D6.4

Project website

AUS

Funded by
the European Union

© **SYNTHEMA** 2022-2026

Revision v1.0

Work package	WP6
Task	T6.2
Due date	28-02-2023
Submission date	28-02-2023
Deliverable lead	AUSTRALO
Version	v1.0
Authors	Arantxa Echarte (AUS), Diana López (AUS)
Reviewers	Gustavo Hernández (UPM), Anna Rizzo (DW)

Abstract

The SYNTHEMA website (www.synthema.eu) includes key information about the project and aims to communicate to both professionals and wider audiences.

Keywords

About, team, structure, use cases, haematological data, health data, haematological diseases, federated computing networks, artificial intelligence techniques, synthetic data, virtual patients, rare disease, Sickle Cell Disease (SCD), Acute Myeloid Leukaemia (AML), privacy-by-design, ethics and data protection, clinical data anonymisation, European Health Data Space, secure multi-party computation

Document revision history

Version	Date	Description of change	Contributor(s)
v0.1	23-01-2023	1st version of deliverable template	Arantxa Echarte (AUS), Diana López (AUS)
v0.2	28-02-2023	Deliverable content revision	Anna Rizzo (DW)
v0.3	28-02-2023	Deliverable content revision	Arantxa Echarte (AUS), Diana López (AUS)
V1.0	28-02-2023	Final version of the deliverable	Gustavo Hernández (UPM)

Disclaimer

The information, documentation and figures available in this deliverable are provided by the SYNTHEMA project's consortium under EC grant agreement **101095530** and do not necessarily reflect the views of the European Commission. The European Commission is not liable for any use that may be made of the information contained herein.

Copyright notice

© SYNTHEMA 2022-2026

Document information

Nature of the deliverable*		**DEC**
Dissemination level		
PU	Public, fully open. e.g., website	✓
CL	Classified information as referred to in Commission Decision 2001/844/EC	
SEN	Confidential to SYNTHEMA project and Commission Services	

* Deliverable types:
R: document, report (excluding periodic and final reports).
DEM: demonstrator, pilot, prototype, plan designs.
DEC: websites, patent filings, press and media actions, videos, etc.
OTHER: software, technical diagrams, etc.

Table of contents

1 Executive summary 6
2 Introduction to SYNTHEMA 7
3 Visual identity 7
4 Website 8
4.1 Site map 8
4.2 Main sections and pages 9
4.2.1 HOME 9
4.2.2 ABOUT 11
4.2.3 USE CASES 13
4.2.4 TEAM 15
4.3 Additional sections 17
4.3.1 NEWS 17
4.3.2 CONTACT 17
4.3.3 PUBLICATIONS 17
5 Conclusions 18

List of figures

Figure 1. SYNTHEMA – Site map 8
Figure 2. SYNTHEMA – HOME page 10
Figure 3. SYNTHEMA – ABOUT page 12
Figure 4. SYNTHEMA – USE CASES 14
Figure 5. SYNTHEMA – TEAM 16

Acronyms and definitions

AI	Artificial Intelligence
AML	Acute Myeloid Leukaemia
DoA	Description of Action
DP	Differential privacy
EHDS	European Health Data Space
ENROL	European Rare Blood Disorders Platform
ERDRI	European Rare Disease Registry Infrastructure
EU RD platform	European Platform on Rare Disease Registration
FL	Federated learning
KPI	Key Performance Indicators
GDPR	General Data Protection Regulation
MDS	Myelodysplastic syndrome
RHD	Rare haematological diseases
SCD	Sickle Cell Disease
SDG	Synthetic Data Generation
SME	Small and Medium Enterprise
SMPC	Secure multi-party computation
WP	Work Package

1 Executive summary

In order to systematically increase the public visibility of SYNTHEMA and subsequently also its outcomes, a project website has been created (www.synthema.eu). The public project website enables the general public and relevant stakeholders to be informed about the project objectives and approach, its news and results and it provides the contact information of the project partners.

Other communication tools (such as branded templates, flyers, online publishing, etc.) as well as dissemination activities will be described in detail in **D6.1 – Impact master plan**, which will be released in M6.

The website will be the primary asset for promoting project activities and results to all target audiences, providing comprehensive information about its objectives, team, events, pointing at outside related resources. The project will consider eco-friendly hosting providers with servers in the EU (A2Hosting). Moreover, the website follows the EU recommendation regarding usability and accessibility, and it includes the logo of the European Commission.

The website sections are:

- **HOME**: the Home section includes a general description, mission and challenges, objectives and concept of the project.
- **ABOUT**: the About section includes information about the European Health Data Space (EHDS), the main goal and the key drives for the platform.
- **USE CASES**: the Use Cases section includes an introduction to Haematological diseases and the two specific Use Cases: *Sickle cell disease* (SCD) and *Acute myeloid leukaemia* (AML).
- **TEAM**: this section includes an introduction to ERN-EuroBloodNet and ENROL networks, and also details about the project partners, including a link to their websites for further information.
- **NEWS**: a collection of news pieces and updates related to the project.
- **CONTACT**: this section provides information on how to contact the project team and request further information about the project.

Through the website we aim to comply with specific project objectives and KPIs, like for example, communication, dissemination, multimedia (teaser video, interviews, short clips) distribution, website visitors (300 unique visitors/month on average) and non-scientific publications. Additionally, open access to the raw datasets via the individual repositories will be ensured through the SYNTHEMA community profile on specialised public access databases like Zenodo, DataHub.io, Frictionless Data and Open-AIRE, Portal of Medical Data Models, among others. Hyperlinks to all access points will be given on the SYNTHEMA website.

All partners will contribute to the website contents. However, the day-to-day management will be AUSTRALO's responsibility.

2 Introduction to SYNTHEMA

SYNTHEMA aims to establish a privacy-preserving, cross-border hub to develop and validate innovative *Artificial intelligence* (AI) models for clinical data anonymisation and synthetic data generation in rare hematological diseases.

Haematological diseases are a large group of disorders resulting from abnormalities in blood cells, lymphoid organs and coagulation factors. Rare hematological diseases inherently suffer from data scarcity and fragmentation, but there is also the dilemma of data privacy and protection. Can we talk about full anonymity when the risk of re-identification is so high? How can we generate meaningful synthetic data to circumvent the lack of quality data to train AI models on?

The overarching ambition of SYNTHEMA is to increase the number of existing samples in this disease space (with a focus on two highly representative use cases: SCD and AML), thus fighting off the critical issues of data scarcity and fragmentation and pushing the boundaries of patient-centric, GDPR-compliant research.

SYNTHEMA enjoys the support, resources and active participation of ERN-EuroBloodNet, as the European Reference Network on rare haematological diseases (RHDs) concentrating 103 highly specialised multidisciplinary healthcare teams in 24 Member States. Moreover, the European Rare Blood Disorders Platform (ENROL), conceived in the core of ERN-EuroBloodNet in line with the EC strategy for Rare Diseases as an umbrella for new and existing RHDs registries, directly contributes to SYNTHEMA on the promotion of interoperability standards of the EU RD platform to tackle the scarcity and fragmentation of data and widen the basis for GDPR-compliant research in RHDs.

3 Visual identity

In order to reach a broad external as well as internal audience, a project visual identity has been created. The main goal is to establish and convey a coherent image and brand recognition leading to an optimal presentation and recognition of the project.

The visual identity uses a set of graphic elements to easily identify the project. The overall aim is to create a coherent and highly recognisable image of the project to support communication and dissemination measures, such as publications and all kinds of written as well as visual communication about on-going and completed research activities.

Additionally, social media banners, common templates for written deliverables (MS Word, see format of this report), minutes of meeting and presentations (MS PowerPoint) have been created. In pursuance of a consistent brand identity, the design of the templates follows the same style of the logos.

Further information on the project visual identity regarding its function and implementation in other dissemination tools will be described in detail in D6.1 (Impact master plan).

4 Website

The project public website is a key instrument to maximise visibility of the project and the main entry point to showcase its main ideas and approach, news, findings and results, introducing visitors to the project rationale and educating them on its concept.

4.1 Site map

A complete sitemap is presented below. The website structure and navigation menus will be expanded and fine-tuned as the project progresses and there is more content hosted online.

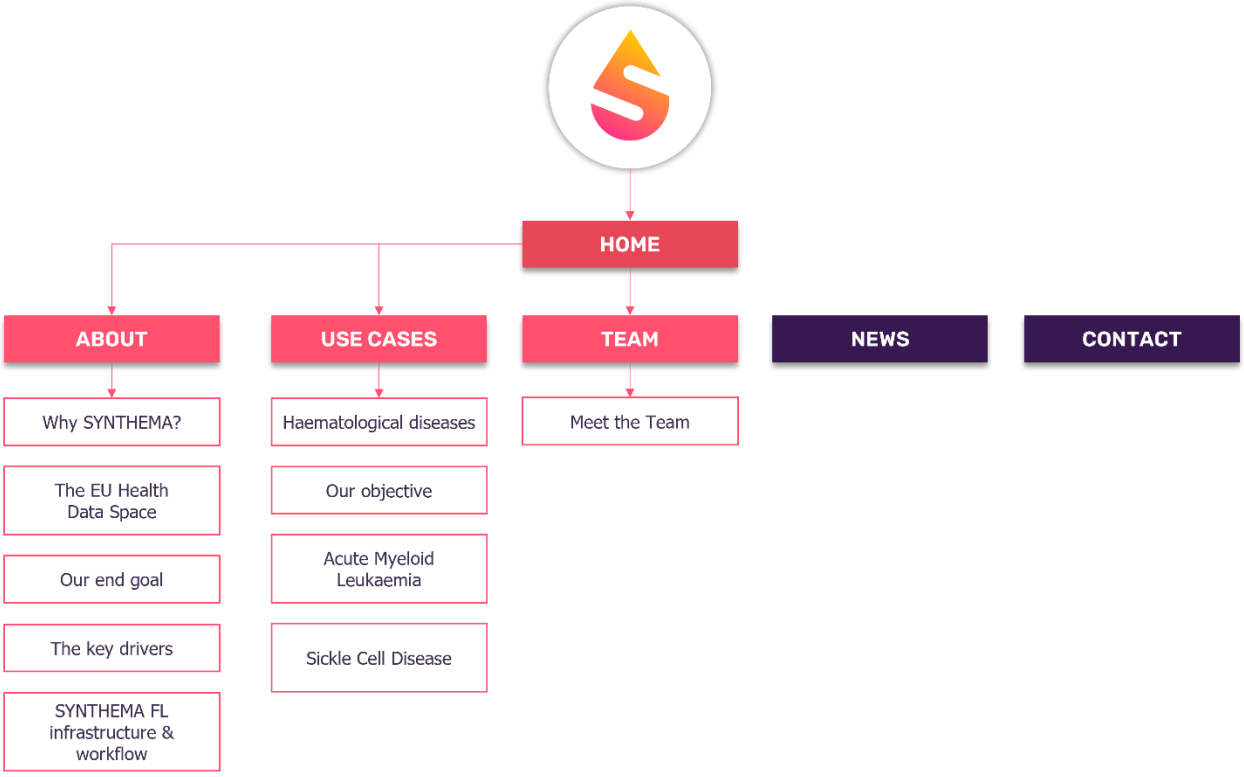
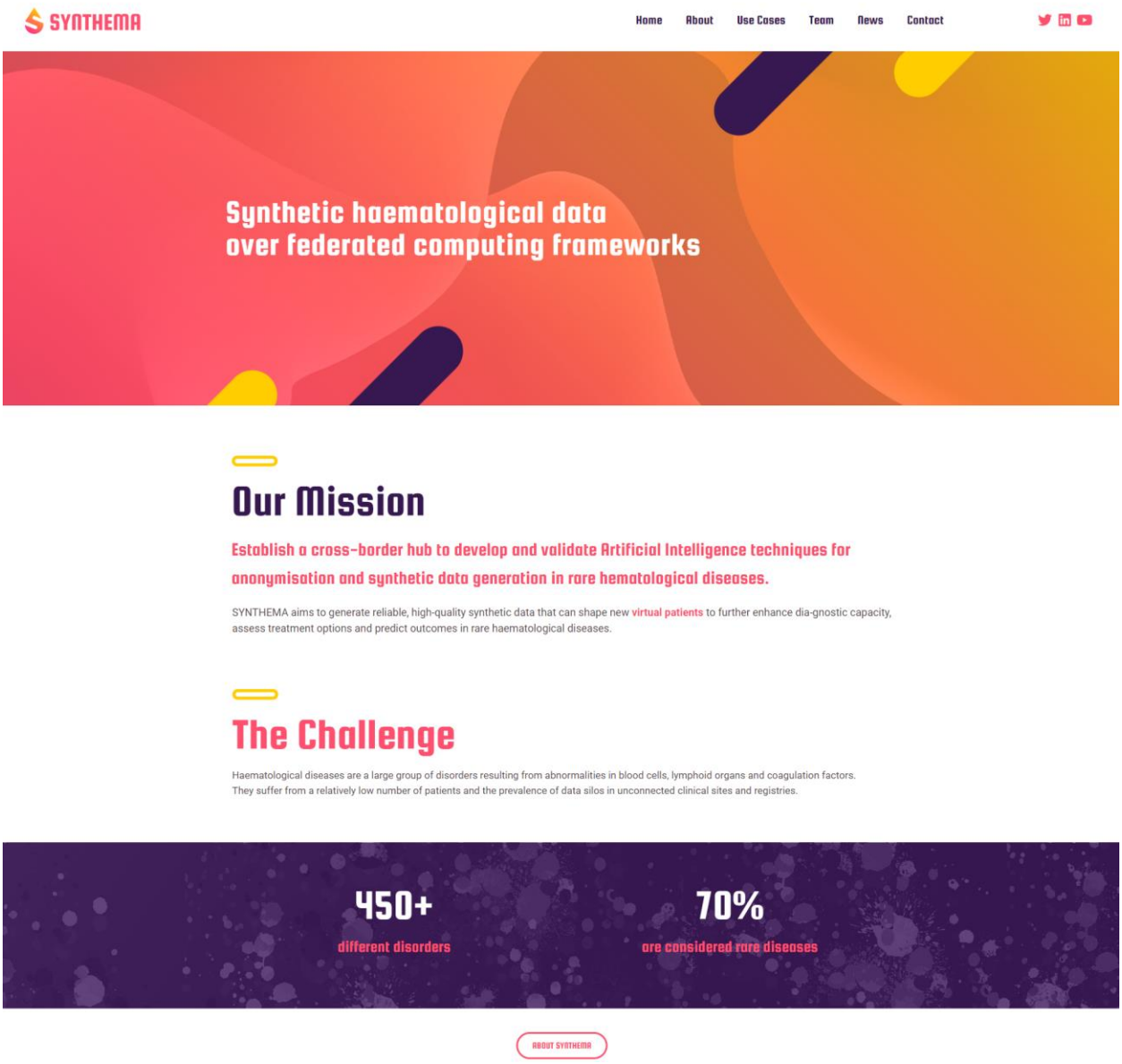


Figure 1. SYNTHEMA – Site map

4.2 Main sections and pages

4.2.1 HOME

The website landing page. This section includes our "main headlines" for the project – it is a straightforward, visually attractive, to-the-point overview of the project vision, goals and our key message. The homepage has been designed to grab the user´s attention and guide them effectively to any other section on the website to keep them engaged.



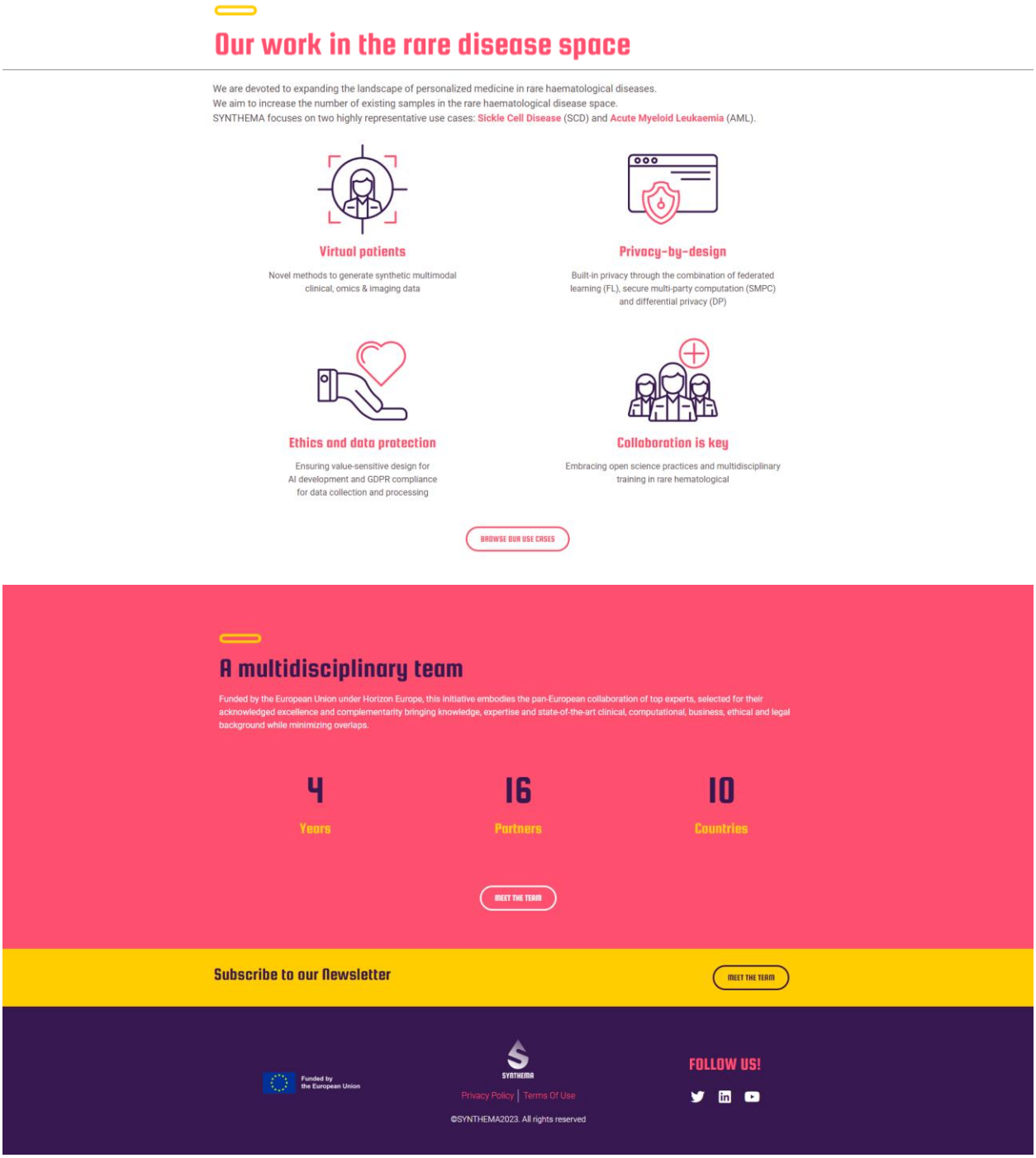
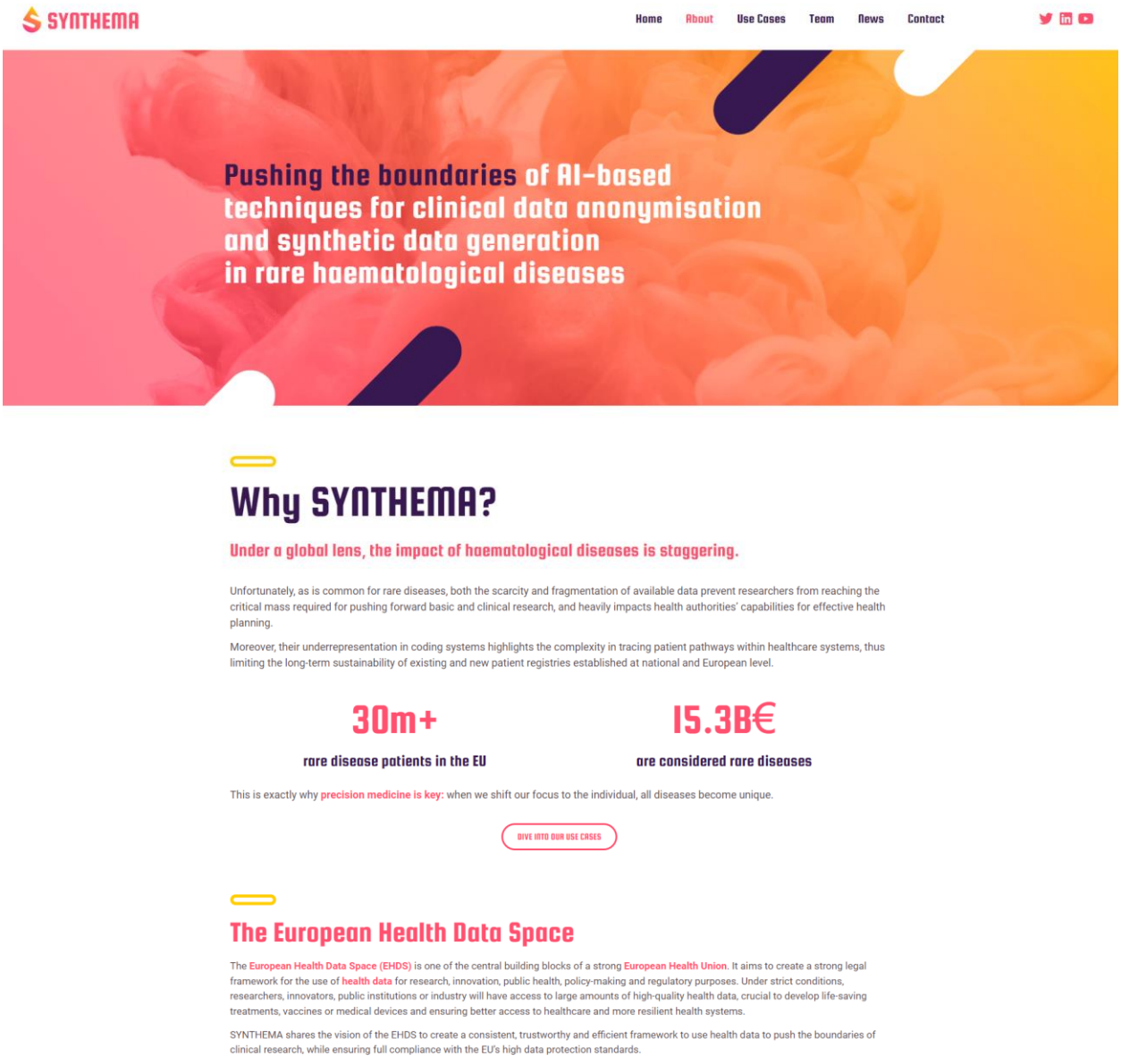


Figure 2. SYNTHEMA – HOME page

4.2.2 ABOUT

The About page offers a more in-depth look into the project innovations and methodology. Here, we have showcased more detailed information about SYNTHEMA context, targets, key drivers and overall technical framework.



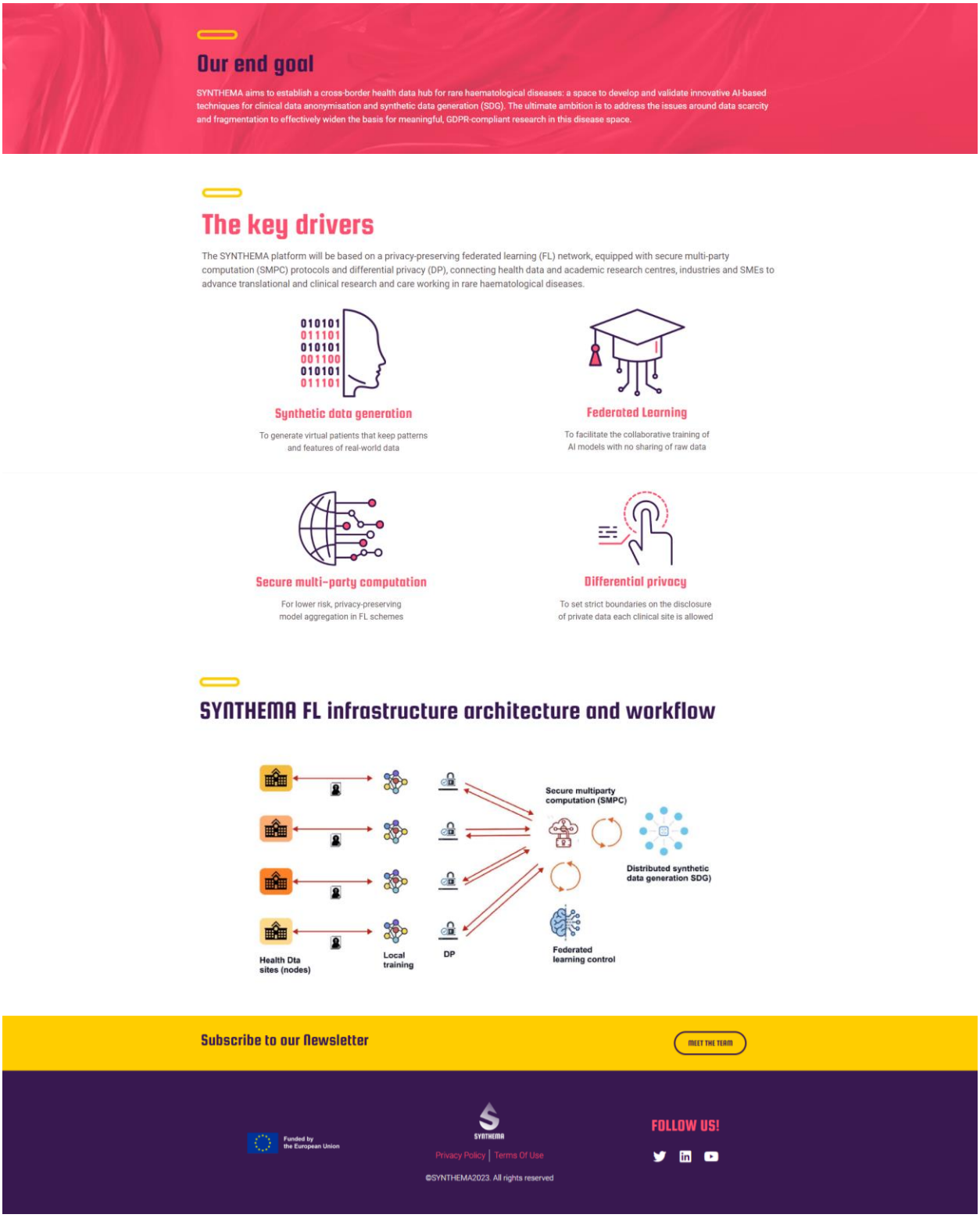
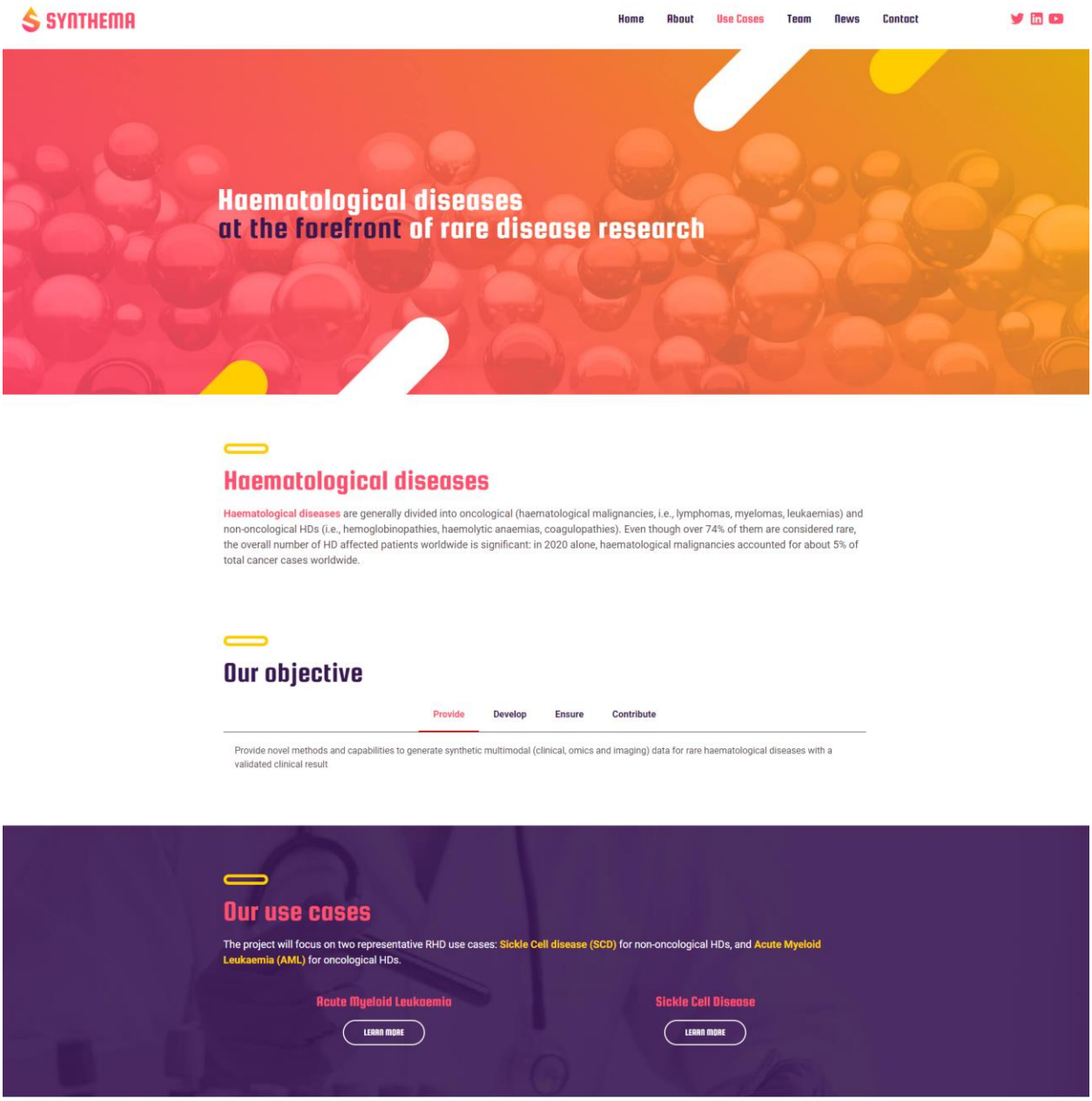


Figure 3. SYNTHEMA – ABOUT page

4.2.3 USE CASES

This section provides an overview of the different disease use cases planned within the project. In our case, the spotlight is on AML and SCD. For both, this page contextualizes the disease and outlines the project goals, focus and partners involved in the effort.



Acute Myeloid Leukaemia

The disease

Acute Myeloid Leukemia (AML) is a type of blood cancer that starts from young white blood cells in the bone marrow. The bone marrow is the soft inner part of the bones, where new blood cells are made.

The bone marrow produces white blood cells called granulocytes or monocytes too quickly because they grow and divide too fast. These abnormal cells build up in the blood and bone marrow and can eventually spread to other parts of the body including the lymph nodes and the spleen.

It is the most common type of acute leukemia in adults. AML can get worse quickly if it is not treated, however, treatments work very well for most people.

Validation

For AML, validation scenarios will assess performance of synthetic data in determining overall survival and treatment response prediction based on clinical-genomic profiles.

Cohort

The AML use case will include 2,500+ patients with "de novo" AML (2016 World Health Organisation/WHO classification criteria) and 2,000+ patients with myelodysplastic syndrome (MDS), a pre-leukemic condition that can evolve into AML and allows us to study the transition between the chronic and acute disease phase.

Sickle Cell Disease

The disease

Sickle Cell Disease (SCD) is a group of hereditary red blood cell disorders. It is a rare, chronic and life-threatening disease. In patients with SCD, red blood cells become C-shaped in resemblance to a sickle, the farming tool the disease is named after.

Sickle cells die early and tend to clog the blood flow when going through small blood vessels, so patients usually suffer from low red blood cell counts, infections, acute chest syndrome and strokes.

Treatment for sickle cell disease is limited. However, following improvements in preventative treatment, many complications associated with sickle cell disease can be avoided or delayed.

Validation

For SCD, validation scenarios will test the reliability of synthetic data in regards to genomic variants/disease phenotypes association and MRI feature-based prediction of brain vascular events (SCD).

Cohort

The SCD use case will include 1,000+ patients with genetic diagnosis for SCD disorder, including paediatric (1+ year-olds) and adult patients (exclusion criteria: transplanted patients, 1 year-old or younger).

Subscribe to our Newsletter

MEET THE TEAM

Funded by the European Union

SYNTHEMA

Privacy Policy | Terms Of Use

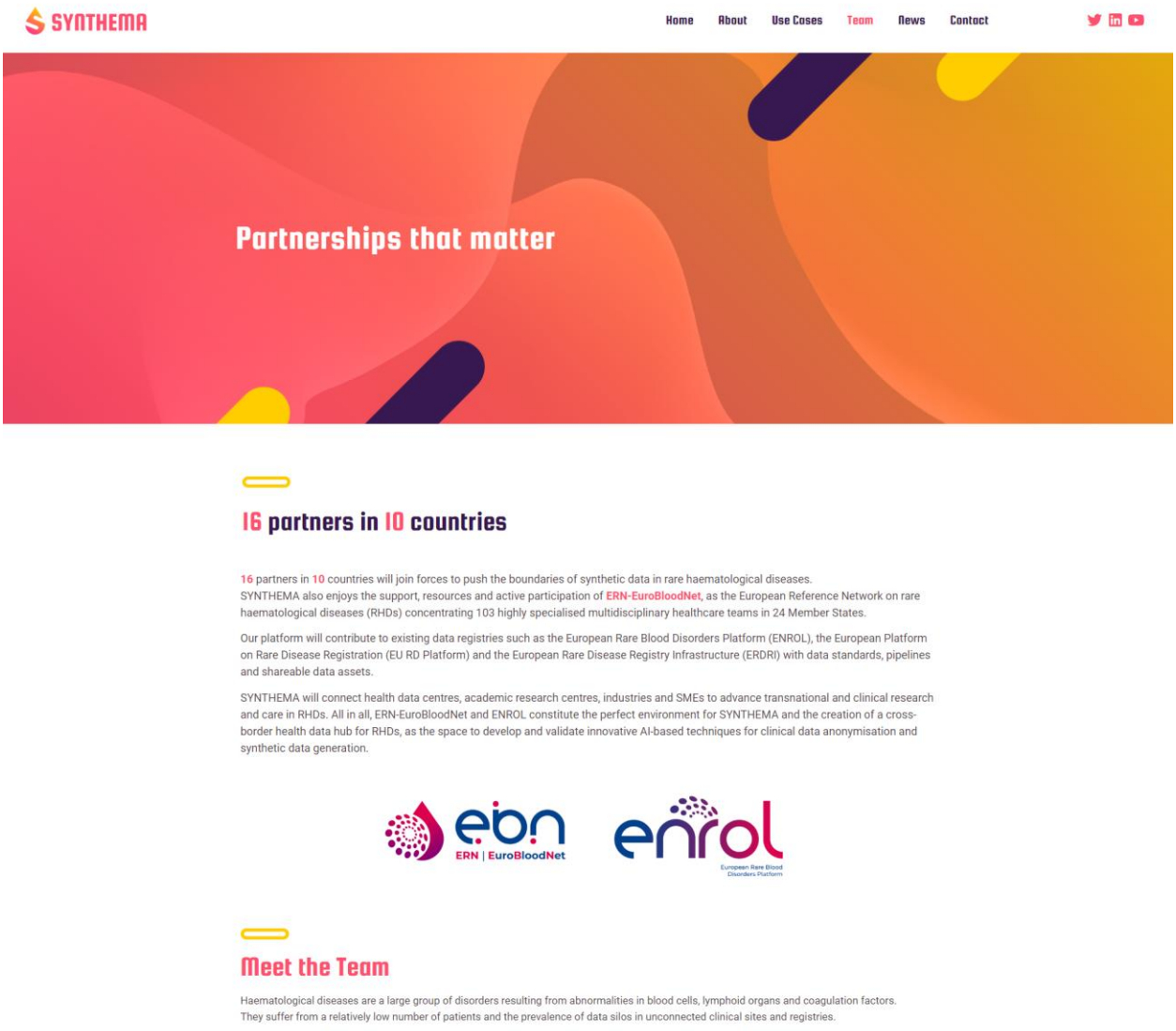
©SYNTHEMA2023. All rights reserved

FOLLOW US!

Figure 4. SYNTHEMA – USE CASES page

4.2.4 TEAM

A sneak peek of the partners in the consortium, including general information and contact details on each specific partner.



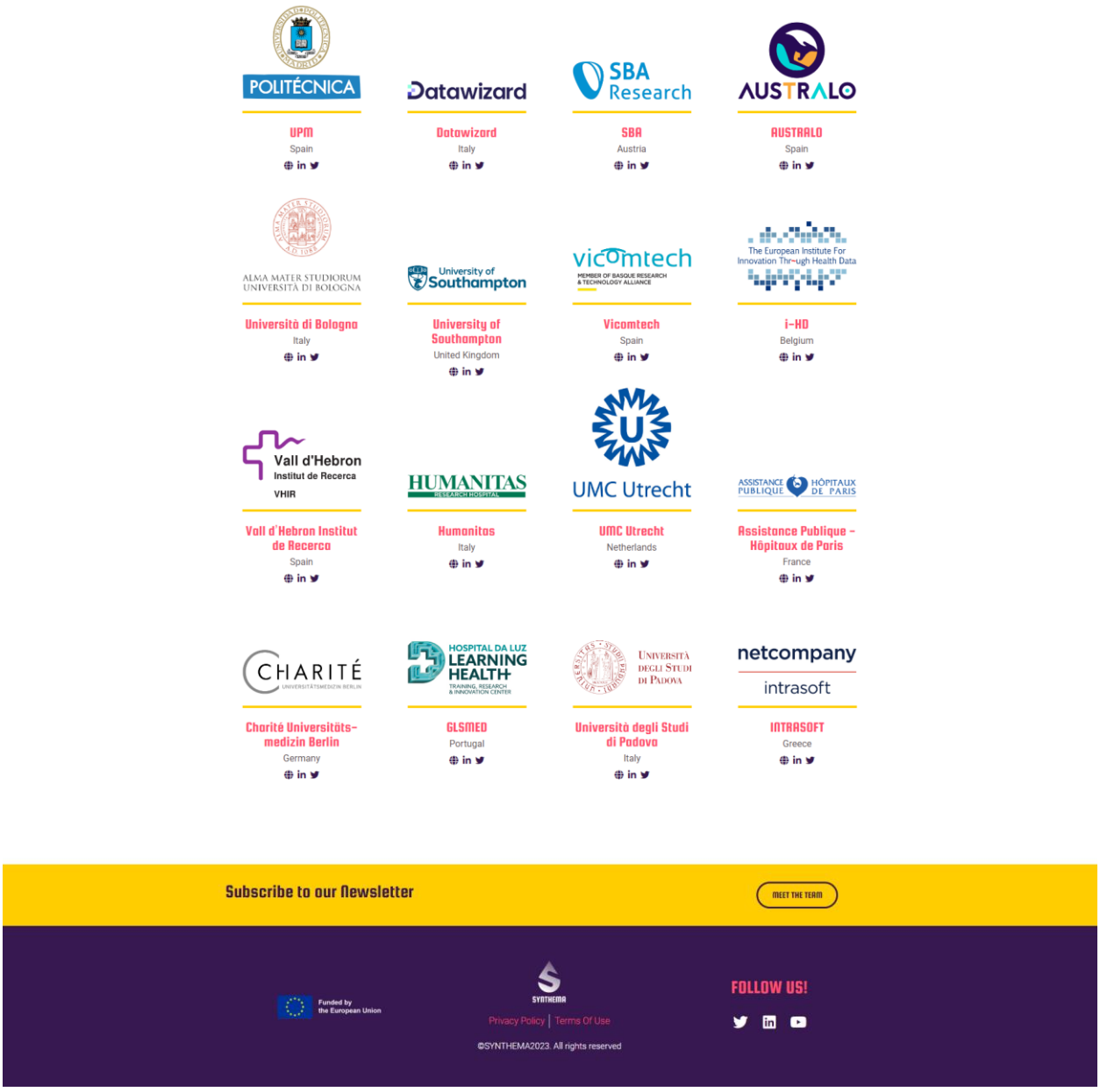


Figure 5. SYNTHEMA – TEAM page

4.3 Additional sections

4.3.1 NEWS

The news section will provide any news and events related to the project, such as consortium meetings, workshops, participation at conferences, and it will also provide access to dissemination material related to the project (logo, flyer, newsletters, press release, etc.).

4.3.2 CONTACT

A simple contact form that users can fill in to reach out to the project office for collaboration opportunities or further information.

4.3.3 PUBLICATIONS

As the project progresses, all public documentation and resources (e.g. public deliverables, Open Access publications…) will also be accessible through the project official website.

5 Conclusions

The aim of the present deliverable **D6.4 – Project website** is to give a detailed overview on the project visual identity created to be used throughout the project. By developing a professional joint image and appearance a sound basis for further dissemination and exploitation activities has been therefore set already in the beginning of the project.

The website (www.synthema.eu) will go officially live on 28-02-23, and it will be updated on a weekly basis for the first three months –due to the initial activity– and bi-weekly thereafter. The look of the SYNTHEMA website is currently as illustrated above and it follows the project graphic identity, however the design is still in progress and some additional improvements are planned.