

Project Acronym: STAR
Grant Agreement number: 956573 (H2020-ICT-2020-1 – Research and Innovation Action)
Project Full Title: Safe and Trusted Human Centric Artificial Intelligence in Future Manufacturing Lines
Project Coordinator: INTRASOFT International



Funded by the Horizon 2020 Framework Programme of the European Union

DELIVERABLE

D7.2 - Market Implementation and VDIH Establishment

Dissemination level	PU -Public
Type of Document	Demonstrator
Contractual date of delivery	31/12/2022
Deliverable Leader	UNPARALLEL
Status - version, date	Final – V1.0, 14/02/2023
WP / Task responsible	WP7
Keywords:	Artificial Intelligence, Internet of Things, IoT-Catalogue, Liferay, Market Platform

This document is part of a project that has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 956573. It is the property of the STAR consortium and shall not be distributed or reproduced without the formal approval of the STAR Management Committee. The content of this report reflects only the authors’ view. The European Commission is not responsible for any use that may be made of the information it contains.

Executive Summary

This document describes the structure of the STAR Market Platform. The STAR Marketplace has been implemented and updated with content provided from tasks undertaken both under WP7 but also from other Work Packages.

The information described in this deliverable represents the information and structure of the marketplace up to the date of the submission of this report. Thus, the website may undergo changes and improvements during the next months.

Deliverable Leader:	UNPARALLEL
Contributors:	INTRA-LU
Reviewers:	R2M & PCL
Approved by:	Charalampos Ipektsidis, John Soldatos (INTRA)

Document History			
Version	Date	Contributor(s)	Description
0.1	10/11/2022	UNPARALLEL	TOC
0.2	17/11/2022	UNPARALLEL	Introduction
0.3	29/11/2022	UNPARALLEL	Market by Star
0.4	07/12/2022	UNPARALLEL	Navigation
0.5	22/12/2022	UNPARALLEL	Conclusion
0.6	04/01/2023	UNPARALLEL	Final draft for revision
0.7	31/01/2023	R2M	Deliverable review
0.8	08/02/2023	PCL	Deliverable review
0.9	09/02/2023	UNPARALLEL	Final version
1.0	14/02/2023	INTRA	QA and creation of the submitted version

Table of Contents

EXECUTIVE SUMMARY	2
TABLE OF CONTENTS.....	4
LIST OF FIGURES	5
DEFINITIONS, ACRONYMS AND ABBREVIATIONS	6
1 INTRODUCTION.....	7
1.1 WORK PACKAGE 7 OVERVIEW	7
1.2 ROADMAP	9
1.3 STRUCTURE OF THE DOCUMENT.....	10
2 THE STAR MARKET PLATFORM.....	11
2.1 MARKET BY STAR.....	11
2.2 NAVIGATION.....	11
2.2.1 Homepage.....	12
2.2.2 Assets Page	14
2.2.3 Individual Asset page.....	16
2.2.4 Success Stories Page.....	17
2.2.5 Success Story individual page.....	18
2.2.6 Training Resources – Listings of Courses and Workshops	19
2.2.7 Training resources individual pages	21
2.2.8 External AI Resources	24
2.2.9 User Login and Registration.....	25
3 CONCLUSION.....	26

List of Figures

FIGURE 1 – WORK PACKAGE 7 TIMELINE	8
FIGURE 2 - RELATIONSHIP BETWEEN WP7 TASKS.....	9
FIGURE 3 – TASK 7.1 ROADMAP	10
FIGURE 4 - SITEMAP	12
FIGURE 5 - MARKET BY STAR HOMEPAGE.....	13
FIGURE 6 - LISTING VIEW	15
FIGURE 7 - INDIVIDUAL ASSET PAGE	16
FIGURE 8 - SUCCESS STORIES PAGE	17
FIGURE 9 - INDIVIDUAL SUCCESS STORY PAGE	18
FIGURE 10 - TRAINING RESOURCES PAGE - COURSES	20
FIGURE 11 - TRAINING RESOURCES PAGE – WORKSHOPS	21
FIGURE 12 - TRAINING RESOURCES INDIVIDUAL PAGE – COURSE.....	22
FIGURE 13 - TRAINING RESOURCES INDIVIDUAL PAGE - WORKSHOP	23
FIGURE 14 - EXTERNAL AI RESOURCES PAGE	24
FIGURE 15 - USER LOGIN & REGISTRATION	25

Definitions, Acronyms and Abbreviations

Acronym/ Abbreviation	Title
AI	Artificial Intelligence
AI4EU	European AI On-Demand Platform
AIOTI	Alliance for the IoT Innovation
BDVA	Big Data Value Association
CMS	Content Management System
EFFRA	European Factories of the Future Research Association
ICT	Information and Communications Technology
KPI	Key Performance Indicator
LDAP	Lightweight Directory Access Protocol
Liferay DXP	Liferay Digital Experience Platform
OpenSSO	Open Single Sign-On
SAML	Security Assertion Markup Language
VDIH	Virtualised Digital Innovation Hub
WP	Work Package

1 Introduction

This document presents the work carried out in Task 7.1, which is the first task of Work Package 7 in the STAR project. This introduction chapter provides the necessary information to give context to the reader to understand the scope of the activities and the objectives defined, which can be identified in the following sections:

- **Work Package 7 overview:** provides an overview of the whole WP7, its timeline, and its objectives. Also describes each of the inner subtasks of the WP, including the relationships between them.
- **Roadmap:** this section provides the envisioned roadmap for Task 7.1, including the results provided in each of the 2 deliverables directly related to Task 7.1.
- **Structure of the document:** this section is self-explanatory, as it provides an overview of the information that is provided in the current deliverable.

1.1 Work Package 7 overview

STAR's Work Package 7 is responsible for the Virtualized Digital Innovation Hub for Secure and Safe AI in Manufacturing. It is active during the execution of the project (from M01 to M36) and is dedicated to the *development and establishment of a virtualised digital innovation hub that will integrate resources for secure and safe AI in manufacturing. The hub will be empowered by a market platform that will integrate the project's results. WP7 sets the following main objectives:*

- (i) *To design and implement an on-line market platform as a hosting environment for the project's results.*
- (ii) *To integrate STAR's solutions for safe and secure AI in the market platform.*
- (iii) *To develop and integrate in the market platform innovation management and training resources, which will be offered through the VDIHs.*
- (iv) *To develop a certification programme for AI systems in manufacturing and to make it available through the VDIH.*
- (v) *To ensure close collaboration and linking to the AI4EU project for the purpose of creating critical mass and integrating the project's market platform and VDIH to the AI4EU ecosystem.*

These 5 objectives are directly related to the 5 tasks of the WP7, which also span across the Work Package duration.

Figure 1 depicts the WP7 timeline, providing a view on the start and end date of each task.



Figure 1 – Work Package 7 Timeline

This deliverable D7.2 is meant to present the work done during the 2nd twelve months of task T7.1, whose objective is to “*design and implement a platform for promoting and demonstrating the project’s solutions for secure, safe, trustworthy and ethical Artificial Intelligence (AI) in manufacturing, including software/middleware solutions, algorithms, legal recommendations, architectural blueprints and more. The heart of the platform will be a portal containing multimedia information about the above-listed assets, along with links to sandboxes and cloud services for demonstrating the operation of the various solutions and services. Moreover, the portal will also provide a standard set of market platform services, including users’ registration, products reviews and stakeholders’ collaboration functionalities. The work of the task will entail the detailed design of the structure of the portal and the specification of its contents. Following the design and specification of the platform, the task will implement the above-listed functionalities (e.g., user management, product reviews, solutions presentation/demonstration), leveraging existing frameworks for building on-line marketplaces*”.

With respect to the relationships between the tasks within the Work Package, it is a straightforward process, as T7.1 is responsible for the Market Platform infrastructure and the other tasks are responsible for gathering content to share in the Market Platform, as depicted in Figure 2.

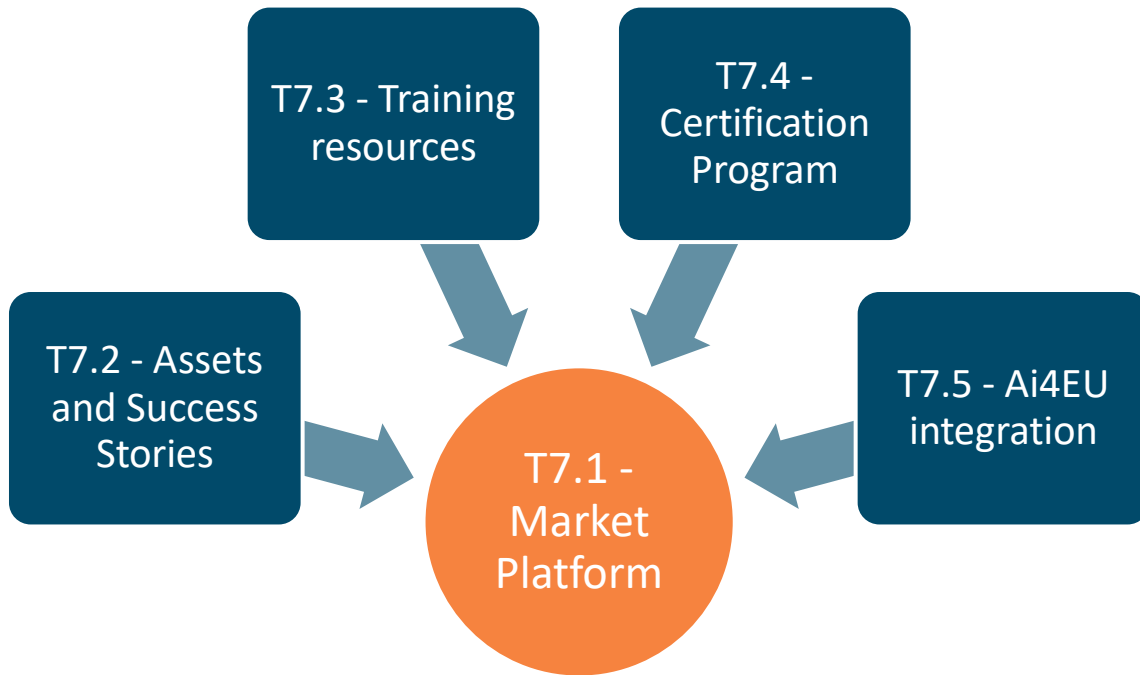


Figure 2 - Relationship between WP7 tasks

Each WP7 task, apart from T7.1, is responsible to gather content to be made available through the Market Platform to the STAR’s stakeholders. Each task shall provide:

- T7.2 – Information related to the assets developed within the scope of the project, as part of Technical Work Packages. This task will also provide details on the success stories resulted from the project activities so to showcase where and how the assets are being successfully deployed and used.
- T7.3 – This task will be responsible for providing all sorts of training resources. This should include documentation, videos, presentations, white papers, etc. These resources should be fed into the Market Platform and made available to our stakeholders.
- T7.4 – The certification program is responsibility of Task 7.4. This certification program shall be used by the Market Platform to provide information to the stakeholders related to STAR certified resources.
- T7.5 – This task shall provide details on how to collaborate with AI4EU platform, which is a well-established platform in the AI domain, offering several resources that could be of interest to STAR Market Platform stakeholders.

1.2 Roadmap

As part of the activities of *Task 7.1 - Specification, Detailed Design and Implementation of Market Platform*, there are two deliverables scheduled:

- D7.1 - Market Platform and VDIH Services Specification – Delivered on M12
- D7.2 - Market Implementation and VDIH Establishment – Due on M24

To provide a better understanding of what was reported in each of the 2 deliverables, a roadmap was created so that the content of each document is clear. Figure 3 provides an overview of Task 7.1 roadmap.

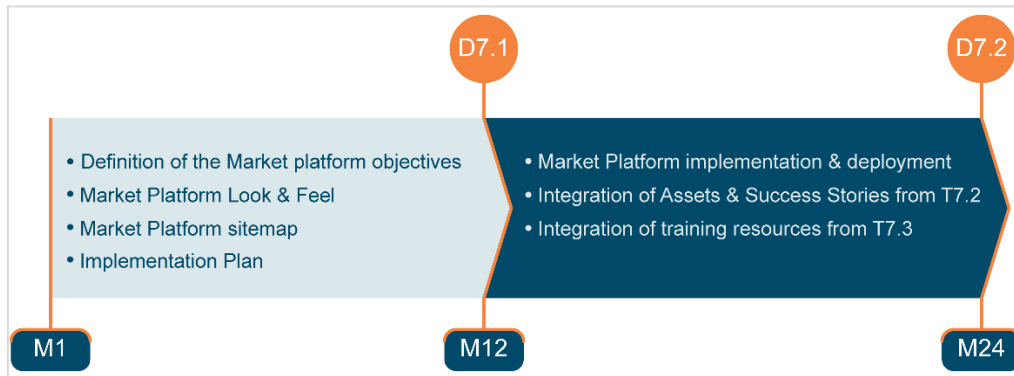


Figure 3 – Task 7.1 Roadmap

Deliverable D7.2, provides the last report of Task 7.1 activities. This means that the work on the implementation and deployment of the Market Platform is concluded. However, the integration work related to the content made available by the other WP7 tasks will continue within the respective task. Thus, D7.2 reports the final version of the Market Platform implementation.

1.3 Link with D7.3

This deliverable is focused on the implementation of the platform and its infrastructure, namely how each resource is shown to the user and its functionalities that are available on the Market Platform.

The deliverable 7.3 is complementary to this deliverable, focusing on the Market Platform content, which already exists and is already available on the website.

1.4 Structure of the Document

The document is divided in:

- **Introduction:** Contains an overview of the WP7 presenting all the tasks with their objectives and showing how they are related. There is also a roadmap showing what kind of work was done in the D7.1 and in D7.2.
- **The STAR Market Platform:** This chapter describes the entire structure of STAR Market Platform and its content.
- **Conclusion:** This chapter gives an overview of the entire structure of STAR Market Platform.

2 The STAR Market Platform

The STAR Market Platform is the entry point where users can consult the information representing the results of the project at one place. The previous version of this deliverable - D7.1, reported all the steps made to define:

- **Market Platform identify and Look & Feel:** Describes the creation of two different look & feel designs and the process of selecting which one was used in the Market Platform.
- **Interaction and navigation structure:** Addresses the structure definition, not only from the content’s point of view, but also from the navigation perspective.
- **Implementation plan:** Describes what kind of technologies were used and the required procedure needed for the implementation.

Based on the previously defined points, the STAR Marketplace was implemented and updated with content provided from the other tasks of WP7, but also from other Work Packages.

In the following sections, we represent the status of the STAR market platform, focusing on the current look of each part of the marketplace and not on the information available. A detailed report on the information currently available can be consulted in D7.3, due at the same time of this report.

2.1 Market by STAR

The current version of the “Market by STAR” platform is publicly available using the following URL:



www.market.star-ai.eu

2.2 Navigation

This section describes the current structure of the Market by STAR Platform, not only from the content’s point of view, but also from the navigation perspective. In Figure 4 is depicted the structure of the platform, which includes the sections for the existing assets, success stories, training resources, and the links for the external AI resources.

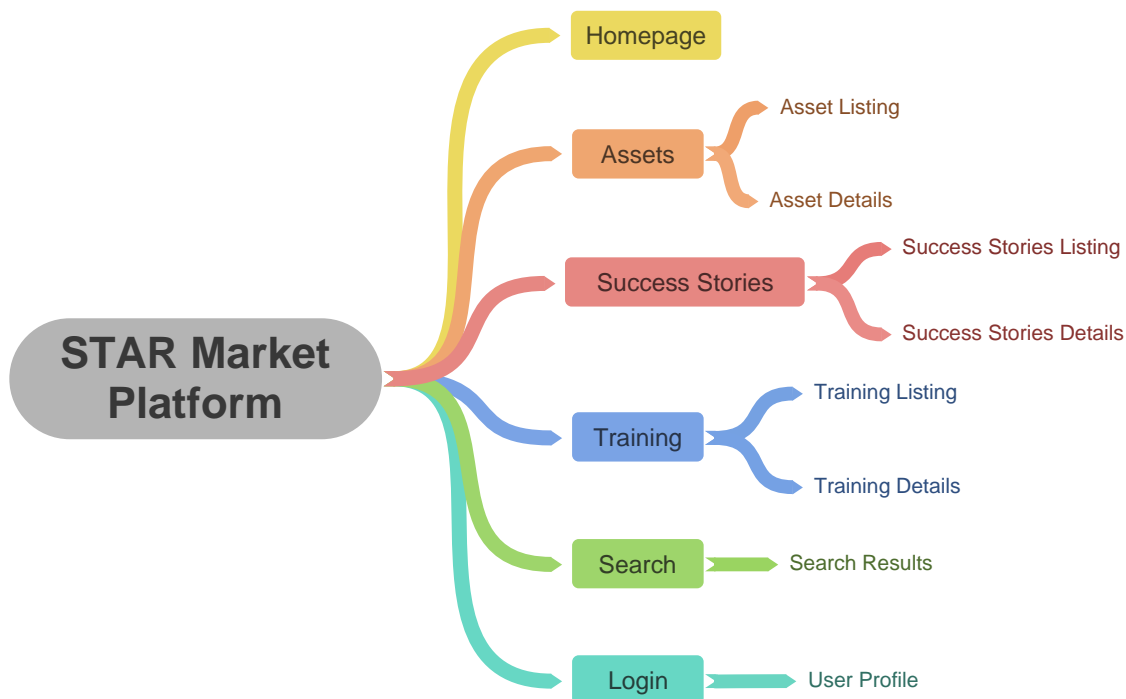


Figure 4 - Sitemap

In each of the following sections is depicted each of the page layouts available in the current version for the Market by STAR platform.

2.2.1 Homepage

The Market by STAR Homepage is divided into layers, as shown in Figure 5. The top of the page provides the Menu with all the available main sections of the platform, followed by the main image created specifically for the Market by STAR homepage.

Then, a section with statistics on what the Market by STAR has to offer to the stakeholders visiting the platform. Following we have a layer for each of the sections of the Market by STAR platform, such as for the Assets, Success Stories, Training Resources and External AI Resources.

Reaching the bottom of the page, we have a layer inviting visitors to register in the platform, followed by 2 banners related to the STAR project and to one of the underlying technologies used in the platform, and last the footer containing the EU disclaimer.



Figure 5 - Market by STAR Homepage

2.2.2 Assets Page

The Assets page provides a grid view with an overview of all the assets publicly available within the Market by STAR platform, as shown in Figure 6. Each asset is here listed, using the asset name, a picture (when available, and in case it's not available we have created a "placeholder" figure to be used), and an initial description.

MARKET
by STAR

Assets Success Stories Training Resources External AI Resources Sign In Search

Assets

Active Learning (AL)
This module provides a placeholder for AL systems i.e., AI systems that are able to consult an authority (e.g., a human) in cases where they lack data/information to take proper decisions.
[Read more >](#)

AI Cyber-Defence Strategies (ACDS)
The module implements different strategies in response to various attacks against AI system, notably poisoning and evasion attacks.
[Read more >](#)

Autonomous Mobile Robot (AMR) planner using safety zone detection
It is composed form a safety zone detector and a robot planner. The first module will be used to provide insights on the safe placement of robots in a manufacturing environment.
[Read more >](#)

Distributed Ledger Services for Data Reliability (DLSDR)
Distributed Ledger Services for Data Reliability (DLSDR) provides a decentralized data reliability solution for industrial AI algorithms configurations and results. It offers an Analytics Engine Configuration (AEC) Service that supports Analytics by providing the capability for distributing analytics manifest objects across multiple gateways. Additionally, it offers an Analytics Results Publishing (ARP) Service, that makes it...
[Read more >](#)

Fatigue Monitoring System (FaMS)
FaMS uses artificial intelligence (AI) models relying on machine learning to estimate fatigue exertion level and mental stress of subjects based on static data (e.g. age, weight, etc.) and dynamic data (e.g. HR, EDA, skin temperature).
[Read more >](#)

Feedback Module
The feedback module interfaces to some interaction module (e.g., GUI or NLP) that enables the transferring of user data to the feedback module and vice versa.
[Read more >](#)

Human Digital Twin Core Infrastructure
The platform support human in the loop processes and to provide feedback/results on workers' safety and performance.
[Read more >](#)

Natural Language Processing (NLP)
Natural Language Processing related components, proof of concepts and recommendations to facilitate the interaction between humans and machines and to get contextual information enabling efficient collaboration.
[Read more >](#)

Production Processes Knowledge Base (PPKB)
This module consolidates domain knowledge about the production processes of the manufacturing environment.
[Read more >](#)

Risk Assessment and Mitigation Engine (RAME)
The module is destined to assess risk for assets associated with AI-based systems in manufacturing lines.
[Read more >](#)

Runtime Monitoring System (RMS)
RMS is a Data collection framework which provides the specifications and relevant implementation to enable a real time data collection, transformation, filtering, and management service to facilitate data consumers (i.e., analytic algorithms). The framework can be applied in IoT environments supporting solutions in various domains (e.g., Industrial, Cybersecurity, etc.). The design of the framework is...
[Read more >](#)

Security Policies Manager (SPM) – Security Policies Repository (SPR)
This module specifies and configures security policies that are destined to govern the operation of the DPT, AI Cyber-Defence and RAME modules.
[Read more >](#)

1 2

STAR
www.star-ai.eu Contact Us Privacy Policy

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 956573.

© 2022 - Star Market

Figure 6 - Listing view

2.2.3 Individual Asset page

Each of the individual Assets made available in the Market by STAR platform has its own dedicated page. An example of this page is present in Figure 7. In its dedicated page, each asset is characterized with a main image, title, summary, and key words in the header of the page, followed by a more detailed description, a list of Success Stories where this asset is being used, links to available documentation and an image gallery.

It is important to note that in order to access individual pages (either an Asset, Success Story or Training Resource), it requires the users to be registered in the Market by STAR platform.

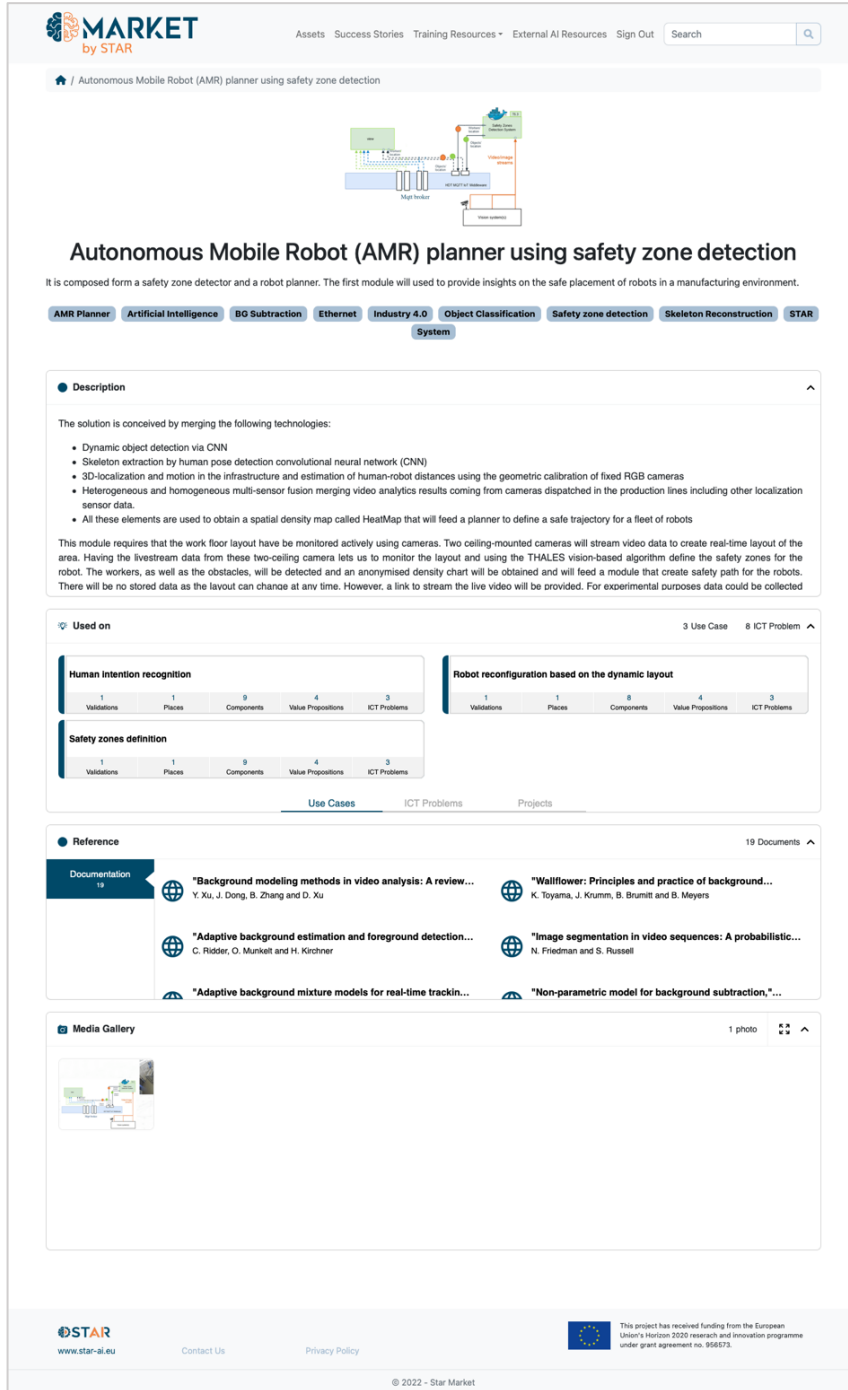
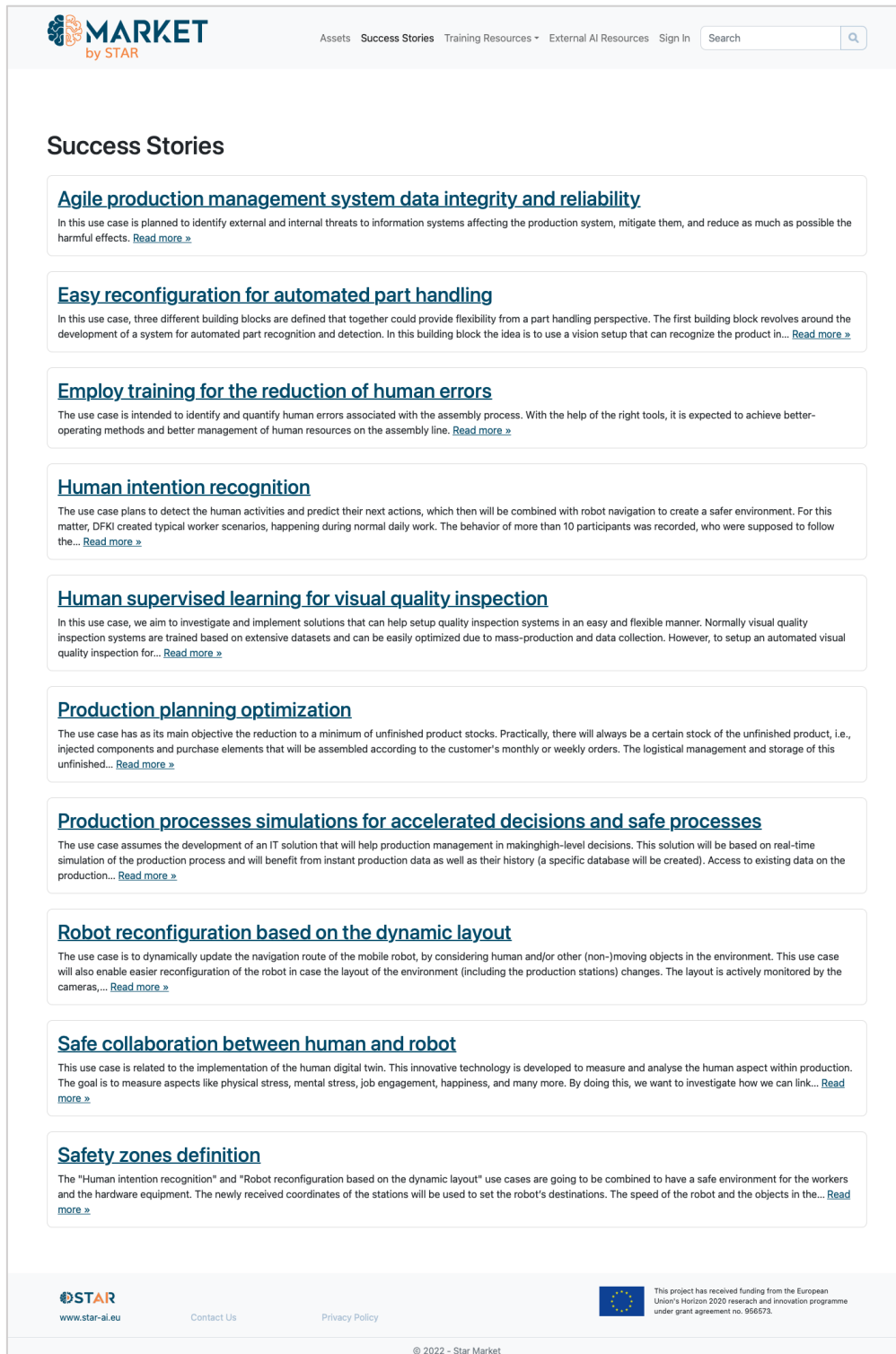


Figure 7 - Individual Asset page

2.2.4 Success Stories Page

Figure 8 depicts the current view of the Success Stories page, which is listing the currently publicly available Success Stories from STAR project.



The screenshot shows the 'MARKET by STAR' website interface. At the top, there is a navigation bar with links for 'Assets', 'Success Stories', 'Training Resources', 'External AI Resources', and 'Sign In', along with a search bar. The main content area is titled 'Success Stories' and lists ten individual success stories, each with a title, a brief description, and a 'Read more' link. The stories are:

- Agile production management system data integrity and reliability**: In this use case is planned to identify external and internal threats to information systems affecting the production system, mitigate them, and reduce as much as possible the harmful effects. [Read more »](#)
- Easy reconfiguration for automated part handling**: In this use case, three different building blocks are defined that together could provide flexibility from a part handling perspective. The first building block revolves around the development of a system for automated part recognition and detection. In this building block the idea is to use a vision setup that can recognize the product in... [Read more »](#)
- Employ training for the reduction of human errors**: The use case is intended to identify and quantify human errors associated with the assembly process. With the help of the right tools, it is expected to achieve better-operating methods and better management of human resources on the assembly line. [Read more »](#)
- Human intention recognition**: The use case plans to detect the human activities and predict their next actions, which then will be combined with robot navigation to create a safer environment. For this matter, DFKI created typical worker scenarios, happening during normal daily work. The behavior of more than 10 participants was recorded, who were supposed to follow the... [Read more »](#)
- Human supervised learning for visual quality inspection**: In this use case, we aim to investigate and implement solutions that can help setup quality inspection systems in an easy and flexible manner. Normally visual quality inspection systems are trained based on extensive datasets and can be easily optimized due to mass-production and data collection. However, to setup an automated visual quality inspection for... [Read more »](#)
- Production planning optimization**: The use case has as its main objective the reduction to a minimum of unfinished product stocks. Practically, there will always be a certain stock of the unfinished product, i.e., injected components and purchase elements that will be assembled according to the customer's monthly or weekly orders. The logistical management and storage of this unfinished... [Read more »](#)
- Production processes simulations for accelerated decisions and safe processes**: The use case assumes the development of an IT solution that will help production management in making high-level decisions. This solution will be based on real-time simulation of the production process and will benefit from instant production data as well as their history (a specific database will be created). Access to existing data on the production... [Read more »](#)
- Robot reconfiguration based on the dynamic layout**: The use case is to dynamically update the navigation route of the mobile robot, by considering human and/or other (non-)moving objects in the environment. This use case will also enable easier reconfiguration of the robot in case the layout of the environment (including the production stations) changes. The layout is actively monitored by the cameras, ... [Read more »](#)
- Safe collaboration between human and robot**: This use case is related to the implementation of the human digital twin. This innovative technology is developed to measure and analyse the human aspect within production. The goal is to measure aspects like physical stress, mental stress, job engagement, happiness, and many more. By doing this, we want to investigate how we can link... [Read more »](#)
- Safety zones definition**: The "Human intention recognition" and "Robot reconfiguration based on the dynamic layout" use cases are going to be combined to have a safe environment for the workers and the hardware equipment. The newly received coordinates of the stations will be used to set the robot's destinations. The speed of the robot and the objects in the... [Read more »](#)

The footer of the page includes the STAR logo and website URL (www.star-ai.eu), contact information, a privacy policy link, the European Union flag, and a note about funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 956573. The copyright notice is © 2022 - Star Market.

Figure 8 - Success Stories page

2.2.5 Success Story individual page

As it happens with the Assets, each individual Success Story has its own dedicated page. Figure 9 shows an example of one Success Story available in the Market by STAR platform.




Figure 9 - Individual Success Story page

By analysing the example of a Success Story provided in Figure 9, one can understand that an Individual page of a Success Story has several sections with specific information. Other sections are already prepared in order to provide more information which are not yet available.

- Success Story header – provides the Success Story name, description, keywords and a picture (if available).
- Success Story characterisation – displays the following information (including the visual elements):
 - Summary – contains a resume of all the use cases, including a map with all the places where the use case is taking place and some statistics about it,
 - Use case status and statistics – indicates whether it has not begun, is in progress or has finished, along with its statistics,
 - Place information – lists the places involved in the use case with the respective characterisation,
 - Team information – shows the entities and users involved,
 - Characterisation – has an interactive area between Value Propositions, Information and Communication Technologies (ICT) Problems, Functions, Target and Domains,
 - Solutions – presents the set of assets used in each ICT Problem and is affected by the interaction in the Characterisation section,
 - KPIs – presents the Key Performance indicators being monitored in this success story. Showing the last values but also an evolution of each of the KPIs (not yet made available, as the KPIs were not yet collected as part of WP6 activities)
 - Gallery – consists of a section where photos and videos are available, and
 - Documentation – contains files or important links (if available)

2.2.6 Training Resources – Listings of Courses and Workshops

Throughout the project, the assets and success stories will be released jointly with the corresponding documentation, either in the form of presentations, webinars, links to courses, whitepapers or books. Such materials will be used to feed the Training Resources section of the Market by STAR Platform, as represented in Figure 10 (list of available courses) and Figure 11 (list of available Workshops).



[Assets](#)
[Success Stories](#)
[Training Resources](#)
[External AI Resources](#)
[Sign Out](#)

Courses

[Advanced Manufacturing Enterprise](#)

This course makes students aware of what a digitally connected enterprise is, as they learn about the operational complexity of enterprises, business process optimization and the concept of an integrated product-process-value chain. Students become acquainted with the available tools, technologies and techniques for aggregation and integration of data throughout the manufacturing supply chain and entire...

[Read more »](#)

[Digital Transformation from Industry 4.0 to Industry 5.0](#)

Take a leap and digitally transform your organization from Industry 4.0 to Industry 5.0 transformation. This course will start learning about Industry 4.0 which is actually the foundation of the digital transformation term. We learn benefits and downsides of Industry 4.0. When we go further in the course we will learn what are different Industry 4.0...

[Read more »](#)

[Digital Transformation in Industry 4.0 : A Complete Guide](#)

Digital Transformation, Industry 4.0. The course details about Digital Transformation in the Industry 4.0 environment. Very systematic approach is made to understand all elements of transformation efforts. Course focusses on advantages, challenges and risks in a detailed way. Also discusses various industry scenarios with respect to Digital Transformation. Course also covers Industry 4.0 today's buzz word...

[Read more »](#)

[Digital Transformation and Industry 4.0 Masterclass](#)

Understand what do terms like Digitalization, Industry 4.0, Society 5.0 mean. Build a deep understanding of 7 core Industry 4.0 technologies (AI, IoT, Blockchain, AR/VR, RPA, Cloud, 3D Printing) and their applications in business. Learn the key business drivers of digitalization and a framework for crafting digital strategy. Practice hands on case to implement digital transformation in...

[Read more »](#)

[Digital Transformation and Industry 4.0](#)

Learn how to manage digital transformation in your organization to win in tomorrow's world. In this course we will start learning about Industry 4.0 which is actually the foundation of the digital transformation term. Then we will have a quick look at the Society 5.0 because it will impact the scope of the digital transformation projects...

[Read more »](#)

[Cyber Security in Manufacturing](#)

Acquire knowledge about security needs and the application of information security systems. Build the foundational skills needed in performing a risk assessment of operational and information technology assets. Gain valuable insights of implementing controls to mitigate identified risks. Main concepts of this course will be delivered through lectures, readings, discussions and various videos.

[Read more »](#)

[Hands-on Internet of Things Specialization](#)

WHAT YOU WILL LEARN-How to build an autonomous networked device, how to program and connect this device, how to use wireless networking protocols.-Assembly of networked devices, programming of networked devices

[Read more »](#)

[Get started in Internet of Things](#)

What you'll learn: Internet of Things, Arduino Programming, Working with NodeMCU, ESP8266, Publishing sensor data to cloud server, Subscribing data from cloud server, Google Assistance based Home Automation, MQTT, Adafruit IO, Firebase Database

[Read more »](#)

[Fundamentals of IoT \(Internet of Things\)](#)

What you'll learn: Students will develop a strong confidence on topic, Internet of Things. Understand the Different Application of Internet of Things. Understand the Different Technology of Internet of Things.

[Read more »](#)

[Imagine IoT](#)

What does the Internet of Things (IoT) mean to you? We are entering a new era in which "things" in the physical world are becoming connected digitally. Everything from light bulbs and baby socks to cars and coffee machines. What is possible in a world of connected, sensing, and interacting things? This course is all about...

[Read more »](#)

[Industrial IoT Markets and Security](#)

"This course can also be taken for academic credit as ECEA 5385, part of CU Boulder's Master of Science in Electrical Engineering degree. Developing tomorrow's industrial infrastructure is a significant challenge. This course goes beyond the hype of consumer IoT to emphasize a much greater space for potential embedded system applications and growth: The Industrial Internet..."


[Read more »](#)

[Fundamentals of IoT](#)

An IoT Essentials course to build a strong foundation in Enterprise IoT from Primary building blocks to IoT Architecture

[Read more »](#)


1
2
3
4



[www.star-ai.eu](#)

[Contact Us](#)

[Privacy Policy](#)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 956573.

© 2022 - Star Market

Figure 10 - Training Resources page - Courses

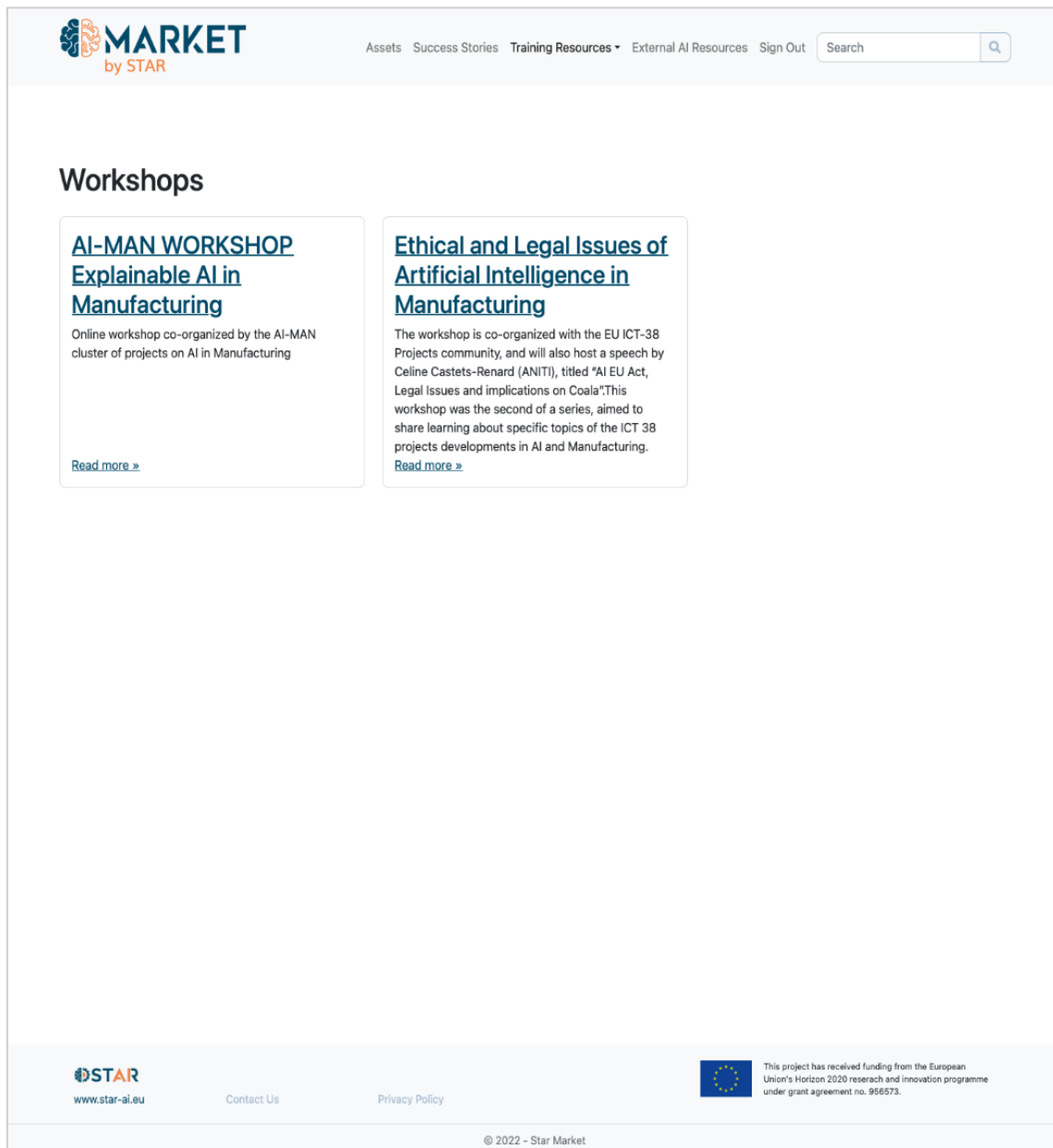
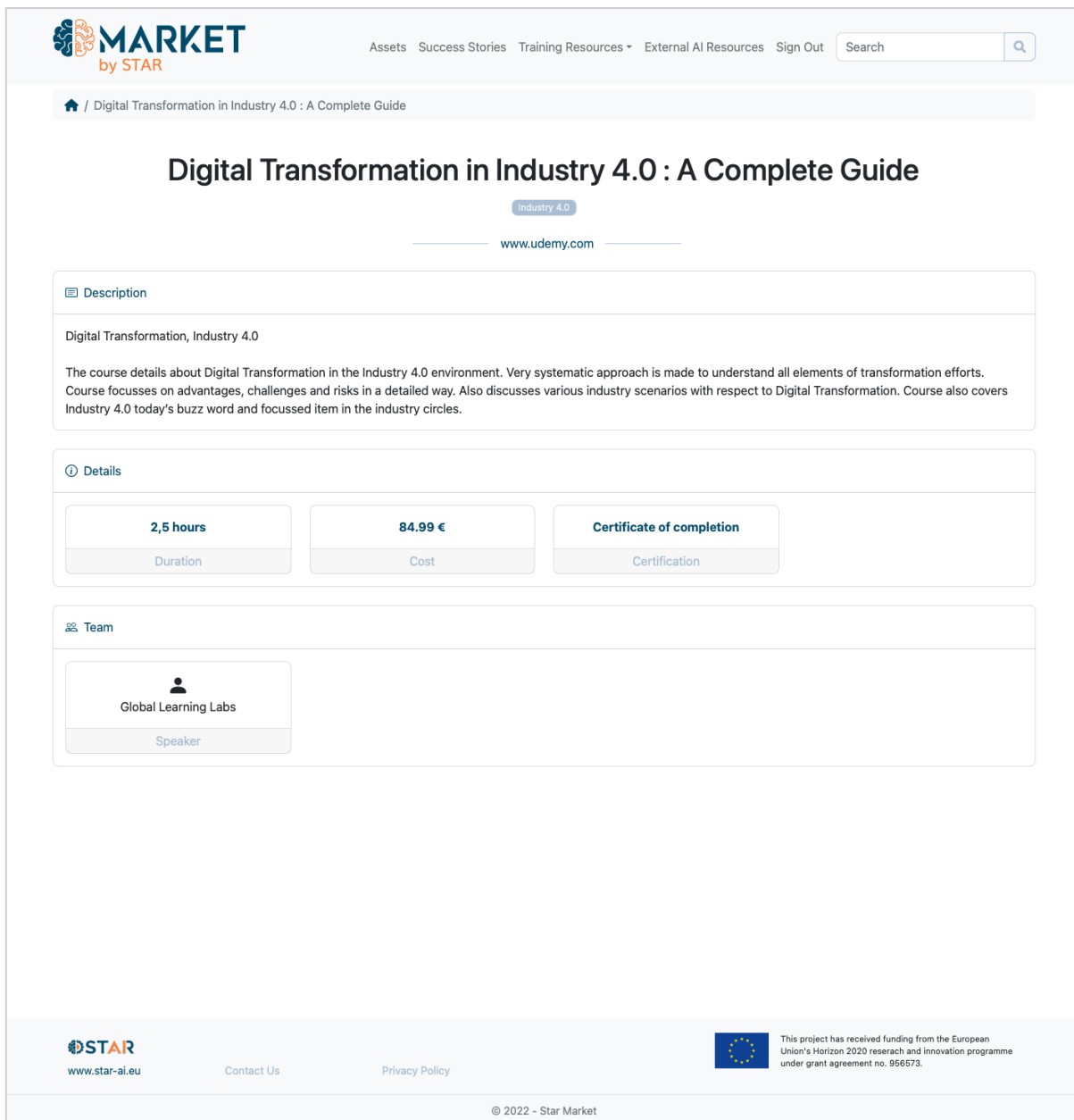


Figure 11 - Training Resources page – Workshops

2.2.7 Training resources individual pages

As it happens with individual assets and individual Success Stories, each individual course or individual workshop also have their own dedicated pages. An example of a course is depicted in Figure 12, while an example of a workshop can be seen in Figure 13.



The screenshot shows the 'MARKET by STAR' website interface. At the top, there is a navigation bar with links for 'Assets', 'Success Stories', 'Training Resources', 'External AI Resources', and 'Sign Out', along with a search bar. Below the navigation bar, a breadcrumb trail indicates the current page is 'Digital Transformation in Industry 4.0 : A Complete Guide'. The main heading is 'Digital Transformation in Industry 4.0 : A Complete Guide', with a sub-label 'Industry 4.0' and the website 'www.udemy.com'. The page is divided into several sections: 'Description' (providing a brief overview of the course content), 'Details' (listing '2,5 hours' duration, '84.99 €' cost, and 'Certificate of completion'), and 'Team' (listing 'Global Learning Labs' as the speaker). The footer contains the STAR logo, contact information, a privacy policy link, a European Union funding notice, and a copyright notice for 2022.

Figure 12 - Training Resources Individual Page – Course

Each course individual page is divided into the following sections:

- Course Header – consists of a title, keywords, and website.
- Description – a description of the content of the course
- Details – a set of available characteristics of the specific course, such as the duration of the course, the cost for the user and the availability of a certificate of completion
- Team – list of people and/or entities that are responsible for providing the course

[Assets](#) [Success Stories](#) [Training Resources](#) [External AI Resources](#) [Sign Out](#)

/ Ethical and Legal Issues of Artificial Intelligence in Manufacturing

Ethical and Legal Issues of Artificial Intelligence in Manufacturing

AI
Ethical Issues

ai4manufacturing.com

Description

The workshop is co-organized with the EU ICT-38 Projects community, and will also host a speech by Celine Castets-Renard (ANITI), titled "AI EU Act, Legal Issues and implications on Coala". This workshop was the second of a series, aimed to share learning about specific topics of the ICT 38 projects developments in AI and Manufacturing.

Details

11/25/2021
Date

2h
Duration

Agenda

- 00:00 – 00:05 Introduction to the Workshop
- 00:05 – 00:20 "Ethics by Design in the AI-Proficient Project", Marc Anderson and Karen Fort, H2020 PROFICIENT Project
- 00:20 – 00:35 "Artificial lawyer – collecting and using data for certain legal issues related to manufacturing" Dr. Raphael Thomas Prabucki, H2020 MAS4AI Project
- 00:35 – 00:50 "AI in Manufacturing, that Works. The Symbiosis of Functionals & Non-Functionals as Main Success Factor", Arthur van der Wees, H2020 STAR Project
- 00:50 – 01:05 "Developing a human centric architecture for AI in manufacturing – experiences, insights, challenges", Jan-Hendrik Passoth and Benedict Lang, H2020 ASSISTANT Project
- 01:05 – 01:20 "AI EU Act, Legal issues, and Implications on COALA Project", Celine Castets-Renard, H2020 COALA Project
- 01:20 – 01:35 "Comparing the EU and Japanese Legal and Ethical Approaches to AI for Manufacturing", Dr Andrew A. Adams, Centre for Business Information Ethics, Meiji University, Tokyo, Japan, H2020 EU-Japn.AI
- 01:35 – 2:00 Discussion – Questions – Answers

Team

Marc Anderson
Speaker

Karen Fort
Speaker

Dr. Raphael Thomas Prabucki
Speaker

Arthur van der Wees
Speaker

Jan-Hendrik Passoth
Speaker

Benedict Lang
Speaker

Celine Castets-Renard
Speaker

Dr Andrew A. Adams
Speaker

Resources

1. Adams-EU-Japan.AI

2. Anderson-AI-MAN

4. Arthurs.LegalStrategies&Systems-STAR

5. Benedict-Lang-ASSISTANT

6. Castets-Renard_COALA

Agenda

www.star-ai.eu

[Contact Us](#)
[Privacy Policy](#)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 956573.

© 2022 - Star Market

Figure 13 - Training Resources Individual Page - Workshop

As shown in Figure 13, each workshop individual page provides information related to the respective workshop. As depicted in the example provided, the page provides the following sections:

- Workshop header – Information on the title of the workshop, some keywords, the link to the website and the recordings of the workshop when available.
- Description – a description of the available workshop
- Details – Information related to when the workshop took place and its duration
- Agenda – The agenda of the workshop, so that users can understand the topics discussed and who provided each part of the workshop
- Team – Information on the people and/or entities that took part in the workshop
- Resources – Available resources related to the workshop, such as the individual presentations used during the workshop

2.2.8 External AI Resources

This page, depicted in Figure 14, provides links to external sources for AI resources that could be of interest to the Market by STAR platform stakeholders. The 3 external platforms are:

- The IoT-Catalogue.com - through IoT-Catalogue.com it was possible to elicit a list of use cases that are known to use AI in manufacturing
- EFFRA Portal - a portal to promote the development of new and innovative production technologies
- AI4EU – a platform which provides a relevant AI resources catalogue

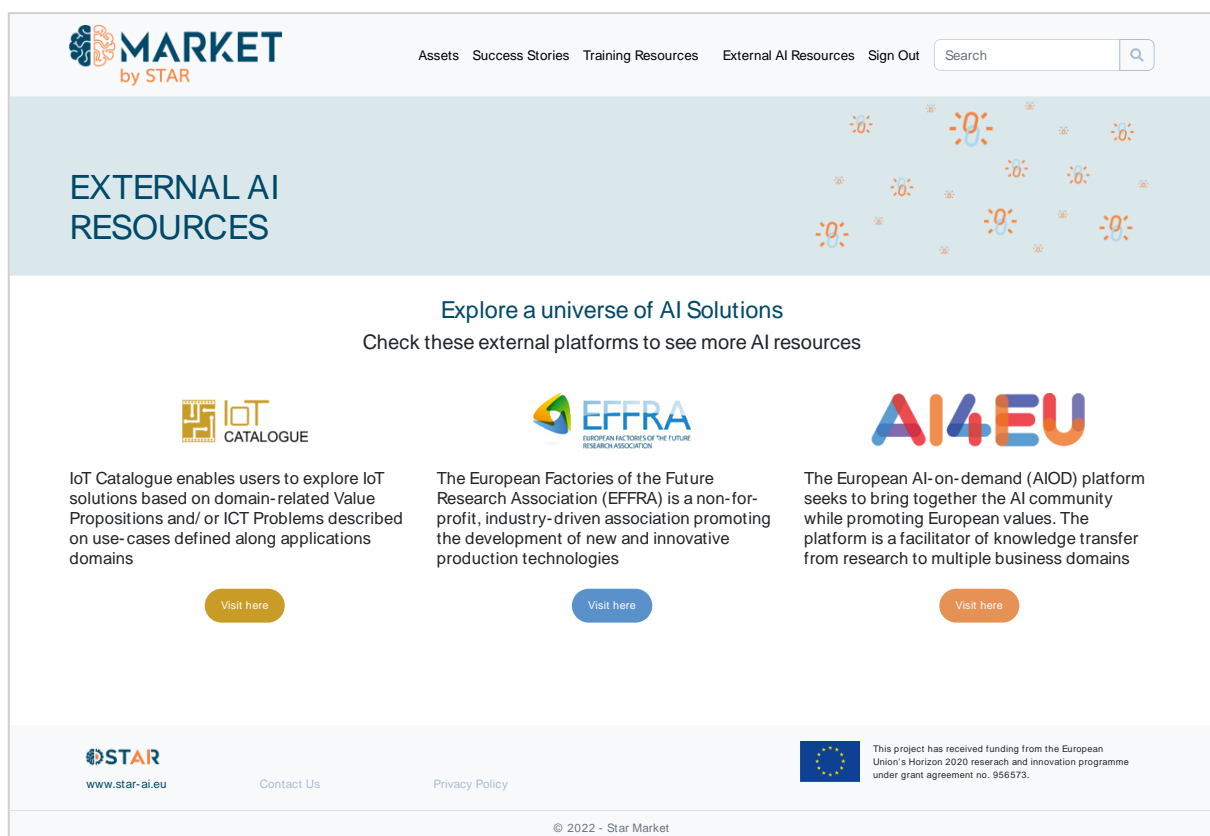


Figure 14 - External AI Resources page

These External AI resources were suggested in the WP2, and more specifically task 2.2, which provided a series of scenarios and use cases involving the deployment and use of Artificial Intelligence (AI) in manufacturing with an emphasis on scenarios directly related to STAR project.

2.2.9 User Login and Registration

For the users to have access to all the results made available within the Market by STAR, there is the need for some user management functionalities. Consequently, as depicted in Figure 15, any Market by STAR visitor can login or register in the platform, so to have complete access to all the information available. For convenience, the platform allows the user to use major social platforms to login or create his/her account.

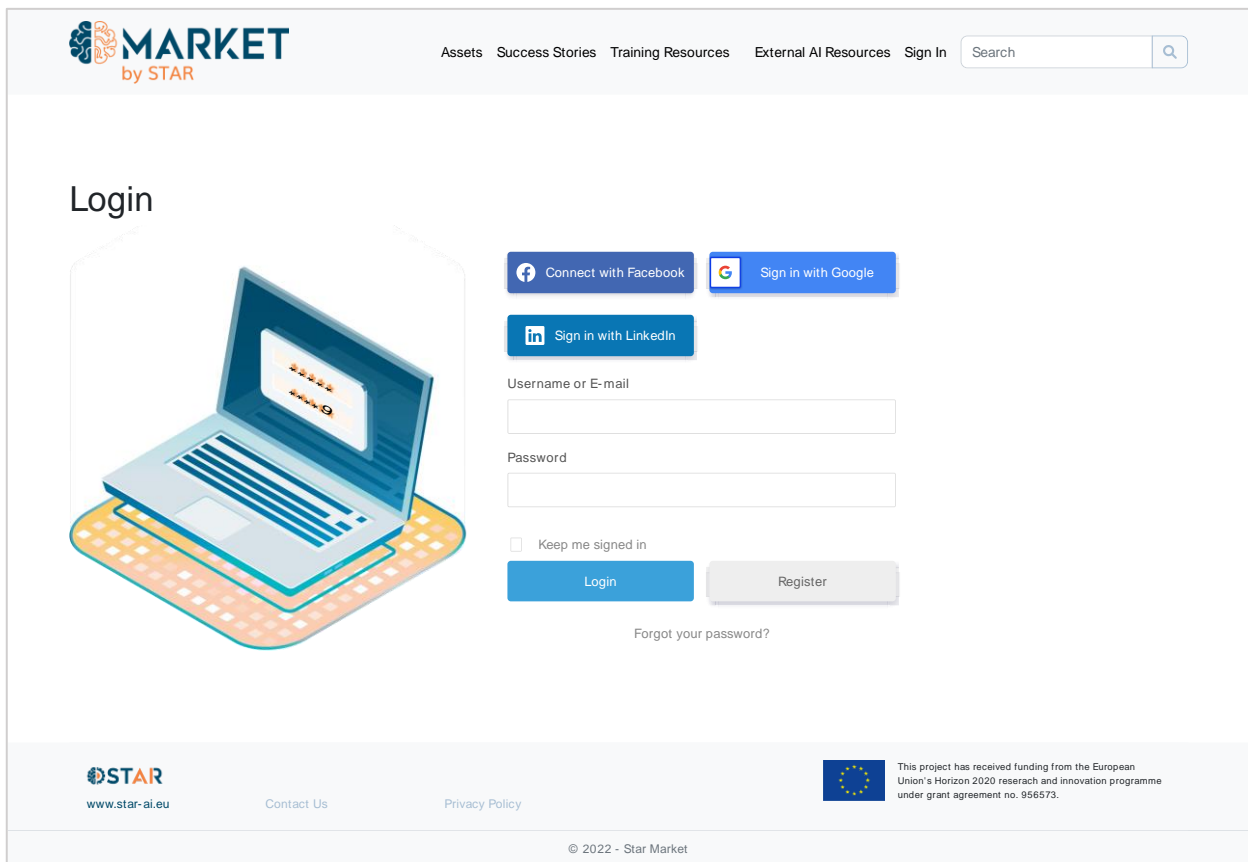


Figure 15 - User Login & Registration

3 Conclusion

The Market by STAR platform for safe, reliable, and secure AI solutions in manufacturing provides a single-entry point to accessing resources and support services, being a vehicle for the promotion, dissemination, and exploitation of the project results. As this deliverable is part of STAR's Work Package 7, it is important to mention that WP7 is responsible for the Virtualised Digital Innovation Hub for Secure and Safe AI in Manufacturing, and it is active during the execution of the project (from M01 to M36).

The STAR Marketplace was implemented and updated with content provided from the other tasks of WP7, but also from other Work Packages. The STAR Marketplace is divided into 6 sections, which are the homepage, assets, success stories, training, search and login.

The home page is divided into layers, the menu, the main image, statistics, a section dedicated to assets, another to success stories, another to training and external AI resources and at the bottom of the page, a layer inviting visitors to register in the platform.

The assets page provides a grid view with an overview of all the assets publicly available within the Market by STAR platform. Each Asset has its own page with information about it, such as the main image, title, summary, keywords, detailed descriptions, a list of success stories, the documentation and gallery.

The success stories page gives us a list of the currently publicly available Success Stories from STAR project. As it happens with the assets, each individual success story has its own dedicated page.

The training section includes courses and workshops and each one will have an individual page, with all its information, such as assets and success stories.

For last, the external ai resources page provides links to external sources (e platforms: The IoT-Catalogue.com, EFFRA Portal, and AI4EU) for AI resources that could be of interest to the Market by STAR platform stakeholders.

It is important to note that in order to access individual pages (either an Asset, Success Story or Training Resource), the users need to be registered in the Market by STAR platform.

This deliverable represents the current status of the platform. Being a live platform, the contents will face updates and improvements. During the next months and in collaboration with the rest of WP7 tasks and the contribution of tasks of other Work Packages the platform will be updated, especially related to integrations (e.g. course recommendations and workforce training) and content.