

**HYPERMEDIA APPLICATIONS 2020**

# ***Design Document***

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Changes in the last version of the Design Document (16/06/2020):

- updated ER and Logical Schema images;
- changed mockups and wireframes in order to correctly represent the implementation of our website: in particular, we updated the Orientation Info in each page;
- typos.

Stefano Martina - 10503949 - [stefano.martina@mail.polimi.it](mailto:stefano.martina@mail.polimi.it)

Francesco Peressini - 10523034 - [francesco.peressini@mail.polimi.it](mailto:francesco.peressini@mail.polimi.it)

Tommaso Peresson - 10526013 - [tommaso.peresson@mail.polimi.it](mailto:tommaso.peresson@mail.polimi.it)

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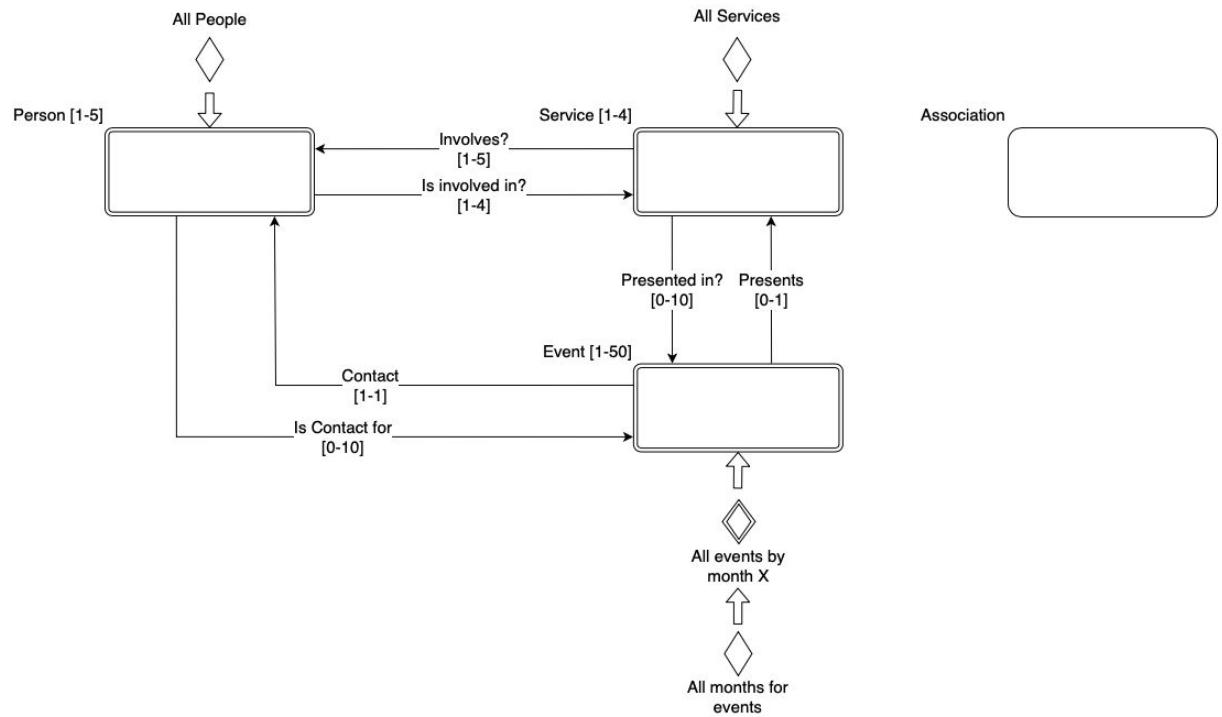
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## 1 - Abstract

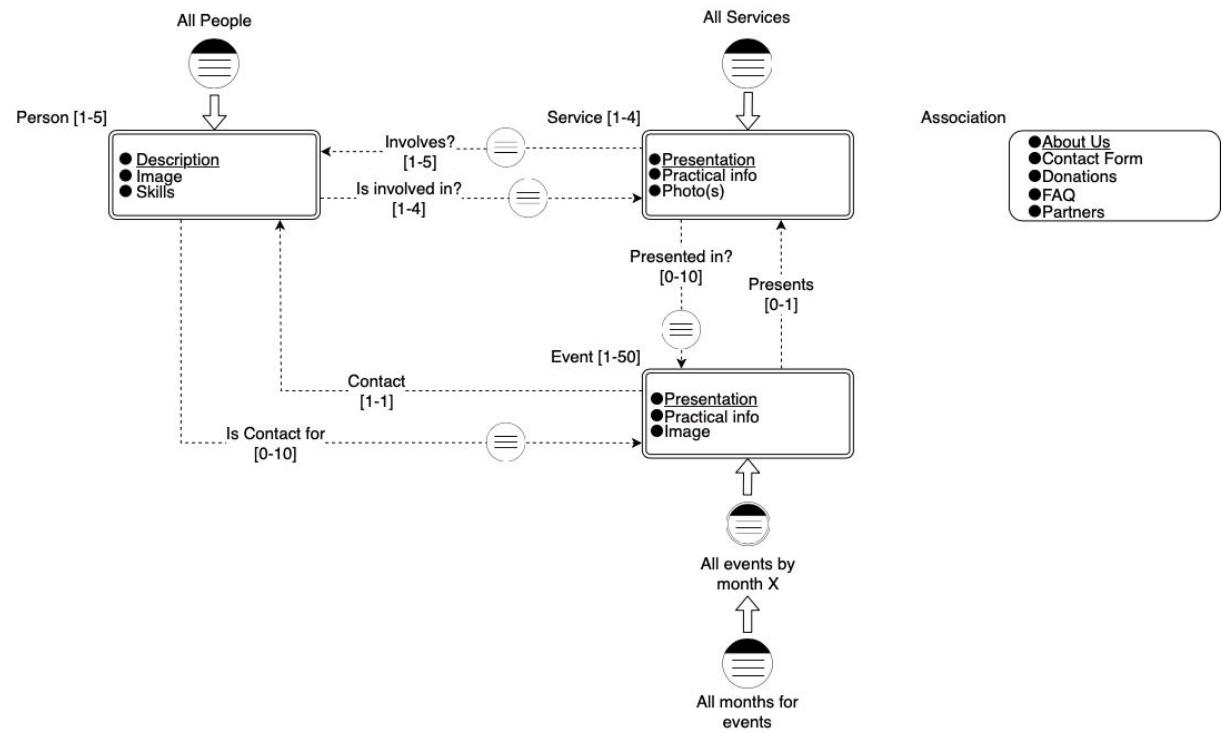
This document provides basic information on the development of a maker lab volunteering association with all the information concerning IDM models (Interactive Dialogue Model). Furthermore the document contains some scenarios to better understand the main ideas behind the website, the design in-the-small concept which provides an implementation of the front-end, an Entity Relationship diagram and a Logical Design schema to describe the structure of the database.

## 2 - Graphical representations

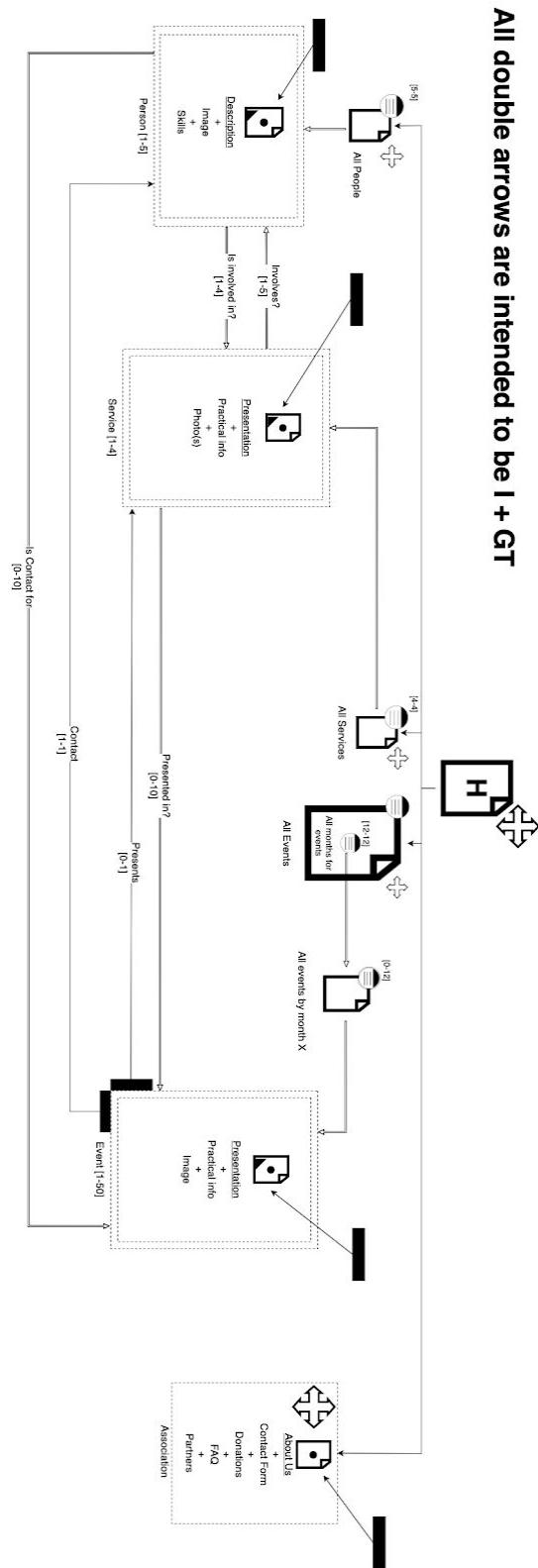
### 2.1 - C-IDM



## 2.2 - L-IDM



## 2.3 - P-IDM



## 3 - Interaction scenarios

### 3.1 - Case 1 - Find an Event

Emily wants to learn how to build her own entertainment unit. She heard from a friend that FreeLab gives free workshops on this topic. She opens a web browser and types the FreeLab url, she's greeted with the home page.

She clicks on “Events” in the navigation bar, and a page with all months opens. After going through her schedule Emily decides to give it a shot this month, if possible. She clicks on April and a new page with all the events of April comes up. After going through the events she finds the workshop she’s interested in, by clicking on it now Emily can learn everything about this workshop, what service comprehends and who is organizing it. (figures from 1 to 4)

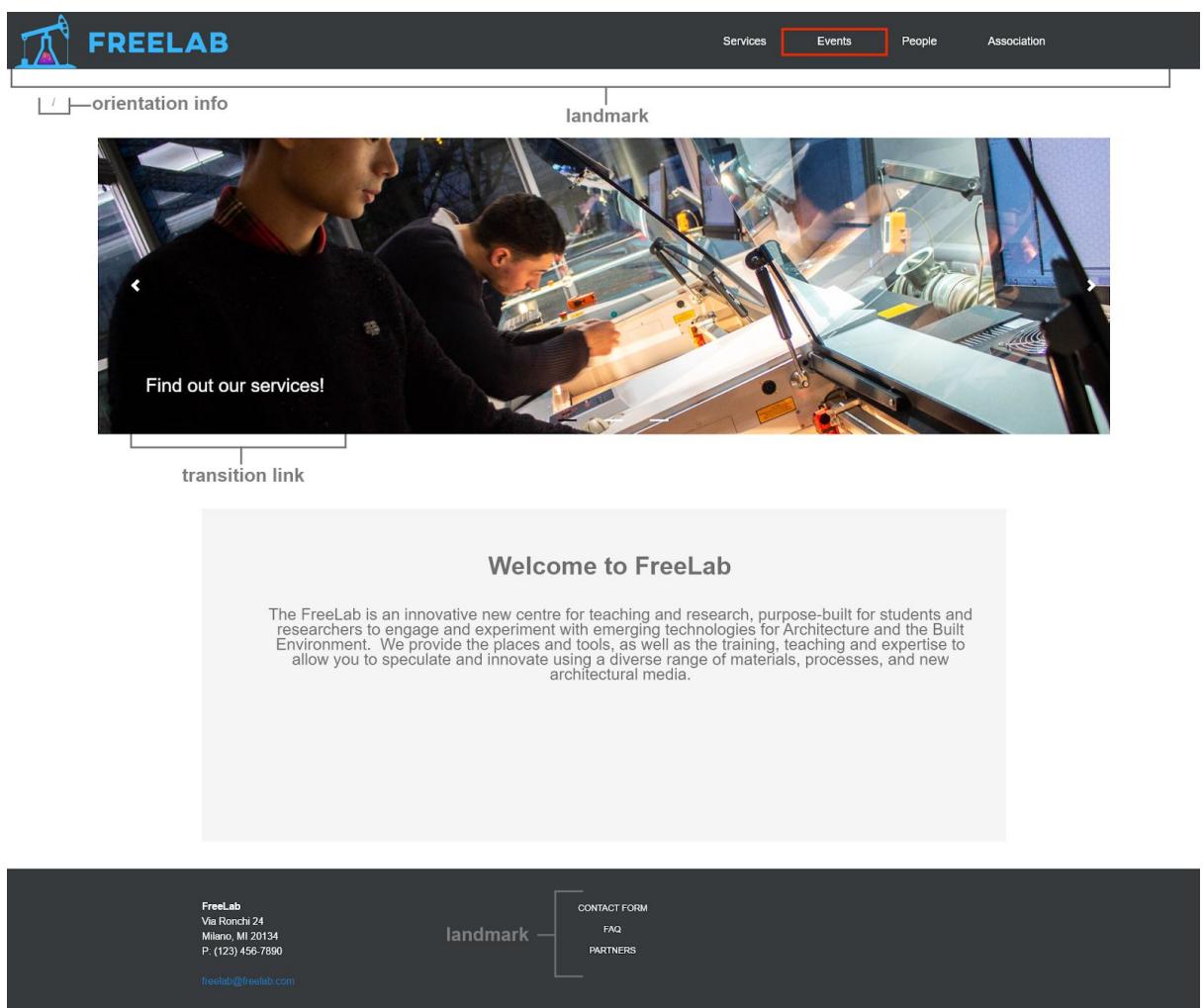
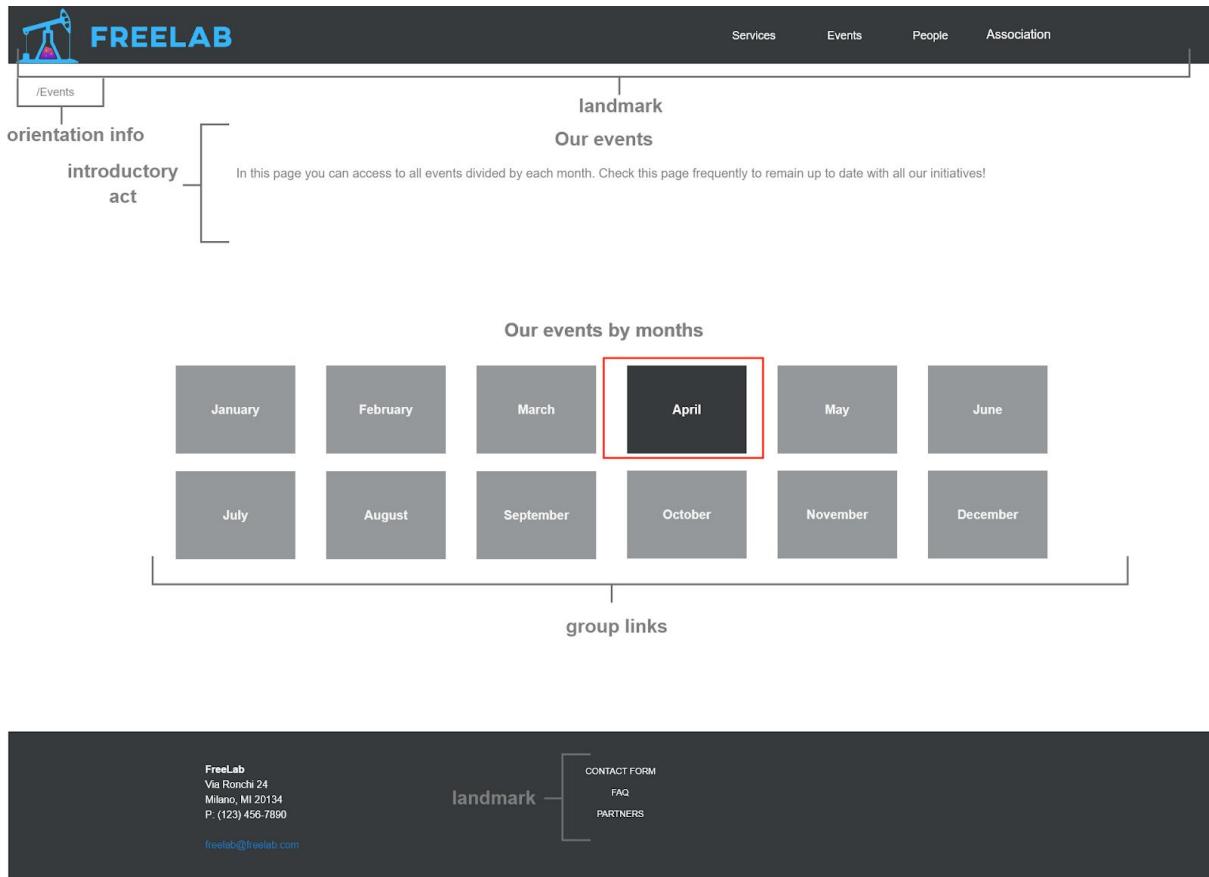


fig. 1



*fig. 2*

The screenshot displays the FreeLab website's event calendar for April. At the top, there's a navigation bar with links for Services, Events, People, and Association. On the left, there's a sidebar with buttons for 'Events / April' (which is highlighted), 'View all events', and a 'group link' annotation pointing to it. The main content area is titled 'April's Events' and shows a 4x3 grid of event cards:

- Build your own entertainment unit** (1/04/2020): A man working on a wooden entertainment unit.
- Basic 3D printing** (3/04/2020): A 3D printed blue '3D' logo.
- Advanced python programming** (7/04/2020): A snippet of Python code.
- Web development** (7/04/2020): A glowing digital interface with code snippets.
- Advanced 3D printing** (12/04/2020): A green 3D printed pineapple-shaped object.
- Wood working** (12/04/2020): A person working on wood.
- Advanced 3D printing** (14/04/2020): A 3D printed lion statue.
- Basic 3D printing** (19/04/2020): A 3D printed blue '3D' logo.
- Advanced furniture maker** (21/04/2020): A person working on a wooden cabinet.
- Advanced programming** (22/04/2020): A person working on a laptop.
- Advanced 3D printing** (30/04/2020): A 3D printer printing a model of a human jaw.
- AI workshop** (31/04/2020): A brain with a network of connections.

Annotations with arrows point to several UI elements:
 

- 'group link' points to the 'Events / April' button.
- 'landmark' points to the 'orientation info' button.
- 'group links' points to the 'View Previous Month' and 'View Next Month' buttons.
- 'group links' points to the bottom of the page.

At the bottom of the page, there's a footer with contact information for FreeLab (Via Ronchi 24, Milano, MI 20134, P. (123) 456-7890, freemail@freelab.com) and a 'CONTACT FORM' section with links for FAQ and PARTNERS.

fig. 3

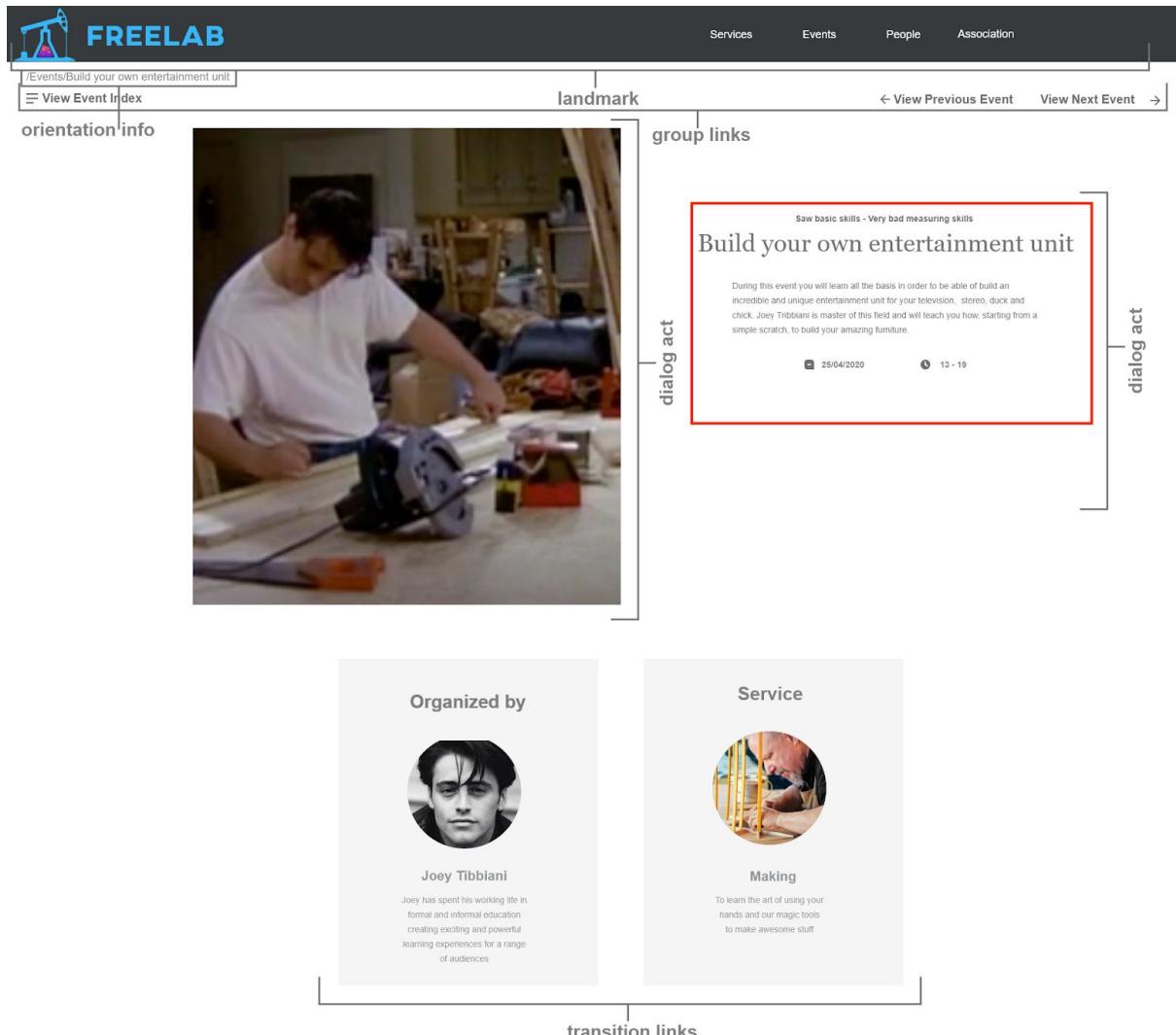


fig. 4

3.2 - Case 2 - Find if the association offers a certain type of service

Monica is a Design student interested in developing a web site for her portfolio but she's a novice with web developing. One of her friends suggested consulting the FreeLab web site to find out if the association offers some kind of service related to this activity.

Firstly, Monica opens the FreeLab webpage and locates the “Services” link in the navigation bar: this link takes her to the presentation page of all the services offered by the association. Here she finds that the last service proposed is Programming!

Interested, she clicks on Programming and finds out that FreeLab offers web development basics! (figures from 5 to 7)

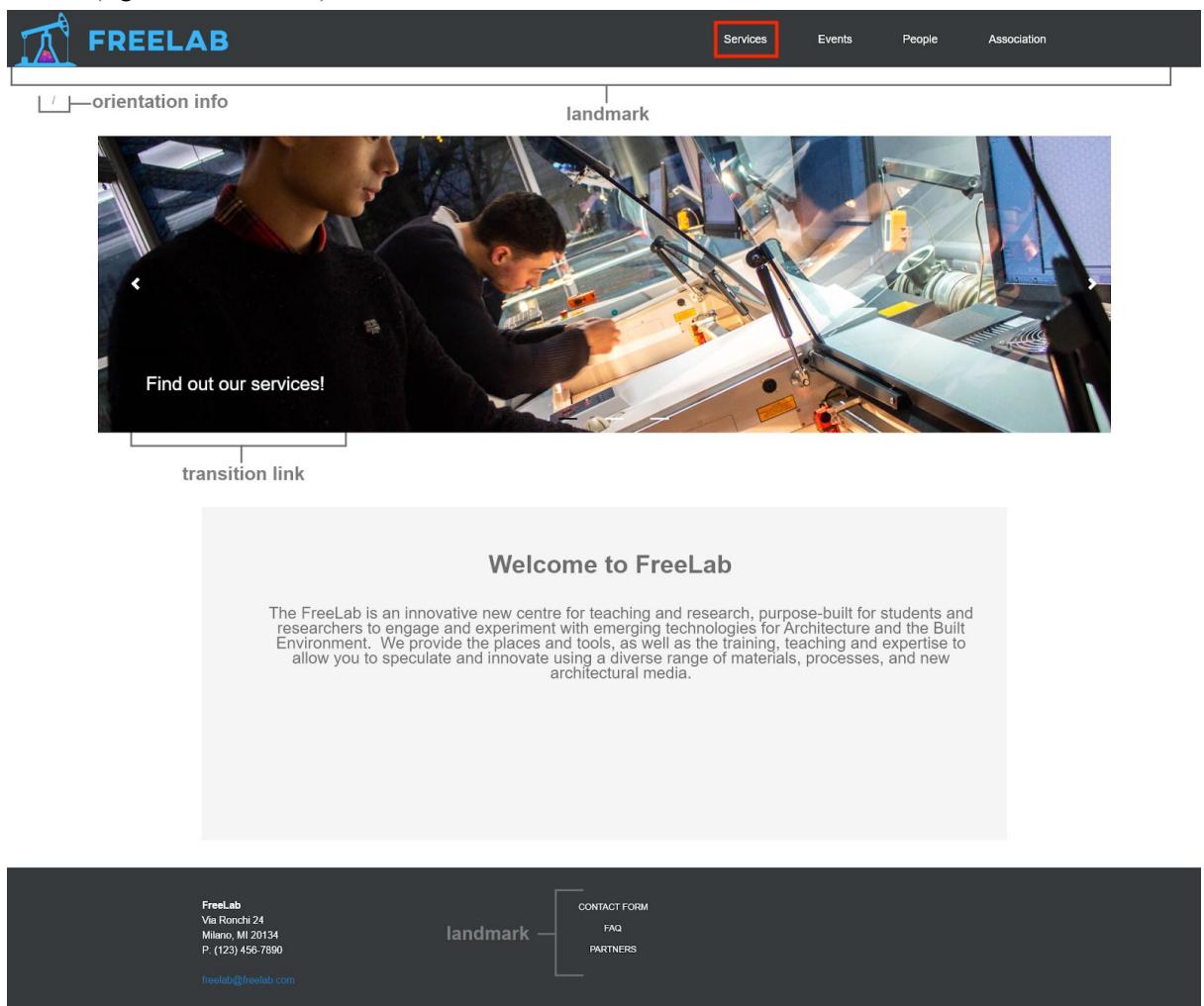


fig. 5

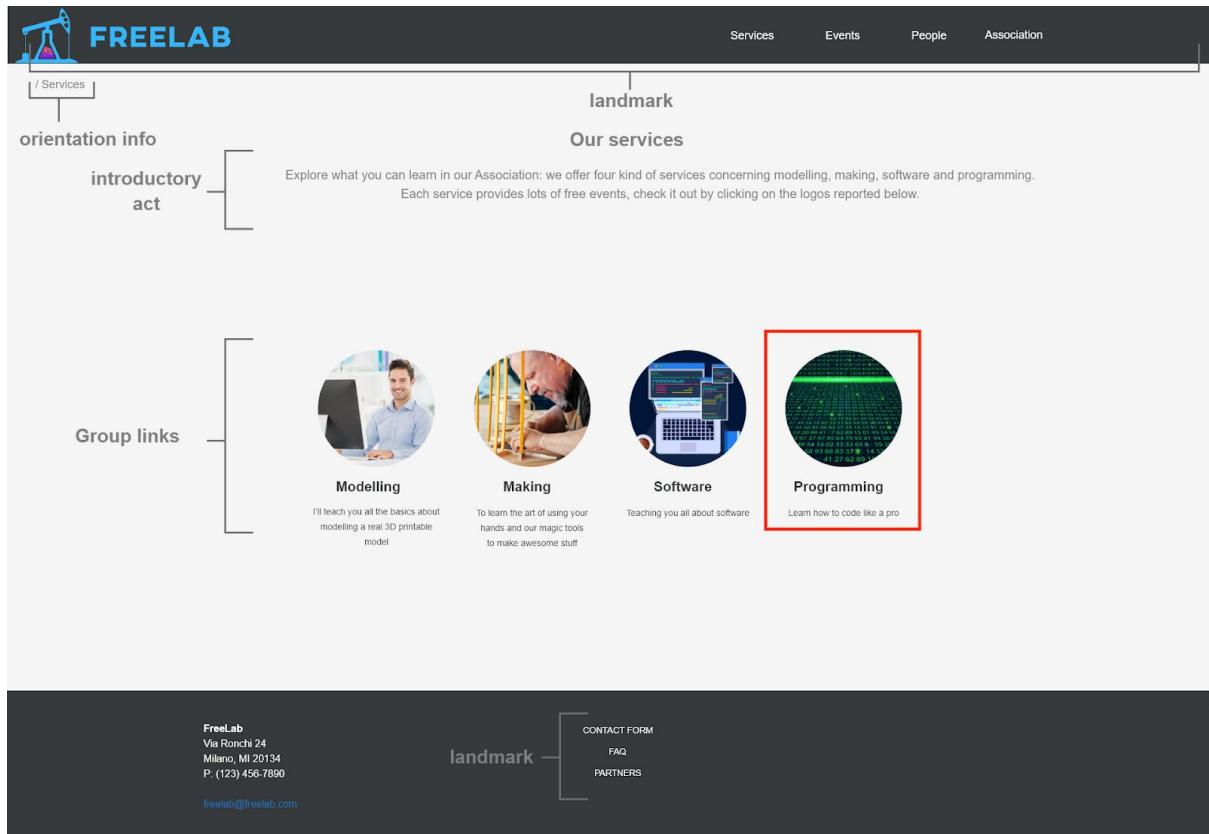


fig. 6

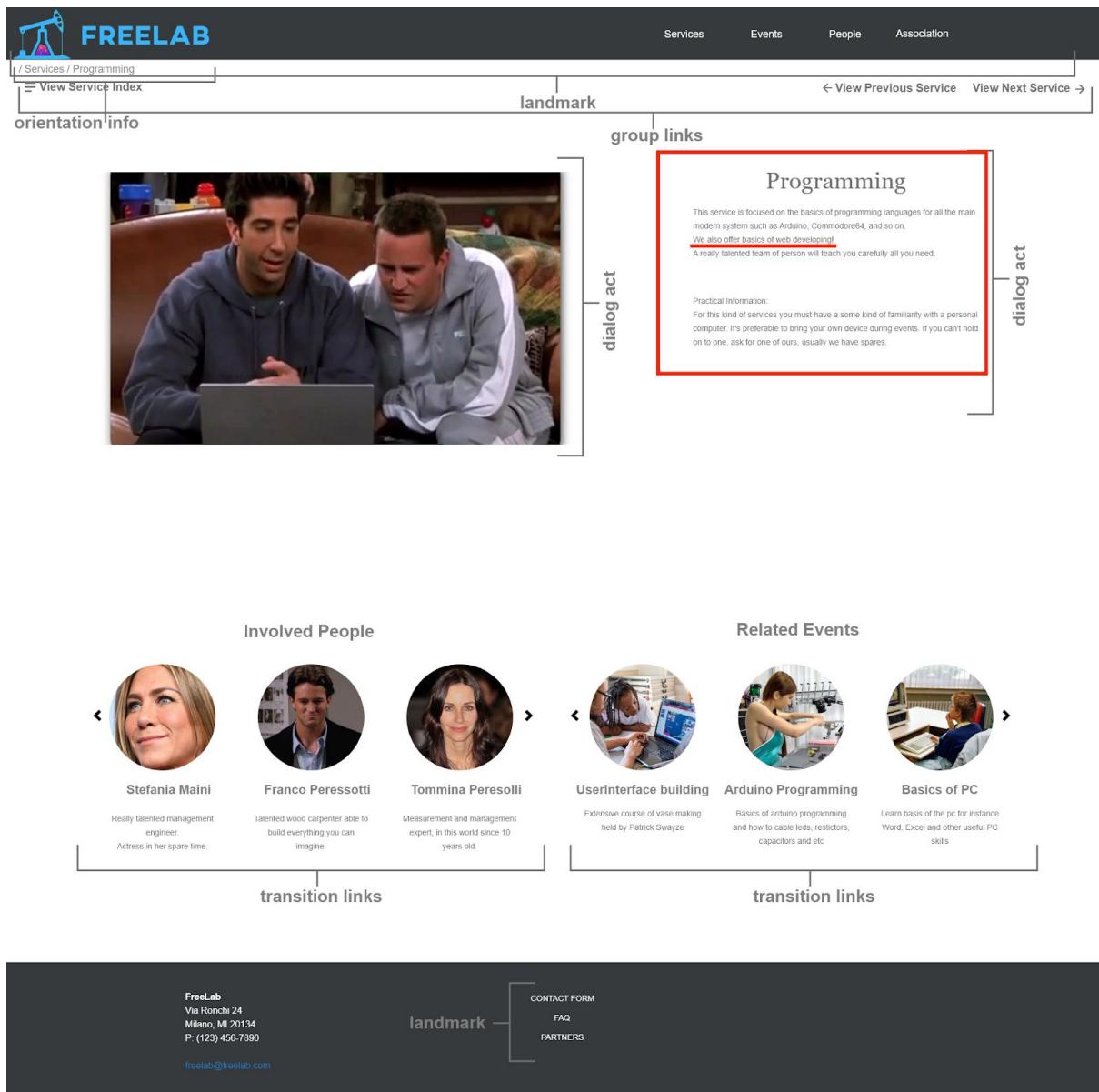


fig. 7

### 3.3 - Case 3 - Visit the FAQ section

Johnny Melano reading an article on the internet comes to know about FreeLab volunteering association, he wanders on how all these beautiful things can be achieved without any cost for the end users. He opens FreeLab's website on his browser and clicks on the FAQ link in the footer of the home page. He's greeted with a list of common questions about the association and he can now find the answers to his questions. (figures 8 and 9)

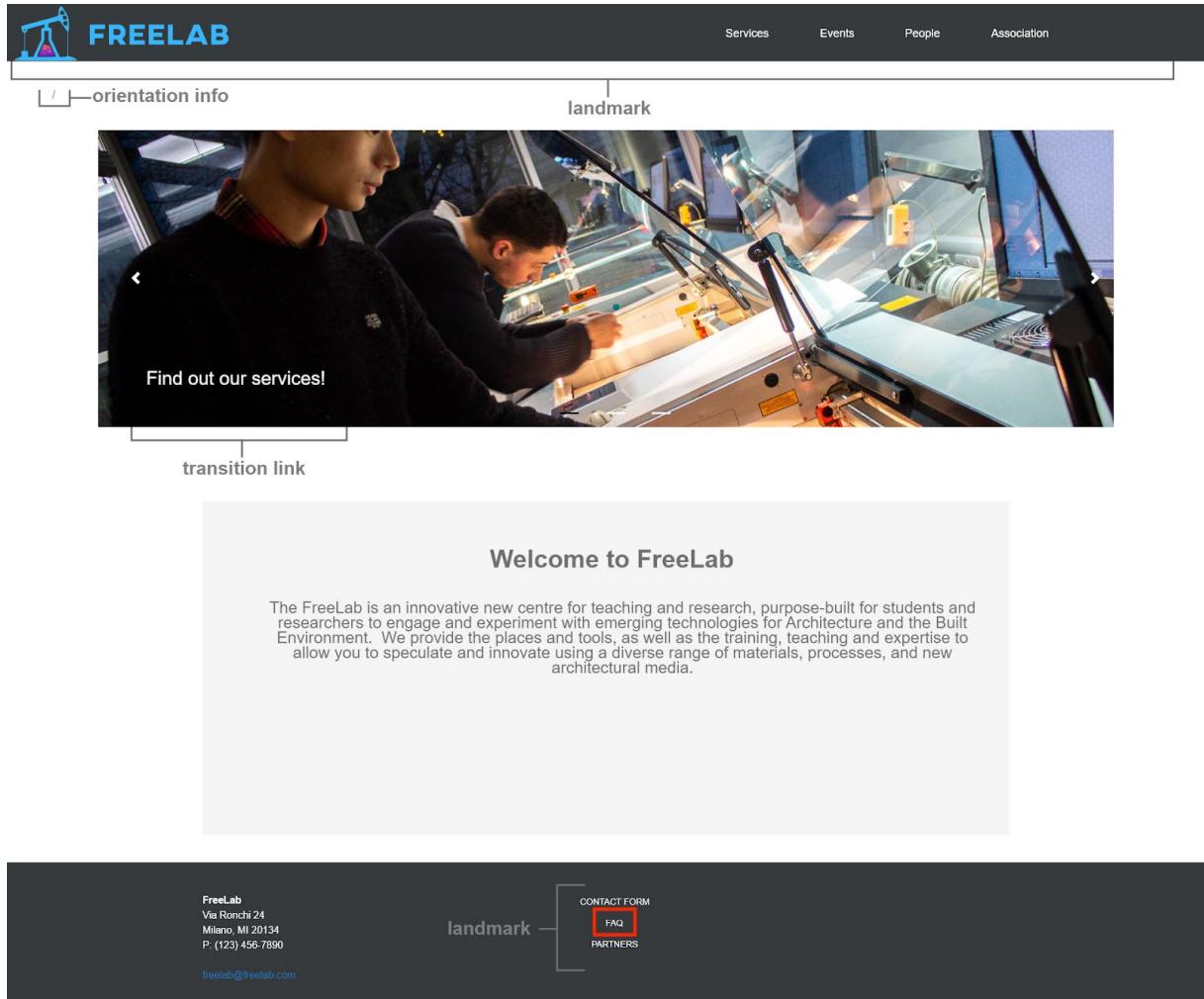


fig. 8

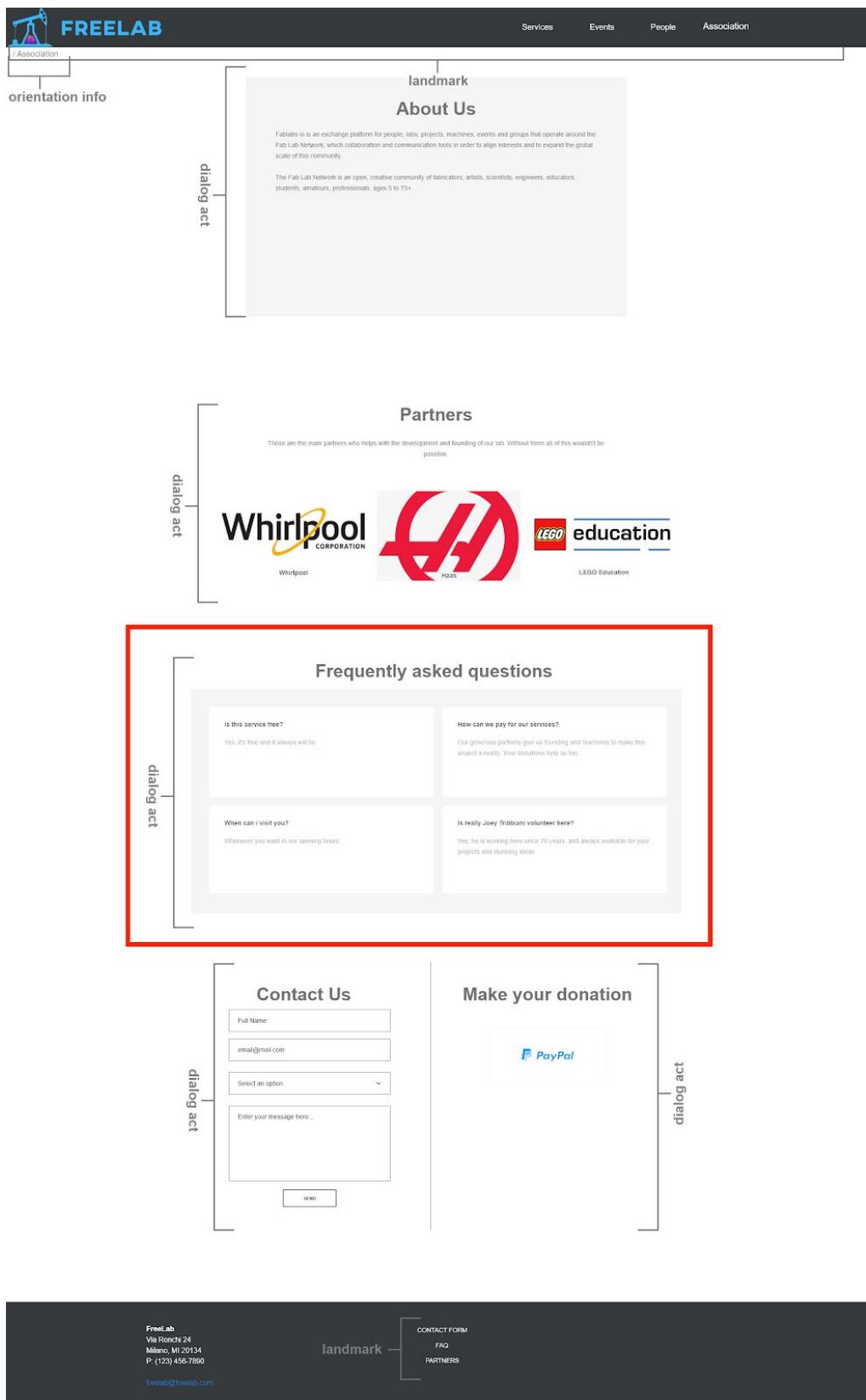


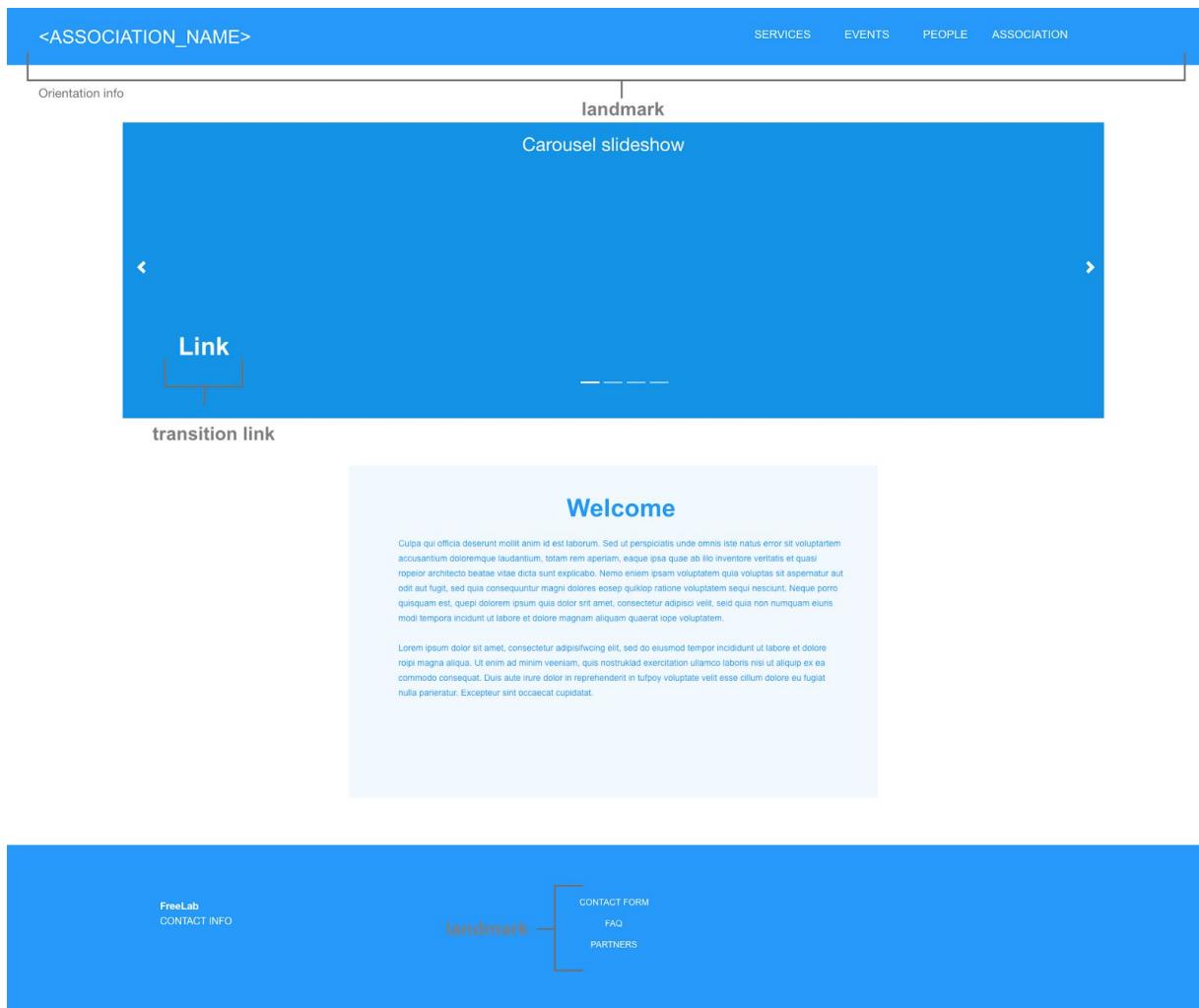
fig. 9

## 4 - Design-in-the-small

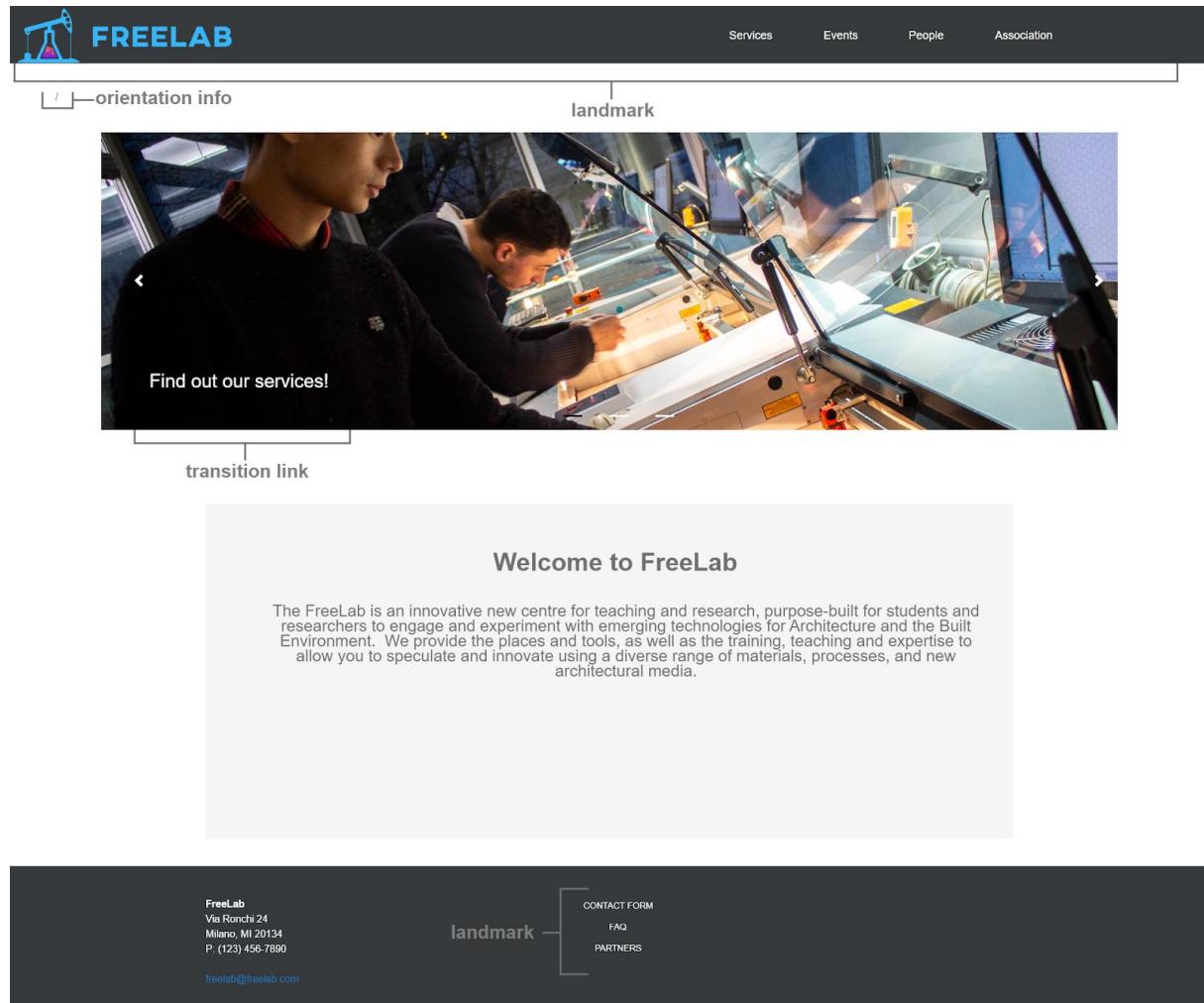
### 4.1 - Home Page

The home page of FreeLab's website is composed by a brief introduction to the Association itself that welcomes the users and a carousel slideshow that presents photos and links of the principal multiple topics of the website.

#### 4.1.1 - Home Page in-the-small



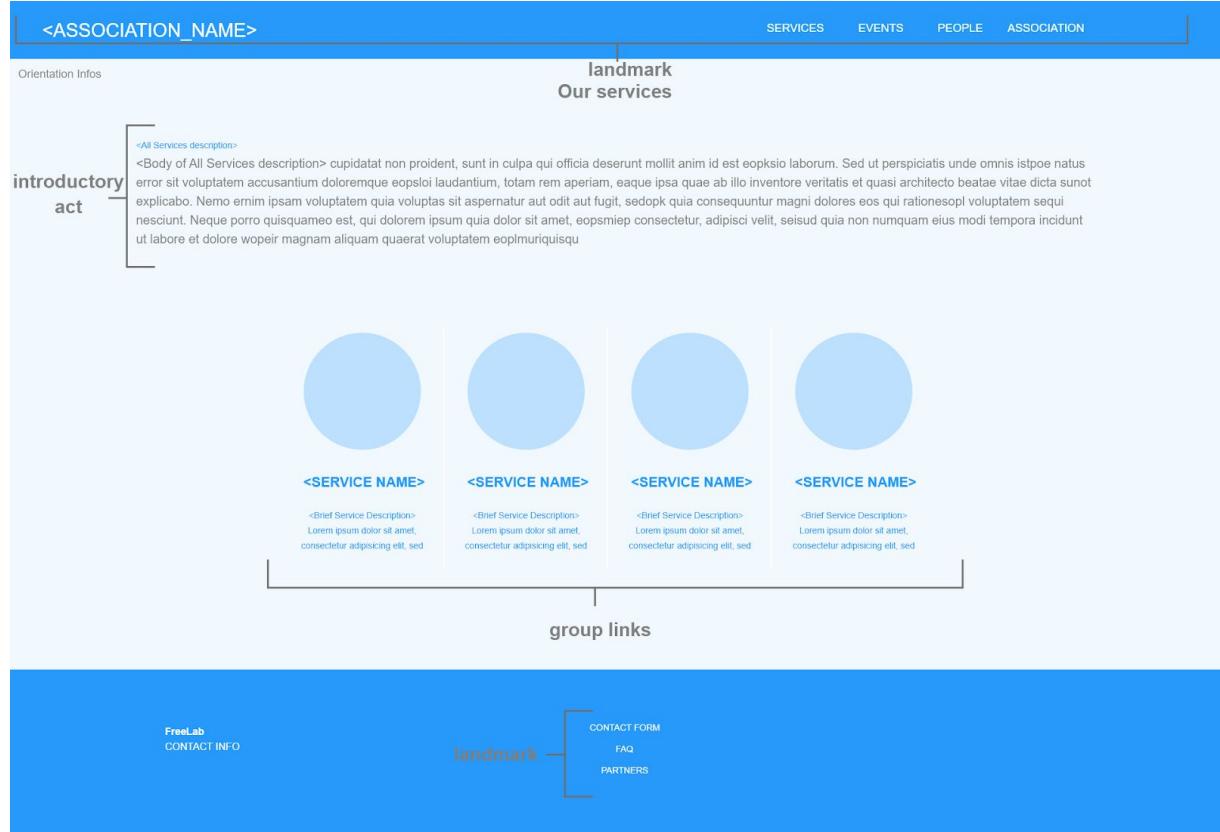
#### 4.1.2 - Home Page screenshot



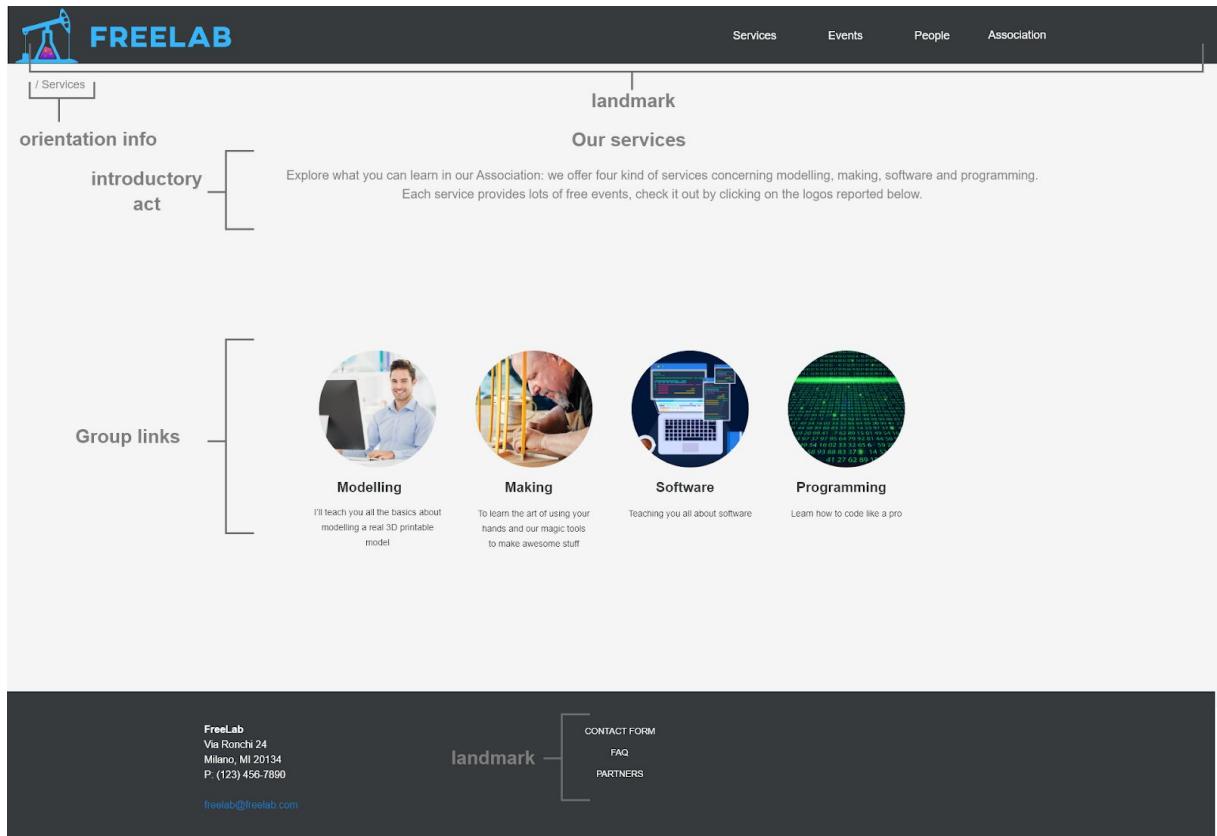
## 4.2 - All Services

This page presents all the available services of the association. On top a brief introductory description, underneath a list representing each service with a photo and a short description.

### 4.2.1 - All Services in-the-small



## 4.2.2 - All Services screenshot

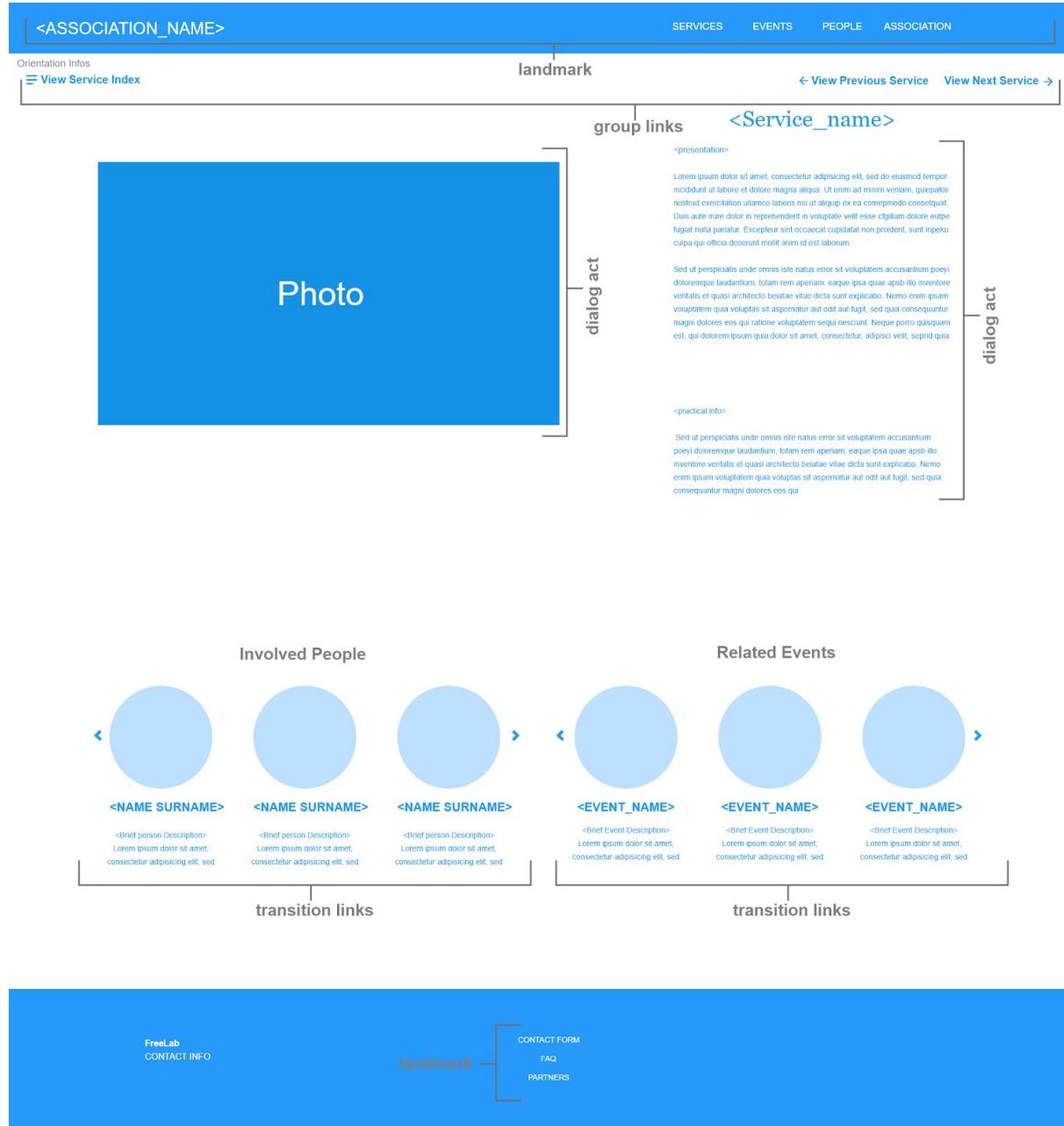


## 4.3 - Service

The service page contains all the details about a specific service provided by the association. It is divided in two halves, the first one containing a description, some practical infos and a carousel of photos.

Instead, in the second half there are all the involved people and the related events.

#### 4.3.1 - Service in-the-small



### 4.3.2 - Service screenshot

The diagram illustrates the Freelab website's layout and user interface design, annotated with interaction concepts:

- Top Navigation:** Services, Events, People, Association.
- Header:** / Services / Programming, View Service Index, landmark, orientation info.
- Service Details:** A large image of two men (Ross and Chandler from Friends) looking at a laptop. To its right is a detailed description of the "Programming" service, including practical information and a dialog act label.
- Involved People:** A section showing profiles of Stefania Maini, Franco Peressotti, and Tommina Peresolli, each with a transition link to the right.
- Related Events:** A section showing profiles of UserInterface building, Arduino Programming, and Basics of PC, each with a transition link to the right.
- Footer:** Contact information for Freelab (Via Ronchi 24, Milano, MI 20134, P. (123) 456-7890), email (freelab@freelab.com), and a footer menu with links to CONTACT FORM, FAQ, and PARTNERS.

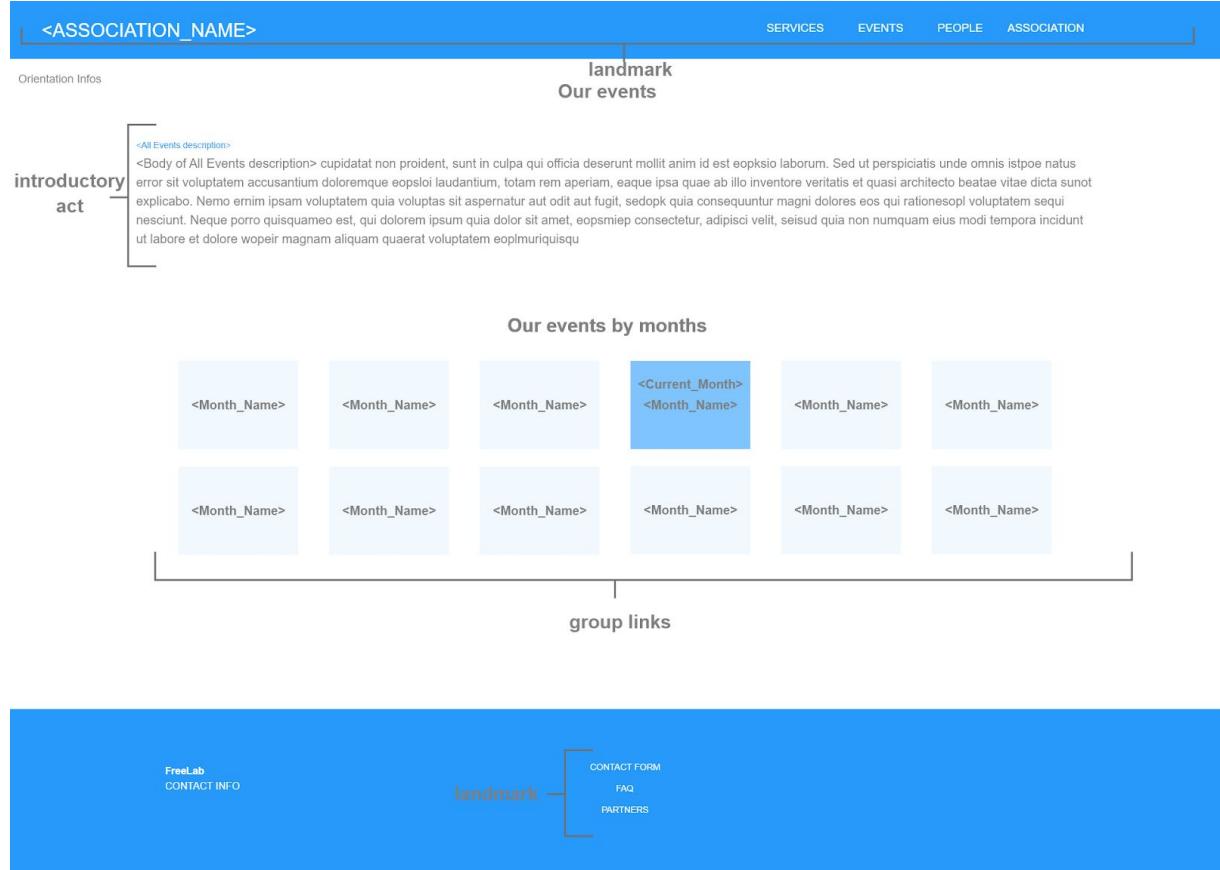
Annotations describe the interaction structure:

- landmark:** Indicated by a bracket under the header and footer.
- orientation info:** Indicated by a bracket under the header.
- group links:** Indicated by a bracket under the service details.
- dialog act:** Indicated by brackets around the service details and involved people sections.
- transition links:** Indicated by brackets under the involved people and related events sections.

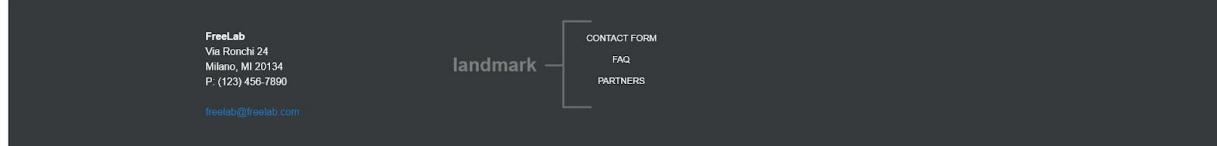
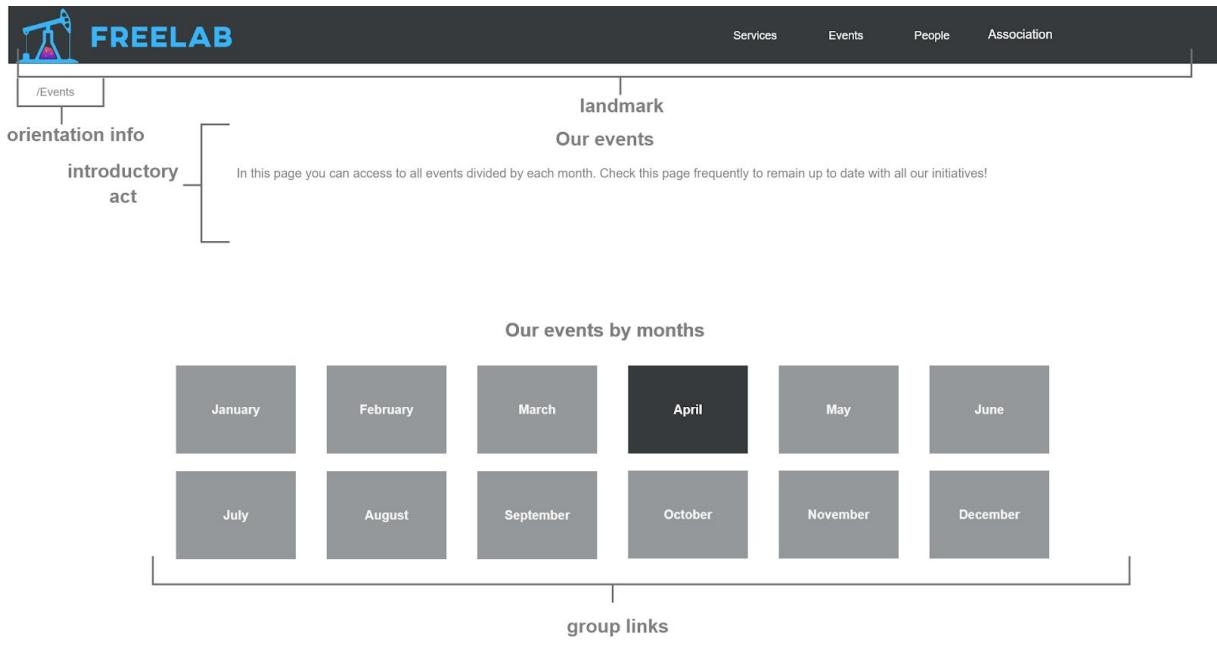
## 4.4 - All Events

In this page there is an introductory description. It also contains twelve cards, each one related to the corresponding month. They are links leading to the corresponding “Events for month X page”.

### 4.4.1 - All Events in-the-small



#### 4.4.2 - All Events screenshot



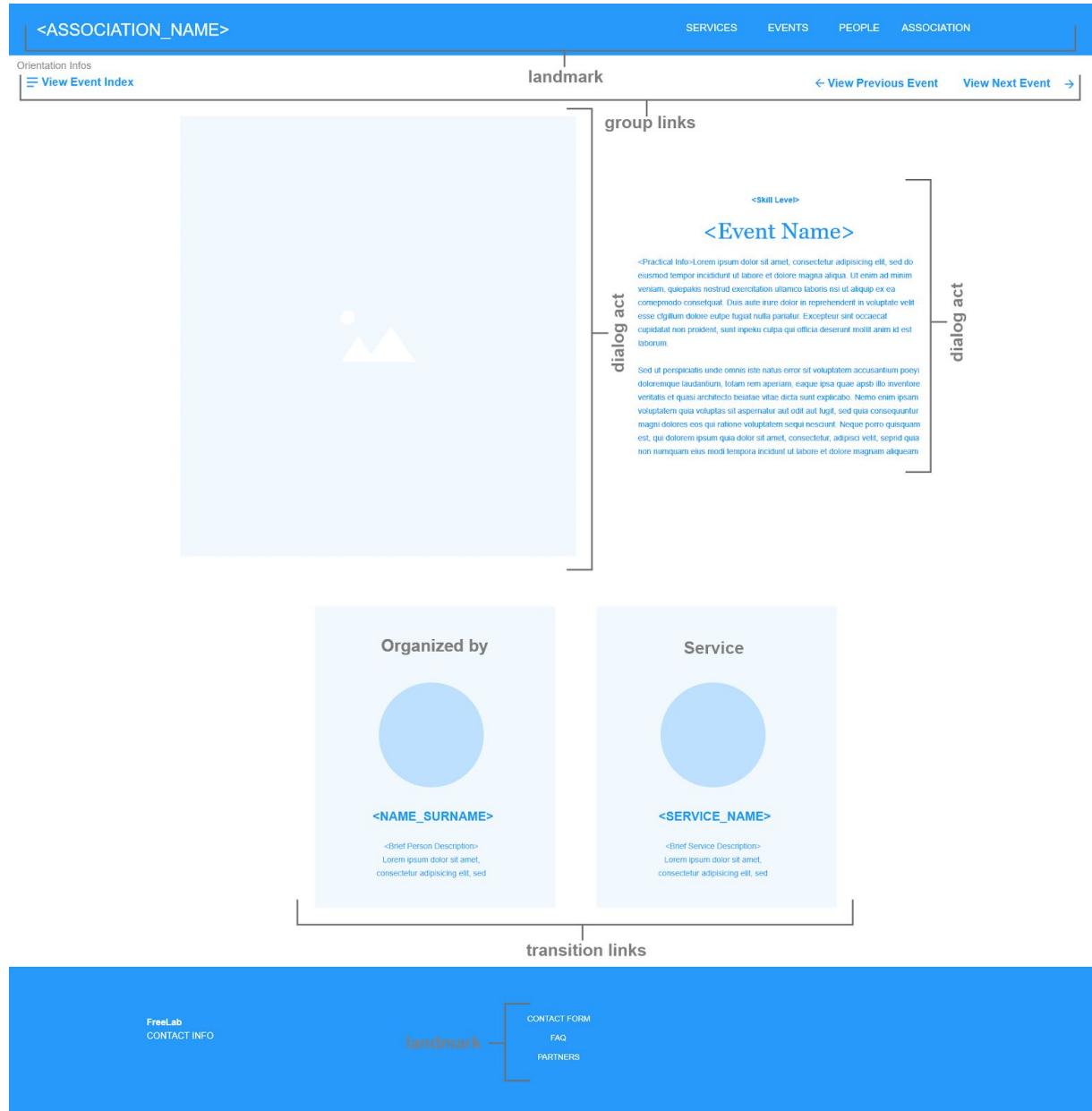
## 4.5 - Event

The event page contains all the information concerning a specific event. In the first top half of the page a detailed description of the event next to a photo represents the event itself.

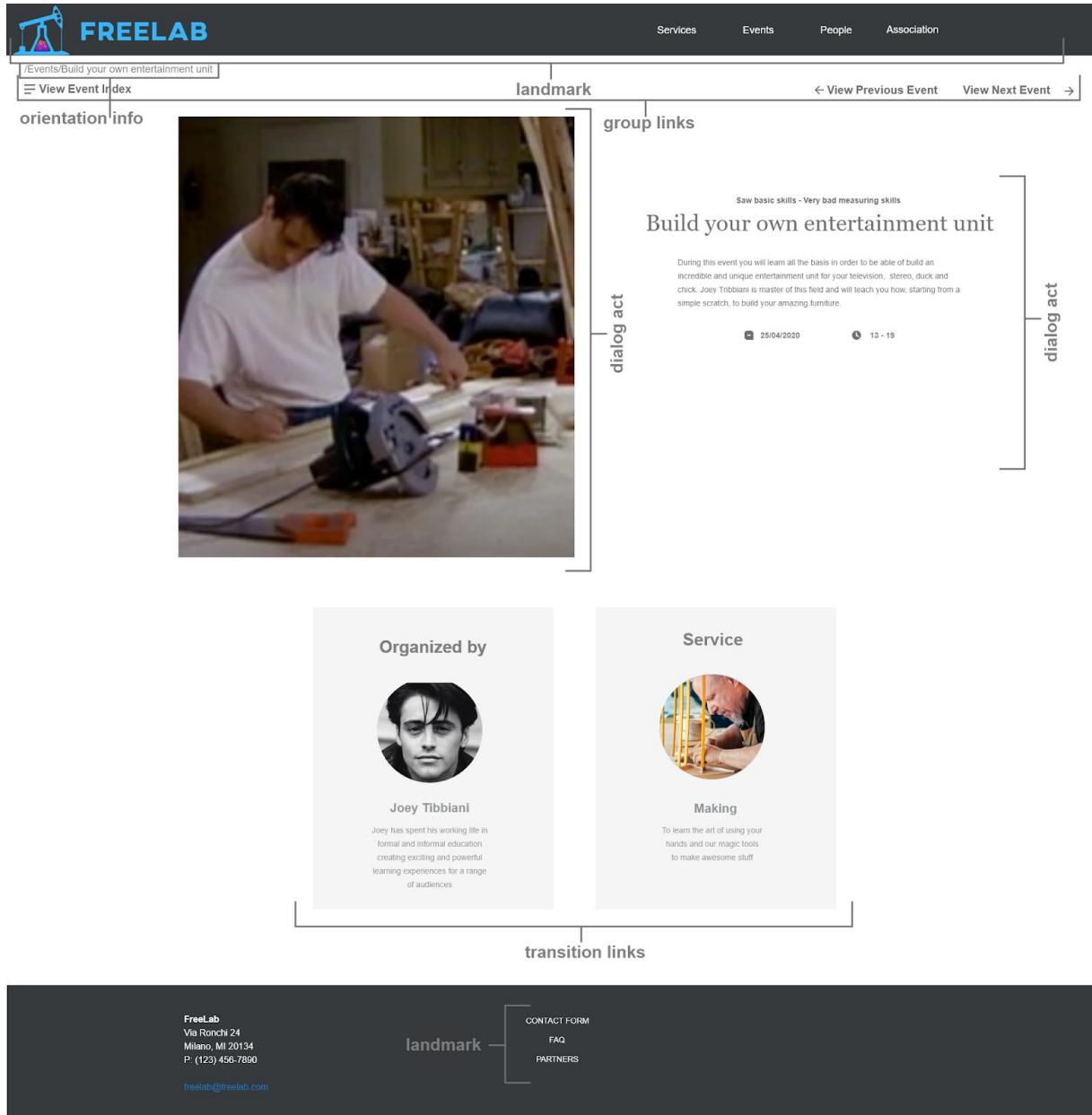
In the second half are reported:

- information about the organizer with a photo, a link to the organizer's profile, name, surname and a short description;
- information of the related service with a photo, a link to the service and a brief description.

### 4.5.1 - Event in-the-small



## 4.5.2 - Event screenshot



## 4.6 - Events by Month X

This page contains a grid representation of all the events available for the selected month: each event is described by its name, a brief description and the date in which it will be held.

### 4.6.1 - Events by Month X in-the-small



### 4.6.2 - Events by Month X screenshot

The screenshot shows the 'Events by Month' section for April. The page has a dark header with the 'FREELAB' logo and navigation links for Services, Events, People, and Association. Below the header, there's a 'landmark' element and a 'group link' for 'Events / April'. The main content area is titled 'April's Events' and contains a 3x4 grid of event cards. Each card has a thumbnail image, a title, a date, and a brief description.

Category	Title	Date	Description
Entertainment	Build your own entertainment unit	1/04/2020	Learn how to build your own entertainment unit
	Basic 3D printing	3/04/2020	Discover all the basics techniques in 3D printing
	Advanced python programming	7/04/2020	Discover all the advanced techniques in python programming
	Web development	7/04/2020	Discover all the concepts concerning web development
3D Printing	Advanced 3D printing	12/04/2020	Discover all the advanced techniques in 3D printing
	Wood working	12/04/2020	Discover all the techniques in the wood working
	Advanced 3D printing	14/04/2020	Discover all the advanced techniques in 3D printing
	Basic 3D printing	19/04/2020	Discover all the basics techniques in 3D printing
Programming	Advanced furniture maker	21/04/2020	Learn how to build wooden objects like a pro
	Advanced programming	22/04/2020	Discover all the advanced programming techniques
	Advanced 3D printing	30/04/2020	Discover all the advanced techniques in 3D printing
	AI workshop	31/04/2020	Workshop about Artificial Intelligence

At the bottom, there's a 'landmark' element and a 'group link' for 'Events / April'. The footer contains the 'FreeLab' address, email, and a contact form with links to 'CONTACT FORM', 'FAQ', and 'PARTNERS'.

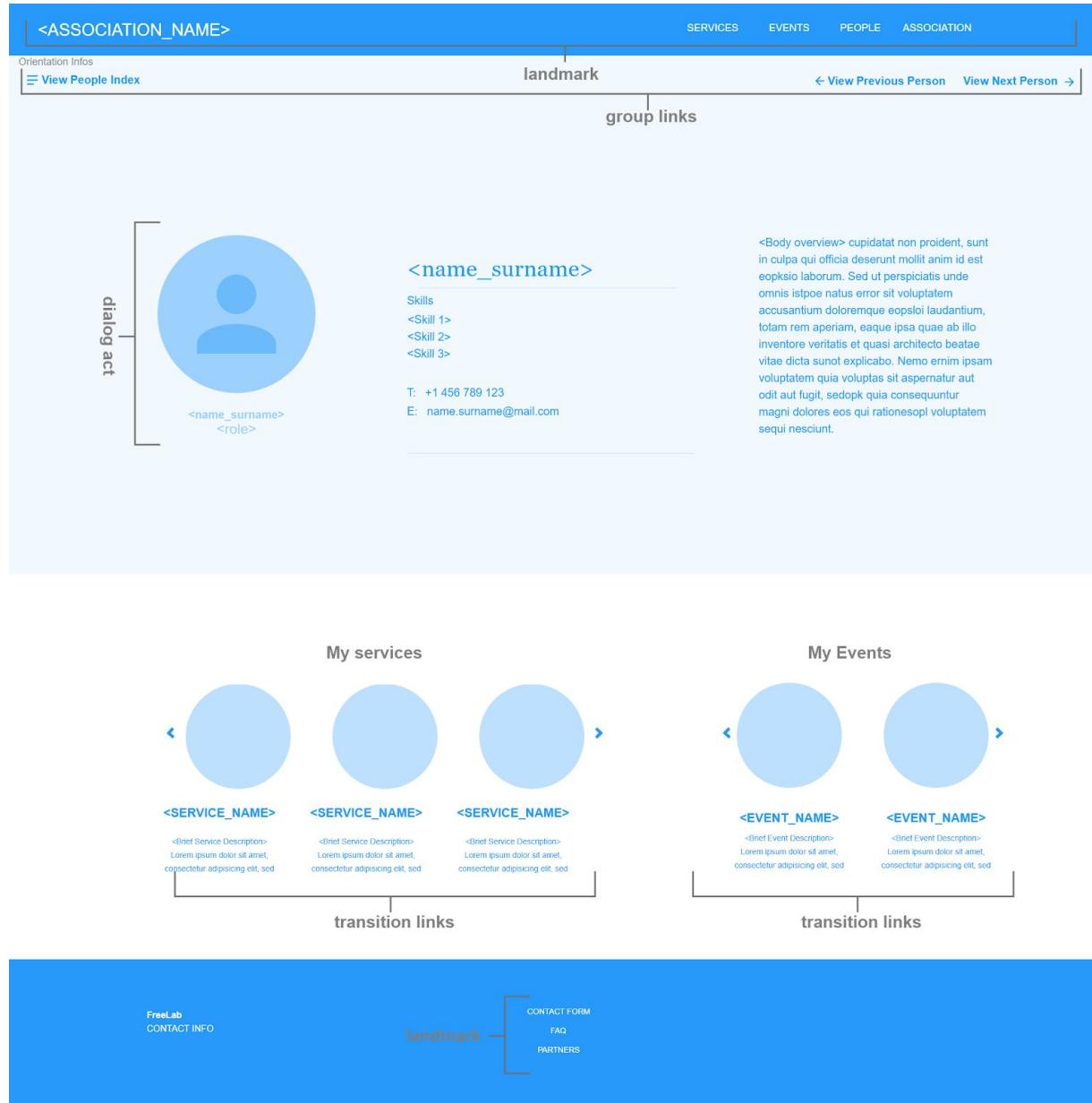
## 4.7 - Person

The Person page is meant to show the staff's components.

It is divided in two halves, the first one contains the biographical information such as name, surname, skills, contacts, and an overview written by the person itself.

The second half contains events and services related to that specific staff component. They are all links to the corresponding content.

### 4.7.1 - Person in-the-small



### 4.7.2 - Person screenshot

The screenshot shows a person profile page for Joey Tribbiani. At the top, there's a navigation bar with links for Services, Events, People, and Association. Below the navigation, there are links for View Previous Person and View Next Person. The main content area features a large circular profile picture of Joey Tribbiani. To the left of the profile picture is a bracket labeled "dialog act". To the right of the profile picture is a section titled "Joey Tribbiani" with his bio, skills, contact information, and a detailed description of his work history. A bracket labeled "group links" points to the "View Previous Person" and "View Next Person" links at the bottom.

This screenshot shows two sections of the website: "My services" and "My Events".

- My services:** This section contains three circular icons with arrows pointing left and right between them, representing different services. Below each icon is a title and a brief description.
  - Modelling:** I'll teach you all the basics about modeling a real 3D printable model.
  - Making:** To learn the art of using your hands and our magic tools to make awesome stuff.
  - Software:** Teaching you all about software.
- My Events:** This section also contains three circular icons with arrows pointing left and right between them, representing events.
  - Printing all days gadgets:** With this 3 hours course you will be introduced to basic concepts of small objects printing.
  - Modelling all days gadgets:** With this 3 hours course you will be introduced to basic concepts of small objects modeling.

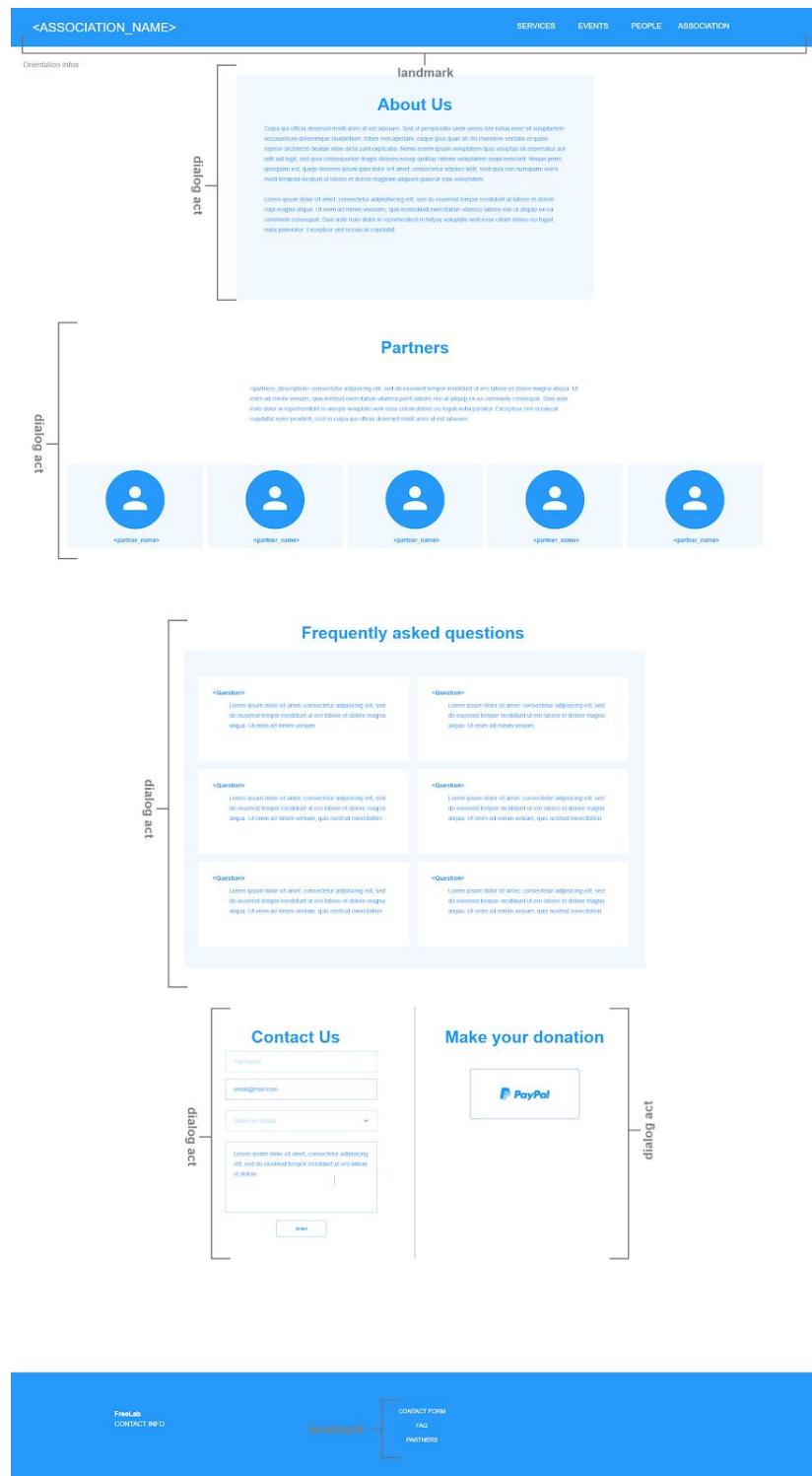
A bracket labeled "transition links" points to the arrows indicating navigation between the items in both sections.

The screenshot shows the footer section of the website. It includes the FreeLab address (Via Ronchi 24, Milano, MI 20134, P: (123) 456-7890), an email link (freelab@freetlab.com), and a "landmark" menu with links to CONTACT FORM, FAQ, and PARTNERS.

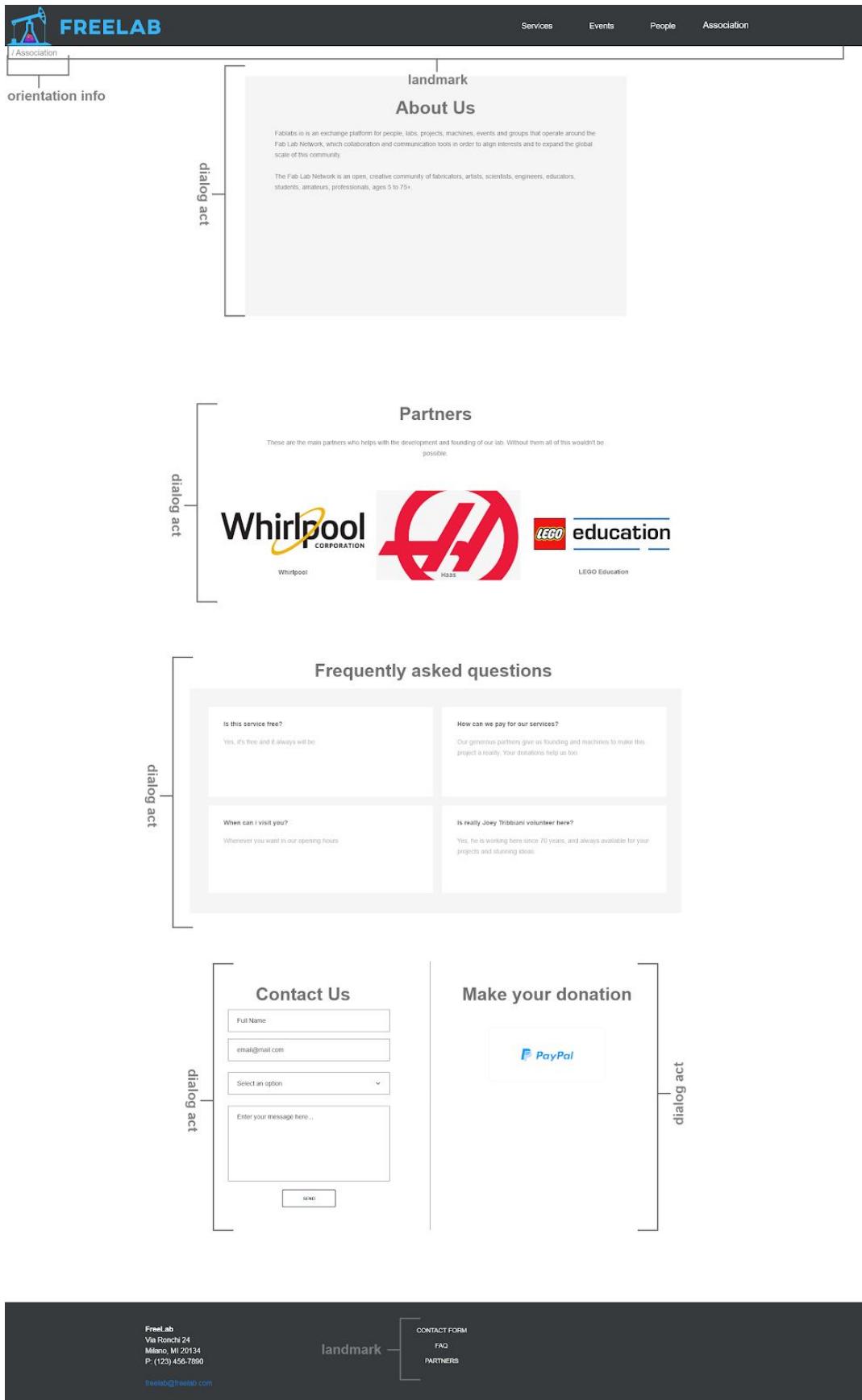
## 4.8 - Association

The association page groups all the information about FreeLab: here you can find a brief description of the Association, a FAQ section, a list of partners, a contact form to directly write to the staff and a link to FreeLab's PayPal account for private donations.

#### 4.8.1 - Association in-the-small



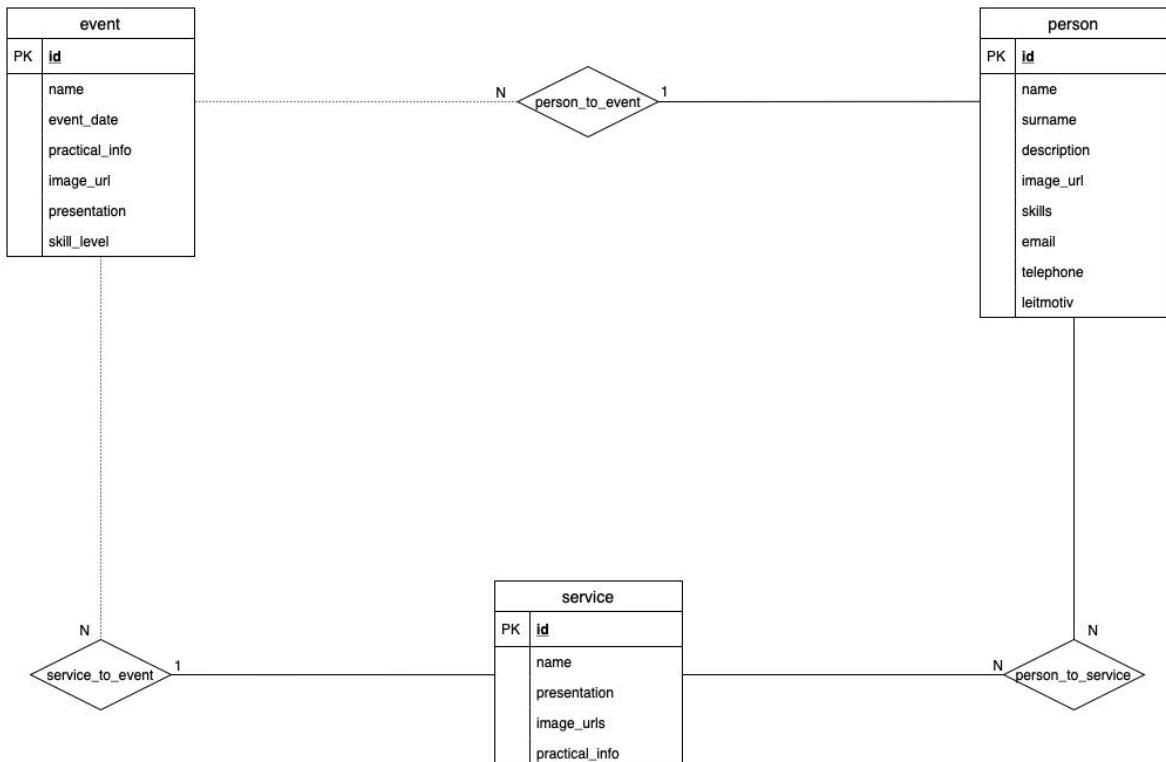
#### 4.8.2 - Association screenshot



## 5 - Database Design

Here you can find the visual representations of the database design that we used.

### 5.1 - ER Diagram



## 5.2 - Logical Design

