



**POLITECNICO**  
**MILANO 1863**

**Hypermedia Applications  
Design Document - v1.1**

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# 1 Abstract

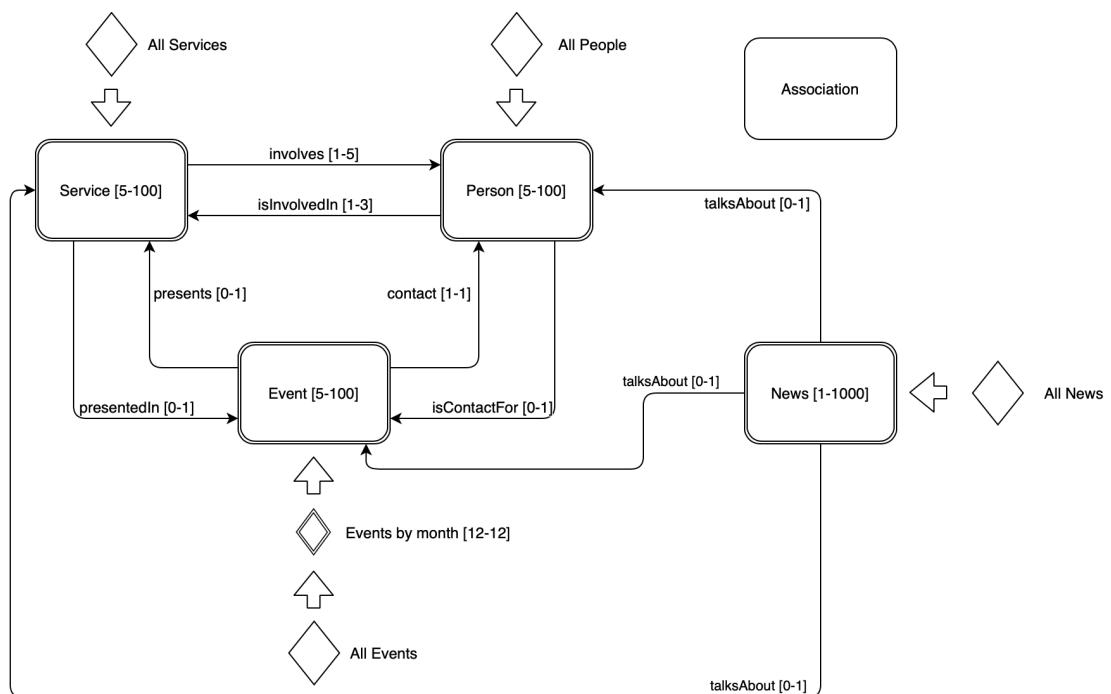
The subject of this document is the design of a website for a voluntary association, specifically a time bank. Section 2 contains the C, L, and P sub-models of the Interactive Dialogue Model (IDM). Section 3 lists 3 possible scenarios of use. Section 4 shows the design in the small for different pages.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

## 1.1 Version history

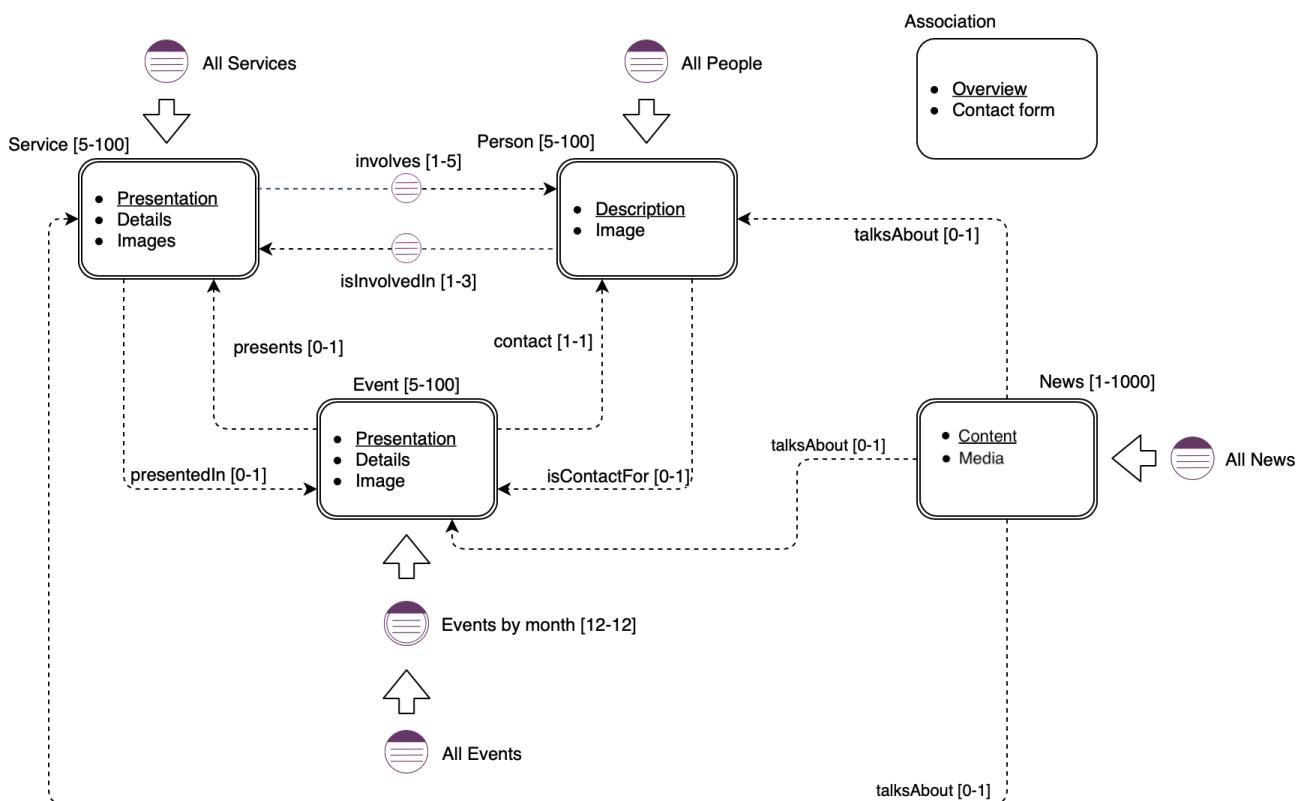
Version	Date	Description
1.0	April 24th, 2020	First release.
1.1	June 16th, 2020	Updated wireframes in order to make the design compliant with the prototype. Replaced mockups with actual screenshots. Updated DB design diagram to include icon in Service table. Fix typo in ER diagram (TalksAbout is now a 0:N relationship). In HomePage's design in the small, changed some transition links to group links after the meeting with the teacher.

## 2 Graphical representations

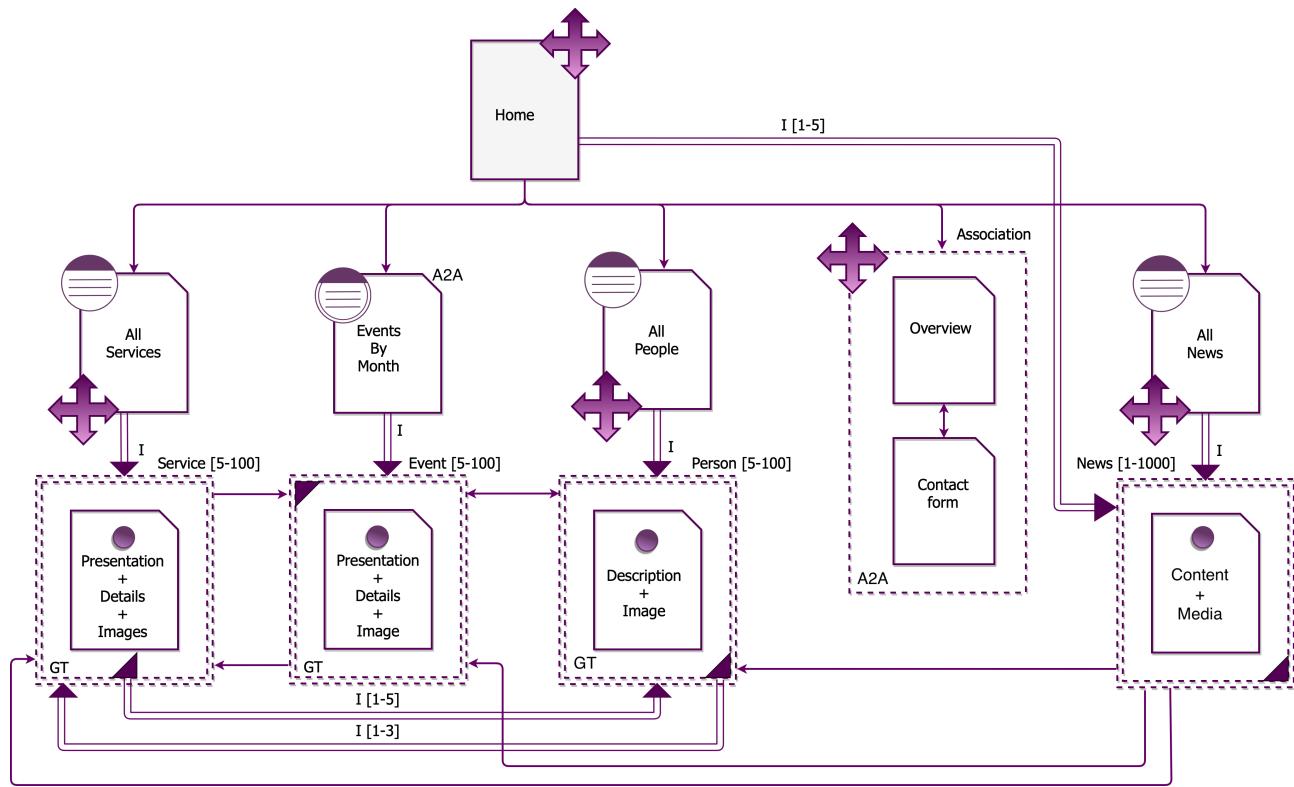
### 2.1 C-IDM



## 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 is highlighted with a red box around the "Services" link. At the bottom, there is a footer with social media links for Facebook and Twitter, and copyright information.

Figure 3.1

The screenshot shows the "Services" page of the QualityTimeBank website. The page title is "Services" and it includes a brief introduction about the organization's expansion into various fields. Below this, there are four service categories displayed in boxes: "English Lessons", "Private Tutoring", "Carers Training", and "Tech Support". The "Private Tutoring" box is highlighted with a red border. Each category box contains a small image, a title, and a brief description. At the bottom of the page, there is a footer with social media links for Facebook and Twitter, and copyright information.

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 to decide when and where to meet, one should contact a tutor. Below this, there are "Previous" and "Next" navigation buttons. Under the heading "Offered by:", there are two profiles: "Alessandro Nichelini" (Math, Computer Science, Physics) and "Anthony Stark" (English, Italian). The "Alessandro Nichelini" profile is highlighted with a red box around his name. 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 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, there's a circular profile picture of Alessandro Nichelini. The text "Alessandro Nichelini" is displayed, followed by "Contact for: [Christmas Party](#)". A paragraph describes him as a Computer Science Engineering student, geek, Apple addicted, and temporarily math teacher. It also states that he's available for private tutoring in scientific fields and for helping elderly with tech issues. Below this, there are "Previous" and "Next" navigation buttons. On the right side, 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).

New members !

- Natasha Joined 15/10/2020
- Jane Joined 06/05/2020
- Wanda Joined 13/06/2020

"TIMEBANK IS PASSIONATE ABOUT VOLUNTEERING AND BELIEVES THAT GOOD QUALITY VOLUNTEERING CAN MAKE A POSITIVE IMPACT ON OUR SOCIETY"

News from the founders:  
Listen about our seniors members explain which are our plans for the future.

[View all news](#)

**People**  
We have the most terrific people of the country.  
[More](#)

**Services**  
We offer lots of different services and we are continuously looking for new ones.  
[More](#)

**Events**  
Our community just can't stop growing. We organise monthly events to keep you informed about new members and services  
[More](#)

**Categories**  
Services  
People  
Events  
About us

Email: info@qualitytimebank.com  
Tel: 05478934

[f](#) [t](#)

© Quality TimeBank2020

Figure 3.5

Services | People | Events | About Us

< | Nov | Dec | **Jan** | >

Tech Together December, 7th Presentation of the Tech Support service.	Christmas Party December, 22nd Come celebrate Christmas with us!
---	--

1 of 1

**Categories**  
Services  
People  
Events  
About us

Email: info@qualitytimebank.com  
Tel: 05478934

[f](#) [t](#)

Figure 3.6

Services | People | Events | About Us

< | Dec | **Jan** | Feb | >

Talking Together January, 14th We are proud to announce the launch of our new service, which will help...	Caring Together January, 23th Presentation of the Carers Training service.
---	--

1 of 1

**Categories**  
Services  
People  
Events  
About us

Email: info@qualitytimebank.com  
Tel: 05478934

[f](#) [t](#)

© Quality TimeBank2020

Figure 3.7

Services | People | Events | About Us

> Events > January

**Talking Together**  
Presenting: English Lessons  
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.  
Date: January, 14th  
Place: Via Porlezza 2, Milano (MI)  
Contact: [Bruce Banner](#)

[Previous](#) [Next](#)

**Categories**  
Services  
People  
Events  
About us

Email: info@qualitytimebank.com  
Tel: 05478934

[f](#) [t](#)

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 QualityTimeBank homepage. 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's a section for 'New members!' featuring profiles of three women: Natasha (joined 19/10/2020), 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, there's a video thumbnail for 'Peter Norton' with the text 'Timebanking in the UK: It's About T...'. Underneath the video, there are sections for 'People', 'Services', and 'Events'. The 'Events' section includes a sub-section for 'Tech Together' with a photo of two people at a computer. At the bottom, there are social media icons for Facebook and Twitter, and copyright information: '© Quality TimeBank2020'.

Figure 3.9

The screenshot shows the events calendar for December. The 'Events' button from the previous screen is also highlighted with a red box here. The calendar shows two events: 'Tech Together' on December 7th and 'Christmas Party' on December 22nd. The 'Christmas Party' event is described as a presentation of the Tech Support service. At the bottom, there are sections for 'Categories' (Services, People, Events, About us) and social media links for Facebook and Twitter, along with copyright information: '© Quality TimeBank2020'.

Figure 3.10

The screenshot shows the details page for the 'Christmas Party' event. The title 'Christmas Party' is at the top, followed by a photo of two people holding green streamers. The text describes the event as a way to celebrate Christmas and meet new people. It provides the date (December 22nd), place (Via del Bifrost 1, Asgard (CO)), and contact person (Alessandro Nichelini, whose name 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, along with copyright information: '© Quality TimeBank2020'.

Figure 3.11

# 4 Design in the small

## 4.1 Home page

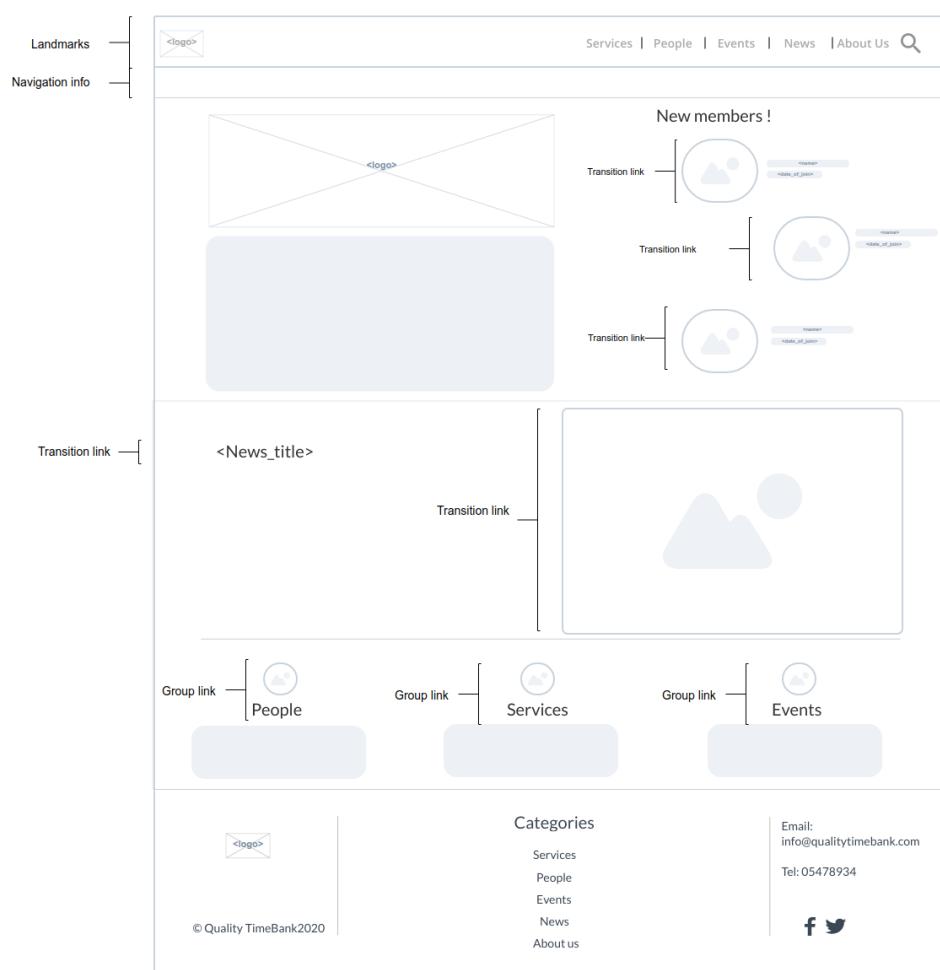


Figure 4.1: Wireframe

**quality time bank**

People Services Events News About us

New members

Alessandro Joined May 11, 2020

Fabio Joined May 11, 2020

Luca Joined May 11, 2020

Transition link

"QUALITYTIMEBANK IS PASSIONATE ABOUT VOLUNTEERING AND BELIEVES THAT GOOD QUALITY VOLUNTEERING CAN MAKE A POSITIVE IMPACT ON OUR SOCIETY."

Transition link

Government backs QTB to deliver language project

More

Group link

People Services Events

We have the most terrific people in the country.

We offer lots of different services and we are continuously looking for new ones.

Our community just can't stop growing. We organise monthly events to keep you informed about new members and services, or just to have fun together.

Categories

People Services Events News About Us

177 Bleecker Street  
+91-9399878398  
info@qualitytimebank.com

Landmarks

Landmarks

Figure 4.2: Mockup

## 4.2 Topic: Association

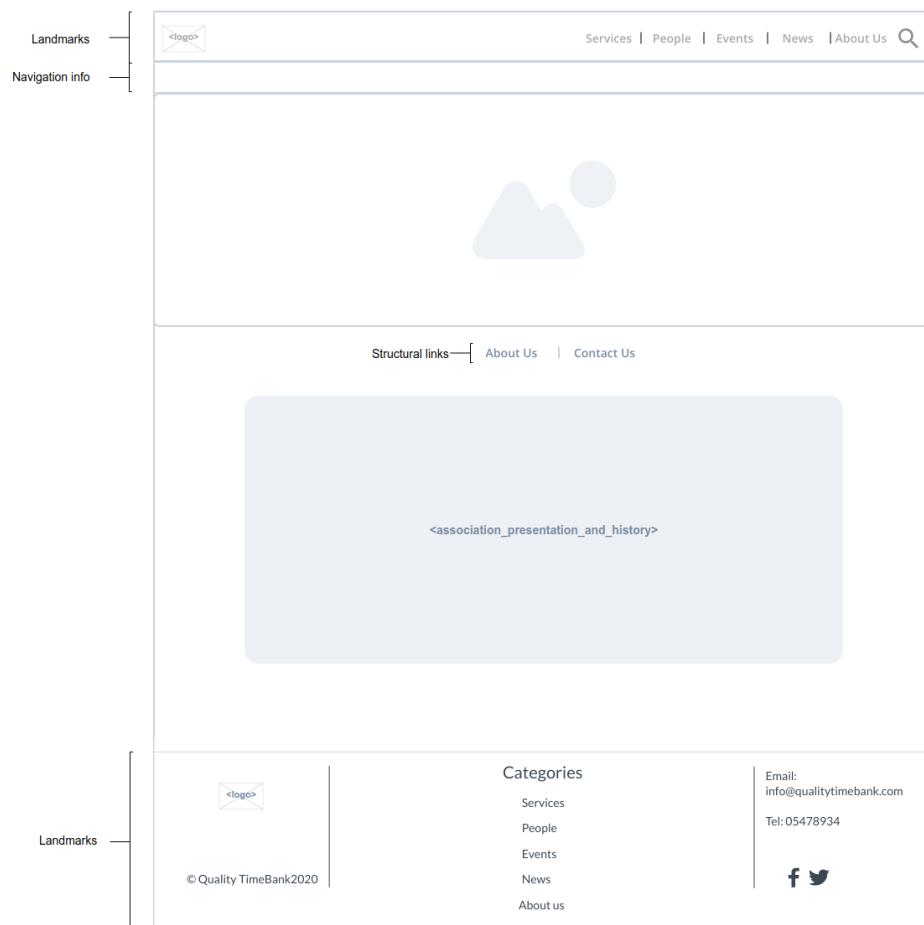


Figure 4.3: Wireframe

Landmarks

Structural links

[About Us](#) [Contact Us](#)

**What is a Time Bank?**

A Time Bank deals with an alternative currency - time; not money. For every hour you spend helping someone, you are entitled to an hour's help in return. It's about neighbours helping neighbours. Help can be in many forms - performing practical tasks, befriending someone, running errands, sharing food grown in the garden, etc.

**How does it work?**

Each person's time "credits" are credited to their "account" in the Time Bank. People can then withdraw time from their account when they would like help with something themselves. These transactions are done via a co-ordinator / broker who keeps all the accounts and matches people who want help, with someone who can help them. When the task is complete, the accounts will have a record of the number of hours traded by each person.

**Join our Community**

Our Time Bank is a community of diverse people who can find a project or a space where they can spend time and share skills with others as they wish. Whilst the exchange of skills is a core aspect of time banking, our members are often in the time bank for the relationships and shared experiences of belonging, and feeling useful and valued in the projects and activities they partake in. By getting involved, our members help shape the ethos and values of the time bank.

Content From  
Content Dialogue Act

Landmarks

**Categories**

- People
- Services
- Events
- News
- About Us

177 Bleecker Street  
+91-9399878398  
info@qualitytimebank.com

©QualityTimeBank2020

Figure 4.4: Mockup

## 4.3 Kind of Topic: Person

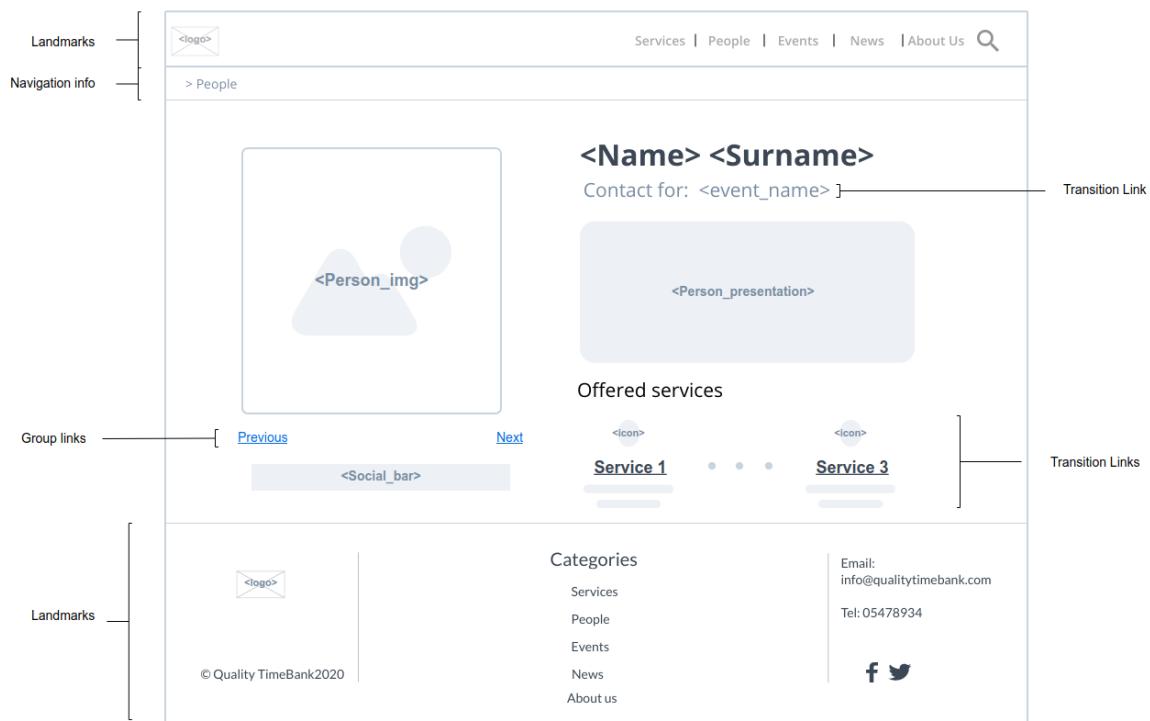


Figure 4.5: Wireframe

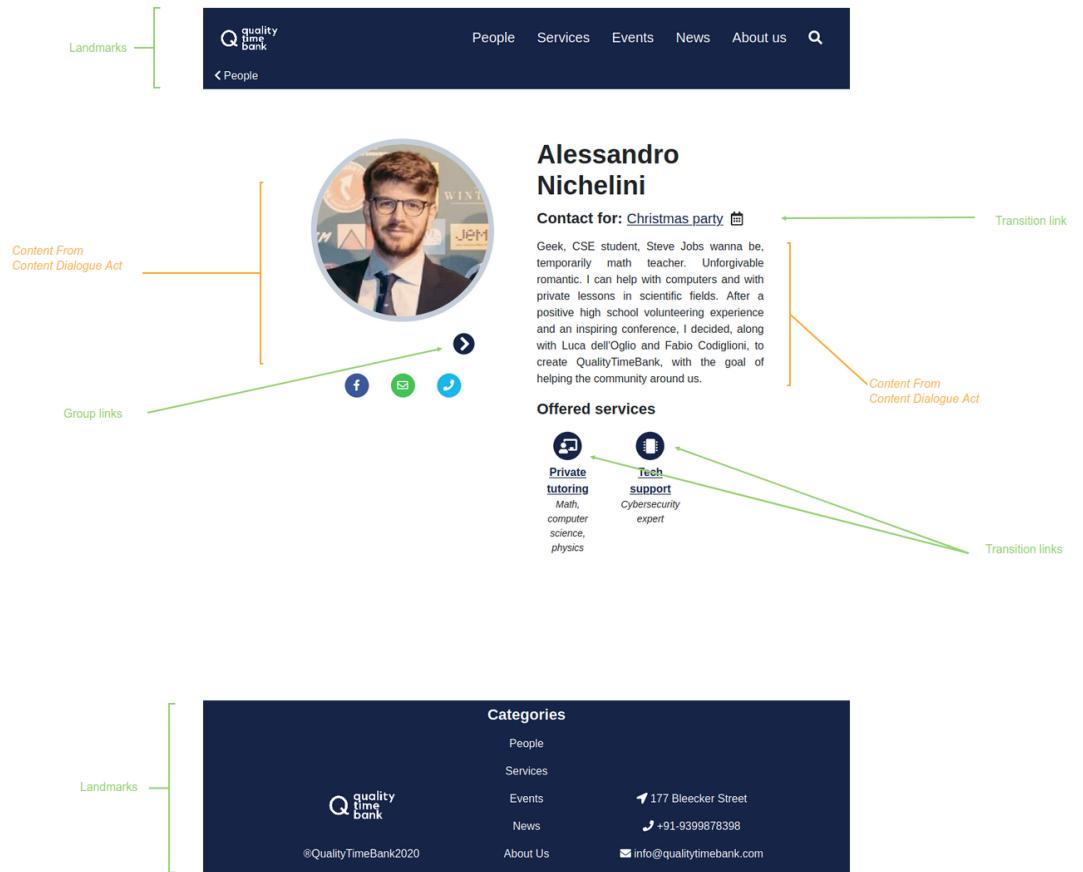


Figure 4.6: Mockup

## 4.4 Kind of Topic: Service

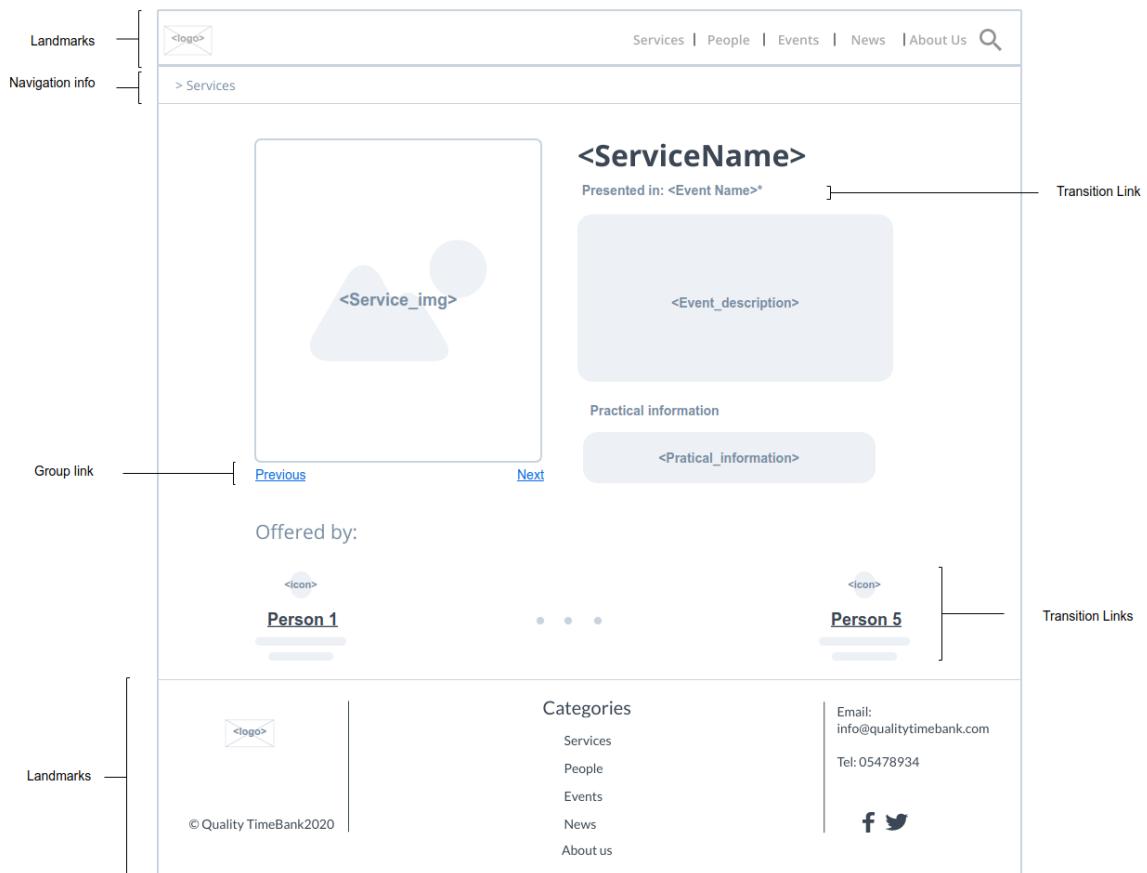


Figure 4.7: Wireframe

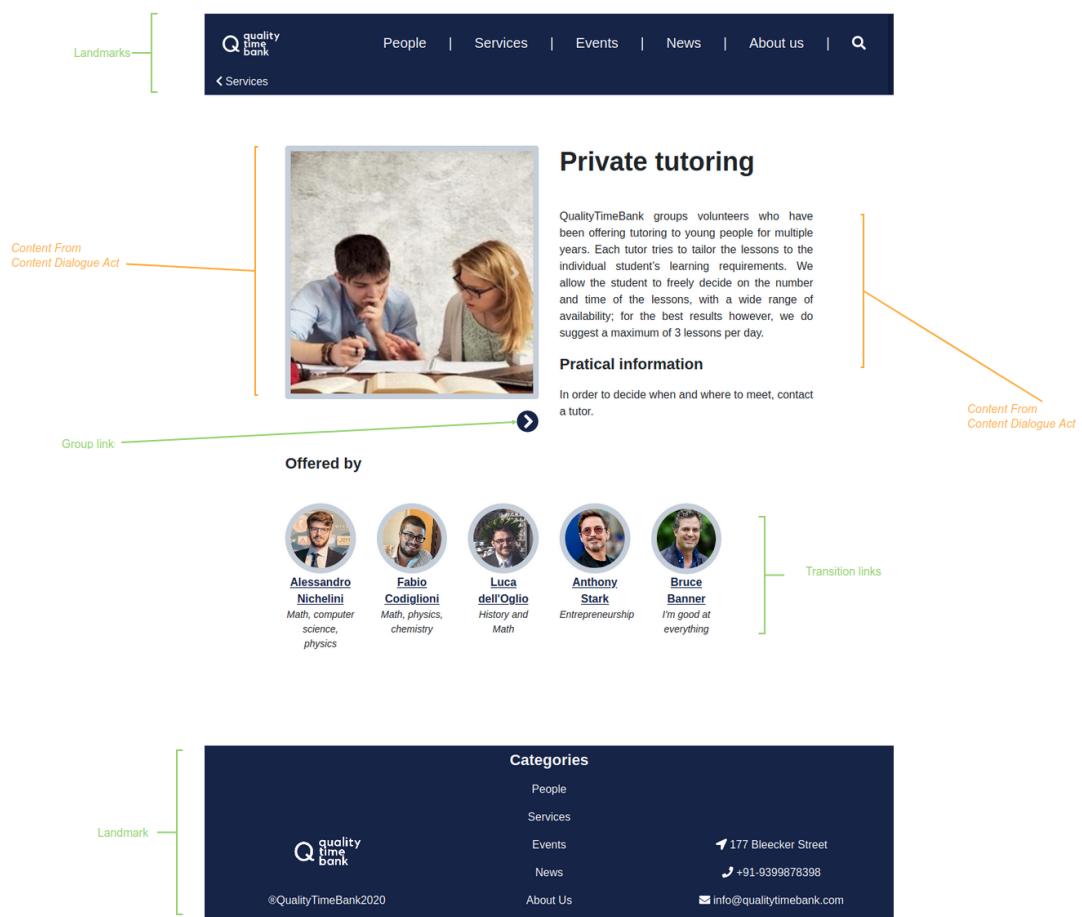


Figure 4.8: Mockup

## 4.5 Kind of Topic: Event

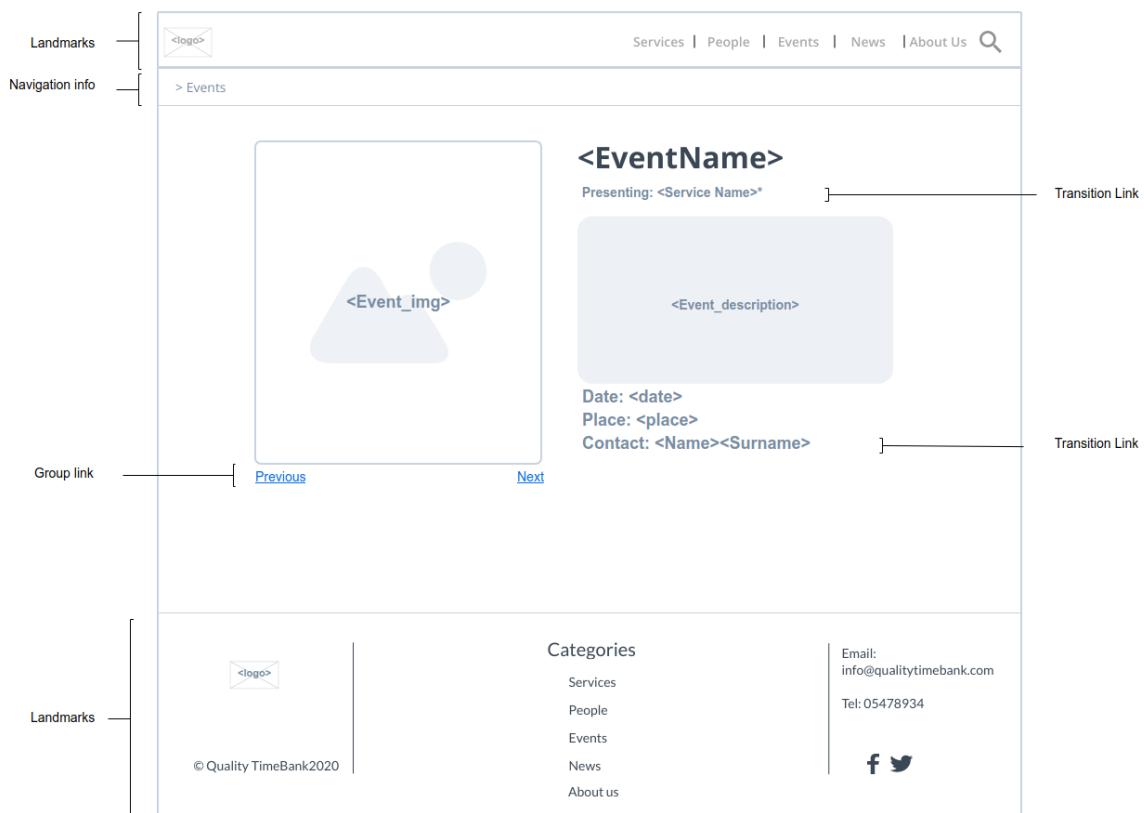


Figure 4.9: Wireframe

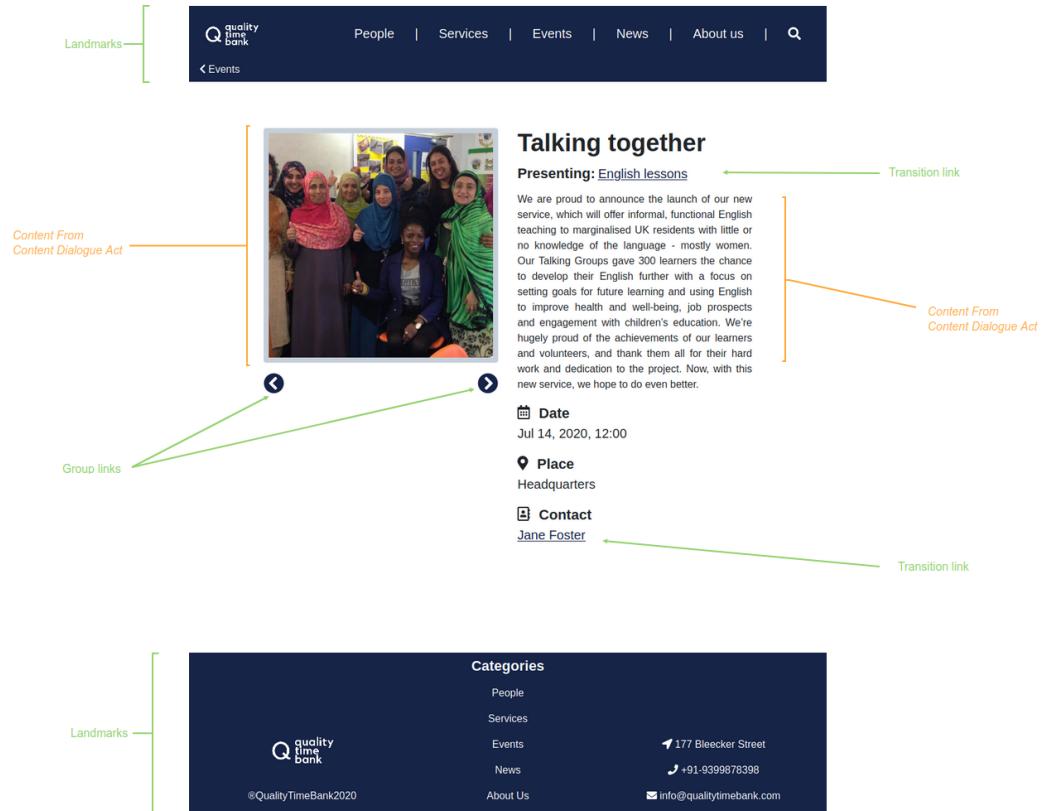


Figure 4.10: Mockup

## 4.6 Introductory page: People

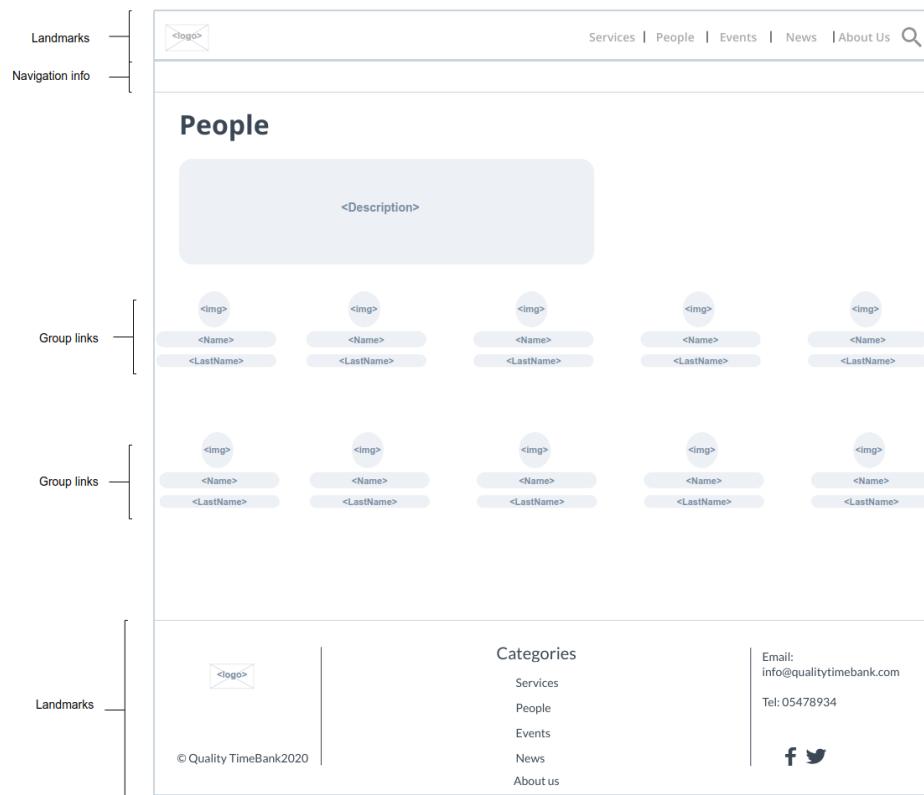


Figure 4.11: Wireframe

The mockup illustrates a website layout with the following components:

- Header:** A dark blue header bar featuring the "quality time bank" logo on the left, and navigation links for "People", "Services", "Events", "News", "About us", and a search icon on the right.
- Section:** A "People" section titled "People". It contains a sub-section titled "Content From Introductory Dialogue Act" which lists members: Alessandro Nichelini, Fabio Codiglioni, Luca dell'Ogio, Anthony Stark, Natasha Romanoff, Bruce Banner, Steve Rogers, Jane Foster, Carol Danvers, Margaret Carter, Pepper Potts, Peter Parker, Maria Hill, and Clint Barton. Each member has a circular profile picture and their name below it.
- Footer:** A dark blue footer bar with the "quality time bank" logo and copyright notice "@QualityTimeBank2020". It also includes a "Categories" section with links to "People", "Services", "Events", "News", and "About Us". On the right side, there are "Landmarks" with icons for address (177 Bleecker Street), phone (+91-9399878398), and email (info@qualitytimebank.com).

Annotations with green arrows point to specific elements:

- A vertical green bracket on the left side groups the "People" section under the heading "Group links".
- A horizontal green bracket on the right side groups the "Landmarks" section under the heading "Landmarks".

Figure 4.12: Mockup

## 4.7 Introductory page: Services

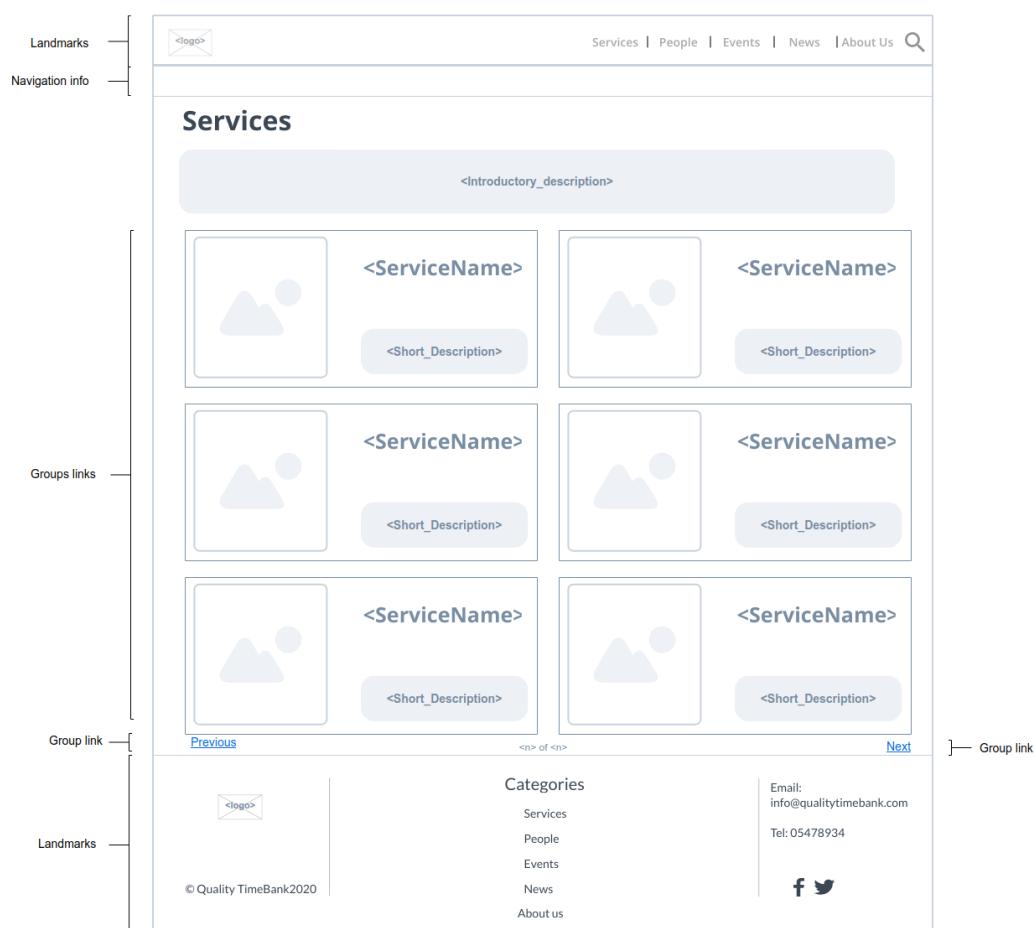


Figure 4.13: Wireframe

Landmarks [ ]

**Services**

Over the years, our organization 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.

Content From Introductory Dialogue Act [ ]

**Private tutoring**  
QualityTimeBank groups volunteers who have been offering tutoring to young people for mult...

**English lessons**  
Talking Together is QualityTimeBank's extensive volunteer-led project offering informal, f...

**Groups links** [ ]

**Carers training**  
There are more than six million carers across the UK - and one in four Birmingham homes is...

**Tech support**  
There is a belief that the elderly don't like to use computers, and we can assure you that...

Groups links [ ]

Content From Content Dialogue Act [ ]

1 of 2 [ ] > [ ]

Landmarks [ ]

**Categories**

- People
- Services
- Events
- News
- About Us

177 Bleecker Street  
+91-9399878398  
info@qualitytimebank.com

Figure 4.14: Mockup

## 4.8 Introductory page: Events

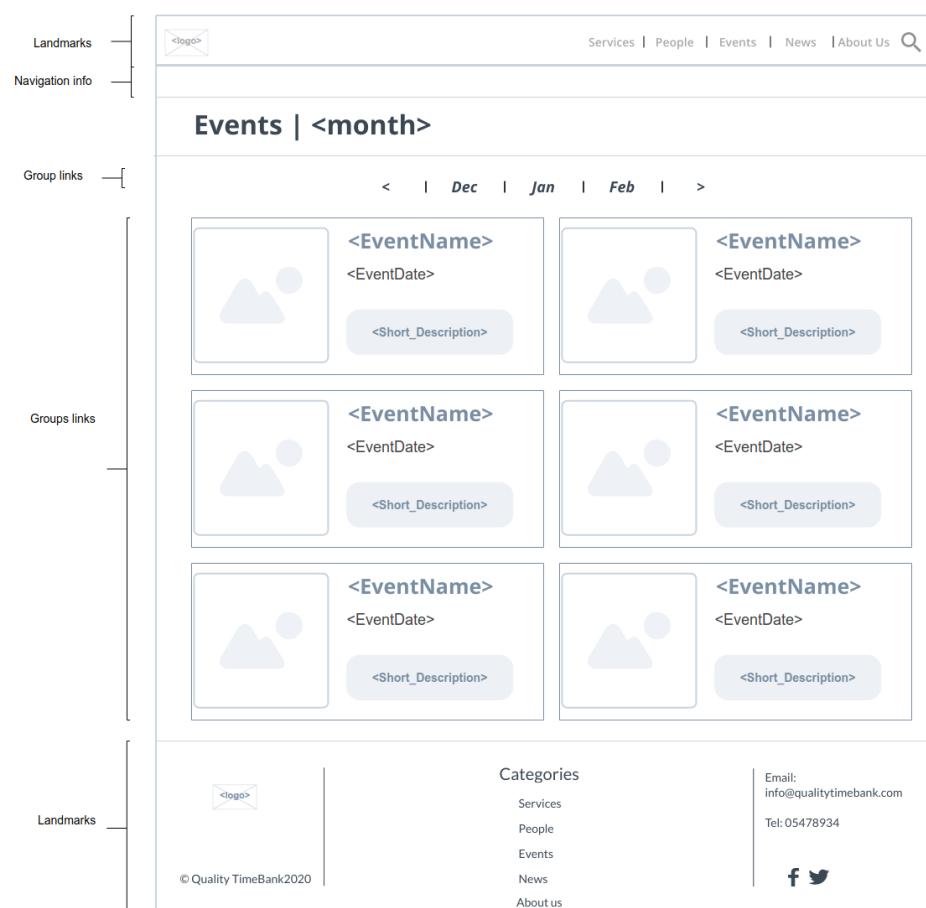


Figure 4.15: Wireframe

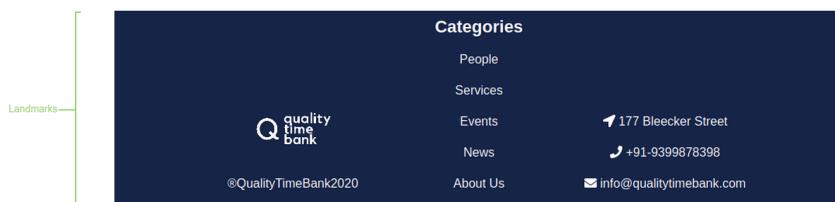
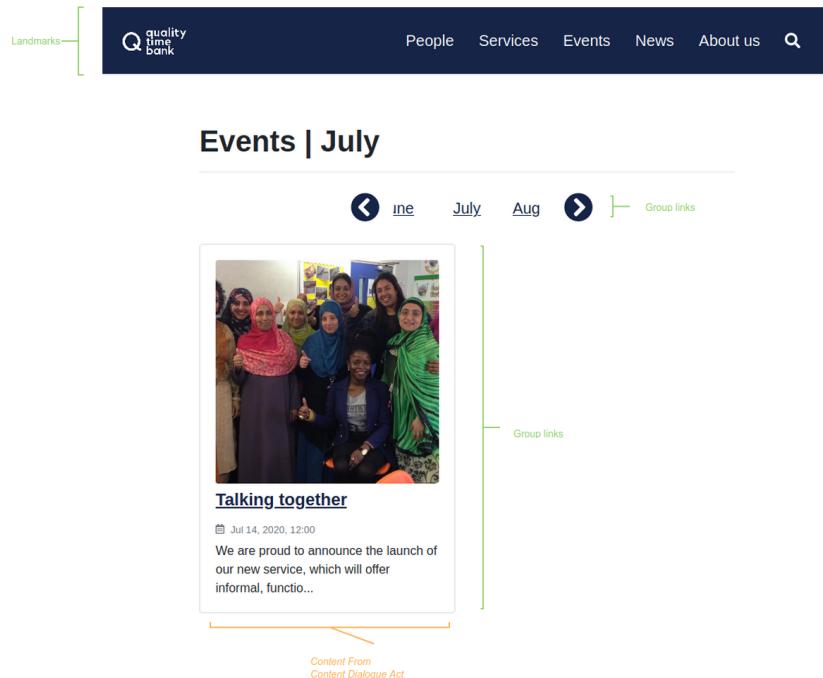
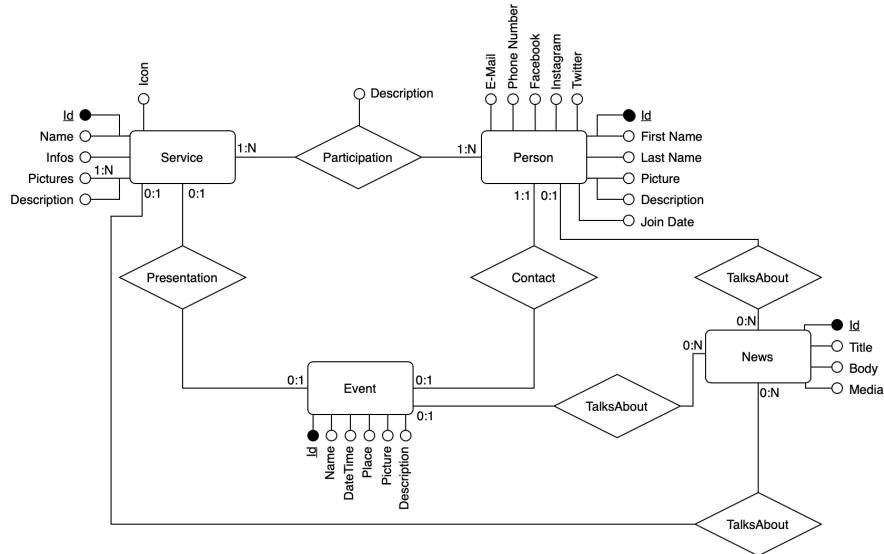


Figure 4.16: Mockup

# 5 Database design

## 5.1 ER



## 5.2 Relational tables

