



Explainable Manufacturing Artificial Intelligence



WP8: Disseminations and Communication Activities

D8.2: Project Website and Communication Channels Instantiation

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Short Abstract

D8.2 is the first result of XMANAI task T8.3 “Communication Activities and Publicity” which is responsible to construct the project’s website from the very early implementation stages. It also reports the set-up of all needed Web 2.0 and social channels that will be used during the project for communication. This document is accompanying the launch of the XMANAI website and Social Media channels which actually compose the deliverable.

Further Information: www.ai4manufacturing.eu

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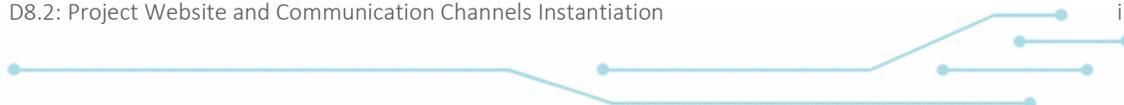


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Versions	Description
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D0.2	Final draft for review
R0.3	Comments from internal reviewers
F1.0	Final Document





Executive Summary

This document is an accompanying the launch of the XMANAI website and Social Media channels which actually compose the deliverable. It provides an overview of the XMANAI website structure which will be the main hub for all relevant news and information related with the project. The social media channels are also reported. XMANAI selected two principle social media channels to reach its dissemination goals: Twitter and LinkedIn. The choice of these two channels is due to the possibility of getting in contact with as many people as possible and target them in different ways. YouTube and Slideshare are also going to be used as channels to publish videos and relevant presentations produced along the project.

For more detailed information about XMANAI website and social media channels, please refer to D8.1 – “Dissemination, Communication and Stakeholder Engagement Plan”.





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1 Introduction

The main aim of Section 1 is to provide a brief overview of the deliverable. For additional details on dissemination and communication, readers should refer to Section 2, which is the core section to the document.

1.1 XMANAI Project Overview

Despite the indisputable benefits that Artificial Intelligence (AI) can bring in society and in any industrial activity, humans typically have little insight about AI itself and even less concerning the knowledge on how AI systems make any decisions or predictions due to the so-called “black-box effect”. Many of the machine learning/deep learning algorithms are opaque and not possible to be examined after their execution to understand how and why a decision has been made. In this context, to increase trust in AI systems, XMANAI aims at rendering humans (especially business experts from the manufacturing domain) capable of fully understanding how decisions have been reached and what has influenced them.

Building on the latest AI advancements and technological breakthroughs, XMANAI shall focus its research activities on Explainable AI (XAI) in order to make the AI models, step-by-step understandable and actionable at multiple layers (data-model-results). The project will deliver “glass box” AI models that are explainable to a “human-in-the-loop”, without greatly sacrificing AI performance. With appropriate methods and techniques to overcome data scientists’ pains such as lifecycle management, security and trusted sharing of complex AI assets (including data and AI models), XMANAI provides the tools to navigate the AI’s “transparency paradox” and therefore:

- (a) accelerates business adoption addressing the problematic that “if manufacturers do not understand why/how a decision/prediction is reached, they will not adopt or enforce it”, and
- (b) fosters improved human/machine intelligence collaboration in manufacturing decision making, while ensuring regulatory compliance.

XMANAI aims to design, develop and deploy a **novel Explainable AI Platform** powered by explainable AI models that inspire trust, augment human cognition and solve concrete manufacturing problems with value-based explanations. Adopting the mentality that “AI systems should think like humans, act like humans, think rationally, and act rationally”, a catalogue of **hybrid and graph AI models** is built, fine-tuned and validated in XMANAI at 2 levels: (i) baseline AI models that will be reusable to address any manufacturing problem, and (ii) trained AI models that have been fine-tuned for the different problems that the XMANAI demonstrators’ target. A bundle of **innovative manufacturing applications and services** are also built on top of the XMANAI Explainable AI Platform, leveraging the XMANAI catalogue of baseline and trained AI models.

XMANAI will validate its AI platform, its catalogue of hybrid and graph AI models and its manufacturing apps in **4 realistic, exemplary manufacturing demonstrators** with high impact in: (a) optimizing performance and manufacturing products’ and processes’ quality, (b) accurately forecasting product demand, (c) production optimization and predictive maintenance, and (d) enabling agile planning processes. Through a scalable approach towards Explainable and Trustful AI as dictated and supported in XMANAI, manufacturers will be able to develop a robust AI capability that is less artificial and more intelligent at human and corporate levels in a win-win manner.

1.2 Deliverable Purpose and Scope

Deliverable 8.2 “Project Website and Communication Channels Instantiation” is one of the results of task 8.3, which is responsible for the development of the project’s website from the very early implementation stages. The initial version of the website with basic project information was available from the beginning of the project. A more advanced version of the website, including project information, relevant links to other web sites and access to the project’s private area is provided by



M3 as D8.2, and will be continuously updated according to the plan detailed in deliverable D8.1 “Dissemination, Communication and Stakeholder Engagement Plan”. In addition, the project’s social media strategy includes the setting up of social media channels accounts, in networks like Twitter, Facebook, LinkedIn, SlideShare and YouTube.

1.3 Impact and Target Audiences

The target audience of this document is internal partners to the project and the EC. It is only an accompanying document to the Website and Social Media channels, available online.

1.4 Deliverable Methodology

The deliverable leader managed the final editing of the document following a collaborative approach of contributions and inputs from the different partners involved. As per DoA, D8.2 is related to the XMANAI website and social media channels. Since D8.2 is not of Report nature, it is accompanied though this brief factsheet.

For more details on the activities performed, please refer to the deliverable D8.1 “Dissemination, Communication and Stakeholder Engagement Plan”.

1.5 Dependencies in XMANAI and Supporting Documents

This deliverable took as reference the information regarding dissemination and communication plan detailed in **deliverable D8.1 “Dissemination, Communication and Stakeholder Engagement Plan”**. D8.2 reports on the establishment of the XMANAI website and social media channels, further modifications and results will be reported trough:

- M18 by D8.3 “1st Dissemination and Communication and Plan for next period”
- M30 by D8.4 “2nd Dissemination, Communication, Standardisation Report and Plan for next period”
- M42 by D8.5 “Final Dissemination, Communication and Standardisation Report”.

1.6 Document Structure

The deliverable is structured in two sections, separated in the following manner:

- **Section 1** is an introductory section that contains a project overview, common to all project deliverables, and then a number of sections describing what the reader may find in this document, how it was produced, dependencies, etc.
- **Section 2** presents a high-level perspective on the XMANAI project website and related social media channels.

1.7 Ethics

The work here reported does not have any associated ethical issues.



2 Project Website and Social Media Channels

This section provides a brief overview of the XMANAI website and XMANAI social media channels, also reported in more detail in D8.1 – “Dissemination, Communication and Stakeholder Engagement Plan”.

2.1 Project Website

The website (version 1) is up and running, published in the domain www.ai4manufacturing.eu. The XMANAI website is designed to be a place to turn to for key information about the project and to read the latest developments.

The website contains information about the project objectives, expected outputs, publications, events, etc. It is used to disseminate news, events and achievements. At the moment, the website is structured as follows:

- **Home page** – working itself as a single page website contacting the highlights of the projects:
 - Rotating banner with key messages (see Figure 2-1)
 - High level information about the project, namely the XAI trust levels (see Figure 2-2)
 - Overview of project partners, last news item, contact information, etc.
- **Project page** - acting as a project factsheet, with description of the objectives, programme, funding scheme, etc. (See Figure 2-3)
- **Partners page** – providing information about the partners and their geographic distribution.
- **Resources Page** – currently in development as it will include public deliverables, publications, models, etc.
- **News Page** – gathering the major news published in the website.
- **Blog Page** – the home for the XMANAI blog (see Figure 2-5).
- **FAQ Area** – with a set of frequently asked questions.
- **Contacts Form** – for visitors to subscribe to more project news. This section can potentially be used to subscribe to the project newsletter.
- **Private Area** – connecting to the private area.

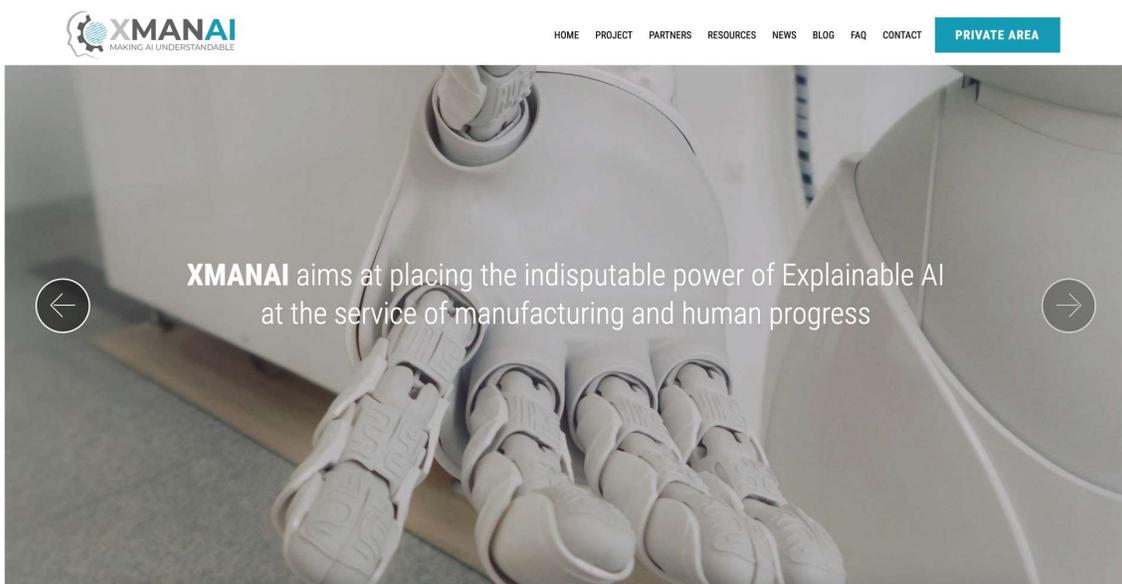


Figure 2-1 - XMANAI Website Home Page Banner

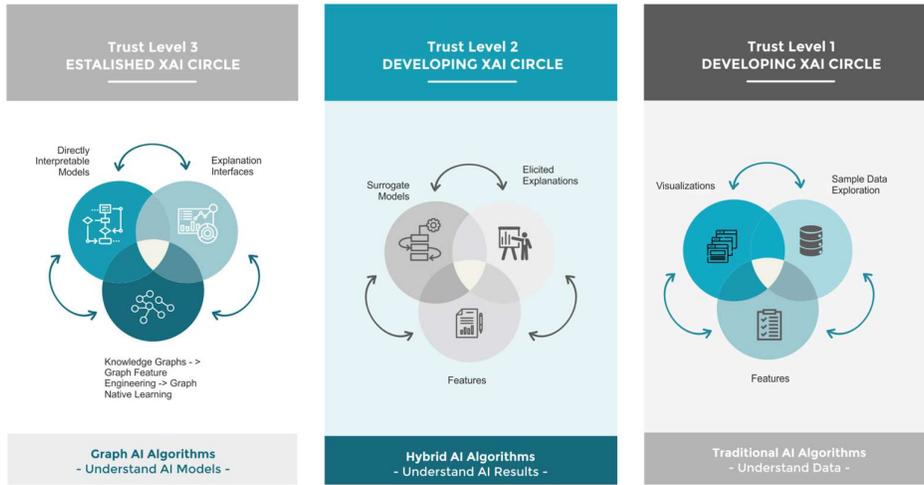


Figure 2-2 - Website Home Page – XMANAI trust levels



PROJECT

Moving from 'black box' to 'glass box'

What is artificial intelligence (AI) and how does it work? For many people, these questions are not easy to answer: this is due to the fact that many machine learning and deep learning algorithms cannot be examined after their execution. The EU-funded XMANAI project will focus on explainable AI, a concept that contradicts the idea of the 'black box' in machine learning, where even the designers cannot explain why the AI reaches at a specific decision. XMANAI will carve out a 'human-centric', trustful approach that will be tested in real-life manufacturing cases. The aim is to transform the manufacturing value chain with 'glass box' models that are explainable to a 'human in the loop' and produce value-based explanations.

Objective

"Despite the indisputable benefits of AI, humans typically have little visibility and knowledge on how AI systems make any decisions or predictions due to the so-called "black-box effect" in which many of the machine learning/deep

Figure 2-3 - Website Project Page



OUR PARTNERS ACROSS THE WORLD

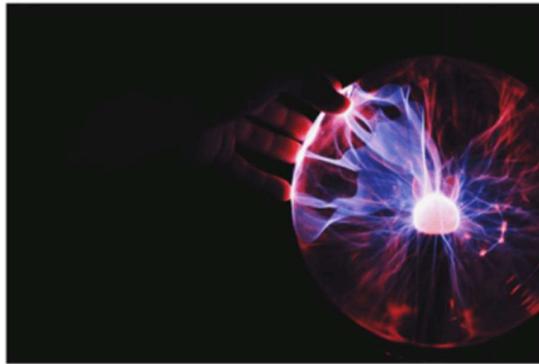
LEARN MORE ABOUT PARTNERS

SEE PARTNERS ON THE MAP

XMANAI consists of 15 partners from 7 countries Italy, Germany, Spain, Estonia, Portugal, Greece and Cyprus. The consortium is very well balanced in terms of research-industry collaboration as the next table depicts, containing a very well though constructed mixture of collective expertise from industry, research, academia, technology providers with solid background on manufacturing, data science and AI, and big data, and human-machine ethics sectors



Figure 2-4 - Website Partners Page



Moving from 'black box' to 'glass box' Artificial Intelligence in Manufacturing, with XMANAI

January 29, 2021

Artificial Intelligence (AI) is finding its way into a broad range of industries, manufacturing amongst them. The sorts of decisions and predictions being made by AI-enabled systems is becoming much more profound, and in many cases, critical to success and profitability, with companies gaining the potential to double their cash flow within the next five years. Manufacturing is definitely in the leading group due to its heavy reliance on data.

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> [Moving from 'black box' to 'glass box' Artificial Intelligence in Manufacturing, with XMANAI](#)

Archives

> [January 2021](#)

Figure 2-5 - Website Blog Article #1



The private area¹ has been set-up in Microsoft SharePoint since day 1 of the project, enabling a proactive collaboration of different types of members with restricted access rights. It will be mostly used by the project participants but in case of need (e.g. Advisory Board) external members can also be allowed to collaborate. The private area is accessible through the XMANAI website.

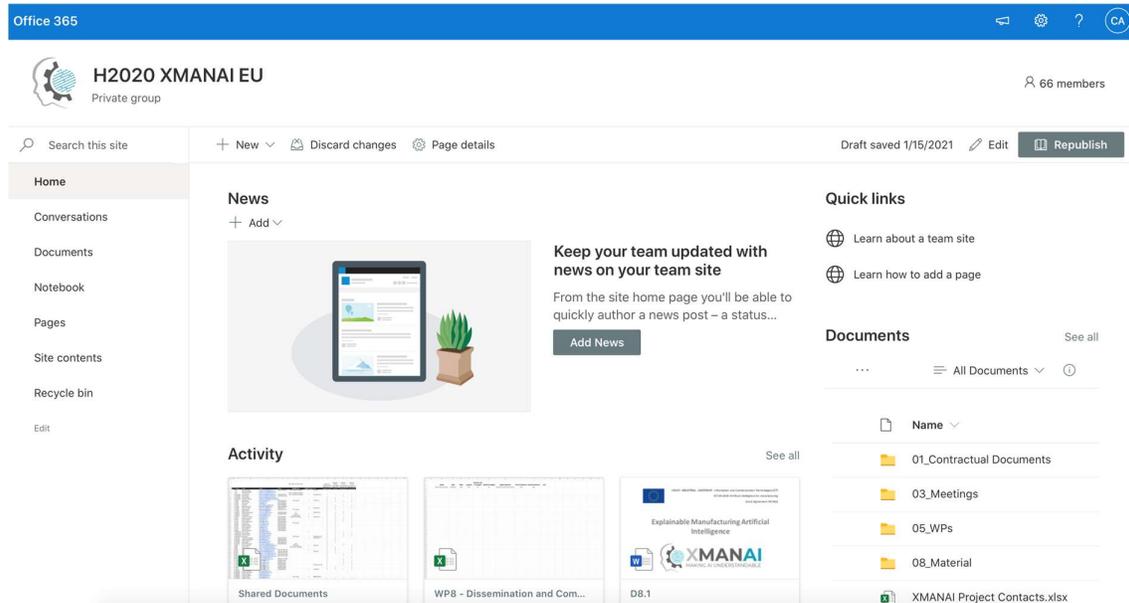


Figure 2-6 - XMANAI Private Area Dashboard

¹ <https://txtgroup.sharepoint.com/sites/H2020XMANAIEU>





2.2 Social Media Channels

2.2.1 LinkedIn

The XMANAI LinkedIn² page is launched and available as presented in Figure 2-7. The website has a direct link to the LinkedIn page and vice-versa.

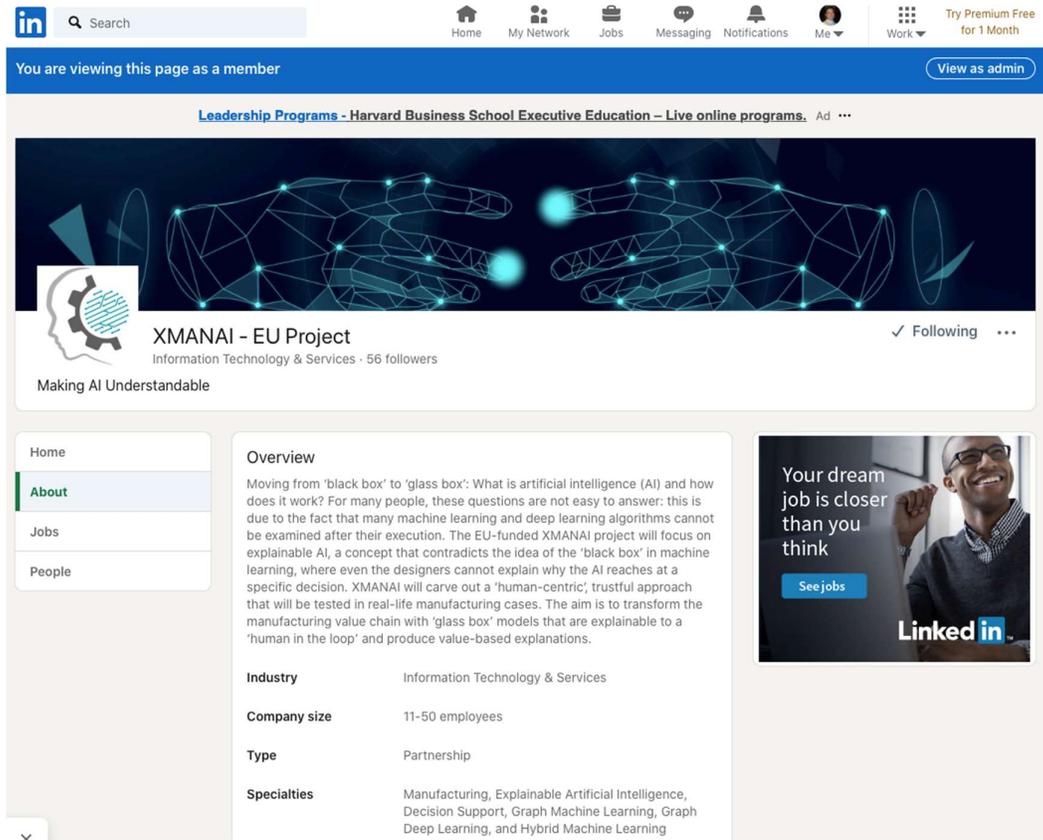


Figure 2-7 - XMANAI LinkedIn

² <https://www.linkedin.com/company/xmanai>

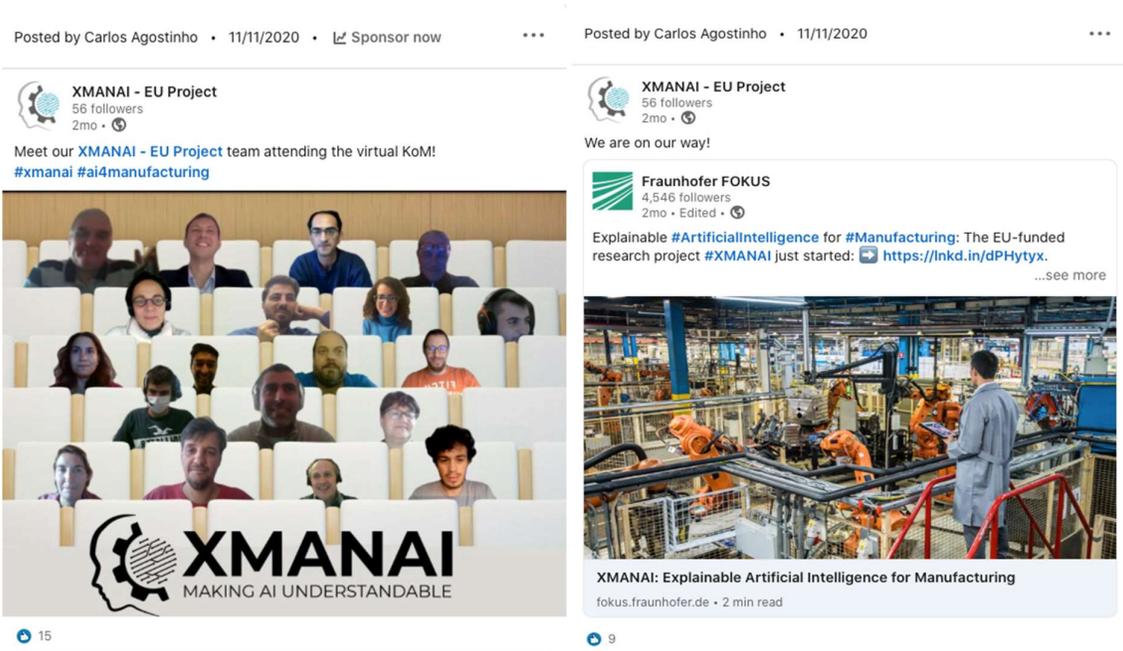


Figure 2-8 - XMANAI LinkedIn (example posts)

2.2.2 Twitter

The XMANAI Twitter³ page is launched and available as presented in Figure 2-9. The website has a direct link to the Twitter page and vice-versa.

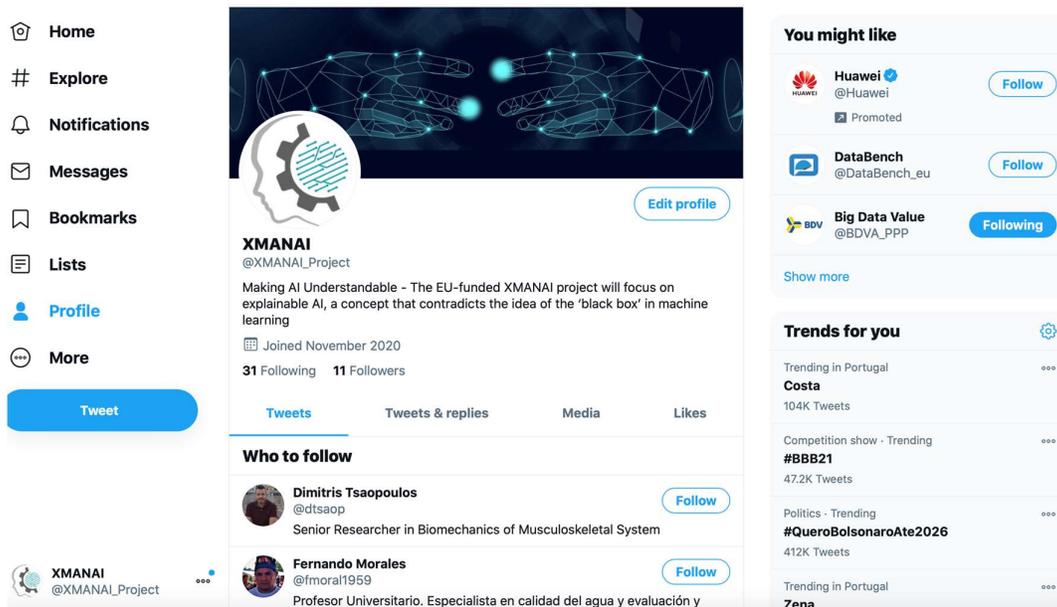


Figure 2-9 - XMANAI Twitter

³ https://twitter.com/XMANAI_Project



2.2.3 SlideShare

XMANAI Slideshare⁴ page is launched and available as presented in Figure 2-10.

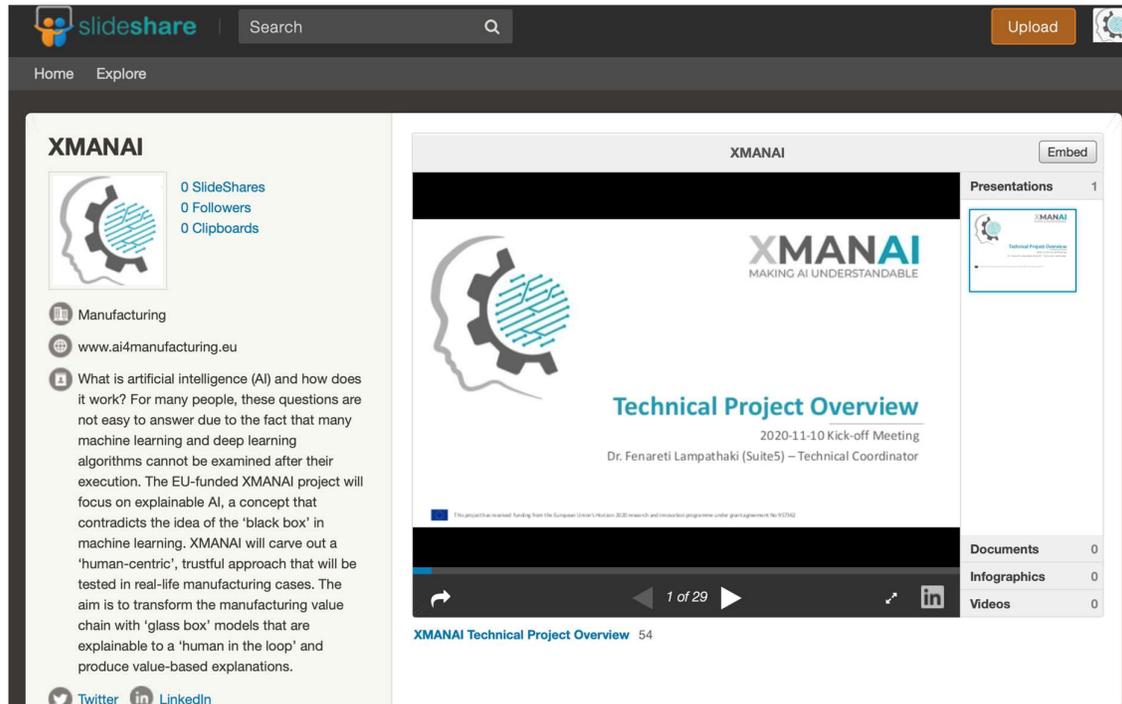


Figure 2-10 - XMANAI SlideShare

2.2.4 YouTube

The XMANAI YouTube⁵ channel, is already available but will only be active after M6, upon the publication of the first XMANAI video.

⁴ <https://www.slideshare.net/CarlosAgostinho11>

⁵ <https://www.youtube.com/channel/UCfi-EHIP2g5CqRQpSs6sE-Q>