HYPERMEDIA APPLICATIONS

DESIGN REPORT

TEAM MEMBERS

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DELIVERY DATE

28/06/2021

LINK TO OUR RUNNING PROTOTYPE

https://hypercompany.herokuapp.com

LINK TO OUR REPOSITORY

https://github.com/sairaghav/Hypermedia-Applications-Project.git

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ABSTRACT

This report describes the UX design realized during the implementation of the website for an ICT Company called Hypercompany, by Aida Gasanova, Lorenzo Grossi, Veronica Lucchetti and Sairaghav Venkataraman as part of the Hypermedia Applications course at Politecnico di Milano during the months of March 2021 to June 2021.

This document contains the description of the design process followed through C-IDM in the large and P-IDM diagrams, content tables, low-fidelity and high-fidelity wireframes, and a presentation of the final product through examples of user scenarios with screenshots.
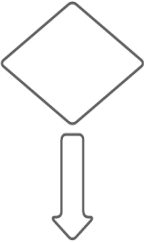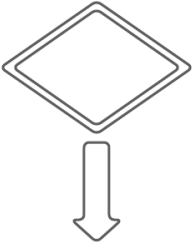
This document also contains the database design and the design for a chatbot implemented in the website.

C-IDM IN THE LARGE DIAGRAM

Diagram
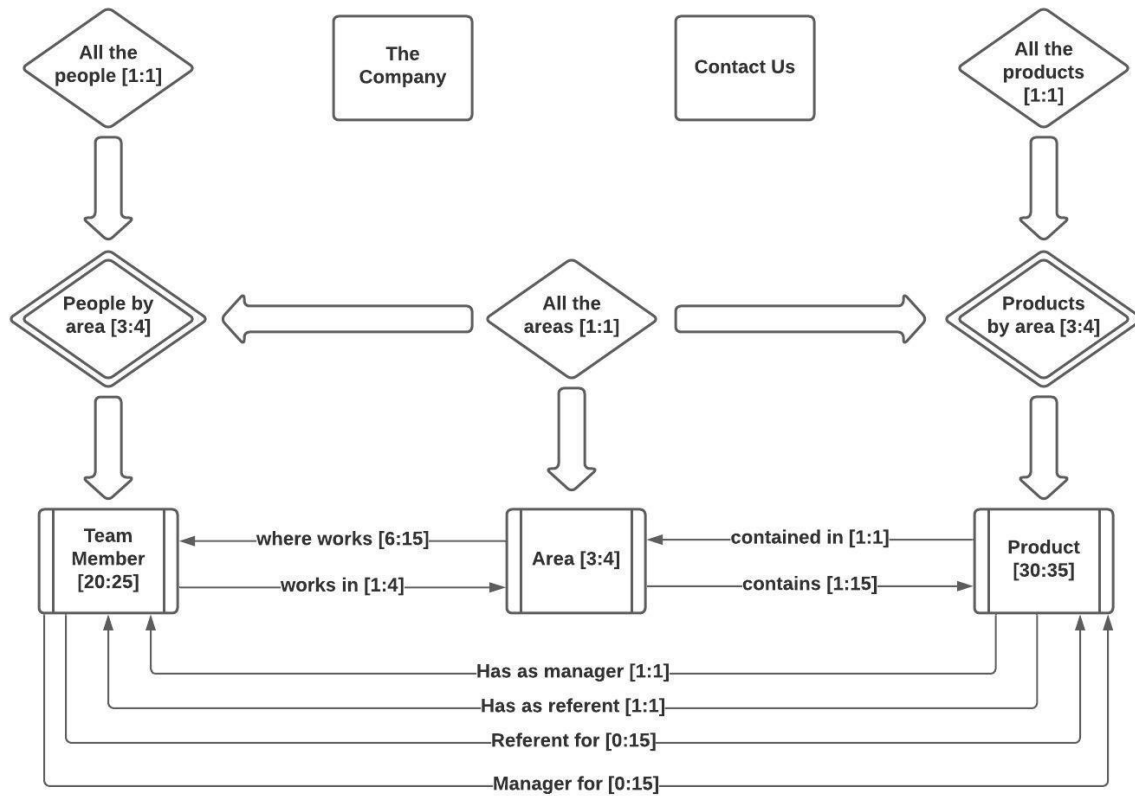
Legend

Symbol	Meaning
	Single topic
	Multiple topic
	Group of topics
	Multiple Groups
	Relevant Relationship

CONTENT TABLES

TOPIC	
The Company	**Contact Us**
Subtitle: "About us"	Image: picture
Description: text	Subtitle: "Contact form"
Subtitle: "Our offices"	Details about contacts: short text
Offices: LIST OF [city image, city name, address, contact number, contact email]	
Subtitle: "Newsletter"	
Details about subscription: short text	

KIND OF TOPIC		
Product	**Team member**	**Area**
Name of the product: short text	Name: short text	Name of the area: short text
Description: text	Image: picture	Description: text
Subtitle: "Related Area"	Subtitle: role	Subtitle: "Products"
Area image, area name, area description	Description: text	Area products: LIST OF [product image, product name, product description]
Subtitle: "Manager"	Subtitle: "Related area"	Subtitle: "Team members"
Manager picture, Manager name, Manager role, Manager description	Area image, area name, area description	Area members: LIST OF [member picture, member name, member role, member description]
Subtitle: "Reference"	Subtitle: "Reference for"/ "Manager for"	
Reference picture, Reference name, Reference role, Reference description	Related products: LIST OF [product image, product name, product description]	

GROUP		
All the products	**All the people**	**All the areas**
Subtitle: LIST OF [area names]	Subtitle: LIST OF [area names]	Areas: LIST OF [area image, area name, area description]
Area products: LIST OF [product image, product name, product description]	Area members: LIST OF [member picture, member name, member role, member description]	

Homepage
Image: picture
Multiple topics: LIST OF [picture, title, subtitle, description]

MAPPING CONTENT TABLES INTO PAGES

Homepage
Image: picture
Multiple topics: LIST OF [picture, title, subtitle, description]

Homepage: page 1
Image: picture
Multiple topics: LIST OF [picture, title, subtitle, description]

The Company
Subtitle: "About us"
Description: text
Subtitle: "Our offices"
Offices: LIST OF [city image, city name, address, contact number, contact email]
Subtitle: "Newsletter"
Details about subscription: short text

The Company: page 1
Subtitle: "About us"
Description: text
Subtitle: "Our offices"
Offices: LIST OF [city image, city name, address, contact number, contact email]
Subtitle: "Newsletter"
Details about subscription: short text

Contact Us
Image: picture
Subtitle: "Contact form"
Details about contacts: short text

Contact Us: page 1
Image: picture
Subtitle: "Contact form"
Details about contacts: short text

All the products
Subtitle: LIST OF [area names]
Area products: LIST OF [product image, product name, product description]

All the products: page 1
Subtitle: LIST OF [area names]
Area products: LIST OF [product image, product name, product description]

All the people
Subtitle: LIST OF [area names]
Area members: LIST OF [member icon, member name, member role, member description]

All the people: page 1
Subtitle: LIST OF [area names]
Area members: LIST OF [member icon, member name, member role, member description]

All the areas
Areas: LIST OF [area image, area name, area description]

All the areas: page 1
Areas: LIST OF [area image, area name, area description]

Product
Name of the product: short text
Description: text
Subtitle: "Related Area"
Area image, area name, area description
Subtitle: "Manager"
Manager picture, Manager name, Manager role, Manager description
Subtitle: "Reference"
Reference picture, Reference name, Reference role, Reference description

Product: page 1
Name of the product: short text
Description: text
Subtitle: "Related Area"
Area image, area name, area description
Subtitle: "Manager"
Manager picture, Manager name, Manager role, Manager description
Subtitle: "Reference"
Reference picture, Reference name, Reference role, Reference description

Team member
Name: short text
Image: picture
Subtitle: role
Description: text
Subtitle: "Related area"
Area image, area name, area description
Subtitle: "Reference for"/"Manager for"
Related products: LIST OF [product image, product name, product description]

Team member: page 1
Name: short text
Image: picture
Subtitle: role
Description: text
Subtitle: "Related area"
Area image, area name, area description
Subtitle: "Reference for"/"Manager for"
Related products: LIST OF [product image, product name, product description]

Area
Name of the area: short text
Description: text
Subtitle: "Products"
Area products: LIST OF [product image, product name, product description]
Subtitle: "Team members"
Area members: LIST OF [member picture, member name, member role, member description]

→

Area: page 1
Name of the area: short text
Description: text
Subtitle: "Products"
Area products: LIST OF [product image, product name, product description]
Subtitle: "Team members"
Area members: LIST OF [member picture, member name, member role, member description]

P-IDM DIAGRAM

In our website, the homepage contains a landmark with a
- link to the introduction page for areas,
- link to the introduction page for products,
- link to the introduction page for team members,
- link to introduction page for the company and
- link to the introduction page for contact us.

The introduction page for areas contains the description of all the areas with links to each individual area page, the introduction page for products contains description of all the products grouped by area with links to each individual product page and the introduction page for team members contains description of all the members grouped by area with links to each individual member page.

The individual area page contains a description of the area, its related members, and products. From an individual area page, each related product and each related member can be accessed through a set of links.
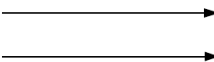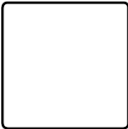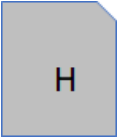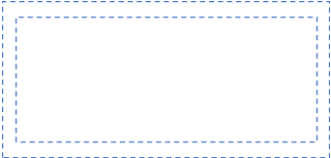
The individual product page contains a description of the product, its related members and area. From an individual product page, its related area, manager, and reference can be accessed through separate links.

The individual team member page contains a description of the team member, their related products and areas. From an individual team member page, the related products and the areas related to them can be accessed through sets of links.

Diagram
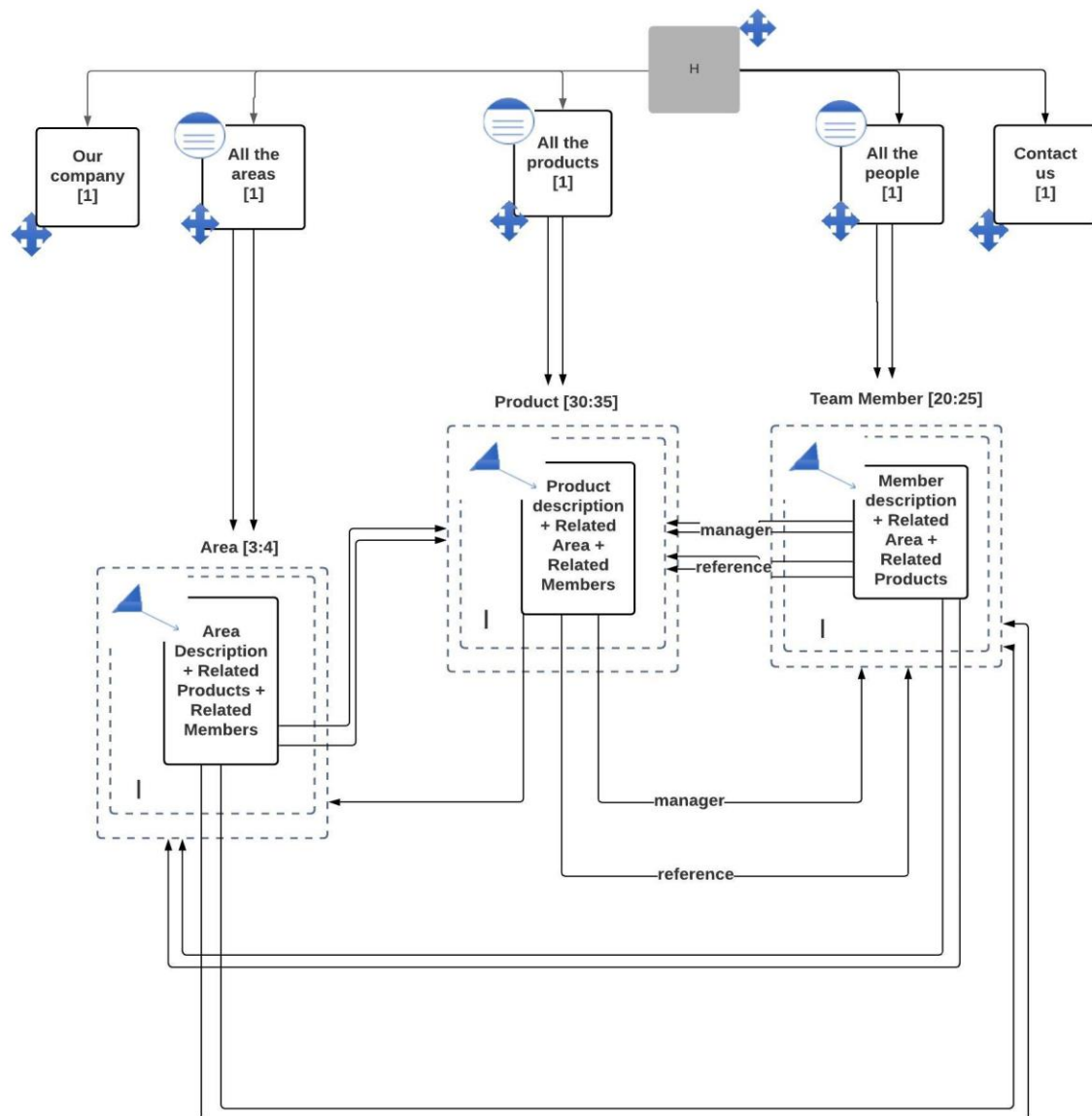
Legend

Symbol	Meaning
✛	To indicate that the page is the destination of a landmark link
⟶	Single link
⟶ ⟶	Set of links
▢	Topic page, multiple topic page
◥↙	To indicate that many Transition links are embedded inside a topic page
I	Index pattern
📄	Introductory page of a single group
H	Homepage
▭	Set of pages or single page corresponding to a multiple topic

VISUAL DESIGN

Low-Fidelity Wireframes

The following Low-Fidelity Wireframes presents the most basic representation of each page of the website with comments. The wireframes are commented in blue and red with information about the content of the page and information of the types of the links.

To maintain readable screenshots not all the links are indicated, and some links that are identical to the indicated ones may have been omitted.

Homepage
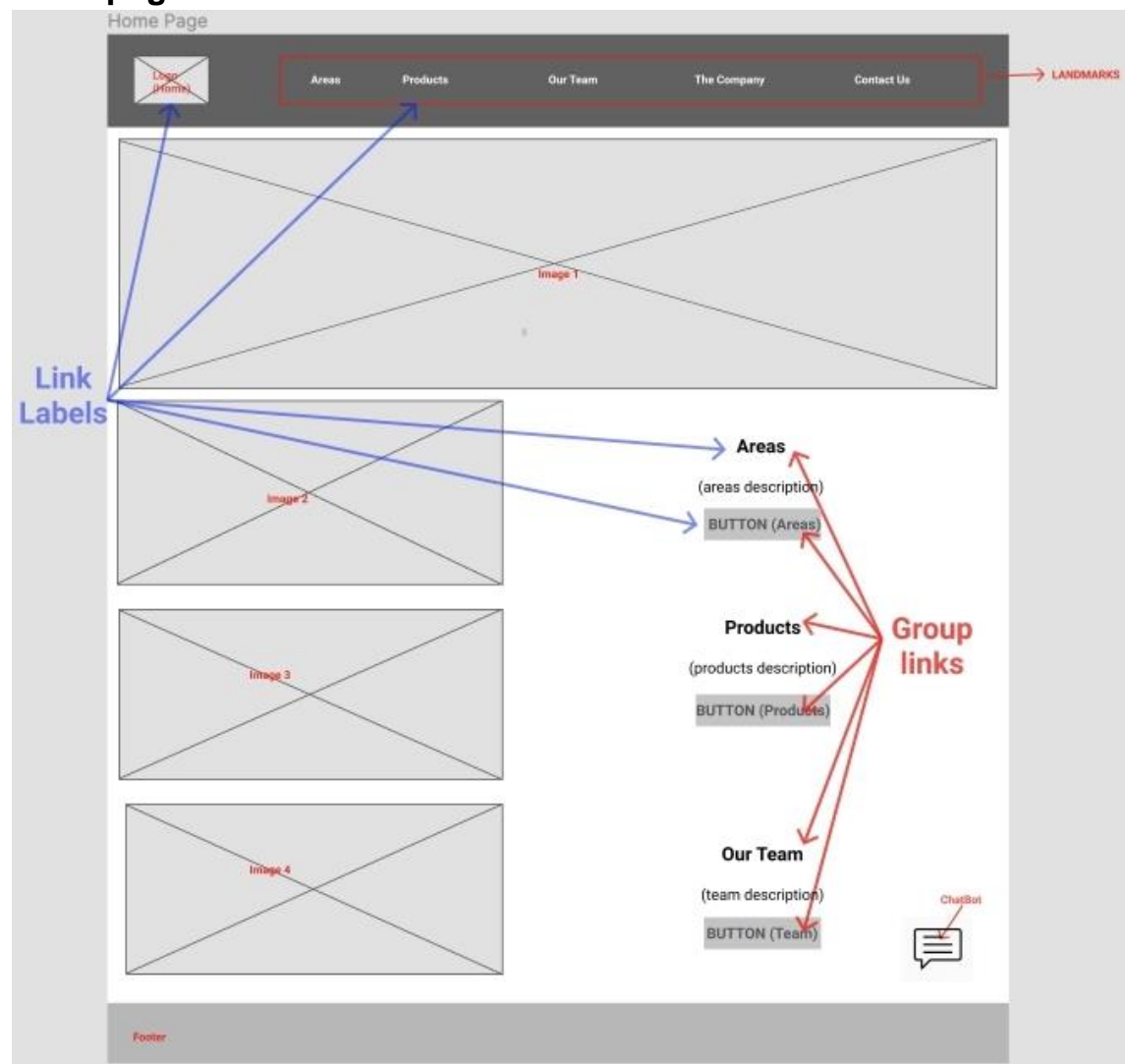
"The Company" page
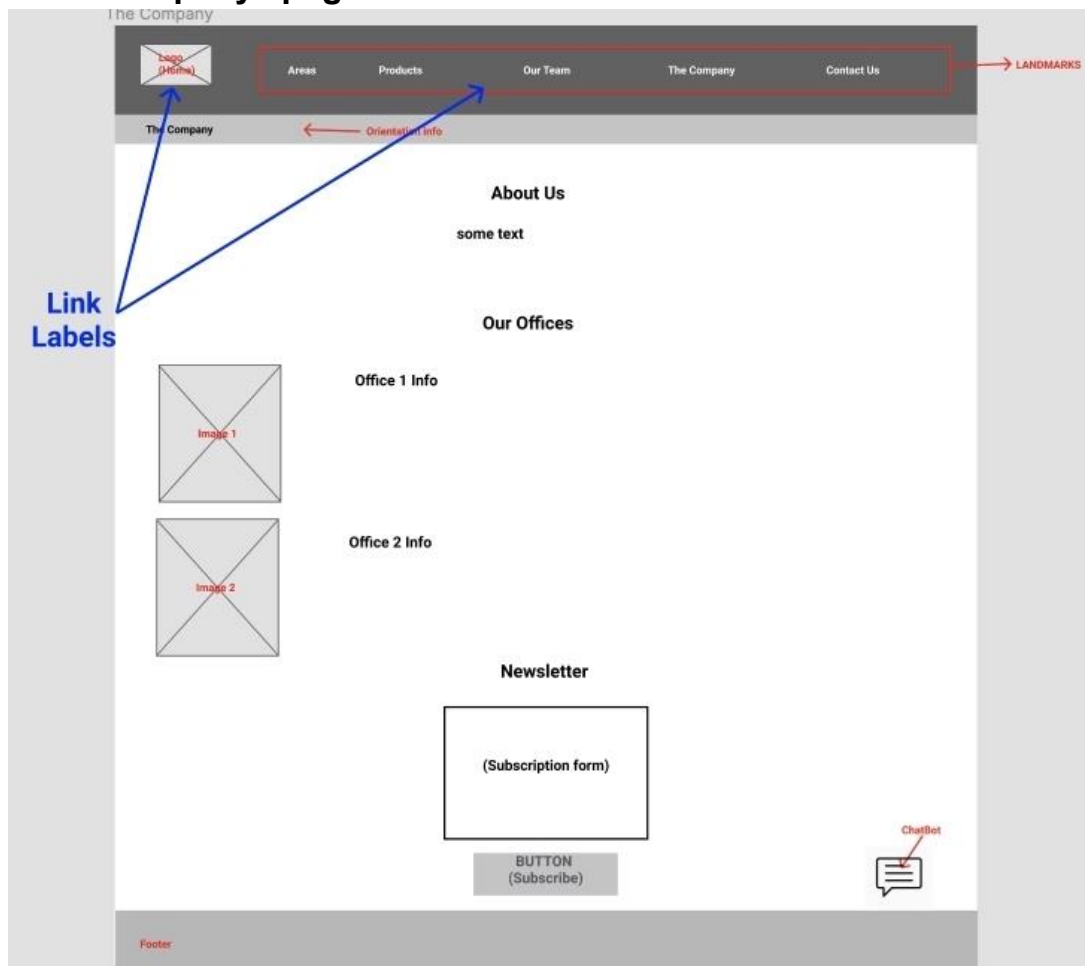
"Contact us" page
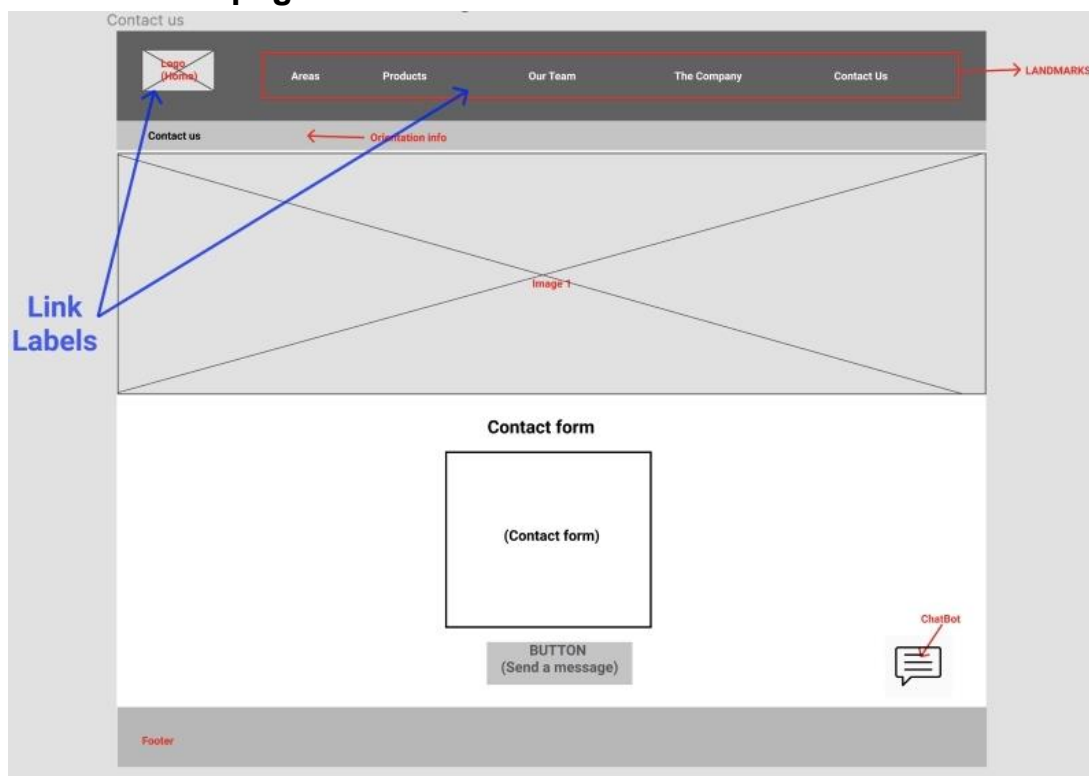
All the products ("Products" page)
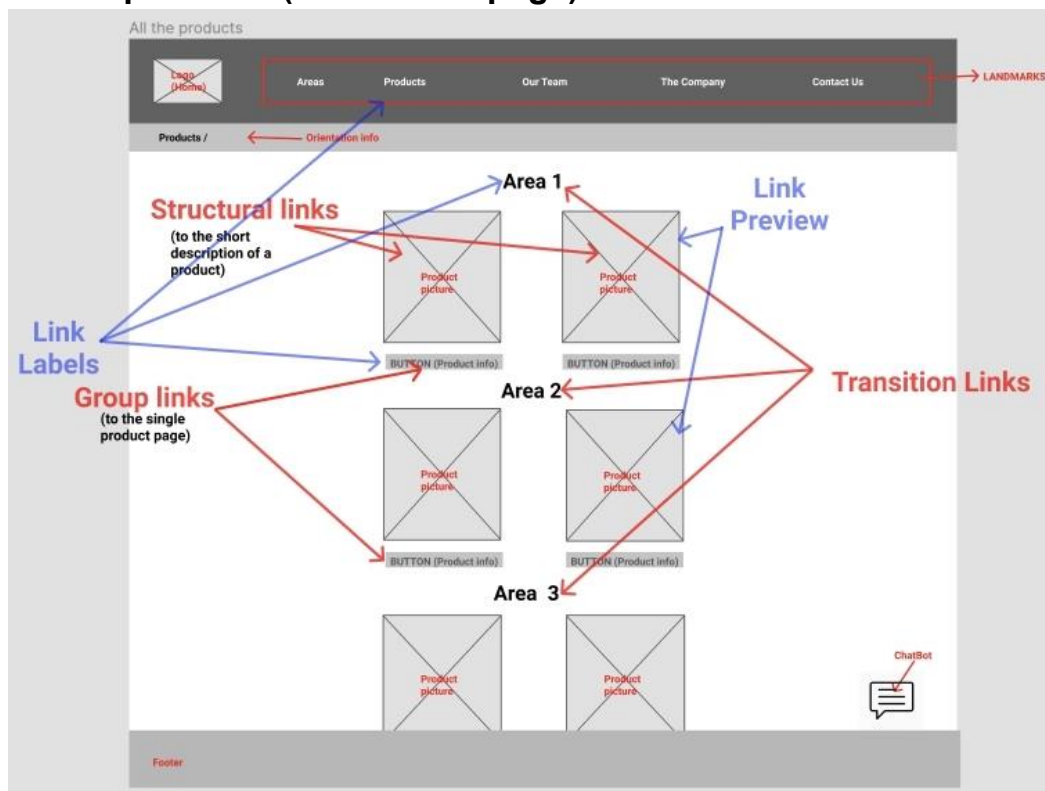
All the people ("Our team" page)
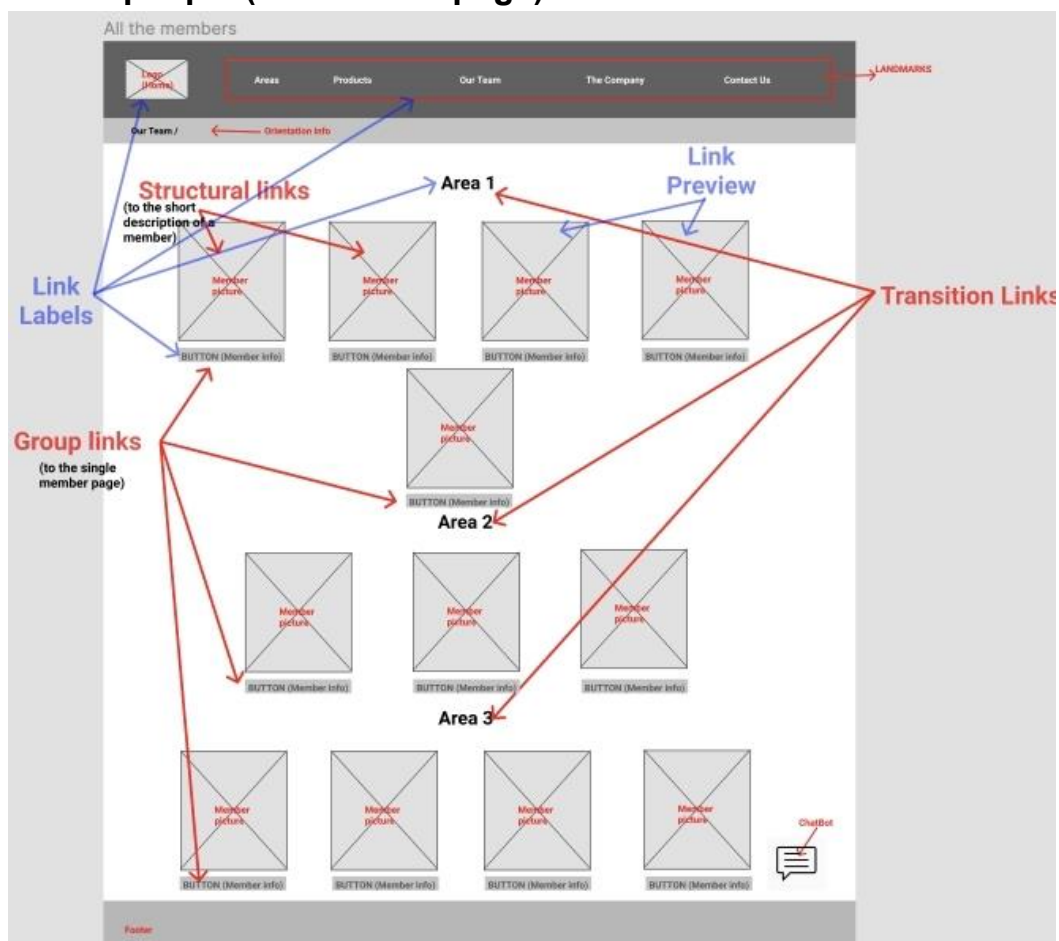
All the areas ("Areas" page)
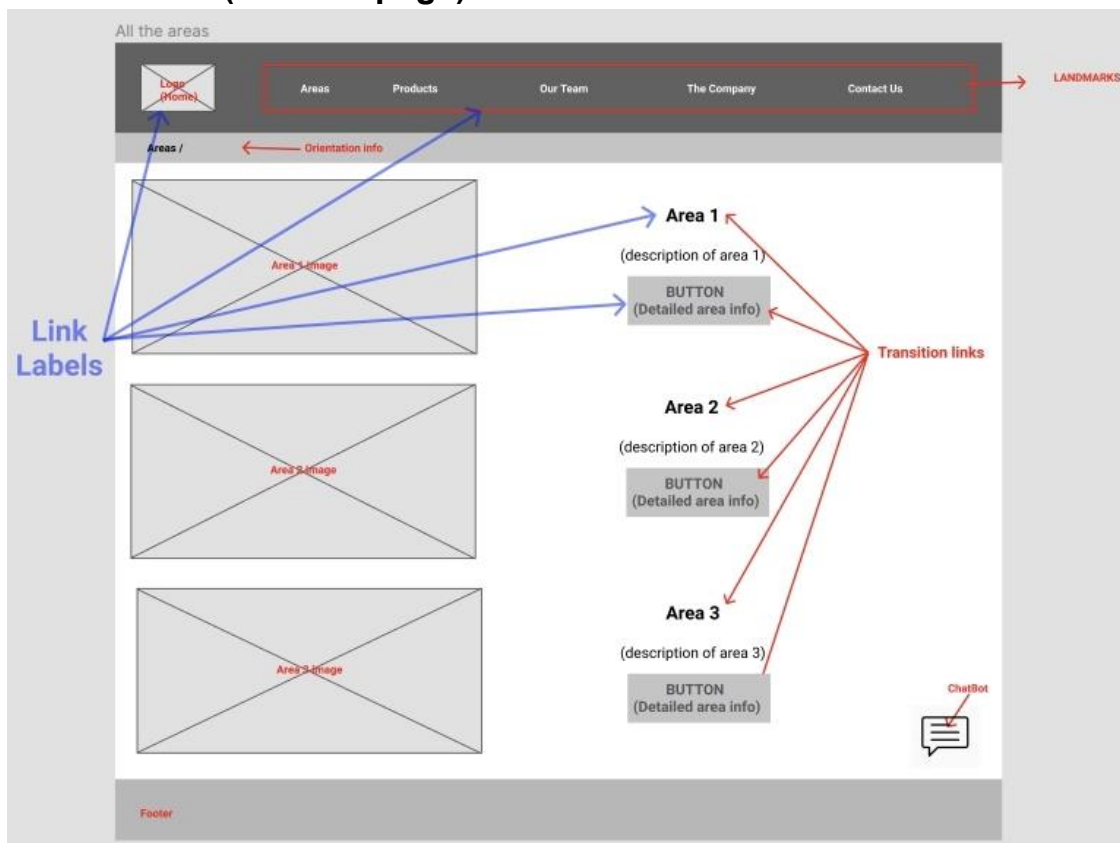
Single Product Page
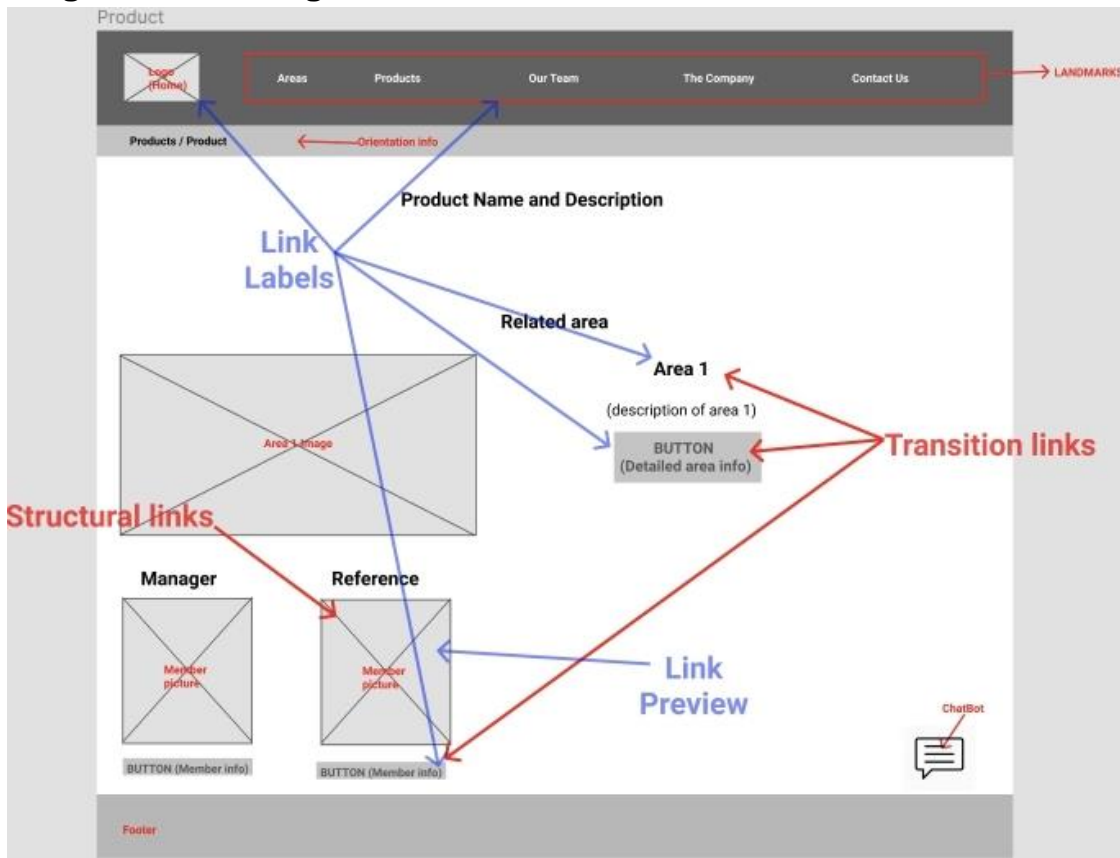
Single Team Member page
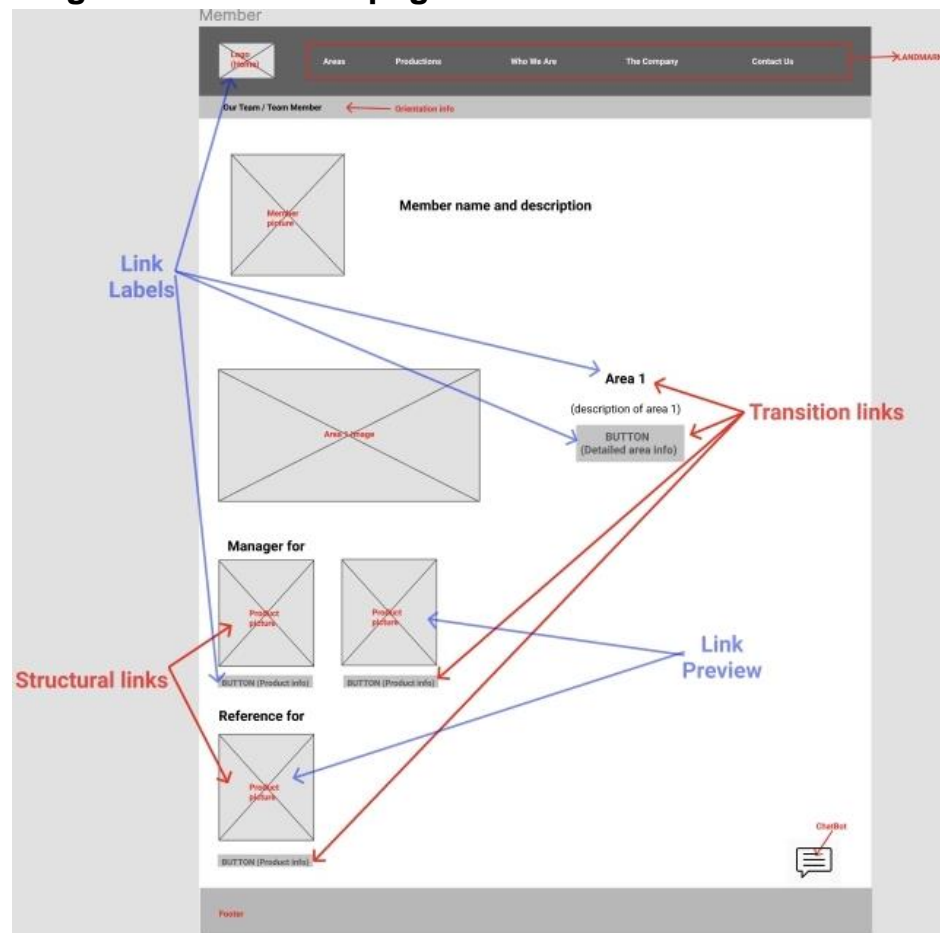
Single Area page
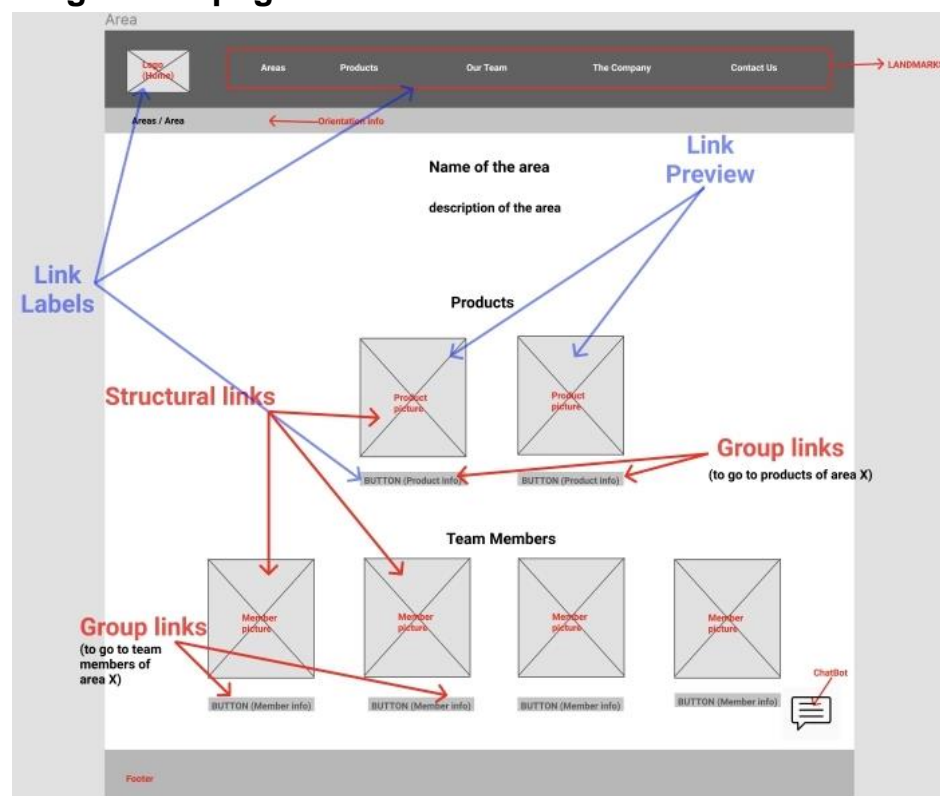
High-Fidelity Wireframes

In the following High-Fidelity Wireframes (from the final version of the website) are highlighted the principal links of each page and it is explained what type they are.

To maintain readable screenshots not all the links are indicated, and some links that are identical to the indicated ones may have been omitted.

Homepage
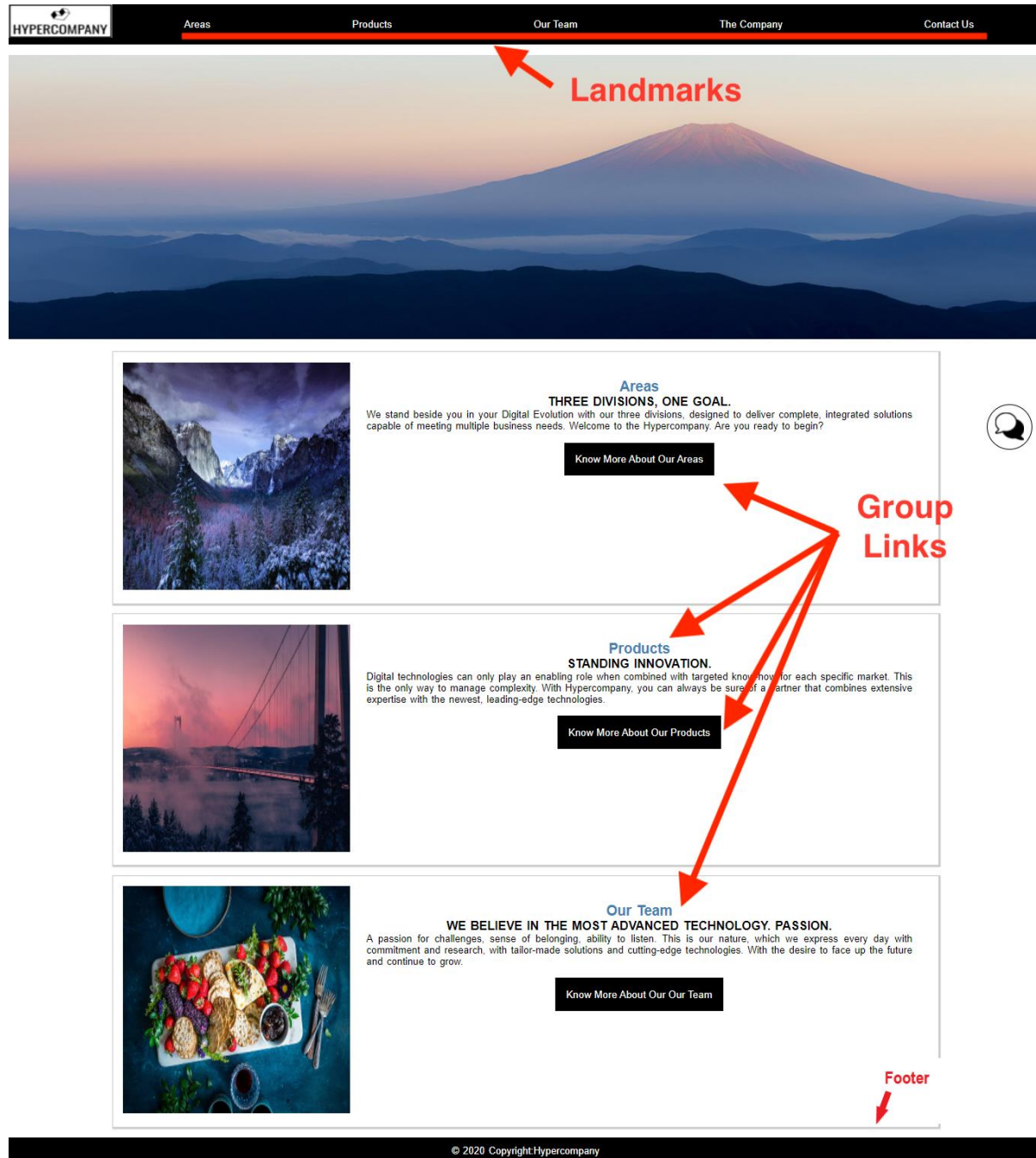
"The Company" page

HYPERCOMPANY   Areas   Products   Our Team   The Company   Contact Us

THE COMPANY

Orientation Info   **Landmarks**

About Us

Hypercompany was founded in the year 2012 by Aida Gasanova, Lorenzo Grossi, Veronica Lucchetti and Sairaghav Venkataraman with the aim of providing much needed end-to-end solutions and services in then-upcoming fields such as Artificial Intelligence, Cloud Computing and Cybersecurity.

Digital Evolution involves everything: this is why it requires relentless innovation, skills and ideas. Over the years, the company has acquired tremendous knowledge and experience in these fields to grow into one of the superior technology companies in Italy.

At Hypercompany, we design and create a virtuous and proactive digital ecosystem, with the goal of continuous improvement of people and resources, technology and knowledge. Interpreting a constantly evolving world requires understanding, foreseeing and always being ready for change.

Our Offices

Milan

Address: Milan, 20133, Italy

Contact Number: + 39 234 567 8910

Contact E-mail: contact-milan@hypercompany.com

Turin

Address: C.so Francia, 112 - 10143 Turin, Italy

Contact Number: + 39 123 567 8910

Contact E-mail: contact-turin@hypercompany.com

Newsletter
Please provide us your details if you wish to subscribe to our newsletter

Name:

Email:

Please fill all the details

Subscribe

Footer

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"Contact us" page

All the products ("Products" page)

All the people ("Our team" page)

All the areas ("Areas" page)

Single Product page

Single Team Member page

HYPERCOMPANY | Areas | Products | Our Team | The Company | Contact Us |

OUR TEAM / AIDA GASANOVA ← **Orientation Info**

Landmarks

Aida Gasanova
COO

Aida Gasanova is one of the founding members of Hypercompany. Her primary areas of expertise are Artificial Intelligence and Cloud Computing. She is the primary manager for our products BankAI and HyperCloudRun. She is based out of Turin office and can be reached at +39-3123456780 or at email agasanova@hypercompany.com.

Transition Links

Related Area

Artificial Intelligence
Hypercompany, thanks to its expertise in AI, Machine Learning and RPA, builds predictive models, robotizes repetitive processes and tasks to optimize business processes, obtain competitive advantages and pursue new business models, improving the customer experience.

View Detailed Area Info

Cloud Computing
Hypercompany provides custom solutions designed to customer requirements, creates Multi-Cloud and Hybrid Cloud environments, and builds simple, secure and fast transition strategies and roadmaps.

View Detailed Area Info

Manager for
(Click on image to toggle short description)

Structural Links

HyperCloudRun

BankAI

Footer

View Detailed Product Info   View Detailed Product Info

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Single Area page

INTERACTION SCENARIOS

First scenario: User searching for a product and related manager

Giulio Rossi is a young developer who is searching for a serverless platform on which he would like to run his new application; Giulio is a great developer and business owner, but he prefers to focus on coding and let a serverless computing platform handle the execution.

He wants to find out if Hypercompany offers this type of product and in that case who is the manager for the product. To do that, Giulio navigates through the homepage, and he finds the landmark which sends him to the products page (1, landmarks). Once landed there, he explores the products and his attention is caught by HyperCloudRun, which seems to fit his specifications. Therefore, he clicks on the product (2, group link) to read more information about it and he finds that Aida Gasanova is the manager for it. Browsing the details about her (3, transition link), he finds the contact information (email and contact number) for her and decides to reach out to her to enquire about the product.

1, landmark:

2, group link:

3, transition link:

Second scenario: User contacting Hypercompany for general enquiry

Francesca Bizzetti is passionate about Artificial Intelligence, and she is about to complete her degree in Automation Engineering. For her thesis work, she wants to focus on Robot Process Automation. Her thesis reference suggests she asks Hypercompany about the development of a very innovative artificial intelligence product called HyperPA, to collect as much information as possible before starting her project.

Francesca therefore navigates through the website starting from the homepage and she immediately notices the link to the areas page in landmarks (1, landmarks); navigating through the area page she finds what she was looking for: the Artificial Intelligence page (2, transition link), and through that she finds the HyperPa product. After reading the description of the product (3, structural link), she realizes she needs more information and therefore she moves to the contact us page (4, landmarks). She is very happy to find out that there is the possibility to send a message to the company and she decides to ask for all the information she needs to collect!

1, landmarks:
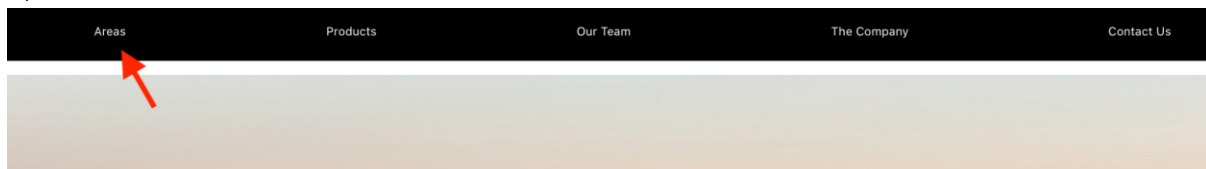
2, transition link:

3, structural link:

4, landmarks:

Third scenario: User looking for information about Hypercompany

Paolo Gasanov is very proud of his daughter Aida because she called him to announce that she was hired as a new member of a prestigious ICT Company called Hypermedia. Paolo is very curious about this, and he wants to find out more about this company, but he especially wants to find out what her daughter's role is in it.

Paolo starts his research, and he accurately reads everything he finds on the homepage. Reaching the end of the homepage, he decides to explore the section about the team (1, group link) and he immediately finds his daughter's picture and that she has been hired as a COO. Clicking on her daughter's image (2, structural link) he can discover more information about her role in the company. Despite this, he is still not satisfied with the information found, so he decides to explore the Company section (3, landmarks) to learn as much as possible about his daughter's new job.

1, group link:

2, structural link:
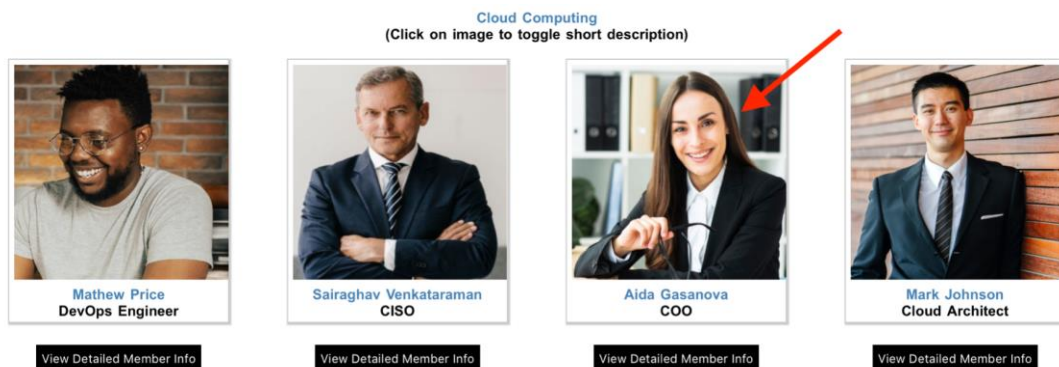
Cloud Computing
(Click on image to toggle short description)

Mathew Price
DevOps Engineer

View Detailed Member Info

Sairaghav Venkataraman
CISO

View Detailed Member Info

Aida Gasanova
COO
Aida Gasanova is one of the founding members of Hypercompany. Her primary areas of expertise are Artificial Intelligence and Cloud Computing.

View Detailed Member Info

Mark Johnson
Cloud Architect

View Detailed Member Info

3, landmarks

Areas   Products   Our Team   The Company   Contact Us

About Us

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Our Offices

Milan

Address: Milan, 20133, Italy

Contact Number: + 39 234 567 8910

Contact E-mail: contact-milan@hypercompany.com

DB DESIGN

The backend database used in this website is PostgreSQL which is accessed using the plugin Sequelize. There are 3 tables used in the website:
1. Areas
2. Members
3. Products

ER Schema

The relationship between the tables are as follows:
- 'area' field of "members" table contains values of 'name' field from the "areas" table, separated by comma (1 -> Many relationship)
- 'area' field of "products" table contains a value of 'name' field from the "areas" table (1 -> 1 relationship)
- 'manager' field of "products" table contains a value of 'name' field from the "members" table (1 -> 1 relationship)
- 'reference' field of "products" table contains a value of 'name' field from the "members" table (1 -> 1 relationship)

Logic Design

The relational tables used in the website with the attributes and their descriptions are as follows:

Areas table

Field Name	Field Type	Field Description
id	INTEGER	Primary key
name	VARCHAR	Contains name of the area
short_description	VARCHAR	Contains a short description of the area
description	VARCHAR	Contains a full description of the area
image	VARCHAR	Contains the image path of the area
createdAt	DATETIME	Contains the created date of record. Automatically added by Sequelize

Field Name	Field Type	Field Description
updatedAt	DATETIME	Contains the updated date of record. Automatically added by Sequelize

Members table

Field Name	Field Type	Field Description
id	INTEGER	Primary key
name	VARCHAR	Contains name of the member
short_description	VARCHAR	Contains a short description of the member
description	VARCHAR	Contains a full description of the member
image	VARCHAR	Contains the image path of the member
designation	VARCHAR	Contains the designation of the member
area	VARCHAR	Contains all the areas of the member separated by Comma
createdAt	DATETIME	Contains the created date of record. Automatically added by Sequelize
updatedAt	DATETIME	Contains the updated date of record. Automatically added by Sequelize

Products table

Field Name	Field Type	Field Description
id	INTEGER	Primary key
name	VARCHAR	Contains name of the product

Field Name	Field Type	Field Description
short_description	VARCHAR	Contains a short description of the product
description	VARCHAR	Contains a full description of the product
image	VARCHAR	Contains the image path of the product
manager	VARCHAR	Contains the manager of the product
reference	VARCHAR	Contains the reference of the product
area	VARCHAR	Contains the area of the product
createdAt	DATETIME	Contains the created date of record. Automatically added by Sequelize
updatedAt	DATETIME	Contains the updated date of record. Automatically added by Sequelize

CHATBOT

Chatbot Model

The chatbot presents users with two options:

1. **Guide:** Navigates through Homepage, Areas page, Products page, Our Team page and then presents users an option to either go to The Company or Contact Us page. Depending on the user's choice, it displays the corresponding page and then exits.

2. **Contact:** Presents users an option to either go to The Company which displays contact information of each office of Hypercompany or Contact Us page which provides a form to contact Hypercompany. Depending on the user's choice, it displays the corresponding page and then exits.
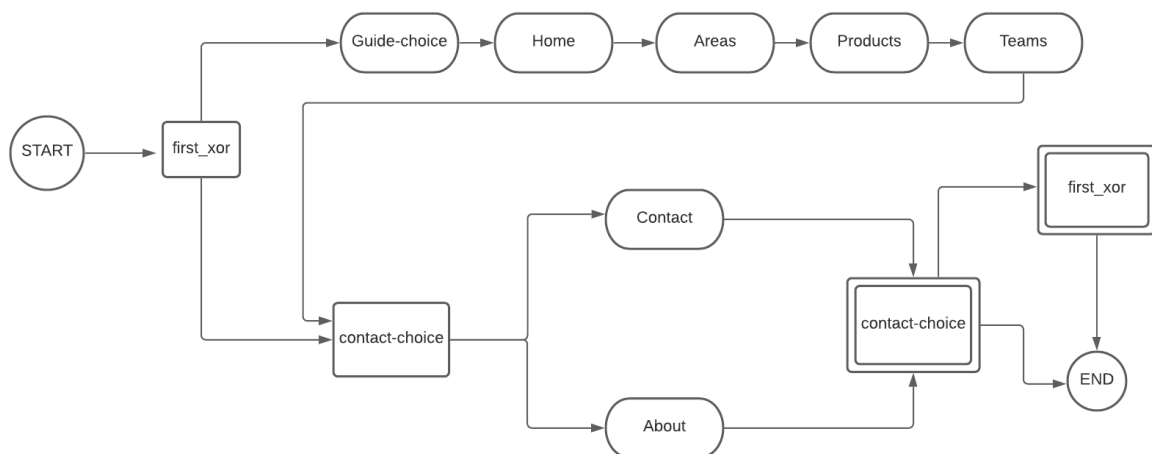
Chatbot State Description

The different states configured in the chatbot are as follows:

State	Description	Chatbot Message	Expected Response	Page Displayed	Next Step	Error message
first_xor	XOR that provides the option to choose between "Guide" or "Contact"	Hello! I am HyperBot, here to help you. Please type what you want to do:\n1. Guide through the website\n2. Contact Us	["I want to go to guide","guide", "guide me","website", "Website","Guide","1"] or ["I want to go to contact","contact", "contact us","Contact", "2"]	Current page where user has already navigated to	Either "guide-choice" or "contact-choice" based on user response	I cannot understand. Please enter "guide" or "contact" to continue.
guide-choice	Task which starts the website guide.	This is the guide! Please do not click on any links on the website while the guide is ongoing. Type either "continue" or "next" to move to the next stage of the guide.	["continue","next","Continue","Next"]	Current page where user has already navigated to	home	I don't understand. Do you want to continue? Enter either next or continue

State	Description	Chatbot Message	Expected Response	Page Displayed	Next Step	Error message
contact-choice	XOR that provides the option to choose either "The Company" page or "Contact Us" page.	You can choose to do one of the following: 1. View information about our company\n2. Submit contact form	["view","information", "details","View","Information","Details","1", "about", "About"] or ["I want to go to contact","contact page", "contact us","2", "form", "Form", "contact","Contact"]	Current page where user has already navigated to	Either "about" or "contact" based on user response	I cannot understand. Please enter "about" or "contact" to continue.
home	Guide for homepage	This is our home page! Please feel free to browse to each section at your own pace. Once you're done, let me know and I can continue to the next step of the guide	["continue","next","Continue","Next"]	/ (Homepage)	products	I don't understand. Do you want to continue? Enter either next or continue

State	Description	Chatbot Message	Expected Response	Page Displayed	Next Step	Error message
areas	Guide for Areas page	This is our Areas page! Here you can see all the areas that we work in! Once you're done, let me know and I can continue to the next step of the guide	["continue","next","Continue","Next"]	/areas	products	I don't understand. Do you want to continue? Enter either next or continue
products	Guide for Products page	This is our Products page! Here you can see all the products that we have built! Once you're done, let me know and I can continue to the next step of the guide	["continue","next","Continue","Next"]	/products	teams	I don't understand. Do you want to continue? Enter either next or continue

State	Description	Chatbot Message	Expected Response	Page Displayed	Next Step	Error message
teams	Guide for Our Team page	This is Our Team page! Here you can see all the brilliant people that build our products! We are almost done with the guide. You will be provided a choice in the next step.	["continue","next","Continue","Next"]	/our_team	contact-choice	I don't understand. Do you want to continue? Enter either next or continue
about	Guide for The Company page	This is The Company page! Here you can see who we are! You can also check out the contact information of any of our office locations specified in the "Our Offices" section.	["continue","next","Continue","Next"]	/the_company	Null	I don't understand. Do you want to continue? Enter either next or continue

State	Description	Chatbot Message	Expected Response	Page Displayed	Next Step	Error message
contact	Guide for Contact Us page	This is Contact page! Here you can send us a message!	["continue","next","Continue","Next"]	/contact_us	null	I don't understand. Do you want to continue? Enter either next or continue

Chatbot Sequence Diagram