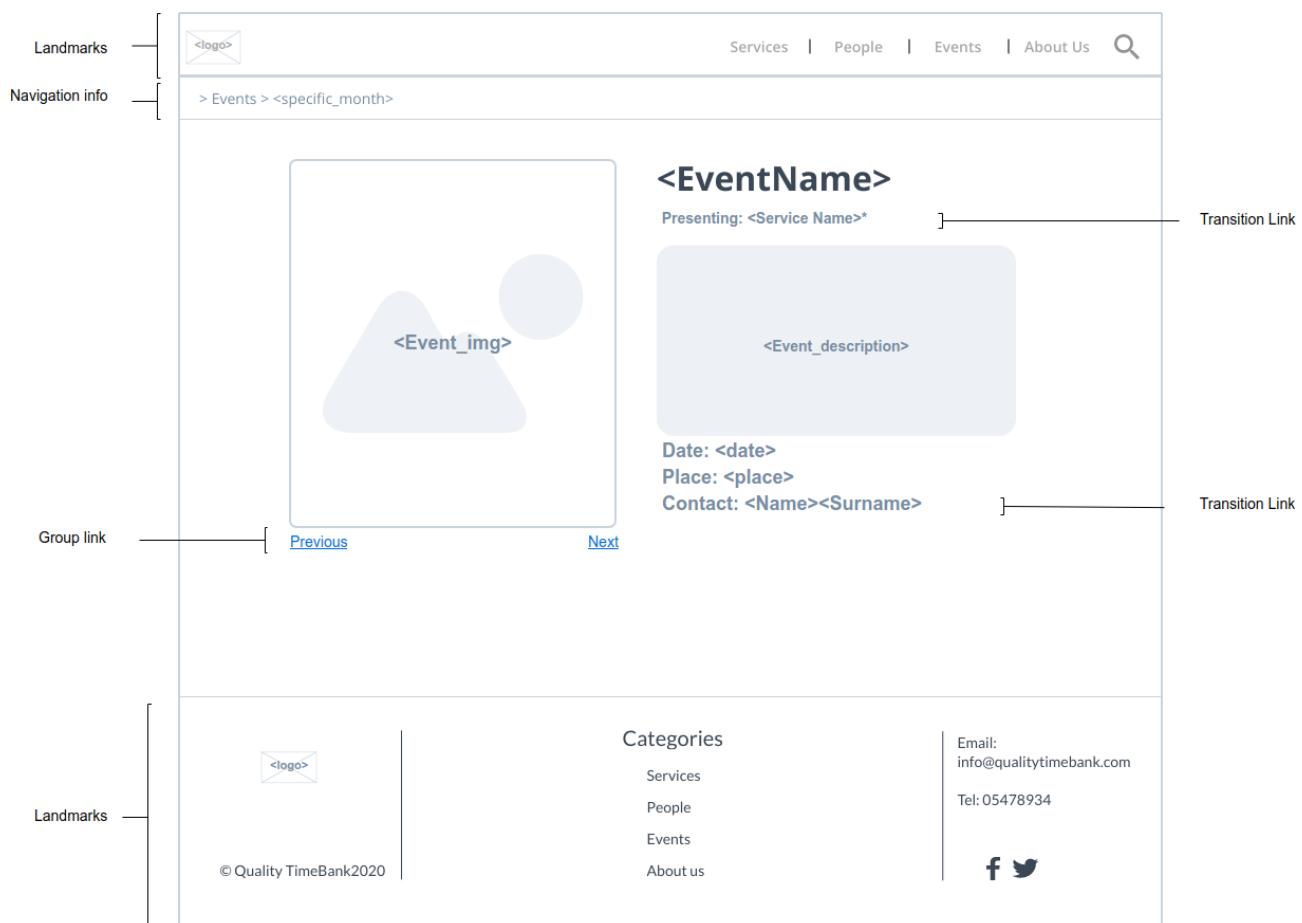


Figure 4.9: Wireframe

The screenshot shows a website for QualityTimeBank. At the top left is the logo 'QUALITYTIMEBANK' with a stylized 'Q'. At the top right are navigation links: 'Services | People | Events | About Us' and a search icon. Below the header, a breadcrumb trail reads '> Events > December'. The main content features a photograph of two people at a Christmas party, one holding a sign that says 'Ho Ho Ho'. To the right of the photo is the heading 'Christmas Party' and a descriptive text: 'Come celebrate Christmas with us! It has been a terrific year for our organisation. Many new people met, lots of shared experiences.' Below this are details of the event: 'Date: December, 22nd', 'Place: Via del Bifrost 1, Asgard (CO)', and 'Contact: [Alessandro Nichelini](#)'. At the bottom left is another logo for 'QUALITYTIMEBANK'. On the bottom right, there are social media icons for Facebook and Twitter, along with contact information: 'Email: [info@qualitytimebank.com](mailto:info@qualitytimebank.com)' and 'Tel: 05478934'. A copyright notice '© Quality TimeBank 2020' is also present.

Figure 4.10: Mockup

## 4.6 Introductory page: People

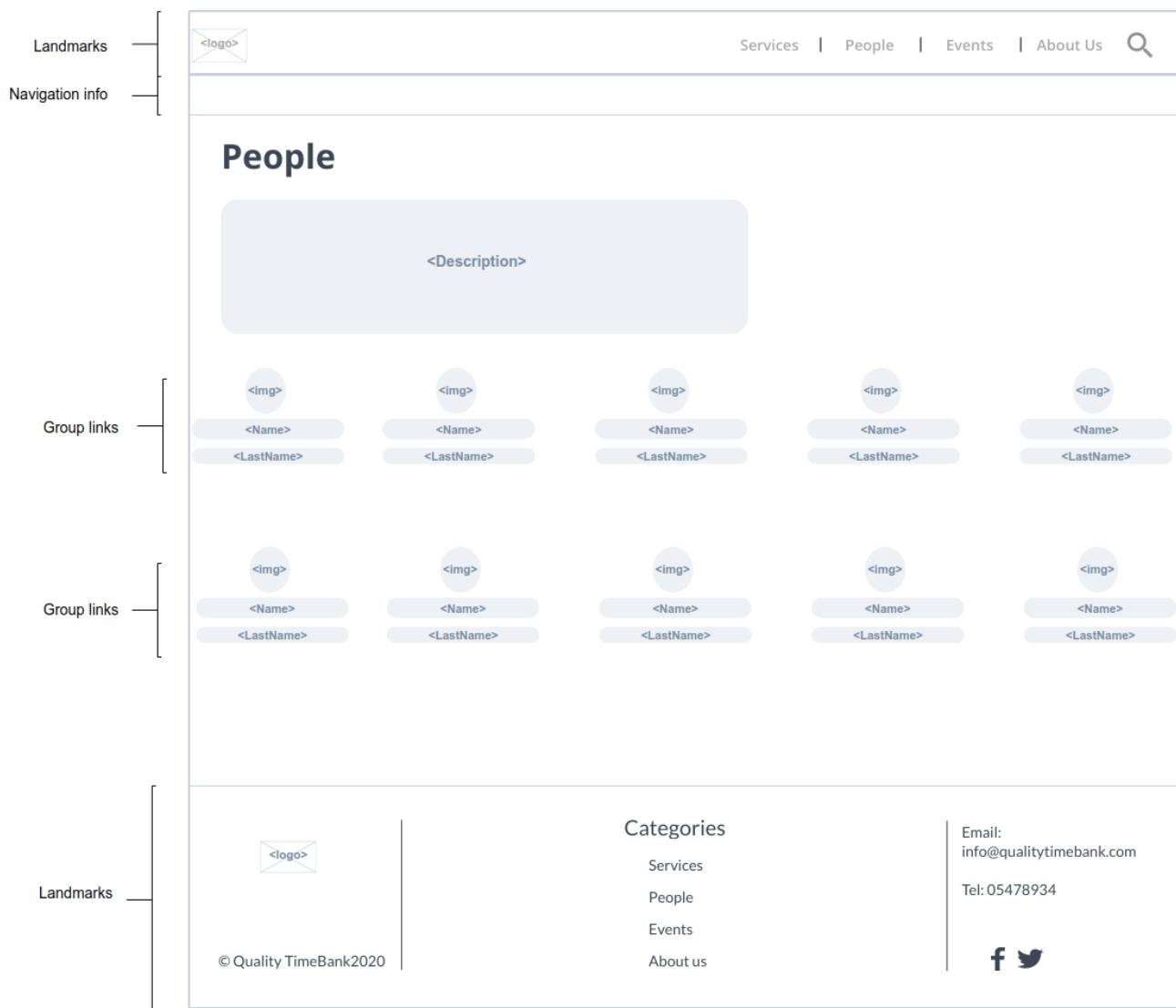


Figure 4.11: Wireframe

Group links

Landmarks

Content From  
Introductory Dialogue Act

Landmarks

**People**

Timebanks come in all different shapes and sizes. Our membership reflects this diversity. We now have approx 300 members across the UK in a range of different fields. In this section you can look for our members.

Alessandro Nichelini    Anthony Stark    Bruce Banner    Carol Danvers    Fabio Codiglioni

Luca dell'Oglio    Jane Foster    Steve Rogers    Natasha Romanoff    Wanda Maximoff

Categories

Services  
People  
Events  
About us

Email:  
info@qualitytimebank.com

Tel: 05478934

f    t

Figure 4.12: Mockup

## 4.7 Introductory page: Services

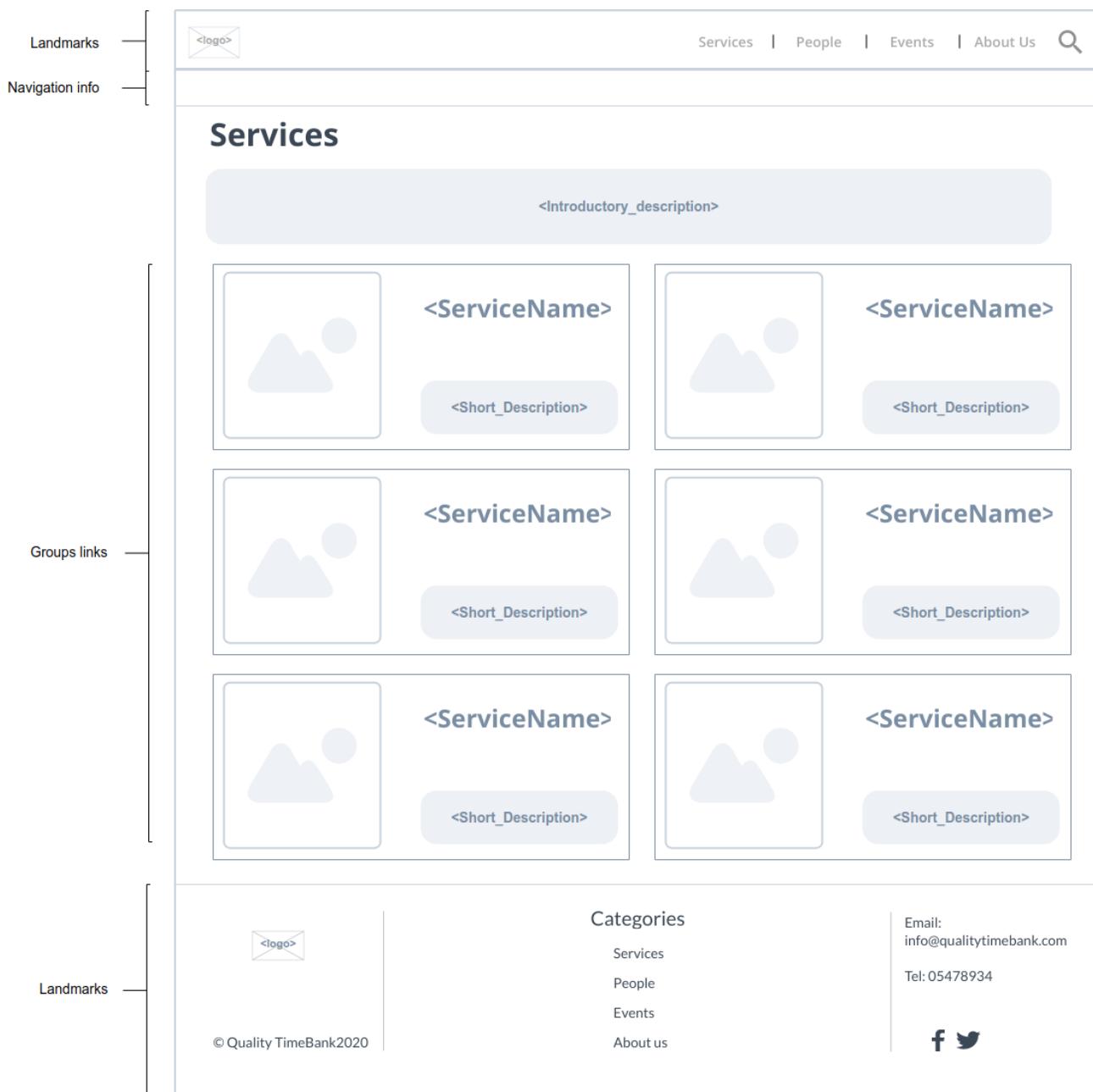


Figure 4.13: Wireframe

**Landmarks**

**Services | People | Events | About Us**

**Services**

Over the years, our organisation has expanded over various types of services in different fields. All of them are offered by people of all ages with extreme care and love for the others.

**English Lessons**

The goal of this project is to offer informal, functional English teaching to marginalized citizens ...

**Private Tutoring**

QualityTimeBank groups volunteers who have been offering tutoring to young people for multiple ...

**Carers Training**

There are more than six million carers across the UK – and one in four Birmingham homes is ...

**Tech Support**

Our volunteers offer their knowledge to assist elderly people in using electronic devices and, in general, ...

**Landmarks**

**Categories**

- Services
- People
- Events
- About us

Email: info@qualitytimebank.com

Tel: 05478934

**f** **Twitter**

**Content From Introductory Dialogue Act**

**Content From Content Dialogue Act**

**© Quality TimeBank 2020**

Figure 4.14: Mockup

## 4.8 Introductory page: Events

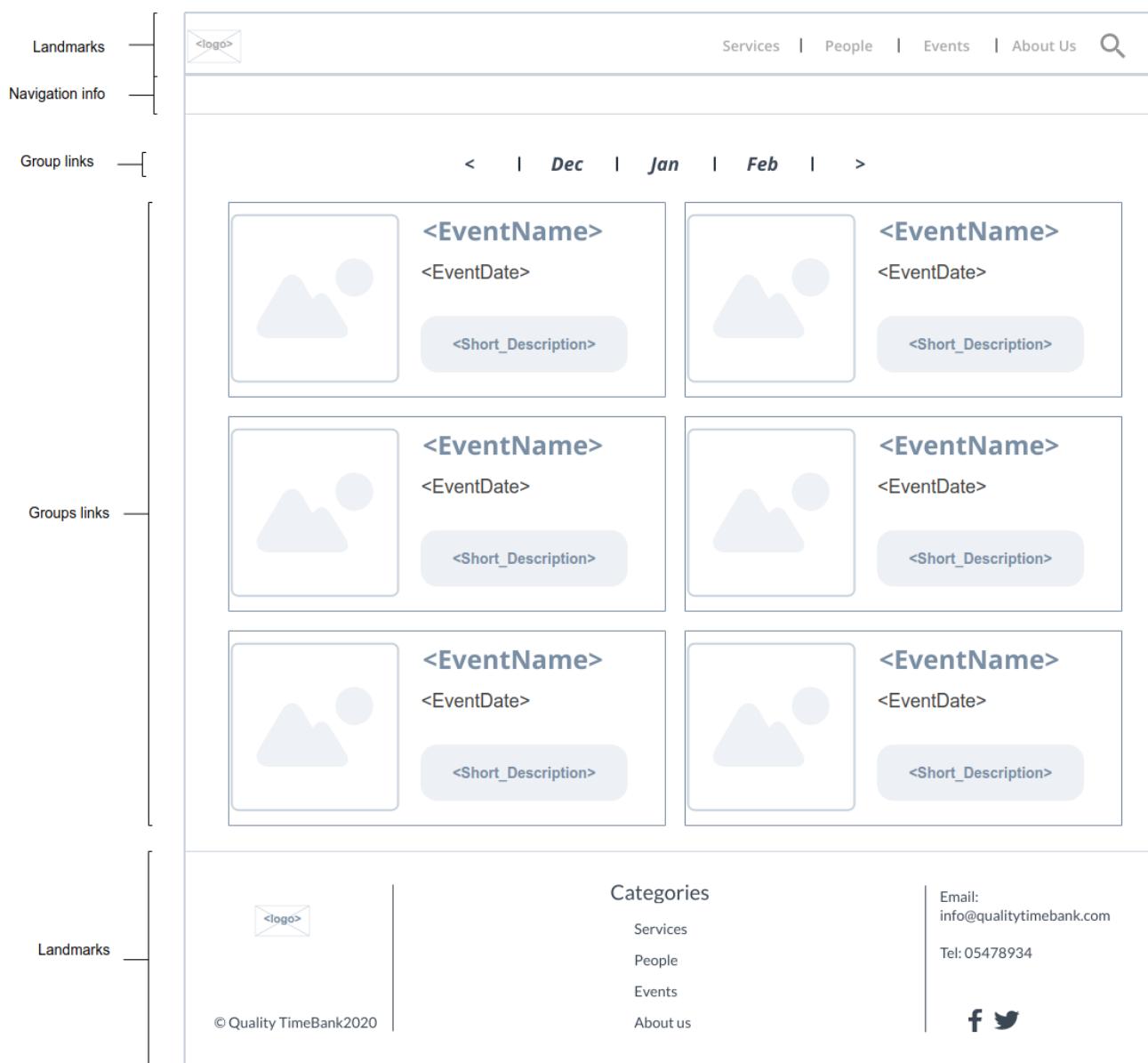


Figure 4.15: Wireframe

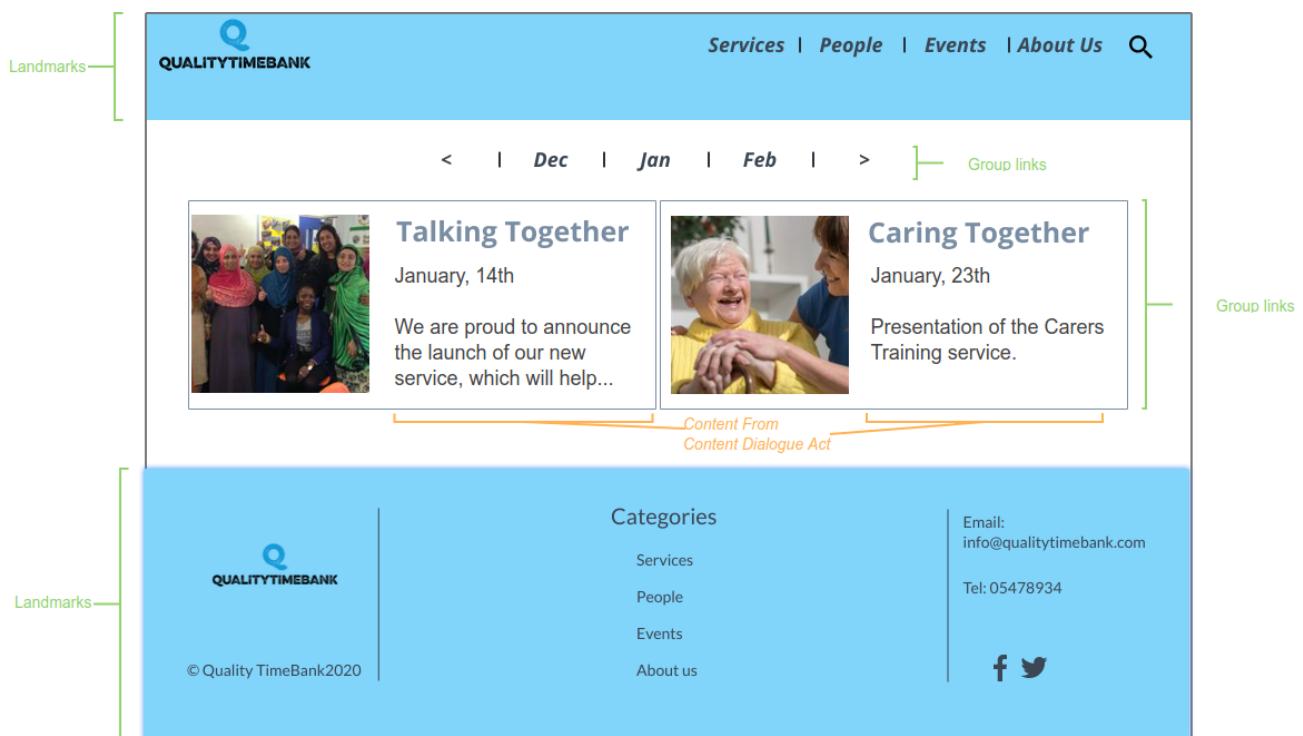
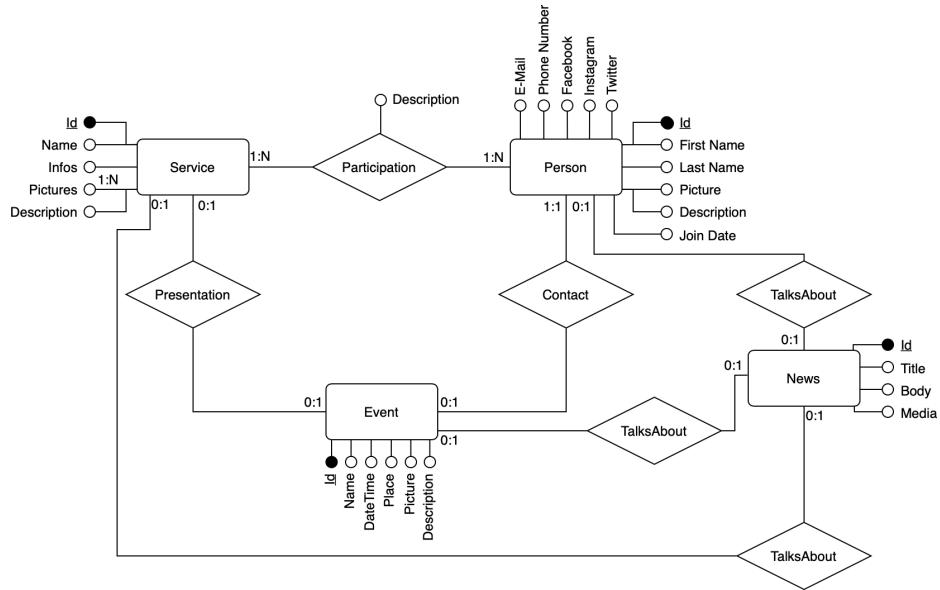


Figure 4.16: Mockup

# 5 Database design

## 5.1 ER



## 5.2 Relational tables

