LeArning and robuSt decision SupporT systems for agile mANufacTuring environments

Project Acronym:

ASSISTANT

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Publishable Executive Summary

ASSISTANT project is composed of 12 partners. The project is funded by the European Commission and planned to spend about 6 Mio € for the challenging work to be carried out. ASSISTANT is organized in nine work packages. The initial dissemination and communication plan is one of the deliverables of work package 8 named Communication, Dissemination and Exploitation.

ASSISTANT has been designed as a holistic approach on Artificial Intelligence for manufacturing in Europe. ASSISTANT will perform communication dissemination and exploitation actions to maximize the impact in the different communities. To strengthen the Industrial European market, ASSISTANT will act as a catalyst for other ICT-38-funded projects, future companies (SMEs and Start-ups) in Europe, and the AI4EU platform community (specifically the manufacturing sector).

Communication and dissemination are the foundation that ensure the maximum impact of the project. They raise awareness of the project through different channels such as media, scientific journals, etc. This deliverable presents the ASSISTANT initial dissemination and communication plan, which the purpose is not only to provide targeted information to different audiences including the media and the general public, but also plans the exploitation of the results of the project. The dissemination will describe how the results are made available. The communication will address the way to bring the project contents and results to different stakeholders. Finally, the exploitation will provide a plan on how the different results and outcomes of ASSISTANT will be exploited.

The ASSISTANT initial dissemination and communication plan will reflect the contribution to the communication and dissemination activities of all partners in the consortium according to their role and effort and using all available and acceptable tools and channels.

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1. Introduction

The ASSISTANT project is made up of 12 partners. The project is funded by the European Commission with a total budget of 6M EUR. ASSISTANT is organized in nine work packages. The initial dissemination and communication plan is one of the deliverables of work package 8 named Communication, Dissemination and Exploitation.

A complex project such as ASSISTANT arouses the interest of several stakeholders, directly or indirectly from scientists to the industry, including the general public. The impact of the project is shown through these stakeholders. These actors see the project from different angles regarding the progress and results of the project. Scientists, for example, will examine new approaches being used by looking at the entire process. They will seek to tame new scientific knowledge brought to the market. The industry will look at the innovation brought by the project and especially the measurable benefits. They will seek to understand what the industry would gain by implementing this new knowledge. The general public, in its majority, is generally aware when the results are already operational in the market but should be informed on the progress of the project. These different actors must be informed on a different granularity because the expectations may be the same, but each of these stakeholders looks at them from its own point of view. Hence the communication and dissemination must be able to reach these different actors individually.

As communication and dissemination remain the driving force that really sells the project to scientists, the industry and the general public, this report presents the ASSISTANT initial dissemination and communication plan, whose purpose is not only to provide targeted information to different audiences including the media and the general public, but also to plan the exploitation of the results of the project. The dissemination will describe how the results are made available. The communication will address the way to bring the project contents and results to different stakeholders. Finally, the exploitation will provide a plan on how the different results and outcomes of ASSISTANT will be exploited. The main purposes are to:

- raise awareness of the project amongst the industry and the research community and to embody the results of the project in open-source communities and standardization bodies by achieving wide communication and scientific dissemination of the ASSISTANT project outcomes to our key audiences (the Information Technology industry, research communities, European projects, engineers, developers, and open-source communities).
- grow a community of early adopters around the project's concepts and tools by positioning ASSISTANT as a recognized set of solutions supporting decision-making, optimization and reconfigurable in relevant industry by using media including websites, events, workshops, and conferences.
- ensure the sustainability of the project's results beyond the actual duration of the project through pragmatic exploitation plans, commercialization strategies and open-source business models.
- convince how ASSISTANT can disrupt positively manufacturing companies by promoting solutions with humans at the heart of the production systems and its organization, while contributing to the change of manufacturing jobs that will be less labor-intensive and more productive.

- show how ASSISTANT can contribute tackling the data availability challenge in manufacturing and convince about the substantial socio-economic benefits of Artificial Intelligence (AI) for manufacturing companies.
- promote information about ASSISTANT results and activities related to the integration of Artificial Intelligence approaches into manufacturing processes.
- inform about events, workshops, and conferences planned during ASSISTANT for reaching the wider manufacturing and scientific communities possible.

The ASSISTANT dissemination and communication plan will reflect the contribution to the communication and dissemination activities of all partners in the consortium according to their role and effort and using all available and acceptable tools and channels.

1.1 Structure of the deliverable report

The deliverable report is structured into three different parts according to the different tasks planned for the work package 8 (Communication, Dissemination and Exploitation). Section 2 will provide the plan for clustering and synergies with European projects and initiatives for community building. Section 3 provides the plan for dissemination and communication and, finally, section 4 describes the exploitation plan of the outcomes of the project.

2. Plan for clustering and synergies with European projects and initiatives for community building

The ASSISTANT project does not exist in isolation and indeed the call under which it was funded (ICT38-2020) makes explicit reference to the need for funded projects to engage strongly with the AI on-demand platform, to profit from the already large investment and commitment of EC in the domain of AI, while bringing new disruptive research in the landscape. Clustering activities with EC-funded projects will consolidate AI research for manufacturing on a larger scale. The goal is to reinforce the European Strategy on AI.

To ensure this engagement was realised, within WP8, dedicated to Communication, Dissemination and Exploitation, there was included a dedicated Task, T8.1 that sought to position the project in such a way as that would ease engagement with AI4EU and related initiatives.

Task 8.1 Clustering and Synergies with European projects and initiatives for community building (all) does not have an associated deliverable but is instead concerned with implementing actions that provided platforms and tangible mechanisms of engagement with strategic initiatives, which would allow the outputs of ASSISTANT to reach key stakeholders and to ensure the messaging of the project was aligned and connected to the activities of several other key initiatives.

The figure below is provided to illustrate the positioning of the **ASSISTANT** project within the broader AI landscape.

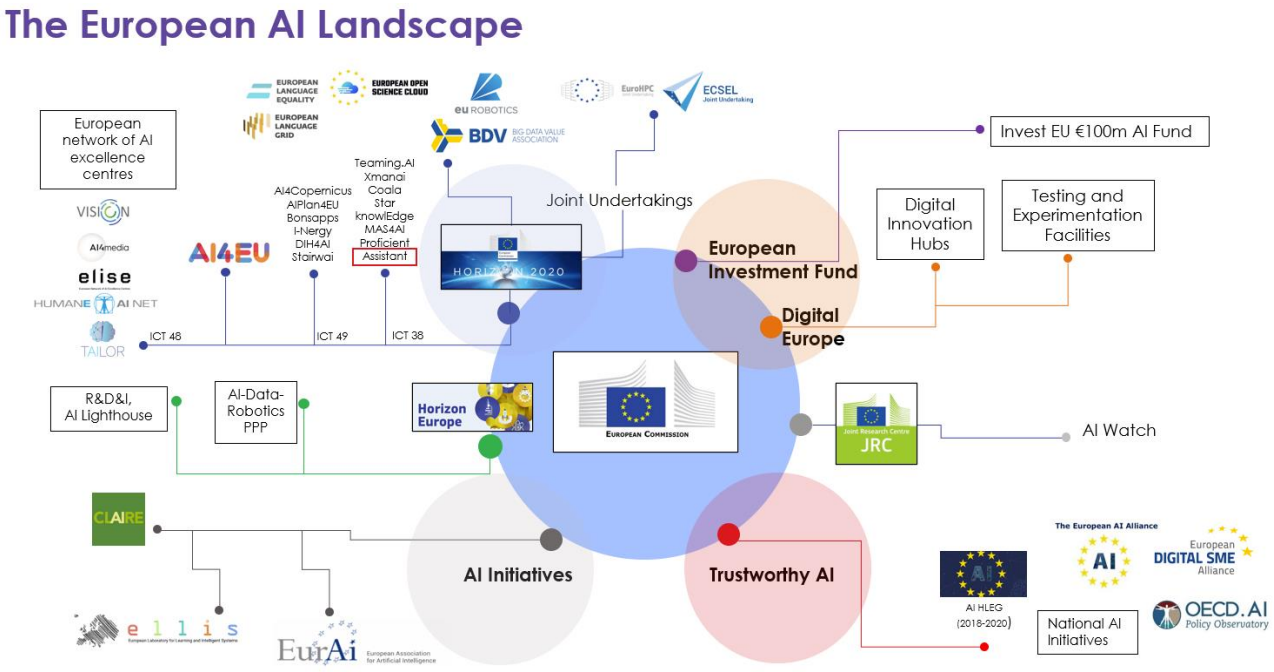


Figure 1: Overview of the European AI landscape and the positioning of ASSISTANT

While the above image is not exhaustive in listing every key ongoing activity, it is useful for illustrating the key projects, initiatives, and programmes that the European Commission is launching to support a holistic umbrella for all AI research and innovation activities. On the left-hand side of the figures, within the Horizon 2020 strand, the ASSISTANT project is positioned alongside the other ICT 38 projects.

What is clear from the picture presented above is that for ASSISTANT to meaningfully communicate and engage with the broader community, it is necessary to implement a coherent strategy that will see the project offer support to actions that connect different initiatives with similar objectives. It is important to avoid duplication and where synergies and collaborations are possible, they should be pursued.

Another important factor informing the project's clustering activities is the realisation that the successful engagement with key organizations and initiatives external to the project will have a multiplying effect for the messaging and outputs of ASSISTANT. By engaging with strategic organisations and entering meaningful and mutually beneficial collaborations, the communication, dissemination and exploitation strategy of the project is likely to be much more successful.

At proposal development stage, the leaders of WP and Task 8.1 leader already identified several initiatives and organizations that represented important possible collaborators. While these organizations and the indicative list of activities remain relevant, the rapidly changing nature of the AI landscape and the connected Manufacturing environment, means that to implement actions of true value to the community, it is necessary for any strategy remain flexible in order to pragmatically respond to emerging opportunities. This is even more important in the current context of the impact that the Covid-19 crisis is having on the business as usual.

The activities of Task 8.1 currently foresee several clustering actions which are considering important to position the project at key junctures of several ongoing initiatives. As mentioned, this positioning is subject to modification in line with emerging opportunities. However, below is presented a list of provisional engagements that are planned and considered valuable to position ASSISTANT appropriately to ensure the successful execution of this Dissemination and Communication Plan.

AI4EU: Project coordinator IMT and Task 8.1 Leader UCC are deeply involved in the AI on-demand Platform leading key Work Packages within this project. There are therefore no challenges to ensuring that ASSISTANT partners are aware of the most recent updates and invited to engage in relevant collaborative opportunities. Bilateral meetings and joint participation in events already envisioned. Manufacturing is expected to be a key vertical within the on-demand platform and ASSISTANT is well positioned to contribute strongly in terms of contributing project outputs to this central platform.

ICT49 projects: With the AI4EU ending at the end of 2021, there is a need to ensure continuity in engagement. The bridge to the next two-year period is provided by the ICT49 projects that plan to build new service layers on the on-demand platform. ASSISTANT plans to engage strongly with set of six projects to understand how and where their exploitation strategies align with the plan outlined in this document. Helpfully, the ICT49 projects are currently working very closely together and mapping their respective activities in terms of the target stakeholders, open calls, service catalogue etc. so engagement and entering mutually beneficial collaborations should be simplified. ASSISTANT project partner UCC is leading this cooperation strategy between the different ICT49 projects, so there is a direct link for ASSISTANT to remain informed of plans and outputs for these new projects.

ICT48: The network of excellence (NoE) centres in AI established under the H2020 call ICT48 are another group that are important target for ASSISTANT in terms of potential collaborations. These four projects, and the supporting CSA, represent a critical mass of AI researchers in Europe and are therefore an important set of actors with which to engage. ASSISTANT partners are embbeded in the new NoEs (HumanE AI Network; UCC, TAILOR; UCC,

VISION; UCC, ELISE; SAG) and therefore engagement is assured. Through the VISION CSA, several synergies between the four NoEs have already been identified and a new united communication channel will be released over the coming weeks. Through participation in shared events (e.g., Theme Development Workshops etc.) and continuous engagement with the strong communication channels developed by VISION, as well as being able to aware of the most up to date information on potential collaborations, ASSISTANT will use this bridge to connect to other pan-European initiates including CLAIRE, BDVA, AI data and robotics PPP, EOSC etc. It remains unclear as to the potential for entering synergies with any of these groups but through this positioning, ASSISTANT will ensure that it is informed of potential opportunities to maximise the reach and impact of its outreach plans.

ICT38 projects: As well as ASSISTANT, seven other projects were also funded under the ICT38 call. It is through engagement with these projects and the supporting European Factories of the Future Research Association (EFFRA) that ASSISTANT plans to ensure the connection with the relevant stakeholders within the vertical of Manufacturing. EFFRA already has in place several very strong structures that will assistant the ICT38 projects to expose their results to the relevant audience. In addition, it is envisioned that a set of workshops or showcases of the outputs of the ICT38 project will be held a key juncture over the timeline of the set of projects.

As mentioned above, this group of engagements represents a provisional list of initiatives where ASSISTANT can strongly position itself. These engagements alone will ensure the messaging of the project reach key research and applied stakeholders in AI and manufacturing, the core focus of ASSISTANT. By connecting the project with these other initiatives, ASSISTANT, through its outputs, will be in an excellent to engage with Europe's leading research and industrial organizations.

As EU's R&D&I plans evolve and advance over the coming period, ASSISTANT partners will also continue to ensure that the above-mentioned plan remains suitably flexible to respond to new opportunities.

3. Dissemination and communication

Dissemination and communication plan will describe how the results are made available and the way to bring the project contents and results to different stakeholders.

3.1 Main target groups of ASSISTANT

ASSISTANT's target audience is made up of:

Manufacturing companies and production planners that will be interested in benefiting from the digitalization of the industry, willing to increase the quality of the products they conceive, searching for innovative tools allowing their production/assembly process to be highly reconfigurable while offering human-friendly environment.

Small and Medium Enterprise (SME) willing to increase their competitiveness by integrating Artificial Intelligence (AI) tools for optimizing their production/assembly process. ASSISTANT will be SME-friendly by offering 2 levels of integrable software and/or hardware solutions.

Technology and software providers and automation, IT services company will be interested in the availability of new technologies allowing them to develop AI-based software applications for optimized production and assembly systems. ASSISTANT will disrupt the market by delivering far beyond the state-of-the-art research solutions to be handled for the next steps (adaptation and commercialization).

Academic manufacturing community (AMC): ASSISTANT will provide results/methods on several hot topics for the AMC. For instance, i) on enhancing the digital twin concept to yield smart manufacturing decisions, ii) how to deal with manufacturing uncertainties with stochastic and robust decision-making uncertainties, iii) the design of resilient production systems based on historical data, iv) real-time manufacturing operation control-based machine learning technic. It is of interest to the AMC to access results of ASSISTANT to continuously integrate the coming and increasing levels of complexity brought by the changing configurations of the industry of the future.

Academic AI community (AIC): ASSISTANT will provide case studies on the use of various AI techniques in realistic manufacturing environments, point out the difficulties, and provide methodological contribution to overcome them. There is a strong need for AIC to make AI more sector/domain specific to deploy the full potential of AI. Giving the AIC access to these results will ensure that ASSISTANT will be continuously enriched with future AI approaches to allow ASSISTANT to be equipped with the latest evolution of AI research.

Finally, **general public** will be informed through media about not only the results of the project, but also the contents and different terms used in ASSISTANT to allow them to follow carefully what ASSISTANT brings to them.

3.2 What should be disseminated and communicated?

We will ensure ASSISTANT visibility in specialized industry media including social media, press writing and circulating press releases. ASSISTANT visibility will be provided through both presentations and/or dedicated sessions at relevant industry events. Efforts will be carried out to raise awareness for ASSISTANT within the scientific community by submitting presentations and papers at relevant scientific and academic media.

Different ASSISTANT events as well as interviews about the content of the project will be regularly posted on social media. The activity about posting interviews on social media began

already with a frequency of a month. ASSISTANT deliverables are also subject to the communication and dissemination through publication. ASSISTANT will fully implement the open access policy of Horizon 2020 by providing online open access to scientific information. For publication in a journal or conference that is not open to the public, the article will be available free of charge on the Open Archive HAL (https://hal.archives-ouvertes.fr). This follows the recommendation on the guidance " How to make full use of the results of your Horizon 2020 project" (see,20210330_how-to-make-full-use-of-the-results-of-your-project_h2020_en.pdf (europa.eu))

ASSISTANT project will deliver a set of important results (tools and/or building methodology) extracted from technical Work packages or generated vertically by the overall project. ASSISTANT has identified below these main results to be disseminated:

Table 1: ASSISTANT results for dissemination

Type of results	Results	Target group	Open source?
Tool of WP3	Framework for intelligent twin for process planning	Industries with a high number of variants and small batch sizes; Production planners; Software vendors	Framework for the intelligent twin for process planning will be open source
Methodology of WP3 tool	(i) Automated AI-based Process Planning methods; (ii) AI-based evaluation and prediction of product changes in process planning methods	AI & Manufacturing Research community	Methodology with its methods will be open source
Tool of WP4	Framework for Intelligent twins for production planning and scheduling	MES providers (AI tools for real-time control); Technology provider (software for control)	Open source
Methodology of WP4	Extraction of patterns interpretable by humans in time series corresponding to physical restrictions on the use of machines in a production context	MES providers (AI tools for real-time control). Technology provider (software for control); AI & Manufacturing Research community	Open source
Methodology of WP4	i) extraction of production models methods from production data ii) prescriptive analytics tools for production planning in an uncertain environment	Prescriptive analytics software providers, MES and ERP providing schedulers; AI & Manufacturing Research community	Open source
Tool of WP5	Workstation level" Digital Twin (station digitalization through sensor data real time update)	Robotics research, manufacturing research, manufacturing companies employing robot workers, automation industry, automotive and consumer goods industries	Methodology and methods released as open source

Tool of WP5	Station controller for task tracking, execution and reallocation	Robotics/manufacturing research, automotive /consumer goods industries, manufacturing companies employing robots, automation, IT services company, system integrators	Methodology and methods released as open source
Tool of WP6	Intelligent AI systems and a simulation engine for the data fabric allowing development, testing, and evaluation of distributed data / computation orchestrations for manufacturing AI systems	Researchers and industry actors interested in edge AI systems, smart manufacturing platforms, automation, and IT services, 5G telecom providers	Framework (open source), selected optimization algorithms (proprietary)
Methodology of WP6 tool	Prototype digital fabric subsystem capable of interconnecting and orchestrating the distributed AI and digital twin systems developed in ASSISTANT	Researchers and industry actors interested in edge AI systems, smart manufacturing platforms, automation and IT services, 5G telecom providers	Methodology and methods released as open source
Tool of WP7	Flexible assembly line demonstrator	Industries interested in machine configuration tunning for high quality	Framework and architecture are open source, implementation is proprietary
Tool of WP7	Data fabric demonstrator	Industry interested in simulating and optimizing production and planning processes	Data fabric demonstrator (open source)
Strategic document	Trustworthy guidelines applied to the scope of industrial manufacturing	Policymakers, Industries willing to implement AI approaches into their systems, AI and manufacturing research	Open source

3.2.1 Activities subject to communication and dissemination

Several events may be the subject of communication and dissemination during the lifecycle of the ASSISTANT project. Without being exhaustive in Table 2 we present some activities which are the subject of communication and dissemination opportunities in ASSISTANT.

Table 2: ASSISTANT, activities subject to communication and dissemination

Activities	Press Releases	Website echo	Twitter echo	LinkedIn echo	News letter
Kickoff meeting	x	x	x	x	

ASSISTANT interviews			x	x	
ASSISTANT plenary meeting		x	x	x	x
ASSISTANT technical results (demonstrators)	x	x	x	x	x
ASSISTANT workshops			x	x	x
ASSISTANT main result publications, conference presentations or public–private partnership	x	x	x	x	x
Communication actions by another project partner = sharing by IMT Atlantique via social networks			x	x	
Final review by the European Commission or final event of the project	x	x	x	x	x

3.2.2 Workshops

To facilitate the wider dissemination of the project results, the ASSISTANT consortium is planning to organize scientific, technological, and industrial workshops.

3.2.2.1 Scientific workshop

The scientific workshop will provide the AI and manufacturing scientific communities with the research of ASSISTANT that combine many approaches: AI and manufacturing, machine learning and optimization, generative design, and modeling, among others. This workshop will also highlight the technical novelties allowing one to keep humans at the heart of the manufacturing process. In addition, we will invite coordinators of other projects funded under the ICT 38-2020 to foster synergies.

Results to disseminate: Research results leading to the construction of the intelligent twins (integration of Digital Twins into AI systems), Digital Twins communication with the overall system.

Main Targets: Academics or specific R&D division of Manufacturing companies, etc.

Expected audience: 200 participants.

Co-location of the workshop: 10th IFAC Conference on Manufacturing Modeling for Management and Control (MIM'2022) in Nantes from June 22 to June 24, 2022 (expected audience: 800 participants).

Responsible of the organization: IMT, assisted by TUM and LMS.

3.2.2.2 Technological workshop

The Technological Workshop showcases the first prototyped tools that can be transferred by technology providers in manufacturing environments. This workshop is planned at M24, when an initial validation is available for multiple tools, and the first use cases specific adaptations are identified. This workshop focuses on AI for manufacturing, it also creates synergies with ICT-38 projects to avoid fragmentation, and duplication of effort. In addition, this workshop will foster collaboration between manufacturing industries and academics.

Besides leveraging on the AI4EU platform to exploit and disseminate its tools, ASSISTANT also wants to act as an entry point for other projects to join the on-demand platform and to synchronize AI for manufacturing research on a European scale. Consequently, the technological workshop will be collocated with one of the main European projects on AI

(ICT26-2018 AI4EU or ICT49-2020 winning projects). IMT is the AI4EU WP2 leader (Platform design and implementation) led by Dr. Anne Sophie Tailender (IMT/Teralab) and involved in other European Projects involving the AI community and DIH Network (EUH4D, DIH4AI). UCC is also part of AI4EU (WP4 Leader) and interconnected through other ICT-38 and 49 Projects. We will invite the Executive Boards of other ICT 38-2020 funded projects to connect these projects with AI4EU/ICT49-2020 winning project.

Results to disseminate: Intelligent digital twin systems (data acquisition and cleaning, model acquisition, prescriptive analytics for robust and flexible manufacturing systems).

Main Target: Technology providers, Automation and IT Services, Software Editor, EIT Manufacturing partners.

Expected audience: 200 participants.

Co-location of the workshop: Winner of ICT-49-2020: AI on demand platform event (follow-up of AI4EU), if they organize an AI event gathering the 15k active users. Otherwise, ASSISTANT will organize an independent event in Sept. 2022 in a follow-up AI4EU event and gathering the AI4EU community and other EU initiatives.

Responsible of the organization: UCC, assisted by IMT/Teralab and FLM between M22 and M26.

3.2.2.3 Industrial workshop

Industrial workshop will present to manufacturing companies the integration and use-case validation results. These results will be supported by figures from our use cases and demonstrating the performance of our intelligent twin system in terms of production costs, product quality, and with the level of satisfaction of the workers. We aim to convince manufacturers that our learning-based software can generate flexibility, reconfigurability, and robustness on the line to a new level. We will show the adaptability of the software to changes on the shop floor and its fast implementation on any manufacturing line. EU officers, PPP representatives (EFFRA, BDVA, EU Robotics) and regional policymakers will also be invited to learn about the concrete results of this project.

Results to disseminate: Use case validation and results obtained by ASSISTANT tools.

Main target: Manufacturing companies, EIT Manufacturing partners, technology providers, policymakers, public authorities in the field of labor.

Expected audience: 200 participants.

Co-location of the workshop: AI thematic event days organized by EFFRA.

Responsible for the organization: FLM, assisted by SAG. Workshop organized between M33 and M36.

3.3 Dissemination and Communication Material

Dissemination and Communication material are required to support the impact of ASSISTANT to different stakeholders. This includes designing the visual identity of the project and developing the content and graphic design of communication material ranging from logos and fact sheet to brochures, posters, support for presentation, etc. It also includes setting up the online communication resources: website and social network activities.

The first dissemination and communication material were generated before the kickoff meeting 17/18 November 2020. This material includes:

- The work package presentations at the kickoff meeting
- The partners presentations

- The logo of the project and the first version of the web site

Different logos were proposed by the IMT communication team and the logo used on this deliverable was voted by all the consortium members.

ASSISTANT possesses a LinkedIn account (https://www.linkedin.com/company/assistant-project/?viewAsMember=true) and twitter account (https://twitter.com/ASSISTANTProje4) for communication with the general public. ASSISTANT events as well as interviews about the content of the project will be regularly posted on these social media (each month).

The second dissemination and communication material will be based on scientific journal/conference papers, workshops, etc. Section 3.4.1 presents the main pages of the ASSISTANT public web site where events, news, interviews, publication, and press release will be posted. The summary of the communication and dissemination material is presented in Table 3.

Table 3: ASSISTANT, summary of the communication and dissemination material

Communication and dissemination material	Number
Logo	1
website	1
project brochure	1
Video presentation of the project	1
Video of demonstrators (for digital twins of 3 use cases)	3
Different support for presentation (slides)	Not defined
Posters	Not defined

3.3.1 **ASSISTANT Public Web Site**

The public website (https://assistant-project.eu) was designed by the technical project manager. It is the main channel for ASSISTANT to communicate with the external world. The ASSISTANT web site is based on the key elements of the projects such as the partners, the funder, the different work packages, the objectives of the project, the news, the press, etc. the design of the site is modern and very attractive. The texts are written in a concise and short manner to encourage reading. The content of the website will continuously evolve with the evolution of the project to continue to attract the wide public attention.

The website will reflect the achievements of the project and will be continuously updated with project documentation (including public deliverables) and links to other communications (e.g., published research articles). The website will be continuously updated for at least one year beyond the end of the project and maintained thereafter.

3.4.1.1 ASSITANT main web site pages

The first section of this page presents a global objective of the project. It shows different navigation menus such as partners, news, publications, etc.

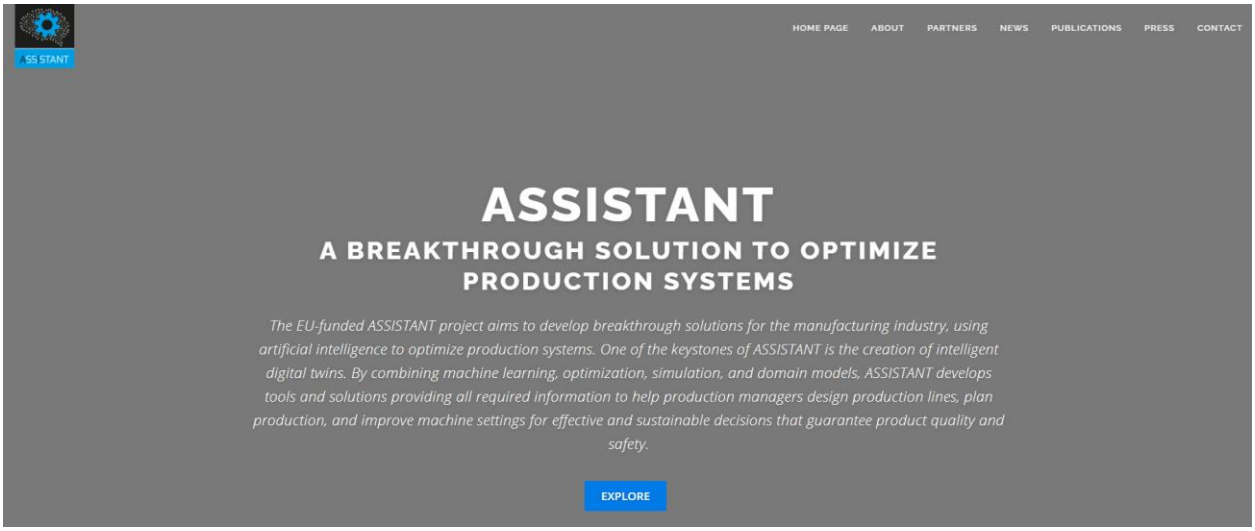


Figure 2: ASSITANT Web Site, home page

The explore button presents a very summary of the project. It also shows the funding authority and the coordination institution.

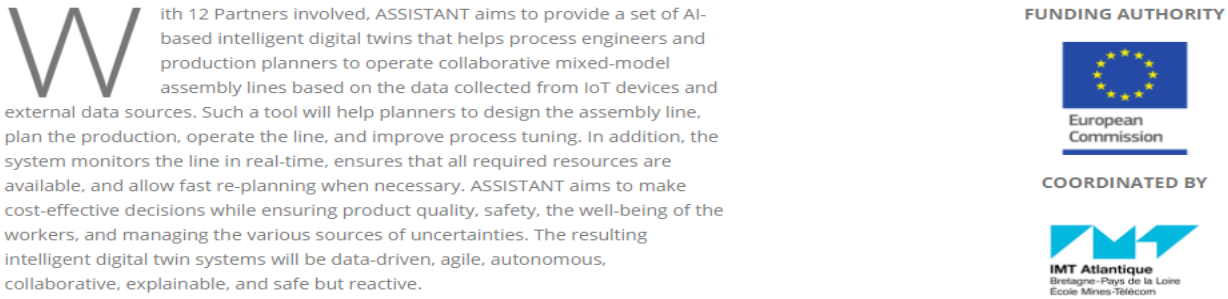


Figure 3: ASSITANT Web Site, summary of the project

On the menu “about “the main characteristic of the project is presented. The different work packages of the project are listed. By clicking on the name of each work package, visitors are directed to the short summary of the work package.

Figure 4: ASSITANT Web Site, main characteristics of the project

On the menu “partners” the partners in the consortium as well as the funding authority of the project are listed. By clicking on their logo, visitors are directed to their respective websites.

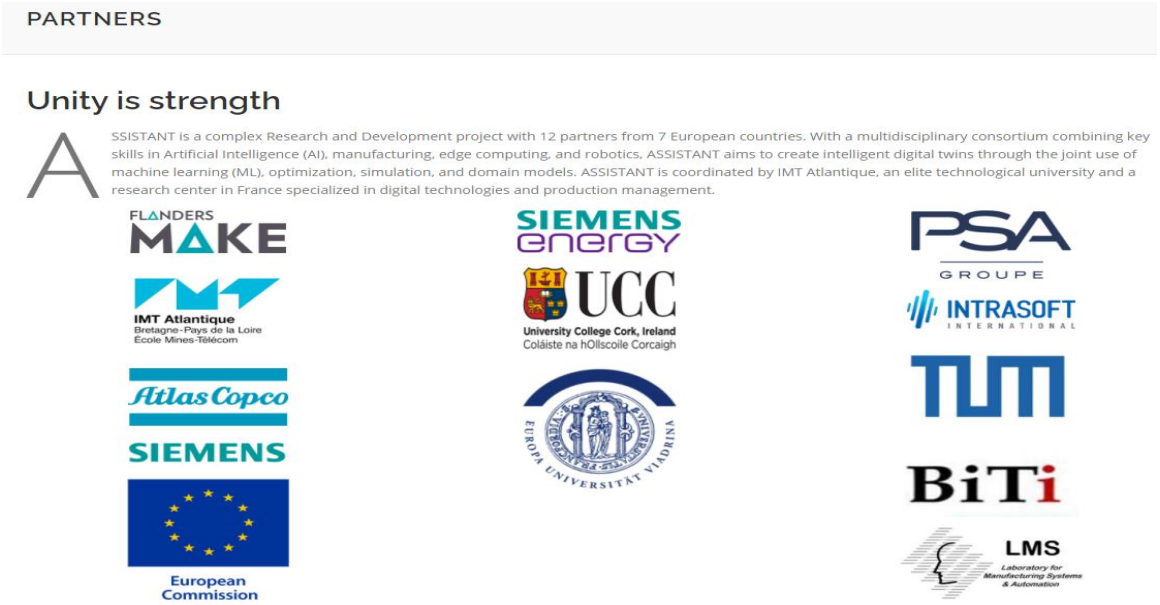


Figure 5: ASSITANT Web Site, partners of the project

The other menus present the news of the project, publications, press and the contact detail and the way to contact the coordination team.

3.3.2 Internal communication material

Different mailing lists to support the project's internal communications (internal mailing list) were created as well as an internal web platform, which offers an area that contain documents, deliverables for project management purposes and reports restricted to the project partners and the European Commission project officers. Access is to be restricted to the consortium members and the Advisory Board. The submitted deliverables D1.1 (project management plan) and D1.2 (private website) clearly provides ASSISTANT mailing lists, and ASSISTANT internal website.

3.4 Dissemination and Communication channels

The project achievements, events and other activities will be publicized using various communication and dissemination channels. We will use communication channels such as press release, Newsletters, website echo, and social networks echo (LinkedIn and twitter). For the dissemination channels, research gate portal, workshops and different scientific journals and conferences will be used.

Table 4: ASSISTANT communication, minimum publication frequency

Communication channels	Minimum publication frequency
Press Releases	2/year
Website echo	2/year
Twitter echo	1/month
LinkedIn echo	1/month
Newsletter	1/month

All partners will be involved in publishing newsletter and press release. For the project level, the following plan will be applied for press releases and newsletters:

Table 5: ASSISTANT newsletters and press release plan

Month	Publication date	Newsletters	Press Releases
M3	January - 2021		1
M6	April - 2021	1	
M9	July - 2021		1
M12	October - 2021	1	
M15	January – 2022		1
M18	April - 2022	1	
M21	July – 2022		1
M24	October - 2022	1	
M27	January - 2023		1
M30	April - 2023	1	
M33	July - 2023		1
M36	October - 2023	1	

Different scientific journals and conferences will be used as dissemination channels as well as workshops. The research gate portal where researchers in ASSISTANT project created a joint scientific dissemination channel will also be used. ASSISTANT Different journals and conferences dissemination opportunities targeting mostly the manufacturing and AI research community are presented in Tables 2 and 3.

Table 6: ASSISTANT journals dissemination opportunities

Type of journal	Journals	KPI
Relevant for design, planning, scheduling and learning (WP3 and WP4)	Artificial Intelligence Journal / Journal of Artificial Intelligence Research / Constraints / Expert Systems With Applications / Software and Systems Modeling / Transactions on Software Engineering / Production and Operations Management / International Journal of Production Research / International Journal of Production Economics / CIRP Journal of Manufacturing Science and Technology / Journal of Manufacturing Systems / Journal of Intelligent Manufacturing / IEEE Transactions on Automation Science and Engineering	at least 25 publications on such journals
Relevant for real time and execution tools under robotized environment (WP5)	CIRP Annals of Manufacturing Technologies, Computation Intelligence, IEEE Transactions on Industrial Informatics, IEEE Transactions on Industrial Electronics, Journal of Advanced Computational Intelligence and Intelligent Informatics, Control Engineering Practice, Robotics and Computer-Integrated Manufacturing	
Relevant for Intelligent data fabric (WP6)	Future Generation Computer Systems (FGCS), ACM Computing Surveys (CSUR), Computers in Industry	

Table 7: ASSISTANT conference dissemination opportunities

Type of event	Conferences/events	KPI
Relevant for design, planning, scheduling and learning (WP3 and WP4)	AAAI / IJCAI / ICML / CP / CPAIOR / UAI / CIRP ICME / CIRP CMS / IFIP APMS / IFAC MIM / IFAC INCOM / MODELS / ECMFA / SAM / OPTARCH / IEEE International Symposium on Systems Engineering / IEEE CASE, Winter Simulation Conference	KPI: at least 30 scientific presentations on such conferences
Relevant for real time and execution tools under robotized environment (WP5)	IEEE CASE / IEEE ETFA / IEEE INDIN / IEEE Workshop on Factory Communication Systems WFCS / IFAC INCOM / IFAC IMS, CIRP General Assembly/ CIRP LCE / CIRP CARV / CIRP CMS / CIRP CATS	
Relevant for Intelligent data fabric (WP6)	EuroSys/ The Annual IEEE/ACM International Symposium on Cluster, Cloud, and Grid Computing CCGrid/ IEEE International Conference on autonomous Computing ICAC	

3.5 Dissemination through AI4EU: Plan and Methodology

The main objective of ASSISTANT is to develop a collection of intelligent digital twins that help to design and operate the complex collaborative and reconfigurable mixed/multi-model production system based on data collected from IoT devices. The project is built upon many technical objectives that will lead to the production of various set tools and building blocks linked to wide AI topics such as intelligent data fabric for manufacturing companies, process planning, production planning, scheduling, real-time control for reactive actuation, ethical and human centric digital twins network.
The AI4EU Project[1]is a collaborative project funded by the European Union from 2019 to the end of 2021. Its objective is to build the first European AI On-Demand Platform and Ecosystem that will share resources, tools, knowledge, algorithms and help to increase innovation and technology transfer, accelerate the growth of start-ups and SMEs, and fulfil the needs of the European AI community.
The integration of ASSISTANT tools in the AI4EU platform would enable a dissemination and exploitation of the results towards the large AI community and enable the adoption and validation of the results with the actors of the ecosystem. ASSISTANT will benefit from the AI4EU community and from the exploitation mechanism. The members are Researchers, SMEs, Startups, LMEs, and other External Platforms. They access to the marketplace of AI assets from a repository whose source code is in the form of deployable services.
So far, AI4EU propose several entry levels for AI Resources sharing. First, a classical catalogue, linked to community tools that allow to quickly share many different types of resources following a publication process. Then to address the specific question of deployable services and the composition and design of AI Solutions, AI4EU implemented a design tool based on containerization technology and working through the Acumos Platform.
IMT as leader of the AI4EU platform development will guarantee a seamless integration of the outcomes of ASSISTANT as AI4EU assets. In addition, for the execution of this process, a methodology will be created and shared with the other ICT-38/49 projects to ease the correct evolution of the AI4EU platform assets. This methodology will be taken in 4 steps:

- Creation of the on-board models,
- The enhancement of the model with use case data,
- The execution in the environment AI4EU resources or local partners
- The publication, making it accessible to all the EU AI community, and therefore building an exploitation mechanism through AI4EU.

So far, the work on the containerization to prepare AI4EU-compliant resources has not started yet. The AI4EU repository and model onboarding process is not fully stable. IMT will provide support to provide try-out and execution spaces to ease models deployment.

[1]AI4EU has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 825619

3.6 Management and monitoring of dissemination and Communication activities

Dissemination and communication activities are managed centrally on the ASSISTANT project's private web platform. As shown in Figures 6, 7 and 8, a common excel file centralizes the various actions of the partners on the various publications, the various events, etc.

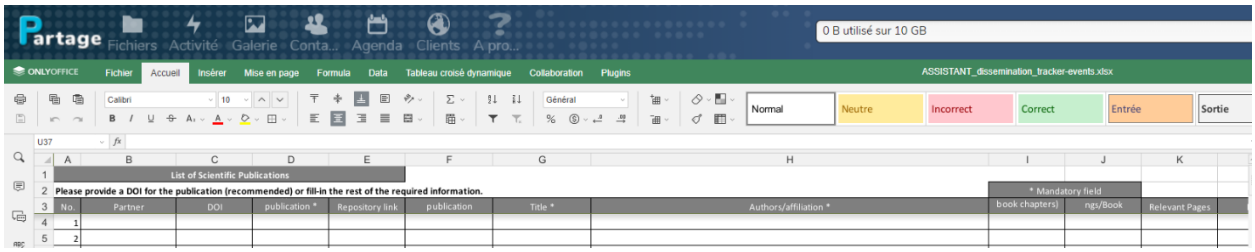


Figure 6: List of scientific publications

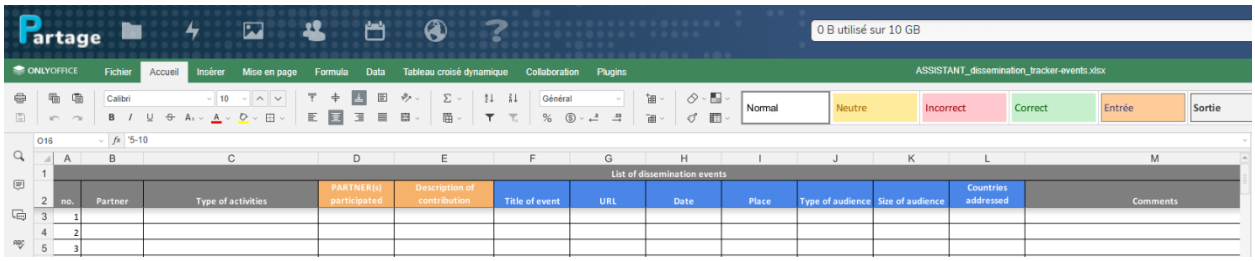


Figure 7: List of dissemination events

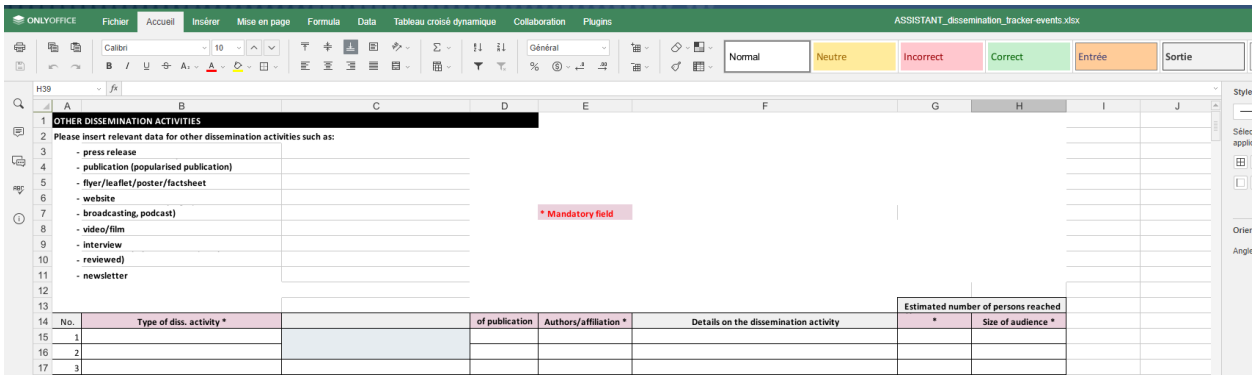


Figure 8: Other dissemination activities

We are using google analytics, analytics tools of LinkedIn and Twitter to collect KPIs from the web site, LinkedIn and twitter as shown on figure 9, 10 and 11.

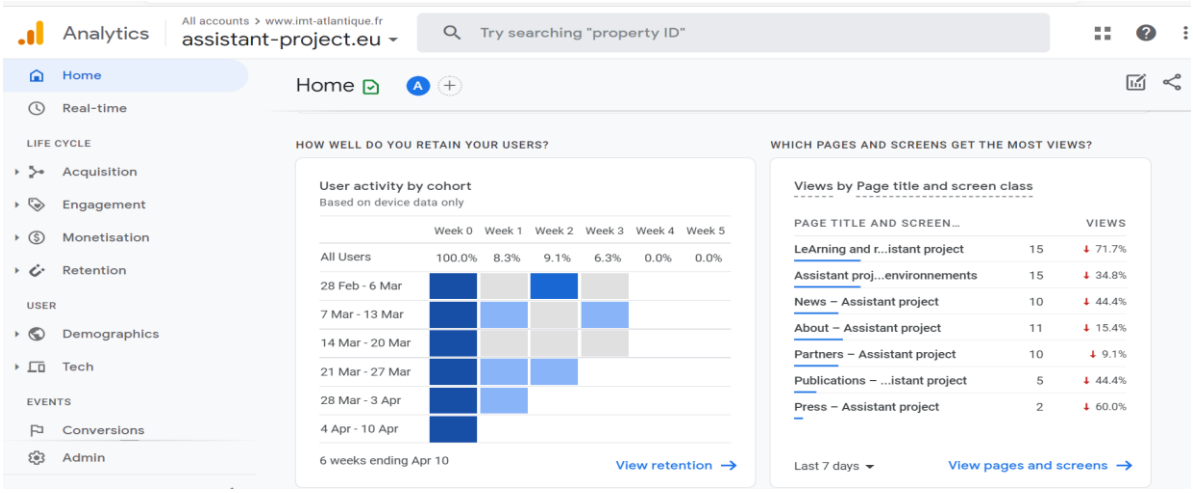


Figure 9: ASSISTANT Web site KPIs collection

Figure 10: ASSISTANT LinkedIn page KPIs collection

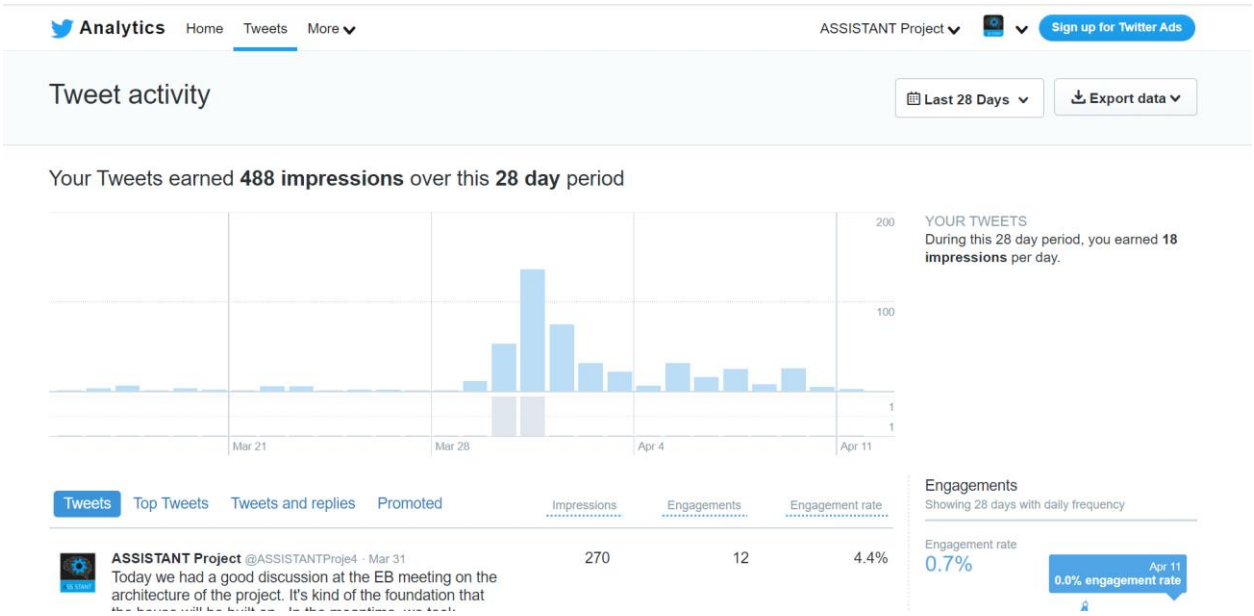
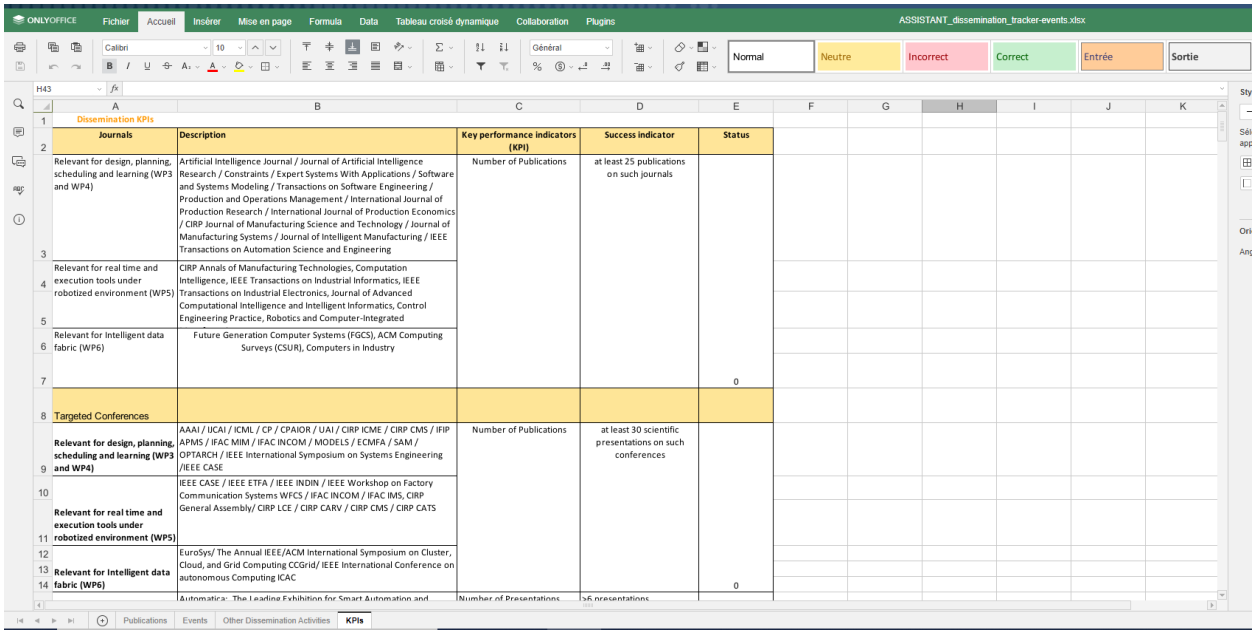


Figure 11: ASSISTANT twitter page KPIs collection

All dissemination and communications KPIs (see appendix) will be managed by an excel file as shown on figure 12.

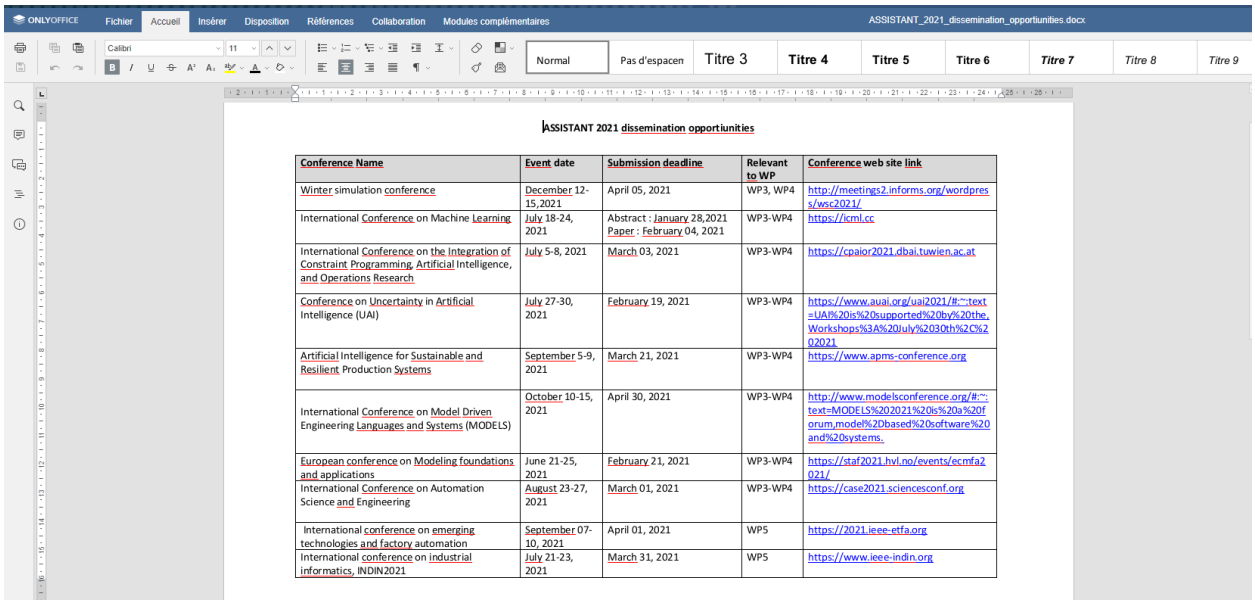


Dissemination KPIs

Journals	Description	Key performance indicators (KPI)	Success indicator	Status
Relevant for design, planning, scheduling and learning (WP3 and WP4)	Artificial Intelligence Journal / Journal of Artificial Intelligence Research / Constraints / Expert Systems With Applications / Software and Systems Modeling / Transactions on Software Engineering / Production and Operations Management / International Journal of Production Research / International Journal of Production Economics / CIRP Journal of Manufacturing Science and Technology / Journal of Manufacturing Systems / Journal of Intelligent Manufacturing / IEEE Transactions on Automation Science and Engineering	Number of Publications	at least 25 publications on such journals	
Relevant for real time and execution tools under robotized environment (WP5)	CIRP Annals of Manufacturing Technologies, Computation Intelligence, IEEE Transactions on Industrial Informatics, IEEE Transactions on Industrial Electronics, Journal of Advanced Computational Intelligence and Intelligent Informatics, Control Engineering Practice, Robotics and Computer-Integrated			
Relevant for Intelligent data fabric (WP6)	Future Generation Computer Systems (FGCS), ACM Computing Surveys (CSUR), Computers in Industry			0
Targeted Conferences				
Relevant for design, planning, scheduling and learning (WP3 and WP4)	AAAI / IJCAI / ICML / CP / CPAIOR / UAI / CIRP ICME / CIRP CMS / IFIP APMS / IFAC MIM / IFAC INCOM / MODELS / ECMFA / SAM / OPTARCH / IEEE International Symposium on Systems Engineering /IEEE CASE	Number of Publications	at least 30 scientific presentations on such conferences	
Relevant for real time and execution tools under robotized environment (WP5)	IEEE CASE / IEEE ETFA / IEEE INDIN / IEEE Workshop on Factory Communication Systems WFCS / IFAC INCOM / IFAC IMS, CIRP General Assembly/ CIRP LCE / CIRP CARV / CIRP CMS / CIRP CATS			
Relevant for Intelligent data fabric (WP6)	EuroSys/ The Annual IEEE/ACM International Symposium on Cluster, Cloud, and Grid Computing CCGrid/ IEEE International Conference on autonomous Computing ICAC			0
	Automatica: The Leading Exhibition for Smart Automation and	Number of Presentations	>6 presentations	

Figure 12: ASSISTANT KPIs monitoring

Scientific dissemination is reinforced by a plan spread over three years. At the start of each new year of the project, a list of dissemination opportunities is provided by the technical project manager to the consortium as shown in figure 13 below for the first year of the project. Project partners are encouraged to submit work already carried out at the work package level according to the procedure described in the project management plan (deliverable D1.1) in section 3.3.1.2 (obligations of partners intended to publish)



ASSISTANT 2021 dissemination opportiunities

Conference Name	Event date	Submission deadline	Relevant to WP	Conference web site link
Winter simulation conference	December 12-15,2021	April 05, 2021	WP3, WP4	http://meetings2.informs.org/wordpress/wsc2021/
International Conference on Machine Learning	July 18-24, 2021	Abstract : January 28,2021 Paper : February 04, 2021	WP3-WP4	https://icml.cc
International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research	July 5-8, 2021	March 03, 2021	WP3-WP4	https://cpaior2021.dbai.tuwien.ac.at
Conference on Uncertainty in Artificial Intelligence (UAI)	July 27-30, 2021	February 19, 2021	WP3-WP4	https://www.auai.org/uai2021/#:~:text=UAI%20is%20supported%20by%20the,Workshops%3A%20July%2030th%2C%202021
Artificial Intelligence for Sustainable and Resilient Production Systems	September 5-9, 2021	March 21, 2021	WP3-WP4	https://www.apms-conference.org
International Conference on Model Driven Engineering Languages and Systems (MODELS)	October 10-15, 2021	April 30, 2021	WP3-WP4	http://www.modelsconference.org/#:~:text=MODELS%202021%20is%20a%20forum,model%2Dbased%20software%20and%20systems.
European conference on Modeling foundations and applications	June 21-25, 2021	February 21, 2021	WP3-WP4	https://staf2021.hvl.no/events/ecmfa2021/
International Conference on Automation Science and Engineering	August 23-27, 2021	March 01, 2021	WP3-WP4	https://case2021.sciencesconf.org
International conference on emerging technologies and factory automation	September 07-10, 2021	April 01, 2021	WP5	https://2021.ieee-etfa.org
International conference on industrial informatics, INDIN2021	July 21-23, 2021	March 31, 2021	WP5	https://www.ieee-indin.org

Figure 13: ASSISTANT 2021 scientific dissemination opportunities

This year (2021), for scientific dissemination, a special session on the ASSISTANT project is organized as part of the Advances in Production Management Systems 2021 (APMS 2021) conference, which will be held in Nantes (online) from September 5, 2021 to September 9, 2021.(https://www.apms-conference.org/apms-2021/program/special-sessions-tracks-proposal/).

3.7 EU as a partner for main dissemination activities.

In addition to use systematically the EU logo and the mention "ASSISTANT project is supported by the European Commission under grant agreement 101000165" for every dissemination and communication activities related to ASSISTANT, the project management team will also systematically inform the EU project officer of the project for any important dissemination action, meeting, workshop, in which action of EU could potentialize the participation and/or the impact of the dissemination activities. In that case, the EU project officer will be informed 45 days before.

4. Exploitation Methodologies and Plan

4.1 Introduction – Scope

The purpose of the following subchapters is to exemplify the methodologies, tools, and the process that will lead to the holistic exploitation strategy of the project and its various pillars.
Although D8.3 on M18 and D8.4 on M36 will be the interim and final report respectively, it was deemed appropriate to also include a brief exploitation plan within the context of the present deliverable, since:

a. Exploitation and dissemination are essentially intertwined and are viewed in tandem.
b. The chosen methodologies have already been successfully employed by INTRA (the Task leader) with specific focus on projects similar to the pillars of ASSISTANT and have been specifically adapted for similar manufacturing, factories of the future, robotics, AI and edge computing research and innovation projects. Hence, they are tailored to the specific needs and vision of the project rather than being generic.
c. They incorporate several notions typically found within new product launch plans (NPL) and Marketing Plans of the real market corporate world and can be a valuable guideline towards the project's route to market potential.

We present below several of the envisioned steps, already briefly introduced to partners, although a more detailed analysis through recursive meetings within the consortium is planned along the way.

4.2 Adherence to PEDR Standards- Alignment with NPD Plans

4.2.1 Adherence to Official Guidelines and Extensions

Our plan of actions and overall approach adheres to, but also extends much further beyond than, the guidelines and methodologies proposed for H2020 PEDR (Plan for Exploitation and

Dissemination of Results) by [2], [3], [4], [5], [6], [7], [8], [9], [10], [11], [12], [13], [14], [15], [16], [17], [18], [19], [20], [21], [22] most prominent of which being:
A. "H2020 Plan for Exploitation and Dissemination of Results" (PEDR)
B. IPR Helpdesk Guidelines "How to manage IP in Horizon 2020"
C. Commercializing Intellectual Property: Knowledge transfer tools": http://www.iprhelpdesk.eu/Fact-Sheet
D. IPR Guidelines of the European Patent Academy and the Department of International Patent Law at EPO
E. Business Plan Development (BPD) from the (CEB) Common Exploitation Booster support services
F. EC Digital Single Market "Innovation Radar"
G. International Patent Classification (IPC) wipo.int/ipcpub/
H. CEN CENELEC, Integrating Standards in Horizon 2020, Linking Innovation and Standardization.

4.2.2 **Augmenting and Extending specifically for ASSISTANT**

On top of the above, and given the partner exploitation intentions (see identifications table in the next section), the innovation level, and the probable market interest for several ERs, the vision is to proceed gradually (in augmentation layers) with even further steps beyond typical Research and Innovation levels, and address a few issues usually found in more advanced stages such as:

- an integrated Marketing Plan and Strategic Plan
- an NPDL (New Product Development and Launch) Plan

We also wish to align with the main pillars of ASSISTANT and its nature, as well as to join similar ecosystems with common scope and goals. Our plan is to address all the notions mentioned in the next section.

4.3 Renowned Methodologies and Marketing Strategies

4.3.1 **Exploitable Asset Taxonomy**

As the technical progress of the project advances, we intend to combine the work packages outcome and various modules produced into a coherent list of ERs (Exploitable results) and make sure that partners gain a good understanding of their properties, benefits, unique selling proposition to potential customers, ability to participate in sub-value chains etc.
We seek re-usable offerings that can be deemed commercially exploitable and can create an impact through novel approaches. We also do not neglect o include intangibles, patents, potential publications, novel processes. This undergoes review by all partners and is refined in iterations.

4.3.2 **KER Identification, Exploitation Platform Submission**

The subset of "Key" ERs is submitted as per H2020 PEDR guidelines in the innovation radar, the Horizon Results Platform, other similar official platforms and affiliated ecosystems as a whole turnkey reusable and scalable offering.

4.3.3 Grounds Identification -Partner Exploitation Paths

This methodology is widely known as “Grounds Identification” or alternatively “Exploitation Intent”. Depending on the established market access of each partner, their business model of operation, their infrastructure, existing client base, legal or other restrictions, research projects or joint ventures in which they are involved, and the specific significance of each exploitable asset to their line of business, we can distinguish categories of interest expression by each partner and devise:

- Individual exploitation routes
- Opportunities for collaborative sub-chains

4.3.4 Product and Service Formulation

The concept is to identify distinct entries with potential use as stand-alone or as aggregations into value-added services for launch to market within the realm of intelligent data fabric for manufacturing companies, process planning, production planning, scheduling, real-time control for reactive actuation, ethical and human centric digital twin network. These consist of unique standalone ERs, aggregations, service additions and of course the overall ASSISTANT platform.

4.3.5 IPR Management and Contributions-Royalties Analysis

As per IPRHelpdesk.eu guidelines and also a “tried and tested” process, we intend to expand the ER list and the relevant CA background registries so that we can update (in iterations until the contractual end of the project)

- IPR and Royalties claims tables.
- Background-Foreground-assistive contributions entries
- The Knowledge Registry
- The contribution-benefits matrix

4.3.6 Online Marketing-Survey – Likert Scales

Experience has shown that systematic internal and external web-surveys can be employed to address numerous issues relating to a first real Marketing Plan. These include:

- Likert Scales
- Qualitative Ordering
- Weighted Ranking
- Sliders, Star-Ratings, Net -Promoter Scores
- And many other renowned tools

4.3.7 NPD and Marketing Plan Notions

We address numerous specific “marketing related” and NPD (New Product Development) notions through series of questions, surveys, direct interviews, and discussions with partners so that we ensure that upon the contractual end of the project a “clear mapping” for every partner and every ER (as well as ASSISTANT as a whole) will be readily available. These typically include:

- Prioritization of Business Initiators and Incentive

- Potential Target Customers and Sectors
- Issues of Market Expansion and Product Diversification
- Product and Bundling Formulation
- Features, Benefits, message, and value conveyed, Unique Selling Proposition
- Scalability-Replicability-Re-usability
- Service Bundling and Augmented Product Formulation
- Optimal Sales Channels
- Optimal Pricing Strategies and Propositions
- Evaluation of the Market and Competition-Alternatives (maturity, commonality, feature comparison)
- Optimal promotional Strategies
- B2B/B2C/B2G identification and prioritization
- Adoption Barriers and Incentives
- And many project specific marketing notions commonly agreed among partners based on the ER nature.

4.3.8 Ecosystem Liaisons- Market Base Expansion

Although properly addressed in the dissemination section, partners have the privilege to have links with specific focused ecosystems and communities within which the project can find leads for joint exploitation paths and sub-value chains. For instance, INTRA has access to the @4industry cluster, its own FoF and Industrial IoT clusters as well as pre-existing links to EFFRA, BDVA, EU Robotics etc. The engagement tracker will be the coordinating point (see section below).

4.3.9 Real Market links - Industry liaisons and the engagement tracker

We aim to assist partners and requested them to address their pre-existing networks of clients, vendors, collaborators from the corporate world, to look for potential customer or collaboration leads, and to expand the reach of the project. The “engagement tracker” is kept online and is revised in recursive teleconferences to achieve a mapping to the industry paradigm and links to the real corporate world, beyond research ecosystems, towards our vision to fulfil the project’s ER route to market capabilities. These of course can be a common valuable asset for dissemination purposes as well as hackathon-workshop-event creation whenever needed. A critical mass of real companies reached is an invaluable addition to forums, clusters, associations, and other similar liaisons.

4.3.10 Persona Construction and matching to Stakeholder Profiles

In tandem with dissemination and communication activities, it is desirable to transpose stakeholders from message recipients into potential client sector, sales leads, and business initiators. Towards this scope we typically propose the coordinated construction (overviewed by the exploitation team and implemented by relevant partners) of synthesized personas through dedicated canvases. Persona-Canvas Analysis per stakeholder group beyond typical identification, also includes a needs-fears-wants analysis leading to the modified value-proposition canvas at the next stage. Indicative entries would include units from the engagement tracker and would cover:

- Representative market sectors of application or expansion
- Potential client leads.
- Entries from typical stakeholder groups such as: Manufacturing companies and production planners, OEMs, SMEs, ICT technology and software providers and

automation, IT services companies, academic manufacturing communities (AMC), Academic - Research communities, Potential Vendors – Resellers, etc.

4.3.11 Dedicated Exploitation Workshops and Online Collaboration Workshop Tools

At least one dedicated exploitation workshop is planned for the second half of the project when technical aspects will have matured. Although physical meetings during extra days in a general assembly is the common practice, it has been proven that (recently due to pandemic reasons) online collaborative platforms assist this scope and the exploitation team of intra has premium subscriptions in Miro, Mural and other whiteboarding platforms.

4.3.12 Business Modelling and Strategic Planning Processes

As a first outcome of the collaborative exploitation workshop, which is then iteratively refined for joint as well as individual cases, a set of world-renowned tools and canvases is typically devised. Composition and filling online (as well as accessible to each partner for each asset with specific clarifications and guidelines for future market launch of potential products and services includes a subset of the following (typically based on previous similar manufacturing, novel industrial, IoT and AI projects):
a. The Value Proposition Canvas
b. The Service-Dominant-Strategy
c. The Business Model Canvas
d. PESTLE and SWOT Analysis
e. A Network Effects Canvas identifying Core relationships (same-side and cross-side) with stimulation activities in the platform.
f. The PIC (Platform Innovation Kit)

4.3.13 Expert Guidance and Assistance of Partners and Consortium

Furthermore, special attention has been given to the participatory nature of many exploitation methodologies. To ensure active participation of all partners, the assistance of the consortium in rounds will take place. The exploitation team will ensure this process in every stage and tool usage. We intend to employ:

4.3.13.1 Expert Validation

We also utilize the knowledge of a select group of external exploitation experts for enhancement of our methodologies, validation of our findings, and strategic expansion of the project's service offerings. A "valorization board of exploitation" is planned to be formulated in the second year of the project.

4.3.13.2 Recurring guidance and assistance exploitation meetings

Exploitation expert overview of the process will be combined, recursive monthly or bi-monthly general assembly meetings and teleconferences focused on exploitation specifically. Progress and problem resolution shall be combined with toolset and methodology presentation with examples and guides for all partners.

4.3.13.3 One to One focused mentoring and guidance

Additionally, even one-to-one guidance to each partner to resolve any potential questions and issues, is provisioned. Typically, methodologies are accompanied with guides and examples,

yet partner peculiarities dictate sometimes special focus to make sure the best results can be accomplished.

5. Conclusions and future actions

This report presents the initial communication and dissemination plan. It shows how ASSISTANT plans to organize its activities towards general communication, clustering, scientific dissemination, and results exploitation in the communities concerned. Initial communication, dissemination, and exploitation strategies have been defined. The plan includes objectives, target audiences, what to communicate, what results to disseminate, etc. Activities subject to communication and, dissemination opportunities (publications, clustering events, academic actions, workshops, etc.) as well as various materials for better communication and dissemination are also provided. In addition, the document presents different communication and dissemination KPIs (see Annex) and the way they will be monitored. As future actions, this initial plan will be monitored and updated and the reporting on future events/activities will be included in the future deliverables related to communication, dissemination, and exploitation activities.

6. References

[1] Description of Action (DoA)
[2] European IPR Helpdesk, The Plan for the Exploitation and Dissemination of Results in Horizon 2020 Fact Sheet
[3] https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/FS-Plan-for-the-exploitation-and-dissemination-of-results_1.pdf
[4] "How to manage IP in Horizon 2020: project implementation and conclusion": http://www.iprhelpdesk.eu/FS_IP_Management_H2020_implementation
[5] European IPR Helpdesk 2015, Commercialising Intellectual Property: knowledge transfer tools, European IPR Helpdesk
[6] H2020 Communicating EU research and innovation guidance for project participants https://ec.europa.eu/research/participants/data/ref/h2020/other/gm/h2020-guide-comm_en.pdf
[7] Social media guide for EU funded R&I projects (H2020 Programme Guidance) (January 2020) https://ec.europa.eu/research/participants/data/ref/h2020/other/grants_manual/amga/soc-med-guide_en.pdf
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[9] New Social Media Guidelines for Beneficiaries H2020 https://ec.europa.eu/inea/sites/inea/files/social_media_for_beneficiaries_h2020-web.pdf
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[16] European IPR Helpdesk, Definitions of Side-Ground, Background, Foreground http://www.iprhelpdesk.eu/sites/default/files/newsdocuments/Fact-Sheet-IP-Management-H2020-Grant-Preparation-Stage.pdf
[17] European IPR Helpdesk, Joint Ownership Fact Sheet http://www.iprhelpdesk.eu/sites/default/files/newsdocuments/Fact-Sheet-IP-Joint-Ownership.pdf
[18] "Commercializing Intellectual Property: knowledge transfer tools": http://www.iprhelpdesk.eu/Fact-Sheet-Commercialising-IP-KnowledgeTransfer-Tools (CEB) Common Exploitation Booster, H2020, http://ec.europa.eu/research/participants/data/ref/h2020/other/comm/gm/h2020-msg-services-exploitation-booster_en.pdf
[19] Digital Single Market "Innovation Radar" https://ec.europa.eu/digital-single-market/en/innovation-radar
[20] Horizon Results Platform https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/horizon-results-platform
[21] The H2020 Reference Terms Support Service http://ec.europa.eu/ research/participants/portal/desktop/en/support/reference_terms.html
[22] Horizon 2020 annotated model grant agreement (Version 5.2. 26 June 2019) https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf

7. Appendix

7.1 Abbreviations

Table 8: Abbreviations

Abbreviation	Meaning
ASSISTANT	LeArning and robuSt decisION SupporT systems for agile mANufacTuring environments
SME	Small and Medium Enterprise
AI	Artificial Intelligence
AIC	Academic AI community
AMC	Academic Manufacturing Community
KPIs	Key Performance Indicators
PEDR	Plan for Dissemination and Exploitation
NPD	New Product Development
ER	Exploitable Result
KER	Key Exploitable Result
IoT	Internet of Things
FoF	Factories of the Future
IPR	Intellectual Property Rights

7.2 Dissemination and Communication indicators of performance

Table 9: Dissemination indicators of performance

Journals	Description	Key performance indicators (KPI)	Success indicator	Status
Relevant for design, planning, scheduling and learning (WP3 and WP4)	Artificial Intelligence Journal / Journal of Artificial Intelligence Research / Constraints / Expert Systems With Applications / Software and Systems Modeling / Transactions on Software Engineering / Production and Operations Management / International Journal of Production Research / International Journal of Production Economics / CIRP Journal of Manufacturing Science and Technology / Journal of Manufacturing Systems / Journal of Intelligent Manufacturing / IEEE Transactions on Automation	Number of Publications	at least 25 publications on such journals	0

	Science and Engineering			
Relevant for real time and execution tools under robotized environment (WP5)	CIRP Annals of Manufacturing Technologies, Computation Intelligence, IEEE Transactions on Industrial Informatics, IEEE Transactions on Industrial Electronics, Journal of Advanced Computational Intelligence and Intelligent Informatics, Control Engineering Practice, Robotics and Computer-Integrated Manufacturing			
Relevant for Intelligent data fabric (WP6)	Future Generation Computer Systems (FGCS), ACM Computing Surveys (CSUR), Computers in Industry			
Targeted Conferences				
Relevant for design, planning, scheduling and learning (WP3 and WP4)	AAAI / IJCAI / ICML / CP / CPAIOR / UAI / CIRP ICME / CIRP CMS / IFIP APMS / IFAC MIM / IFAC INCOM / MODELS / ECMFA / SAM / OPTARCH / IEEE International Symposium on Systems Engineering /IEEE CASE	Number of Publications	at least 30 scientific presentations on such conferences	
Relevant for real time and execution tools under robotized environment (WP5)	IEEE CASE / IEEE ETFA / IEEE INDIN / IEEE Workshop on Factory Communication Systems WFCS / IFAC INCOM / IFAC IMS, CIRP General Assembly/ CIRP LCE / CIRP CARV / CIRP CMS / CIRP CATS			
Relevant for Intelligent data fabric (WP6)	EuroSys/ The Annual IEEE/ACM International Symposium on Cluster, Cloud, and Grid Computing CCGrid/ IEEE International Conference on autonomous Computing ICAC			0

Industry events and fairs (targeting Manufacturing and AI industrial community	Automatica: The Leading Exhibition for Smart Automation and Robotics, WMF and Manufacture, AMB Stuttgart, Productronica in Munich, AI and Robotics Industry Exhibition, Metromeet (Bilbao), Hannover Messe	Number of Presentations	>6 presentations	0
AI events (targeting academic and industrial AI community	AI For Good Summit/ Annual AI Summit London/ AI for YOU/ Robot Messe / AI for Manufacturing Workshop/ AI World Congress 2020/ AI & Big Data Innovation Summit - K4I/ AI World Summit/ Digitizing European Industry Stakeholder Forum/ AI & Robotic Process Automation World Summit/ European Business AI and Robotics/ AI Paris by Corp/ML Conference – The Conference for Machine Learning Innovation/ AI & Big Data Expo Europe/ International Conference on Distributed Computing and Artificial Intelligence/ Rise of AI Conference	Number of Presentations	>9 presentations	0
Academic workshop	Results to disseminate: Research results leading to the construction of the intelligent twins (integration of Digital Twins into AI systems), Digital Twins communication with the overall System	Number of Participants	200 participants	0

	Main target: academics or specific R&D division of Manufacturing companies, EIT Manufacturing partners.			
Technological Workshop	Results to disseminate: Intelligent digital twin systems (data acquisition and cleaning, model acquisition, prescriptive analytics for robust and flexible manufacturing systems). Main target: Technology providers, Automation and IT Services, Software Editor, EIT Manufacturing partners.	Number of Participants	200 participants	0
Industrial Workshop	Results to disseminate: Use case validation and results obtained by ASSISTANT tools. Main target: Manufacturing companies, EIT Manufacturing partners, technology providers, policymakers, public authorities in the field of labor.	Number of Participants	200 participants	0
Clustering meetings	Clustering activities with ICT 38-2020 laureates organized.	Number of activities	>3 activities	0
Public Private Partnerships (PPP)	Reaching both domain-specific scientific and industrial community. ASSISTANT will leverage on the possibilities offered by the PPP to disseminate results to the different following community.		1 presentation during PPP event 1 release in each PPP newsletter	0 0

Table 10 : Communication indicators of performance

Channel / activity	Impact	Target Value	Status
Project website	Project website pageviews (Source: Google Analytics)	6,000 visits	0
Social networks	Social media followers on LinkedIn, and Twitter (Source: Accounts' data)	1,000 followers	0
Press releases	Nb. of press releases under the project lifetime (Source: beneficiaries reporting)	50	0

Newsletters	Two newsletters per year. Indicators: nb. of subscribers (beneficiaries reporting)	500 subscribers	0
Video/ Motion Design video of ASSISTANT	Large audience video explaining ASSISTANT project objectives and impacts to the manufacturing and society (Source: YouTube views)	10,000 views	0
Poster	A poster presented at conferences and events with the project's identity	100 posters	0
Industrial workshop	One large workshop during the project gathering industrials, but also academics, EU officers, PPP representative (EFFRA, BDVA, euRobotics) and regional policy makers. Indicators: nb. of participants (Source: workshops attendance lists)	200 attendants	0
Industry and AI ecosystem events	Nb. of Industry and AI ecosystem events in which ASSISTANT will be presented	15 events	0
Scientific publications	Scientific publications will be submitted targeting high impact factor journals	25	0
Scientific presentations	Nb. of presentations targeting high impact conf. (Source: beneficiaries reporting)	30	0
Scientific and technological workshop and collaboration with AI projects and AI stakeholders	A number of clustering activities led during the project with ongoing H2020 AI projects and/or European initiatives attended in the form of workshops, collaboration events and sessions under the request by the other projects activities (Source: beneficiaries reporting and workshops attendance European Commission or in the scope of lists)	2 workshops and 5 clustering meetings	0

7.3 Partners newsletters and press release publication plan

7.3.1 University College Cork (UCC)

Month (Mx)	Publication date (Month x-Year x)	Newsletters (number)	Press Releases (number)
18	2022-04	1	1
24	2022-10		
36	2023-10	1	1

7.3.2 University of Patras - Laboratory for Manufacturing Systems and Automation (LMS)

Month (Mx)	Publication date (Month x-Year x)	Newsletters (number)	Press Releases (number)
16	02-2022		1
33	07-2023		1

7.3.3 Flanders Make vzw (FLM)

Month (Mx)	Publication date (Month x-Year x)	Newsletters (number)	Press Releases (number)
14	12-2021		1
26	12-2022		1
36	10-2023		2
			Total: 4

7.3.4 Technical University of Munich (TUM)

Month (Mx)	Publication date (Month x-Year x)	Newsletters (number)	Homepage Press Releases (number)
3	01-2021		1
19	05-2022		1
12	10-2021	1	
24	10-2022	1	
36	10-2022	1	

7.3.5 **Biti Innovations AB (BITI)**

Month (Mx)	Publication date (Month x-Year x)	Newsletters (number)	Press Releases (number)
12	2021-10		1
24	2022-10		1
36	2023-10		2
			Total: 4

7.3.6 **SIEMENS AG (SAG)**

Month (Mx)	Publication date (Month x-Year x)	Newsletters (number)	Press Releases (number)
12	11-2021	1	
24	11-2022	1	
36	11-2023	1	

7.3.7 **INTRASOFT International (INTRA)**

Month (Mx)	Publication date (Month x-Year x)	Newsletters (number)	Press Releases (number)
M7	05-2021	1	1
M13	12-2021	1	1
M25	12-2022	1	1
M37	12-2023	1	1

7.3.8 **Atlas Copco (AC)**

Month (Mx)	Publication date (Month x-Year x)	Newsletters (number)	Press Releases (number)
M13	11- 2021		1
M25	11 - 2022		1
M36	10 - 2023		1

7.3.9 **SIEMENS Energy (SE)**

Month (Mx)	Publication date (Month x-Year x)	Newsletters (number)	Press Releases (number)
N.A.	N.A.	N.A.	N.A.

7.3.10 **Groupe PSA (PSA)**

Month (Mx)	Publication date (Month x-Year x)	Newsletters (number)	Press Releases (number)
14	12-2021		1
26	12-2022		1
36	10-2023		2

7.3.11 **European University Viadrina (EUV)**

Month (Mx)	Publication date (Month x-Year x)	Newsletters (number)	Press Releases (number)
6	2021 / 04	1	1
10	2021/ 08	1	1
30	2023 / 05	1	1
36	2023/ 11	1	1