



Deliverable 6.2

Dissemination and Communication Strategy and Periodic Dissemination and Communication Report (Interim Report 1)

Work Package 6

SAH, SYN



**Funded by
the European Union**



Document identification

Project Acronym	Watson
Project Full Title	A holistic frameWork with Anticounterfeit and inTelligence-based technologieS that will assist food chain stakehOlders in rapidly identifying and prevenTing the spread of fraudulent practices.
Project ID	101084265
Starting Date	01.03.2023
Duration	36 months
Horizon Europe Call ID & Topic	HORIZON-CL6-2022-FARM2FORK-01-11 - Effective systems for authenticity and traceability in the food system
Project Website	https://watsonproject.eu/
Project Coordinator	University College Dublin (UCD)
Work Package No. & Title	6, Ecosystem Building and Exploitation
Work Package Leader	SAH
Deliverable No. & Title	D6.2 Dissemination and Communication Strategy and Periodic Dissemination and Communication Report (Interim Report 1)
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Type	Report
Dissemination Level	Public
Date	03/02/2025
Version	1.2
Status	Final version with requested revision

Document history

Date	Version	Changes	Contributor(s)
29/06/2023	V1.0	Deliverable submitted	SAH, SYN, SIN, UCD
25/09/2023	V1.1	Requested edits: -Update acknowledgement of EU funding -Update communication and dissemination activities to be clearly distinguished in terms of target audience, dedicated messages and channels to be used	SAH, SYN, SIN, UCD
03/02/2025	V1.2	Requested edits addressed:	SAH, SYN, SIN, UCD

		<ul style="list-style-type: none"> - Updated acknowledgment of EU Fund and disclaimer - Updated project summary - Updated all figures that included wrong acknowledgment of EU funding and disclaimer - Corrected factual errors regarding the Dissemination and Communication rules <ul style="list-style-type: none"> -3.5 Project visibility - commitments and responsibilities - Removed scientific publication published in advance of Watson start date (Removed section 7.1 Publication at scientific journals) 	
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Funding Statements and Disclaimer

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them.

This project has also received funding from the Swiss State Secretariat for Education, Research and Innovation (SERI) and the UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding Guarantee [grant number 10071171].

Executive summary

This document serves as the comprehensive dissemination and communication plan for the Watson project. It outlines the strategic framework for effectively promoting and disseminating project information, outcomes, and results. By defining key target groups, messages, and communication channels, the plan aims to maximize the visibility, understanding, and engagement of stakeholders.

Communication and dissemination play a vital role in the success of the Watson project as they enable the exploitation of results and outcomes. The project consortium recognizes the importance of effectively communicating project advancements, research findings, and innovative concepts to various audiences. These efforts will enhance the project's visibility and facilitate the understanding and involvement of stakeholders at different levels. The primary objective of the Watson dissemination and communication strategy is to establish a well-structured plan that ensures the broad promotion of the design studies, developed concepts, technologies, and the potential for future implementation. By engaging with target groups through targeted messages, the project aims to create awareness, generate interest, and foster a sense of community around the project's goals and achievements.

The dissemination and communication plan will encompass diverse activities tailored to the specific needs and preferences of each target group. It will leverage a range of communication channels, such as project websites, social media platforms, newsletters, conferences, workshops, media outlets, and direct engagement with stakeholders. The plan will also foster collaborations and partnerships with external organizations, institutions, and individuals who can amplify the project's reach and impact. Regular evaluation and monitoring will be integral to the plan, allowing for the assessment of communication effectiveness, audience engagement, and understanding. Feedback and insights from these evaluations will inform the refinement and improvement of communication strategies throughout the project's duration, ensuring continuous adaptation to evolving needs and circumstances. Additionally, the dissemination and communication plan will allocate the necessary budget and resources to support the implementation of the planned activities. A detailed timeline will be established, outlining key tasks, milestones, and deadlines to ensure proper coordination and timely execution.

The deliverable is completed with a Section 8 on the initial approach on the exploitation planning and relevant contributions to innovation management. Relevant activities will mainly take place in T6.3, which starts on M12 and reports in Deliverables D6.6 (Month 18) and D6.7 (Month 36). T6.3 aims to address Intellectual Property Right (IPR) issues, to undertake stakeholder analysis and inform them at multiple levels (e.g., regional and national) on the project results and potential impact (in collaboration with the dissemination activities). Within this task and in close coordination with project's dissemination and communication strategy and activities, Watson will follow an effective, concrete, and dynamic exploitation strategy that will be regularly reviewed and expanded as the project proceeds.

By implementing this comprehensive dissemination and communication plan, the Watson project aims to create a robust platform for sharing knowledge, promoting outcomes, and building a vibrant community around its research, ultimately contributing to the successful dissemination and exploitation of the project's results.

Key words: Dissemination, communication, exploitation, engagement

Project summary

Watson is a 3-year project that has been funded by the EU's research and innovation framework programme, Horizon Europe, to combat fraudulent practices in the food supply chain. Watson's interdisciplinary consortium of 47 partners (40 Beneficiaries, 2 Affiliated Entities and 5 Associated Partners) across 20 countries will develop a holistic traceability framework that will integrate data-driven services, intelligence-based toolsets and risk-estimation approaches, enabling food safety authorities to identify and prevent fraudulent activities.

The project aims to improve the sustainability of food chains by reducing food fraud. This will be achieved through systemic innovations that (a) increase transparency in food supply chains through improved track-and-trace mechanisms containing accurate, time-relevant and untampered information for the food product throughout its whole journey, (b) equip authorities and policy makers with data, knowledge and insights in order to have the complete situational awareness of the food chain and (c) raise the consumer awareness on food safety and value, leading to the adoption of healthier lifestyles (mid-term) and the development of sustainable (and greener) food ecosystems.

Watson will develop a digital technology reference architecture integrating novel technologies such as AI-supported early warning system for food safety authorities based on the processing of various data with connection to food fraud related database; Resilient Data driven and IoT-based Services for Improved Tracing and Tracking; Fast, Inexpensive and Flexible Tools for Authenticity Control, Distributed Ledger Technology (DLT) and Data Analytics, which enable transparency within supply chains through the development of a rigorous, traceability regime, and novel tools for rapid, non-invasive, on the spot analysis of food products. The proposed framework is tested and demonstrated in 6 use cases across different European countries considering different operational procedures and diverse environments:

1. Tackling counterfeiting of wine in Portugal.
2. Rapid traceability of extra virgin olive oil in Italy.
3. Improved traceability of high-value products in cereal and dairy chains in Finland.
4. Preserving the authenticity of PGI honey in Spain.
5. Identification of possible manipulations at all stages of the meat chain in Germany.
6. Combating of fish counterfeiting in Norway.

Watson aspires to improve sustainability of food chains by increasing food safety and reducing food fraud through systemic innovations that increase transparency in food supply chains by improved track-and-trace mechanisms, equip food safety authorities and policy makers with data, knowledge and tools, and raise consumers' awareness on food safety and value.

Abbreviations

APR	SOC. AGRICOLA ORGANIZZAZIONE DI PRODUTTORI APROL UMBRIA SOC. COOPERATIVA
ASI	ASOCIACIÓN DE INVESTIGACIÓN INDUSTRIAS DE LA CARNE DEL PRINCIPADO DE ASTURIAS
BAU	UNIVERSITÄT BAYREUTH
BIO	BIOS IKE BIO
BWE	BULGARIAN WINEMAKING & EXPORT ASSOCIATION
CAGR	COMPOUND ANNUAL GROWTH RATE
CER	CENTER FOR RESEARCH & TECHNOLOGY
CNR	CONSIGLIO NAZIONALE DELLE RICERCHE
DBC	DBC EUROPE
DEC	ASSOCIAÇÃO PORTUGUESA PARA A DEFESA DO CONSUMIDOR
EIT	EUROPEAN INSTITUTE of INNOVATION & TECHNOLOGY
ESP	ESPERSEN A/S
EU	EUROPEAN UNION
EUF	EUROPEAN FOOD INFORMATION RESOURCE
EUN	EURONEWS EUN
FAO	FOOD AND AGRICULTURE ORGANIZATION
FIB	RESEARCH INSTITUTE OF ORGANIC AGRICULTURE
FSH	FOODSCALE HUB
HAI	HÄMEEN AMMATTI INSTITUUTTI
HER	HERMES AS
HUB	HUMBOLDT-UNIVERSITÄT ZU BERLIN
IFA	ISEKI FOOD ASSOCIATION
IGP	ASOCIACIÓN PARA LA PROMOCIÓN Y GESTIÓN IGP MIEL DE ASTURIAS
IPR	INTELLECTUAL PROPERTY RIGHTS
INE	INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORES, TECNOLOGIA E CIÊNCIA
INR	INSTITUT NATIONAL DE RECHERCHE POUR L'AGRICULTURE, L'ALIMENTATION ET L'ENVIRONNEMENT
INT	NETCOMPANY - INTRASOFT
IPR	INTELLECTUAL PROPERTY RIGHTS

KER	KEY EXPLOITABLE RESULTS
KPI	KEY PERFORMANCE INDICATOR
LGL	BAVARIAN HEALTH AND FOOD SAFETY AUTHORITY
LIC	THE LISBON COUNCIL FOR ECONOMIC COMPETITIVENESS AND SOCIAL RENEWAL ASBL
MET	METRO ANONYMI EMPORIKI KAI VIOMICHANIKI ETAIREIA EIDON DIATROFIS KAI
MIG	MIGROS TICARET ANONIM SIRKETI
MIT	MITERA GMBH
MRI	MAX RUBNER-INSTITUT, FEDERAL RESEARCH INSTITUTE OF NUTRITION & FOOD
NGO	NON-GOVERNMENTAL ORGANIZATION
NTU	NATIONAL TECHNICAL UNIVERSITY OF ATHENS
PDA	CONSEJERÍA DE MEDIO RURAL Y COHESIÓN TERRITORIAL DEL PRINCIPADO DE ASTURIAS
REG	RESILIENCE GUARD GMBH
SAH	SMART AGRO-HUB
SIN	SINTEF NORD AS
SYN	SYNELIXIS SOLUTIONS S.A.
TRL	TECHNOLOGY READINESS LEVEL
UBI	UBITECH LIMITED
UCD	UNIVERSITY COLLEGE DUBLIN
UNC	UNIONE NAZIONALE CONSUMATORI
UPC	UPC KONSULTOINTI OY
UVMB	UNIVERSITY OF VETERINARY MEDICINE BUDAPEST
VTT	TEKNOLOGIAN TUTKIMUSKESKUS
WCS	WELICS LTD
WDP	WORLD DEVELOPMENT PROGRAMME
WHO	WORLD HEALTH ORGANIZATION
ZPS	ZVEZA POTROŠNIKOV SLOVENIJE DRUŠTVO

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1. Introduction

1.1 Purpose of this document

A Communication and Dissemination Plan is a strategic document that outlines how information, knowledge, and findings will be effectively communicated and shared with specific target audiences. It is commonly used in various fields, including business, marketing, public relations, and research projects.

The purpose of a Communication and Dissemination Plan is to ensure that relevant stakeholders receive accurate and timely information about a particular initiative, project, or organization. It helps in shaping the communication strategy, identifying key messages, determining appropriate communication channels, and establishing the timeline for dissemination activities.

This deliverable covers the key elements of Watson's Communication and Dissemination Plan, including:

- *Objectives:* Clearly defined goals and objectives of the dissemination and communication efforts. These objectives align with the overall goals of the project and specify the desired outcomes of the communication activities. This includes raising awareness, educating target audiences, and disseminating research findings.
- *Target Audiences:* Identifying the specific groups or individuals who need to receive the project information. This includes consumers, farmers, retailers, the general public, and specific research communities. How the communication strategies and messages are tailored to suit the needs and preferences of each audience is also outlined.
- *Key Messages:* Determining the main points or themes that need to be conveyed to the target audiences. These messages are clear, concise, and aligned with the overall objectives. Key messages are tailored to address the specific interests and concerns of each audience.
- *Communication Channels:* Identifying the most appropriate and effective channels and platforms for reaching the target audiences. These include various mediums such as websites, social media platforms, email newsletters, press releases, conferences, and workshops. Both traditional and digital communication channels are considered to ensure maximum reach and impact.
- *Communication Materials:* Specifying the tools and materials that will be used to convey the messages and disseminate project information. These include promotional tote bags, brochures, videos, infographics, and other relevant communication materials.
- *Key Partnerships:* Identifying potential partners and collaborators who can support the dissemination efforts. These are organizations, institutions, or individuals with existing networks and credibility in the target audiences. Collaborating with them will amplify the reach and impact of the communication activities.
- *Report:* A detailed report outlining the different communication activities, milestones and deadlines to date from month 1-4. This reporting structure will be continued throughout the project timeline to ensure that the communication efforts are well-organized and executed in a timely manner.
- *Roles and Responsibilities:* Defining the roles and responsibilities of individuals or teams involved in the communication and dissemination activities. This helps in ensuring accountability and coordination among team members.

- *Evaluation*: Defining metrics and methods for evaluating the effectiveness of the communication efforts. This involves measuring website traffic, social media engagement, media coverage, and presence at dissemination events.

By developing and implementing a well-structured Communication and Dissemination Plan, organizations can effectively share information, engage with their stakeholders, and achieve their communication objectives.

In addition, within the present document, a brief dedicated section (section 8) describes the initial approach on the exploitation of Watson project outcomes. Information regarding the planning of the activities, the key exploitable results and relevant IPR issues is provided. This initial analysis identifies the key steps and the initial time plan and paves the way for exploitation and business planning. T6.3, which is responsible for these activities (and starts at month 12), has pursued a consolidation and enhancement of the description of the expected Key Exploitable Results (KER) starting from the descriptions included in the Grant Agreement. The list of KER is expected to further mature and adapt during the Task 6.3.

1.2 Structure of this document

This document has been meticulously structured based on the guidelines and recommendations set forth by the European Commission regarding the communication and dissemination of Horizon Europe projects. These guidelines serve as a framework to ensure effective and impactful communication strategies throughout the project's lifecycle. By following these suggestions, the document aims to establish a comprehensive and well-organized approach to communication and dissemination activities. It incorporates key elements and best practices outlined by the European Commission to maximize the project's visibility, engagement, and knowledge-sharing. The structured framework allows for a systematic and coherent presentation of the project's communication and dissemination plan. It ensures that all relevant aspects, such as target audiences, key messages, communication channels, and evaluation methods, are thoroughly addressed. Additionally, adhering to the European Commission's recommendations facilitates alignment with the broader goals and objectives of the Horizon Europe program. It ensures that the project's communication and dissemination efforts are in line with the overarching framework of the program and its desired outcomes. By adopting this detailed and structured approach, the document aims to enhance the project's overall communication effectiveness, promote collaboration, and facilitate the dissemination of project results and impacts to a wide range of stakeholders and audiences.

2. Watson's objectives and targets

Drawing upon a wealth of internationally recognized expertise and leveraging the latest advancements in technology, five primary objectives were proposed that align with the project's aspirations. Table 1 outlines the objectives and which Key Performance Indicators (KPIs) will be used to measure them.

Table 1 Watson objectives and related Key Performance Indicators

Objective	KPIs
Obj1 – Design and develop a holistic traceability framework that will integrate data-driven services, intelligence-based toolsets and risk-estimation approaches, enabling food safety authorities and food chain stakeholders to identify at early stages and prevent fraudulent activities while improving food products' traceability.	<ul style="list-style-type: none"> - Number of public authorities that will validate the Watson framework >20 - Increased prevention of fraudulent activities in the food chain >60% - Improved food products' traceability >90% - Number of food data systems and data sources connected >10
Obj2 – Validate and demonstrate the effectiveness of the proposed Watson methodological framework and toolset through 6 validation campaigns in 6 different subsectors of the European food system that will pave the way for rapid uptake of the proposed framework and its systemic solutions, with the active engagement of several food chain stakeholders.	<ul style="list-style-type: none"> - Number of validation campaigns >6 - Number of usage scenarios integrated >18 - Number of external stakeholders participating in the validation campaigns >10.000 - Number of training workshops for consumers and food safety authorities >3 - Positive feedback for the Watson framework >95% - Increase in consumer intention towards authentic food products >30%
Obj3 – Advance the inspection and control capabilities of food safety authorities through robust, reliable and rapid methods and toolsets based on emerging technologies that ensure traceability and prevent fraudulent activities in the food chain.	<ul style="list-style-type: none"> - Number of downloads of the Watson mobile applications for traceability >2.000 - Increase of sales of authentic food products >10%. - Number of food safety authorities to test the proposed framework >10 - Increase the number of food samples analysed through more rapid methods >30% - Increase food fraud detection capacity of public authorities >60%
Obj4 – Ensure wide communication and scientific dissemination of the innovative Watson results to the research, academic, and international community, raising awareness and promoting multi-stakeholder cooperation and information sharing in order to tackle fraudulent activities in the food chain.	<ul style="list-style-type: none"> - Number of mini-series episodes on food traceability, food product authenticity and sustainable diets >3 - Number of (online and physical) training activities in schools, neighbours and open farm days >15 - Liaison with relevant EU funded projects >15 - Number of stakeholders from the food industry comprising the valorisation board of the project >50 - Number of new stakeholders engaged through the project's communication channels >50.000 - Number of participants in the Open Farm Days and other Training activities >10.000
Obj5 – Mainstream project results towards relevant policy making organisations and standardisation bodies in order to foster science-enabled policy reforms related to traceability and authenticity in food systems aiming to increase the global competitiveness of the European food sector.	<ul style="list-style-type: none"> - Best practices, regulations and lessons learnt, material from >20 countries - Number of White Papers for policy recommendations >3 - Number of contributions to relevant food standardisation groups >2 - Replicable products >3 results

In connection with the objectives and KPIs, Table 2 summarizes the project's expected outcomes and impacts.

Table 2 Watson expected outcomes and impacts

Outcome #1: A robust knowledge base of the underlying reasons for/drivers of food fraud (e.g. economic and social) and the extent of food fraud.

OUT1.1 Best practices, regulations and lessons learnt, material collected from >20 countries uploaded on the Watson website

OUT1.2 >50.000 downloads by key stakeholders;

OUT1.3 positive validation of the user needs and context analysis done by at least 5 independent experts;

OUT 1.4 >90% of the stakeholders' community members agree with the scenario analysis;

Impact: IMP1.1 >100 additional stakeholders ask to join the project community before the end of the project;

IMP1.2 >10 additional authorities ask to join to the Watson framework their database for fighting against counterfeit food product before the end of the project;

IMP1.3 >10.000 food producers access the project website to download best practices and information for their production activities

Outcome #2: Innovative strategies and solutions (tools and devices) to prevent fraudulent practices by improving traceability and safeguarding authenticity and fostering solutions for fraud prevention.

OUT2.1 >5.000 external stakeholders in validation campaigns;

OUT2.2 >70% of which show a high level of adoption of the proposed solution during their current practice;

OUT2.3 positive feedbacks about the relevance of the quantitative evidences;

OUT2.4 quantitative evidence that the Watson framework makes the authentication and traceability practices at low cost and more secure and trustworthy in respect to the current practices;

OUT2.5 >95% of Stakeholders' community members provide positive feedbacks on the usability, cost- effectiveness, trustworthiness, etc.;

OUT2.6 Individually traceable bottles >99%

OUT2.7 Bottles counterfeited <5%, Increase of collected taxes >10%;

OUT2.7 Increase of Profitability >15%, Number of levels with immediate access to information related to the product >9;

OUT2.8 Time lag for information validation <1 min;

OUT2.9 Early adopters of the meat industry that will integrate the expanded food fraud vulnerability assessment tool in their operating procedures >10.

Impact: IMP1.4 at least 10 policy makers will include the Watson policy recommendations in their policy agendas before the end of the project;

IMP1.5 at least 5 innovations of the project will be considered for standardizations by > 2 standardization groups engaged in the Stakeholders' community;

IMP1.6 before the end of the project, at least 20 investors will sign a memorandum of understanding with the project consortium to finance the industrialization activities of Watson Framework and their scale up;

IMP1.7 Increased number of consumers and their loyalty >40%;

IMP1.8 Increase of Profitability >10%;

IMP1.9 Legal jobs saved due to fraud avoidance >80%;

IMP1.10 Company's revenue loss due to fake honey < 1%;

IMP1.11 Reduce number of fish being illegally sold as Norwegian cod/ white fish >70%;

IMP1.12 Improve quality of fish (cooling chain maintained) >60%;

IMP1.13 Increase willingness to pay more for "traced" fish >30%.

Outcome #3: Improved assistance to control bodies and authorities in fraud prevention.

OUT3.1 Increase quality and fraud control >40%;

OUT 3.2 Reduce time and resources dedicated to current honey inspections, quality control and supply chain auditing >25%;

OUT3.3 Increase accuracy of current analysis protocols >30%; OUT3.4 Reduce Time-to-Results >70%, Olive Oil DNA Extraction protocols improvement >80%;

OUT3.5 Stages of on-site EVOO DNA traceability >6 (Producer, Milling, Storage, Bottling, Retailer, Importer/Exporter, Consumer);

OUT3.6 Reduce time lag for DNA validation <5 min;

OUT3.7 Reduction in cost of inspections, quality and supply chain auditing >20%.

<p>Impact: IMP2.1 >80% of the operational bodies of the stakeholders' community are willing to use on a fee-based services the Watson solution even after the project end;</p> <p>IMP2.2 at least 10 operational bodies of the stakeholders' community and 5 operational bodies and Authentication authorities not belonging to the project community will sign an agreement with the Watson consortium to use the Framework after the project end;</p> <p>IMP2.3 Reduction in cost of inspections, quality control and supply chain auditing >20%;</p> <p>IMP 2.4 Improved trust between stakeholders of the wine supply chain >60%;</p> <p>IMP2.5 Legal jobs saved due to fraud avoidance >80%;</p> <p>IMP2.6 Improve trust between stakeholders of the seafood supply chain >40%;</p> <p>IMP2.7 Improve trust between stakeholders of the meat supply chain >60%;</p> <p>IMP2.8 Increase consumer intention towards traceable and authenticated Olive Oil >35%</p>
<p>Outcome #4: Improved transparency through digital solutions (such as IoT, artificial intelligence, blockchain and distributed ledger technologies) that meet consumer demand for food transparency, with a focus on demonstrating authenticity of food as a way to reduce food fraud and boost consumer confidence in food origin and quality.</p>
<p>OUT4.1>10.000 downloads of the Watson mobile application for traceability; OUT4.2 reaching of the target planned.</p>
<p>Impact: Same as IMP1 in OUT2 and IMP1.14 >10% increase of sales of non-counterfeit food products registered in the retails and consumers associations participating in the validation campaign;</p> <p>IMP1.15 >30% of increase of the consumer intention towards authentic food products, registered during the validation campaign;</p> <p>IMP1.16 Consumer intention towards traceable and authenticated wines >30%;</p> <p>IMP1.17 Increase consumer intention towards traceable and authenticated meat products >35%;</p> <p>IMP1.18 Company's revenue loss due to counterfeiting <1%, Increase in sales turnover outside EU >15%/20%;</p> <p>IMP1.19 Increase in sales turnover within EU >7%</p>
<p>Outcome #5: Contribution to further development of policies for food authentication and traceability and for fighting food fraud/food crime</p>
<p>OUT5.1 liaison with at least 15 EU funded project;</p> <p>OUT5.2 >50 stakeholders of the food industry will be part of the valorisation board of the project; OUT5.3 >50.000 stakeholders engaged through the communication channels;</p> <p>OUT5.4 >10.000 participants to the Open Farm Day and other training activities;</p>
<p>Impact: Same as IMP2, in OUT3 and IMP2.9 >2 business models studied and validated by the stakeholders' community</p>
<p>Outcome #6: Support official control by providing guidance on detection and mitigation of fraudulent practices.</p>
<p>Same as IMP2 in OUT3, OUT5 and OUT5.</p> <p>OUT6.1 >3 White position papers for policy recommendations OUT6.2 > 1.000 downloads of authentication authorities of at least 10 EU MSs.</p>
<p>Impacts: Same as IMP2 in OUT3 and OUT5</p>

3. Communication, dissemination and exploitation

3.1 Communication dissemination and exploitation purposes and means

The strategy for communication, dissemination and exploitation of project outcomes will adhere to principles and best practices that have been successfully tested by consortium partners in previous FP7 and H2020 projects. This strategy encompasses several key components:

- Precise identification of the target audience for the knowledge generated and the creation of tailored dissemination materials that align with their specific requirements.
- Specification of communication methods and channels to effectively engage with the intended audience.
- Preparation of both electronic and printed materials to facilitate wide-reaching dissemination.
- Development of a well-structured timeline to ensure the most efficient dissemination of project findings and outcomes.
- Identification of the key stakeholders involved in the project's exploitation phase.
- Implementation of tools and strategies to maximize the utilization and effective exploitation of the project's results.

The key objectives of the dissemination effort involve overseeing the knowledge gained during the project and sustaining continuous connections with essential stakeholders, encompassing the wider public audience, research community and regulatory bodies. This approach is geared towards promoting additional research initiatives and discovering fresh market prospects. The project's exploitation strategy concentrates on reaching out to interested stakeholders who will embrace and adopt the tools and solutions formulated over the course of the project. The aim is to guarantee the replicability of these solutions and achieve broad acceptance within the intended audience. Recognizing and understanding the distinctions between these components is essential for the effective implementation of communication, dissemination, and exploitation activities. The Watson partners follow a guideline of Horizon Europe and the Grant Agreement as described in Table 3.

Table 3 Purposes and means of Communication, Dissemination and Exploitation activities

	Communication	Dissemination	Exploitation
Purposes	The purpose of communication in projects is to inform and engage multiple audiences, including society, and to showcase the benefits of research and innovation.	Dissemination focuses on making project results available to audiences who may use them, aiming to enable the utilization and adoption of all publishable outcomes.	Exploitation involves entities making tangible use of project results, with participants striving to exploit the results they own or facilitating their exploitation by other legal entities.
Means	This is achieved through various means such as maintaining a project website, sending newsletters, issuing press releases, creating videos and conducting interviews, distributing project factsheets and brochures, and utilizing social media platforms like blogs, Twitter, and LinkedIn.	This is accomplished through methods such as scientific publications, policy briefs, workshops, and demonstrations, as well as sharing results on online repositories that encompass research data, software, and reports.	This is executed through avenues like contributing to PhD theses, establishing standards, influencing policy changes, offering services, fostering further research, and more.

3.2 Communication and dissemination plan components and methodology

The communication and dissemination plan of Watson emphasizes the importance of public information, community building, and engagement. The plan recognizes that increasing the effectiveness of the public information strategy requires careful consideration of key activities and dependencies. In line with the EU guidelines of communicating Horizon Europe projects, communication and dissemination are related concepts, but they have distinct differences:

Communication: Communication is a deliberate and well-planned process that begins from the inception of an action and extends throughout its entire duration. Its primary objective is to promote the action and effectively disseminate its outcomes to various audiences. This entails the implementation of strategic and targeted measures to communicate the purpose, progress, and achievements of the action. The communication process involves reaching out to a wide range of stakeholders, including the media and the general public. It aims to create awareness and understanding of the action, its goals, and its impact. Additionally, communication efforts may involve engaging in a two-way exchange, facilitating dialogue and feedback between the action implementers and the targeted audiences. Strategic communication measures are employed to ensure that the message effectively reaches the intended recipients. These measures include selecting appropriate communication channels, crafting compelling messages, and tailoring the content to resonate with the specific audience segments. The goal is to maximize the reach and impact of the communication efforts. Furthermore, communication is not a one-time event but a continuous process that spans the entire lifetime of the action. It involves regular updates, progress reports, and dissemination of results. By maintaining an ongoing and consistent flow of information, the action can build momentum, sustain interest, and maintain engagement from stakeholders throughout its duration. In summary, communication is a crucial component of any action, requiring strategic planning and targeted measures to effectively promote the action and its results. It involves reaching out to diverse audiences, engaging in a two-way exchange, and employing continuous communication efforts throughout the action's lifetime.

Communication refers to the process of exchanging information, ideas, or messages between individuals or groups. It involves the transmission and reception of information, which can be done through various channels such as speaking, writing, gestures, or visual aids. Communication aims to convey thoughts, feelings, or intentions to achieve mutual understanding and interaction between parties involved.

Dissemination: Dissemination refers to the process of making the results of a project publicly available through various means, excluding methods that involve protecting or directly exploiting the findings, such as scientific publications. The purpose of dissemination is to share the project's outcomes, knowledge, and insights with a broader audience, beyond the immediate project stakeholders. It involves communicating the findings, methodologies, and conclusions derived from the project in a format that is accessible and understandable to the target audience. Dissemination methods can vary depending on the nature of the project and the intended audience. Some common approaches to dissemination include:

1. *Reports and Publications:* Project reports, white papers, and technical documents are commonly used to disseminate the project's results. These publications provide in-depth information about the project's objectives, methodologies, findings, and recommendations.
2. *Websites and Online Platforms:* Creating a dedicated project website or utilizing online platforms enables easy access to project information and resources. These platforms can host project

documentation, research papers, presentations, and other relevant materials for public viewing and download.

3. *Conferences and Workshops*: Presenting project findings and insights at conferences and workshops provides an opportunity to reach a wider audience and engage in discussions with experts in the field. This platform allows for knowledge exchange, networking, and dissemination of results to relevant stakeholders.
4. *Webinars and Online Events*: Organizing webinars and online events enables remote participation and knowledge dissemination. These platforms allow project members to present their work, engage with the audience through live interactions, and share key findings and insights.
5. *Press Releases and Media Outreach*: Issuing press releases and engaging with the media can help in disseminating project outcomes to a broader audience. By highlighting key achievements and impacts, the project can attract attention from journalists and media outlets, increasing public awareness.
6. *Social Media and Online Communities*: Leveraging social media platforms, such as Twitter, LinkedIn, and research-oriented platforms, can facilitate the dissemination of project results. Sharing updates, publications, and engaging with the online community allows for broader visibility and reach.
7. *Collaboration and Partnerships*: Collaborating with other projects, organizations, or initiatives in the field can enhance the dissemination efforts. By joining forces, the project can benefit from shared networks, platforms, and resources, amplifying the dissemination of results.

Overall, dissemination involves sharing project outcomes through various channels to make the results accessible and available to the public. It encourages the exchange of knowledge, fosters collaboration, and contributes to the advancement of the field by allowing others to learn from and build upon the project's findings.

Dissemination, on the other hand, specifically refers to the act of spreading or distributing information, knowledge, or findings to a wider audience or target group. It involves sharing information with the purpose of making it widely accessible and available. Dissemination often occurs through various means such as publishing research papers, distributing reports, conducting presentations, utilizing mass media, or leveraging digital platforms. The goal of dissemination is to ensure that information reaches the intended audience and has a broader impact.

In summary, communication encompasses the broader process of exchanging information and ideas, while dissemination focuses specifically on the act of spreading information to a wider audience or target group. Communication can occur in various contexts, while dissemination is a specific aspect of communication that emphasizes the distribution of information for broader accessibility and impact.

3.3 The role of Work Package 6

Work package 6 (WP6) 'Ecosystem Building and Exploitation', focuses on communication, dissemination, and exploitation of the key results from Watson project. The specific objectives of WP6 are aligned with the broader project goals, and are as follows:

1. *Developing a Communication Strategy*: WP6 aims to develop a comprehensive communication strategy that aligns with Watson's overall objectives. This strategy will outline the approach, key messages, target audiences, and communication channels to effectively disseminate project information.

2. *Engaging Stakeholders:* WP6 focuses on engaging stakeholders from various sectors, including researchers, policymakers, industry stakeholders, and the general public. It aims to create opportunities for dialogue, collaboration, and involvement through targeted communication initiatives.
3. *Disseminating Project Outcomes:* WP6 is responsible for disseminating the project's outcomes, research findings, and policy recommendations to relevant stakeholders and the wider research community. This includes leveraging various communication channels and platforms to ensure broad visibility and impact.
4. *Exploiting Project Outcomes:* All partners are expected to exploit the results of the project. The project outcomes will be transformed as Key Exploitable Results and during WP6 business planning, and exploitation activities will take place.

As detailed in the proposal, the general objectives of WP6 are:

1. To define a clear and distinctive brand identity for Watson;
2. To create broad visibility and raise awareness of Watson and its results;
3. To effectively communicate Watson to a broad audience, tailoring messages and tools according to the specific stakeholders;
4. To establish liaisons with related activity groups, projects, developers and policy makers to ensure wide participation to deployment of Watson results;
5. To ensure exploitation of Watson innovation outcomes during and after project lifetime by undertaking continuous analysis of market trends and needs, in relation to a parallel analysis of market fit of Watson derivatives to facilitate innovation management: optimal market positioning of Watson outputs and providing feedback to the activities to calibrate innovation output according to evolving market trends;

To continuously monitor and periodically report on the holistic impact achieved by Watson, using a multitude of tools and information sources and maintaining a close focus to the expected impacts

3.4 Target audiences: sectors and numbers

3.4.1 Target groups

The communication and dissemination plan in Watson takes into consideration the needs and interests of different target groups to establish clear communication goals for each subgroup. By understanding the characteristics and preferences of these groups, the communication and dissemination plan aims to employ the most effective communication channels and methods to reach them. The communication and dissemination plan begins by identifying the primary target groups, which are the main audience segments that the project aims to engage with. These target groups may include researchers, academia, policymakers/funders, industry stakeholders, or other relevant stakeholders identified in the project. The communication and dissemination plan then identifies secondary target groups, which are additional audiences that may indirectly benefit from or contribute to the project's objectives. To effectively communicate with these target groups, the communication and dissemination plan identifies the key offerings and messages of the project. This involves highlighting the unique value propositions, outcomes, and benefits that the project provides to each target group. By understanding the specific interests and needs of these groups, the communication and dissemination plan ensures that the messages and offerings are

tailored to resonate with their priorities and motivations. Furthermore, the communication and dissemination plan determines the most appropriate communication means to reach each target group. This may involve a combination of channels such as websites, social media platforms, newsletters, presentations, press releases, workshops, conferences, or peer-reviewed journals. By selecting the most relevant and impactful communication methods, the communication and dissemination plan maximizes the reach and engagement of the project's messages within each target group. Overall, the communication and dissemination plan in Watson takes a targeted and strategic approach to communication and dissemination by aligning the project's goals, messages, and offerings with the specific needs and interests of different target groups. This ensures that the project's outcomes and impact are effectively communicated and understood by the intended audiences, facilitating meaningful engagement and collaboration throughout the project's lifecycle. An overview of the target groups of the Watson project is provided in Table 4.

Table 4 Target group summary

Association of Consumers
<p>The Association of Consumers plays a crucial role in the Watson project as a target group for communication and dissemination efforts. The project recognizes the importance of engaging with consumers and addressing their needs and interests in the context of data transparency in the agrifood sector. The communication goals for the Association of Consumers include raising awareness about the significance of data transparency in ensuring food safety, authenticity, and traceability. The project aims to inform consumers about the benefits of the Watson solution and how it can contribute to their confidence in the food they consume. To effectively reach the Association of Consumers, the project employs various communication means and channels. These may include organizing events specifically tailored for consumers, such as workshops or information sessions, where they can learn about the project's developments and outcomes. The project may also collaborate with consumer associations to disseminate information through their networks and platforms. In addition to direct engagement, the project seeks to communicate with the Association of Consumers through electronic means and social media. By utilizing these channels, the project can convey key messages, share updates, and provide resources and educational materials related to data transparency in the agrifood sector. It is important for the project to address the needs and interests of consumers, ensuring that the information shared is clear, accessible, and relevant to their concerns. By actively involving the Association of Consumers in the project's communication efforts, the project aims to promote consumer empowerment and foster trust and confidence in the food supply chain. Overall, the Watson project recognizes the Association of Consumers as a key stakeholder and strives to engage with them through tailored communication strategies. By promoting the importance of data transparency and providing information about the project's outcomes, the project aims to empower consumers and contribute to a more transparent and trustworthy agrifood sector.</p>
Farmers
<p>Farmers are an important target group for the Watson project's communication and dissemination activities. Recognizing their crucial role in the agrifood sector, the project aims to address their needs and interests related to data transparency and the use of technology in farming practices. The communication goals for farmers within the Watson project include:</p> <ul style="list-style-type: none">• Raising awareness: The project aims to inform farmers about the benefits and potential of data transparency in the agrifood sector. This involves highlighting how the Watson solution can contribute to improving farm management, increasing productivity, and ensuring the authenticity and traceability of agricultural products.• Knowledge sharing: The project aims to provide farmers with relevant information and resources on best practices, innovative technologies, and tools that can enhance their farming operations. This may include organizing workshops, training sessions, or webinars tailored to address the specific needs and challenges faced by farmers.

- **Collaboration and engagement:** The project recognizes the importance of involving farmers in the development and testing of the Watson solution. By actively engaging farmers in the project's activities, such as participating in pilot studies or providing feedback, the project can ensure that the solution meets their requirements and aligns with their farming practices.

To effectively reach farmers, the project utilizes various communication means and channels. This may include collaborating with farmer associations, agricultural cooperatives, or other farming networks to disseminate information and engage with the farming community. Additionally, the project may leverage digital platforms, such as websites, social media, and online forums, to share updates, case studies, and success stories related to data transparency and its impact on farming. It is important for the project to understand the specific needs and interests of farmers and tailor the communication messages and materials accordingly. By addressing the practical benefits of data transparency and technology adoption in farming, the project aims to encourage farmers' participation and adoption of the Watson solution.

Overall, the Watson project recognizes farmers as key stakeholders and aims to actively involve them in its communication and dissemination activities. By promoting the benefits of data transparency and providing relevant knowledge and resources, the project seeks to empower farmers and contribute to the advancement of sustainable and efficient farming practices.

Food Products Transportation Companies

Food products transportation companies are an important target group for the Watson project's communication and dissemination efforts. Recognizing their role in ensuring the safe and efficient transportation of food products, the project aims to address their needs and interests related to data transparency and supply chain optimization.

The communication goals for food products transportation companies within the Watson project include:

- **Highlighting benefits:** The project aims to communicate the benefits of data transparency and the Watson solution for food products transportation companies. This involves emphasizing how the solution can enhance traceability, reduce logistical inefficiencies, and improve overall supply chain management. By highlighting the potential cost savings, improved compliance, and reduced risks, the project aims to generate interest and engagement among transportation companies.
- **Demonstrating value:** The project seeks to demonstrate the value proposition of the Watson solution specifically for food products transportation companies. This may involve showcasing case studies, success stories, and real-world examples where the solution has led to improved operational efficiency, reduced waste, or enhanced customer satisfaction. By providing tangible evidence of the solution's impact, the project aims to build credibility and encourage adoption among transportation companies.
- **Collaboration and knowledge exchange:** The project aims to foster collaboration and knowledge exchange between food products transportation companies and other stakeholders in the agrifood sector. This may include organizing industry-specific events, workshops, or forums where transportation companies can share their challenges, experiences, and best practices related to data transparency and supply chain optimization. By facilitating networking and knowledge sharing, the project aims to create a community of practice that can collectively drive improvements in the industry.

To effectively reach food products transportation companies, the project utilizes various communication channels and strategies. This may include direct engagement with transportation industry associations, participating in relevant trade shows or conferences, and leveraging digital platforms for targeted messaging and information dissemination. Additionally, the project may develop specific resources or guidelines tailored to the unique needs and challenges faced by food products transportation companies. Overall, the Watson project recognizes the importance of engaging food products transportation companies as key stakeholders in promoting data transparency and supply chain optimization. By communicating the benefits, demonstrating value, and facilitating collaboration, the project aims to encourage their active participation and adoption of the Watson solution, ultimately contributing to safer, more efficient, and sustainable food transportation practices.

Food Producers

Food producers are a critical target group for the communication and dissemination efforts of the Watson project. As the primary stakeholders involved in the production of food, it is essential to engage them in understanding and adopting the project's outcomes related to data transparency and authenticity assurance in food systems.

The communication goals for food producers within the Watson project include:

- **Awareness of project objectives:** The project aims to communicate the objectives and purpose of Watson to food producers. This involves explaining the significance of data transparency and authenticity assurance in ensuring the safety, quality, and trustworthiness of food products. By raising awareness about the project's goals, food producers can understand how their participation and adoption of the project's outcomes can benefit their operations and enhance consumer confidence.
- **Education and training:** The project aims to provide education and training to food producers on the use and implementation of the Watson solutions. This may include organizing workshops, webinars, and training sessions to familiarize them with the technologies, tools, and practices that promote data transparency and authenticity in the food production process. By empowering food producers with the necessary knowledge and skills, the project aims to facilitate their active involvement and adoption of the project's outcomes.
- **Collaboration and knowledge sharing:** The project seeks to foster collaboration and knowledge sharing among food producers. This may involve facilitating networking events, forums, or platforms where producers can exchange experiences, best practices, and challenges related to data transparency and authenticity assurance. By creating a community of practice, the project aims to encourage mutual learning and support among food producers and promote the widespread adoption of innovative solutions.
- **Highlighting benefits and success stories:** The project aims to highlight the benefits and success stories resulting from the adoption of the Watson solutions by food producers. This may involve showcasing case studies and real-world examples where the implementation of data transparency measures and authenticity assurance practices has led to improved product quality, market access, and consumer trust. By sharing these success stories, the project aims to inspire and motivate other food producers to embrace similar practices.

To effectively reach food producers, the project utilizes a range of communication channels and strategies. This may include collaborating with industry associations and organizations, participating in trade fairs and exhibitions, leveraging digital platforms for targeted messaging, and establishing direct communication channels such as newsletters or mailing lists. The project also recognizes the importance of tailoring the messaging and resources to address the specific needs, challenges, and interests of food producers. By engaging food producers, the Watson project aims to promote the adoption of data transparency and authenticity assurance practices in the food production process. Ultimately, this can contribute to safer, more sustainable, and trusted food products, benefiting both the producers and the consumers.

Retailers

Retailers play a crucial role in the food supply chain, acting as a link between food producers and consumers. The Watson project recognizes the importance of engaging retailers in its communication and dissemination efforts to ensure the effective implementation of data transparency and authenticity assurance in the retail sector. The communication goals for retailers within the Watson project include:

- **Awareness and understanding:** The project aims to raise awareness among retailers about the significance of data transparency and authenticity assurance in the food products they sell. This involves conveying the benefits of adopting the Watson solutions, such as improved product traceability, consumer trust, and market competitiveness. Retailers need to understand the value proposition of incorporating these practices into their operations.
- **Adoption and implementation:** The project aims to encourage retailers to adopt and implement the Watson solutions within their supply chains. This may involve providing them with information, resources, and guidelines on how to integrate data transparency and authenticity measures into their processes. By

showcasing the practical benefits and feasibility of these solutions, the project aims to facilitate their adoption by retailers of various scales and sectors.

- **Collaboration and partnerships:** The project seeks to foster collaboration and partnerships between retailers and other stakeholders in the food ecosystem. This may involve organizing workshops, forums, or networking events where retailers can engage with food producers, transportation companies, and other relevant stakeholders. By facilitating these interactions, the project aims to promote knowledge exchange, best practice sharing, and the development of joint initiatives that benefit all parties involved.
- **Consumer communication:** The project recognizes the crucial role of retailers in communicating the benefits of data transparency and authenticity assurance to consumers. Retailers are often the direct interface with consumers and can influence their purchasing decisions. Therefore, the project aims to provide retailers with the necessary tools and resources to effectively communicate the importance of these practices to consumers, such as through product labelling, point-of-sale information, or educational campaigns.
- **Monitoring and feedback:** The project aims to establish mechanisms for monitoring and receiving feedback from retailers regarding the implementation of the Watson solutions. This feedback can help identify challenges, refine strategies, and continuously improve the project's outcomes. Regular communication channels, surveys, or dedicated working groups can be utilized to facilitate this ongoing dialogue with retailers.

To reach retailers effectively, the project employs a range of communication channels and approaches. This may include direct engagement with retail associations and organizations, participation in trade events and conferences targeting the retail sector, leveraging digital marketing tools, and establishing collaborations with industry influencers or thought leaders. The project also recognizes the importance of tailoring the messaging and resources to address the specific needs and interests of retailers, considering their diverse sizes, business models, and consumer markets. By engaging retailers in the Watson project, the aim is to create a retail landscape that prioritizes data transparency and authenticity assurance, leading to enhanced consumer trust, improved supply chain efficiency, and a more sustainable food system overall.

Food Processors

Food processors play a significant role in the food supply chain, as they are responsible for transforming raw agricultural products into processed food items. The Watson project recognizes the importance of engaging food processors in its communication and dissemination efforts to ensure the effective implementation of data transparency and authenticity assurance in their operations. The communication goals for food processors within the Watson project include:

- **Awareness and understanding:** The project aims to raise awareness among food processors about the significance of data transparency and authenticity assurance in their processes. This involves highlighting the benefits of implementing the Watson solutions, such as improved product traceability, quality control, and compliance with regulations. Food processors need to understand the value proposition of incorporating these practices into their operations.
- **Adoption and implementation:** The project aims to encourage food processors to adopt and implement the Watson solutions within their production processes. This may involve providing them with information, guidelines, and training on how to integrate data transparency and authenticity measures into their operations effectively. The project aims to showcase the practical benefits and feasibility of these solutions for food processors of various sizes and sectors.
- **Collaboration and partnerships:** The project seeks to foster collaboration and partnerships between food processors and other stakeholders in the food ecosystem. This may involve organizing workshops, forums, or networking events where food processors can engage with food producers, retailers, and technology providers. By facilitating these interactions, the project aims to promote knowledge exchange, best practice sharing, and the development of joint initiatives that enhance data transparency and authenticity throughout the food supply chain.

- **Compliance with regulations:** The Watson project aims to assist food processors in ensuring compliance with relevant regulations and standards related to data transparency and authenticity in the food industry. This may involve providing guidance on regulatory requirements, supporting the development of internal protocols and procedures, and facilitating the adoption of technologies that enable compliance.
- **Continuous improvement and innovation:** The project aims to encourage food processors to embrace continuous improvement and innovation in their processes. This involves promoting the adoption of advanced technologies, such as smart labelling and tagging, IoT devices, and blockchain solutions, to enhance data transparency, product traceability, and quality assurance. The project also aims to facilitate knowledge sharing and collaboration among food processors to drive innovation in the sector.

To effectively communicate with food processors, the project utilizes various communication channels and strategies. This may include direct engagement with food processing associations and organizations, participation in industry conferences and exhibitions, targeted workshops and training sessions, and the development of informative materials and case studies tailored to the specific needs and interests of food processors. By engaging food processors in the Watson project, the aim is to promote a culture of data transparency and authenticity assurance in food processing, leading to improved consumer trust and the production of safe and high-quality food products.

Nutritionists

Nutritionists play a critical role in promoting healthy eating habits and providing expert advice on nutrition. While they may not be directly involved in the operational aspects of data transparency and authenticity assurance, their involvement and support are crucial for the successful implementation of the Watson project. The communication goals for nutritionists within the Watson project include:

- **Education and awareness:** The project aims to educate nutritionists about the importance of data transparency and authenticity assurance in the food supply chain. This involves raising awareness about the potential benefits of these practices for promoting healthier and more sustainable food choices. Nutritionists can play a key role in advocating for the adoption of data transparency measures to ensure consumers have access to accurate and reliable information about the nutritional content and origin of food products.
- **Collaboration and knowledge exchange:** The project seeks to foster collaboration and knowledge exchange between nutritionists and other stakeholders in the food ecosystem. This may involve organizing workshops, seminars, or webinars where nutritionists can engage with food producers, retailers, and policy makers to share insights, best practices, and research findings. By facilitating these interactions, the project aims to enhance the understanding of nutritionists regarding the role of data transparency in supporting evidence-based dietary recommendations and promoting consumer health.
- **Consumer education:** Nutritionists can play a crucial role in educating consumers about the importance of data transparency and authenticity assurance in food products. They can help consumers make informed decisions by providing guidance on interpreting food labels, understanding nutritional information, and identifying reliable sources of information. The project aims to provide nutritionists with relevant resources and materials that they can use to educate their clients and the general public about the benefits of data transparency in supporting healthy food choices.
- **Feedback and evaluation:** The project values the input and feedback of nutritionists in evaluating the impact of data transparency and authenticity assurance on consumer behaviour and dietary patterns. Nutritionists can provide valuable insights based on their interactions with clients and their understanding of consumer needs and preferences. Their feedback can contribute to refining and improving the project's strategies and recommendations to better address the nutritional aspects of data transparency.

To effectively engage nutritionists, the project utilizes various communication channels and strategies. This may include collaborating with nutritionist associations and organizations, organizing professional development events and conferences, providing access to relevant research findings and resources, and establishing online platforms or communities for knowledge sharing and collaboration. By involving nutritionists in the Watson project, the aim is to

harness their expertise and influence to promote healthier food choices, supported by transparent and authentic information, and ultimately contribute to improved public health outcomes.

Food Safety and Certification Authorities

Food safety and certification authorities play a crucial role in ensuring the integrity and safety of food products. Their involvement and collaboration are vital for the successful implementation of data transparency and authenticity assurance in the food supply chain. The communication goals for food safety and certification authorities within the Watson project include:

- **Alignment and integration:** The project aims to align its objectives and outcomes with the priorities and requirements of food safety and certification authorities. This involves understanding the regulatory landscape and standards set by these authorities and ensuring that the Watson solutions comply with relevant regulations and guidelines. By communicating and collaborating with food safety and certification authorities, the project can ensure a smooth integration of data transparency and authenticity measures into existing certification processes and quality assurance systems.
- **Knowledge sharing and capacity building:** The project seeks to facilitate knowledge sharing and capacity building among food safety and certification authorities. This may involve organizing training sessions, workshops, or seminars to enhance their understanding of the benefits and practical implementation of data transparency measures. By providing them with the necessary information and resources, the project aims to empower food safety and certification authorities to effectively evaluate and verify the authenticity and traceability of food products using the Watson solutions.
- **Communication of project outcomes:** The project aims to communicate its outcomes and achievements to food safety and certification authorities to demonstrate the effectiveness and added value of data transparency and authenticity assurance in ensuring food safety and consumer protection. This may include sharing research findings, case studies, and success stories that highlight the positive impact of implementing the Watson solutions. By showcasing the benefits and tangible results, the project aims to inspire and encourage food safety and certification authorities to adopt similar practices in their regulatory frameworks.
- **Collaboration and standardization:** The project recognizes the importance of collaborating with food safety and certification authorities to develop standardized protocols and guidelines for implementing data transparency and authenticity measures. This involves engaging in discussions, consultations, and working groups to define best practices, establish common standards, and address any regulatory challenges. By fostering collaboration and dialogue, the project aims to contribute to the development of harmonized approaches that can be adopted by food safety and certification authorities at national and international levels.

To effectively engage food safety and certification authorities, the project utilizes various communication channels and strategies. This may include participating in regulatory conferences and events, establishing partnerships with relevant authorities, providing technical documentation and reports, and engaging in direct communication and consultation processes. By involving food safety and certification authorities in the Watson project, the aim is to enhance the credibility and reliability of data transparency and authenticity measures, leading to improved food safety practices and increased consumer confidence in the food supply chain.

Researchers in the agrifood and technology sectors

Researchers in the agrifood and technology sectors play a vital role in advancing knowledge and innovation in the field. The Watson project recognizes the importance of engaging researchers in its communication and dissemination efforts to foster collaboration, knowledge exchange, and further development of the project's outcomes. The communication goals for researchers in the agrifood and technology sectors within the Watson project include:

- **Knowledge sharing and collaboration:** The project aims to facilitate knowledge sharing among researchers by disseminating its findings, methodologies, and technological advancements. This may include publishing research papers, presenting at conferences and workshops, and organizing specialized sessions where

researchers can exchange ideas, share their expertise, and explore potential collaborations. By actively involving researchers, the project aims to contribute to the collective knowledge and promote innovation in the agrifood and technology sectors.

- **Dissemination of project outcomes:** The project seeks to communicate its outcomes and research achievements to the research community. This includes sharing research findings, case studies, and innovative solutions developed within the Watson project. By disseminating this information through scientific publications, academic networks, and relevant conferences, the project aims to generate interest and awareness among researchers, inspiring them to further explore the potential of data transparency and authenticity assurance in the agrifood sector.
- **Capacity building and training:** The project aims to provide training and capacity-building opportunities for researchers in the agrifood and technology sectors. This may involve organizing workshops, webinars, or training sessions to educate researchers on the Watson project's methodologies, tools, and technologies. By enhancing their skills and knowledge in the field of data transparency and authenticity assurance, the project aims to empower researchers to contribute to future advancements and apply the project's outcomes in their own research endeavours.
- **Collaboration with academia and research institutions:** The project recognizes the importance of collaborating with academic institutions and research organizations in advancing its goals. This may involve establishing partnerships, research agreements, or joint initiatives with universities, engineering schools, and research centres. By fostering collaboration, the project aims to leverage the expertise and resources available within the research community to further enhance the development and implementation of data transparency and authenticity assurance solutions.

To effectively engage researchers, the project utilizes a range of communication channels and activities. These may include publishing research articles in reputable journals, organizing dedicated research workshops or special sessions at conferences, establishing online communities and discussion forums, and actively participating in relevant research networks and platforms. By engaging researchers in the Watson project, the aim is to leverage their expertise, drive innovation, and ensure the project's outcomes are widely disseminated and utilized to advance the agrifood and technology sectors.

Industrial communities representing the food industry

Industrial communities representing the food industry play a critical role in the implementation and adoption of data transparency and authenticity assurance practices. The Watson project recognizes the importance of engaging these communities in its communication and dissemination efforts to ensure the effective implementation of its outcomes within the food industry. The communication goals for industrial communities representing the food industry within the Watson project include:

- **Awareness and understanding:** The project aims to raise awareness among industrial communities about the benefits and importance of data transparency and authenticity assurance in the food industry. This involves communicating the potential value of adopting the Watson solutions, such as enhanced supply chain traceability, improved product quality and safety, and increased consumer trust. Industrial communities need to understand the relevance of these practices to their operations and how they can contribute to their overall business objectives.
- **Knowledge exchange and best practices:** The project aims to facilitate knowledge exchange and sharing of best practices among industrial communities within the food industry. This may involve organizing industry-specific workshops, conferences, or forums where industry professionals can learn from each other's experiences, discuss challenges, and explore innovative approaches to implementing data transparency and authenticity assurance measures. By creating a platform for collaboration and information sharing, the project aims to foster the adoption of effective strategies and solutions across the industry.
- **Collaboration and partnerships:** The project seeks to foster collaboration and partnerships between industrial communities and other stakeholders in the food ecosystem, such as food producers, retailers, and technology providers. This may involve establishing industry-focused working groups, joint initiatives, or

collaborative projects that aim to address common challenges and drive industry-wide improvements in data transparency and authenticity assurance. By facilitating collaboration, the project aims to leverage collective expertise, resources, and influence to accelerate the adoption of these practices.

- **Showcasing successful case studies:** The project aims to highlight successful case studies and real-world implementations of data transparency and authenticity assurance within the food industry. By showcasing tangible benefits and positive outcomes achieved by industry players, the project aims to inspire and motivate other industrial communities to adopt similar approaches. This may involve sharing case studies, success stories, and testimonials through various communication channels, including industry publications, conferences, and online platforms.
- **Policy and advocacy:** The project aims to engage with industrial communities in advocating for supportive policies and regulations that promote data transparency and authenticity assurance in the food industry. This may involve collaborating with industry associations, policymakers, and regulatory bodies to influence policy development and create an enabling environment for the adoption of these practices. By actively participating in policy discussions and providing industry perspectives, the project aims to shape the regulatory landscape in a way that encourages and supports industry-wide implementation.

To effectively engage industrial communities representing the food industry, the project utilizes targeted communication strategies tailored to their specific needs and interests. This may include industry-specific workshops, participation in trade fairs and exhibitions, leveraging industry associations and networks, and utilizing digital marketing tools to reach a wide audience. By engaging industrial communities, the Watson project aims to drive industry-wide transformation, foster collaboration, and create a more transparent and authentic food supply chain.

Policymakers and regulators in agrifood sectors

Engaging policy makers and regulators in the agrifood sectors is crucial for the successful implementation and adoption of data transparency and authenticity assurance practices advocated by the Watson project. The communication goals for policy makers and regulators within the project include:

- **Awareness and understanding:** The project aims to raise awareness among policy makers and regulators about the importance of data transparency and authenticity assurance in the agrifood sectors. This involves providing them with information on the benefits of these practices, such as improved food safety, supply chain efficiency, and consumer trust. Policy makers and regulators need to understand the value proposition of adopting these practices and the potential impact on the overall food system.
- **Policy development and regulation:** The project aims to inform and influence policy development and regulation related to data transparency and authenticity assurance in the agrifood sectors. This may involve providing policy makers and regulators with research findings, best practices, and recommendations that can guide the formulation of effective policies and regulations. By engaging in policy discussions and providing evidence-based insights, the project aims to shape regulatory frameworks that support the adoption and implementation of these practices.
- **Collaboration and stakeholder engagement:** The project seeks to foster collaboration and engagement between policy makers, regulators, and other stakeholders in the agrifood sectors. This may involve organizing policy roundtables, workshops, or consultations where different perspectives can be shared, and stakeholders can collaborate on finding solutions. By facilitating dialogue and collaboration, the project aims to ensure that policy makers and regulators have a comprehensive understanding of the challenges and opportunities associated with data transparency and authenticity assurance.
- **Capacity building:** The project aims to support capacity building efforts for policy makers and regulators in the agrifood sectors. This may involve organizing training programs, webinars, or knowledge-sharing sessions that provide policymakers with the necessary information and skills to design and implement policies that promote data transparency and authenticity assurance. By enhancing their capacity, the project aims to empower policy makers and regulators to make informed decisions and effectively address the complexities of the agrifood sector.

- **Monitoring and evaluation:** The project aims to establish mechanisms for monitoring and evaluating the impact of policies and regulations related to data transparency and authenticity assurance. This may involve collecting and analysing data, conducting impact assessments, and providing feedback to policy makers and regulators on the effectiveness of their initiatives. By monitoring progress and sharing insights, the project aims to contribute to evidence-based policy making and continuous improvement in the regulatory landscape.

To effectively engage policy makers and regulators, the project employs a range of communication strategies. This includes direct engagement through policy briefs, presentations, and meetings, as well as participation in relevant policy forums and conferences. The project also collaborates with industry associations and stakeholder networks to amplify its messages and ensure a coordinated approach to advocacy. By engaging policy makers and regulators, the Watson project aims to shape policies and regulations that foster data transparency and authenticity assurance in the agrifood sectors, leading to a more resilient and sustainable food system.

Members of EIT Food, FAO, WDP other relevant associations

Engaging members of EIT Food, FAO, WDP, and other relevant associations is crucial for disseminating the ideas, developments, and results of the Watson project and ensuring their adoption and implementation within the wider agrifood community. The communication goals for these associations and their members within the project include:

- **Awareness and knowledge sharing:** The project aims to raise awareness among members of EIT Food, FAO, WDP, and other relevant associations about the objectives, activities, and outcomes of the Watson project. This involves sharing information and knowledge about the project's innovations, research findings, and best practices related to data transparency and authenticity assurance. By disseminating this information, the project aims to inform and educate association members about the potential benefits and opportunities of adopting these practices.
- **Collaboration and partnership:** The project seeks to foster collaboration and partnerships between the Watson project and members of EIT Food, FAO, WDP, and other relevant associations. This may involve engaging in joint initiatives, research projects, or knowledge exchange programs that facilitate the sharing of expertise, resources, and networks. By collaborating with these associations, the project aims to leverage their expertise and networks to accelerate the adoption and implementation of data transparency and authenticity assurance practices.
- **Advocacy and policy influence:** The project aims to work with members of EIT Food, FAO, WDP, and other relevant associations to advocate for policies and initiatives that promote data transparency and authenticity assurance in the agrifood sector. This may involve joint policy advocacy campaigns, participation in policy discussions, and sharing of research-based insights with policymakers and stakeholders. By collectively advocating for supportive policies, the project aims to create an enabling environment for the widespread adoption of these practices.
- **Capacity building and training:** The project aims to support capacity building and training efforts for members of EIT Food, FAO, WDP, and other relevant associations. This may include organizing training workshops, webinars, or knowledge-sharing sessions that provide association members with the necessary skills and knowledge to implement data transparency and authenticity assurance practices. By enhancing their capacity, the project aims to empower association members to drive change within their organizations and sectors.
- **Dissemination and outreach:** The project aims to leverage the networks and communication channels of EIT Food, FAO, WDP, and other relevant associations to disseminate the project's outputs and messages to a wider audience. This may involve publishing articles, organizing webinars or workshops, participating in conferences and events, and utilizing social media platforms. By utilizing these dissemination channels, the project aims to reach a broader audience and create awareness about the importance of data transparency and authenticity assurance in the agrifood sector.

To effectively engage members of EIT Food, FAO, WDP, and other relevant associations, the project employs a range of communication strategies. This includes direct engagement through meetings, workshops, and conferences, as

well as utilizing the association's communication channels such as newsletters, websites, and social media platforms. By collaborating with these associations and their members, the Watson project aims to create a collective impact and drive positive change in the agrifood sector at a broader scale.

Non-European agencies or institutions and initiatives such as FAO, OECD, WFP, IFAD, SDG

Engaging non-European agencies or institutions and initiatives such as FAO, OECD, WFP, IFAD, and SDG is crucial for the global impact and dissemination of the Watson project's outcomes related to data transparency and authenticity assurance in the agrifood sector. The communication goals for these entities within the project include:

- **Collaboration and knowledge exchange:** The project aims to collaborate with non-European agencies and institutions to share its research findings, innovations, and best practices. This involves establishing partnerships, participating in joint initiatives, and exchanging knowledge and expertise in the field of data transparency and authenticity assurance. By collaborating with these organizations, the project can leverage their global reach and influence to promote the adoption of its solutions and contribute to the advancement of global food security and sustainability goals.
- **Advocacy and awareness raising:** The project aims to advocate for the importance of data transparency and authenticity assurance in the agrifood sector among non-European agencies and initiatives. This involves raising awareness about the project's objectives, methodologies, and outcomes and highlighting the potential benefits of implementing these practices globally. By advocating for the integration of data transparency and authenticity assurance in international agendas and initiatives, the project aims to contribute to the achievement of global food security, sustainability, and development goals.
- **Policy and guideline development:** The project aims to provide inputs and recommendations to non-European agencies and institutions in the development or revision of policies, guidelines, and frameworks related to data transparency and authenticity assurance. This involves sharing the project's research findings, insights, and recommendations to inform the decision-making processes of these entities. By contributing to the development of robust and effective policies and guidelines, the project aims to facilitate the adoption of data transparency and authenticity assurance practices at a global scale.
- **Dissemination and capacity building:** The project aims to disseminate its outcomes and recommendations to non-European agencies and institutions through various communication channels and platforms. This may include organizing workshops, conferences, or webinars targeted at these entities, where project representatives can present their findings and engage in discussions. Additionally, the project may provide capacity-building activities and training programs to support the implementation of data transparency and authenticity assurance practices in different regions and countries.
- **Global alignment and coordination:** The project aims to align its objectives and activities with the initiatives and goals of non-European agencies and institutions such as FAO, OECD, WFP, IFAD, and SDG. This involves actively engaging with these entities to understand their priorities and strategies, identifying areas of synergy and collaboration, and aligning the project's outcomes with their global agendas. By fostering global alignment and coordination, the project aims to contribute to a unified and coordinated approach towards data transparency and authenticity assurance in the agrifood sector.

To engage non-European agencies and institutions effectively, the project will leverage its existing partnerships, networks, and collaborations with relevant stakeholders. It will also actively participate in international conferences, forums, and events where these entities are present. By establishing strong relationships and collaborations with non-European agencies and institutions, the project aims to amplify its impact and contribute to the global advancement of data transparency and authenticity assurance in the agrifood sector.

3.4.2 Consortium members (internal to the project)

Watson consortium includes all the essential actors of the value network including researchers in the food industry, associations of stakeholders, communication experts, technology providers, impact multipliers, policy makers, etc. across Europe. The consortium brings together the resources of 44 participating organisations from 19 European countries each excelling in their respective field and with significant Research and Development experience. The choice of the specific partners was based on a series of criteria such as expertise, matching the roles required in Watson, strategic impact, dissemination potential and strong industrial support, previous collaboration, commitment and availability, flexibility, and adaptability. More specifically, the Watson interdisciplinary consortium consists of 13 International Renowned Research Institutes and Universities, 11 Large Enterprises and SMEs Leading European Research and Development, 3 Prestigious NGOs/Think Tanks & 4 Universally Known Food Safety Authorities, 11 Active Stakeholders' Associations and 3 Retailers.

As part of the communication strategy, the Watson project recognizes the importance of utilizing the local channels of its members to enhance the global impact of the dissemination efforts. By leveraging the existing networks and resources of each project member, the aim is to reach a wider audience and increase the visibility of the project's message. Through the involvement of local channels, such as regional media outlets, community organizations, and industry associations, the project will tap into established networks and sources of information. These sources serve as additional touchpoints for sharing project updates, research findings, and key messages. They provide a valuable means of connecting with diverse stakeholders, including local communities, policymakers, industry experts, and other relevant entities. Furthermore, the knowledge and insights gained from engaging with local channels can be later utilized on the project's common communication channels. By combining local and global communication channels, the Watson project aims to maximize its reach and impact. The local channels act as catalysts for spreading the project's message, while the common communication channels serve as central hubs for consolidating and disseminating information to a broader audience. This approach not only enhances the global visibility and recognition of the project but also fosters collaboration and knowledge exchange among different regions and stakeholders. It strengthens the project's overall communication infrastructure and contributes to a more comprehensive and effective dissemination and communication plan.

While all Watson partners will actively participate in joint dissemination and communication events and activities, as well as contribute to the project's exploitation and business sustainability tasks, individual partner categories have specific plans tailored to their respective roles. Here is a brief overview of the dissemination and exploitation plans for each partner category:

- *Research and Academic Partners:* Research and academic partners will leverage their expertise and networks to disseminate project outcomes within the scientific community. They will actively participate in conferences, workshops, and seminars, presenting research findings and publishing papers in peer-reviewed journals. They will also collaborate with relevant academic networks and associations to ensure broad visibility and knowledge exchange.
- *Industry and Technology Partners:* Industry and technology partners will focus on disseminating project outcomes and advancements to the business community and relevant industry stakeholders. They will showcase the practical applications and benefits of Watson's solutions through industry-specific events, trade shows, and exhibitions. They may also organize industry-specific workshops or

webinars to engage potential users and demonstrate the value of implementing Watson technologies.

- *Public Sector and Policy Partners:* Public sector and policy partners will play a crucial role in disseminating project results to policymakers, government agencies, and regulatory bodies. They will actively engage in policy dialogues, roundtable discussions, and relevant working groups to promote the adoption of Watson's outcomes and influence policy decisions. They may also collaborate with international organizations and participate in policy-focused conferences and events.
- *End-User Partners:* End-user partners, representing stakeholders who will directly benefit from Watson's solutions, will play a key role in disseminating the project's outcomes to their respective communities. They will organize targeted workshops, training sessions, and demonstrations to educate end-users about the benefits and functionalities of Watson technologies. They will also utilize their existing networks and user communities to raise awareness and foster adoption of Watson solutions.

Each partner category will develop specific communication materials, such as brochures, fact sheets, and online content, tailored to their target audiences. They will also actively contribute to the project's exploitation and business sustainability tasks, including identifying potential market opportunities, commercialization strategies, and intellectual property management. By leveraging the unique strengths and networks of each partner category, the Watson project aims to ensure comprehensive dissemination and exploitation of its outcomes, reaching diverse stakeholders and maximizing the impact of its results. The partner categories of the Watson consortium are listed in Table 5.

Table 5: Watson consortium partner categories

<p>Technology Providers</p> <p>INT, SYN, WCS, BIO, EUN, SAH UPC, REG, DBC, HER</p> <p>Technology providers for ICT, smart labelling and tagging within the Watson consortium will utilize their commercial profile and expertise to effectively reach potential stakeholders. They will leverage their existing portfolio of hundreds of customers in various countries worldwide to disseminate information about the project. This will be achieved through their established marketing tools and channels, including websites, newsletters, and direct communication with their customer base.</p> <p>Furthermore, these technology providers will tap into their extensive network of collaborators within the research community. With over 50,000 contacts resulting from their participation in research activities, they will leverage these connections to raise awareness about Watson and its innovative solutions. This network will serve as a valuable platform for promoting the project's outcomes and engaging with relevant stakeholders.</p> <p>Additionally, the technology providers will capitalize on their existing collaborations established from previous research activities. These partnerships and alliances will be leveraged to disseminate information about Watson to a wider audience, expanding the reach of the project's message and increasing its visibility within the research and industry communities.</p> <p>By utilizing their commercial profile, expertise, and expansive network, the technology providers in the Watson consortium will play a crucial role in reaching potential stakeholders and ensuring the broad dissemination of the project's objectives, achievements, and future impact.</p>
<p>Universities/RTOs</p> <p>UCD, INR, CNR, CER, VTT, MRI, SIN, INE, NTU, HUB, HAI, ASI, BAU</p> <p>Universities, engineering schools, public/private training providers, and research centres within the Watson consortium possess an extensive and well-established network that will be leveraged to disseminate the ideas,</p>

developments, and results of the project. These institutions have a wide reach and influence within the academic and research communities, making them valuable channels for promoting and sharing the project's outcomes. The consortium members in this category will organize conferences and workshops as part of their dissemination activities. These events will serve as platforms for showcasing the progress and findings of the Watson project. By bringing together researchers, academics, industry professionals, and other relevant stakeholders, these conferences and workshops will facilitate knowledge exchange, discussion, and collaboration. Furthermore, the universities, engineering schools, and training providers will play a crucial role in advancing the training of PhD and MSc students. They will incorporate Watson's ideas, developments, and results into their educational programs, ensuring that future professionals are equipped with the knowledge and skills related to the project's domain. This training will contribute to the long-term impact and sustainability of the project by fostering a new generation of experts who are well-versed in the advancements brought forth by Watson. Through their existing networks, conferences, workshops, and student training programs, the universities, engineering schools, public/private training providers, and research centres will actively disseminate the project's ideas, developments, and results. This will contribute to broader awareness, knowledge sharing, and potential collaborations within the academic and research communities.

Processors/Retailers/Food Service Providers

MET, MIG, ESP

Food producers, associations, processors, and retailers within the Watson consortium will adopt a comprehensive strategy to engage with their respective stakeholders and promote the project's outputs. Their main objective will be to actively participate in project events and effectively communicate the significance of authenticity assurance in food systems.

These stakeholders will play a vital role in disseminating the project's outputs by leveraging their industry expertise, networks, and existing relationships with food producers, associations, processors, and retailers. They will actively engage in project events, such as workshops, seminars, and conferences, where they can share their experiences, insights, and the benefits of implementing authenticity assurance measures in the food sector.

In addition to event participation, these stakeholders will use various channels to spread the project's outputs and increase awareness among their target audience. This may include publishing articles, blogs, and press releases in industry-specific publications, newsletters, and websites. They may also utilize their own communication channels, such as social media platforms, mailing lists, and industry forums, to disseminate information about the project's outcomes and the importance of authenticity assurance in food systems.

By actively participating in project events and effectively spreading the project's outputs, food producers, associations, processors, and retailers will contribute to raising awareness and promoting the adoption of authenticity assurance measures across the food industry. Their involvement will ensure that the project's message reaches a wide audience and influences practices and policies in the field of food production, processing, and retail.

Producers/Associations, Public Authorities and Policy Makers

ZPS, UNC, DEC, MIT, IGP, EUF, IFA, ADV, APR, BWE, LIC, FIB, FSH, PDA, UVMB, LGL

Food organizations, consumer and farm associations, policy makers, safety authorities, ministries of agriculture, and chambers of commerce, among others, play a crucial role in disseminating the major achievements and results of the Watson project to a wide audience. These stakeholders will actively inform their respective networks and audiences about the project's outcomes and advancements in the field of food and agriculture.

To maximize the impact of the project, these stakeholders will leverage their established platforms, including workshops, conferences, and events focused on food and agriculture. They will actively participate in these gatherings, where they will showcase the project's results, share best practices, and engage in discussions with industry professionals, policymakers, and other relevant stakeholders. By doing so, they will contribute to raising awareness and disseminating the knowledge and findings generated by the Watson project.

Furthermore, these stakeholders will utilize their electronic communication channels, such as websites, newsletters, and social media platforms, to convey the appropriate messages and disseminate the project's results to a wider

audience. They will employ targeted marketing and communication strategies to ensure that the project's outcomes reach the intended recipients, including the public, industry professionals, and decision-makers in the food and agriculture sectors.

Through their extensive networks, strong presence in relevant industry events, and effective use of electronic communication channels, food organizations, consumer and farm associations, policy makers, safety authorities, ministries of agriculture, and chambers of commerce will actively promote and disseminate the project's results. Their involvement will help create awareness, drive adoption, and influence policy and decision-making processes in the food and agriculture domains, ultimately contributing to the overall success and impact of the Watson project.

3.5 Project visibility - commitments and responsibilities

The outcomes of this project will be made possible through the generous financial support provided by the European Union (EU). Therefore, it is essential that all communication and dissemination materials prominently feature the EU emblem and include specific wording to acknowledge the EU's contribution. The EU emblem, which consists of a circle of 12 golden stars on a blue background, should be displayed visibly and appropriately in all project-related materials. This emblem serves as a visual representation of the EU's support and should be used in accordance with the guidelines provided by the EU. In addition to the EU emblem, a specific wording should be included to acknowledge the EU's financial support. This wording may vary depending on the specific guidelines provided by the EU funding programme. In the case of the Watson project, the "Funded by the European Union" acknowledgement is being used (Figure 1).

Moreover, Watson communication or dissemination activities include the following disclaimer:

"Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them."

This is shown below, in the example of Watson's website homepage (Figure 2). By adhering to the EU's requirements for acknowledgement, the project demonstrates its gratitude for the EU's support and helps raise awareness about the EU's investment in research and innovation initiatives. It also ensures transparency and accountability in the use of EU funds, while promoting the visibility and credibility of the project's outcomes within the EU and beyond.



Figure 1 Acknowledgement of EU funding to be used in all Watson communication and dissemination materials

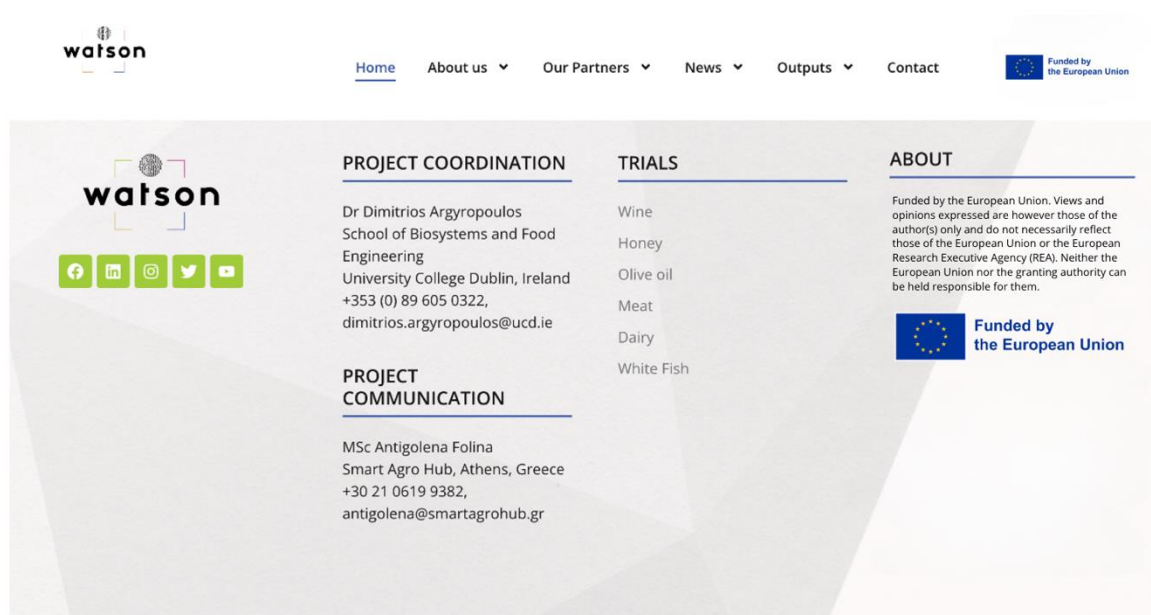


Figure 2 Acknowledgement of EU funding on homepage of Watson website

In addition, communication and dissemination activities must be in line with the Grant Agreement - Article 17 – “Communication, Dissemination and Visibility”, and Annex 5 – “Specific Rules on Communication, Dissemination and Visibility”.

3.6 Communication and Dissemination Channels

Four main categories of communication and dissemination channels have been identified:

1. Publications and Online Resources:

- Project deliverables in the form of written reports, including annotated bibliographies, think pieces, and a researcher database.
- Online resources such as research papers, articles, and other informative materials related to the project's findings and outcomes.

2. Watson Events:

- Small- and large-scale events organized by the project, including workshops, trainings, sandpits, consortium meetings, and a final conference.
- These events serve as platforms for knowledge sharing, collaboration, and engagement with stakeholders.

3. Participatory Outputs from Watson:

- Activities that involve external stakeholders working with the consortium to produce Watson outputs.
- These activities encourage active involvement and contributions from stakeholders, fostering a collaborative approach to achieving project goals.

4. External Related Activities:

- Engagement in relevant activities identified within the EU and international agenda, where Watson aims to be represented.

- This includes both virtual and physical participation in conferences, forums, and initiatives that align with the project's objectives.

These four categories of communication and dissemination ensure a comprehensive approach to reaching target audiences, sharing project findings, and actively engaging stakeholders in the Watson project.

4. Communication strategy: principles and implementation

4.1 Vision and target audience

Food fraud, as defined by the Food and Agriculture Organization (FAO), encompasses deliberate actions taken by individuals or businesses to deceive others regarding the authenticity and quality of food products, often with the aim of gaining an unfair advantage. This multifaceted issue encompasses practices such as adulteration, substitution, dilution, tampering, simulation, counterfeiting, and misrepresentation. The intricacies of the interconnected global food supply chain and the allure of increased profits have led to a surge in food fraud incidents. Notable cases, such as the 2008 contamination of raw dairy materials with melamine in China and the 2013 horsemeat scandal in Europe, have underscored the significance of this problem. Food fraud incurs substantial costs and can manifest through various methods, including the manipulation of production methods or origins, intentional mislabelling, and concealing defects or contamination. Its consequences extend beyond food safety concerns, affecting the integrity of the internal market, public health, and trust in the food system. The financial impact of food fraud on the global food industry is substantial, estimated at around 30 billion euros annually. Additionally, it is closely linked to organized crime, involving violations of labour rights, tax fraud, environmental crimes, and money laundering. The COVID-19 pandemic has exacerbated these challenges by disrupting supply chains, potentially creating opportunities for fraudulent activities. To effectively address food fraud and its associated complexities, a comprehensive framework is essential. This framework should be augmented with anti-counterfeit measures and intelligence-driven technologies that empower public authorities to rapidly identify and prevent fraudulent practices. Collaboration between EU and national authorities, facilitated by efficient information sharing, is critical to mitigate the impact of food fraud and safeguard the food supply chain.

In this endeavour, Watson aims to provide a methodological framework combined with a set of tools and systems that can detect and prevent fraudulent activities throughout the whole food chain thus accelerating the deployment of transparency solutions in the EU food systems. The proposed framework will improve sustainability of food chains by increasing food safety and reducing food fraud through systemic innovations that (a) increase transparency in food supply chains through improved track-and-trace mechanisms containing accurate, time-relevant and untampered information for the food product throughout its whole journey, (b) equip authorities and policy makers with data, knowledge and insights in order to have the complete situational awareness of the food chain and (c) raise the consumer awareness on food safety and value, leading to the adoption of healthier lifestyles (mid-term) and the development of sustainable (and greener) food ecosystems.

Therefore, Watson aspires to improve sustainability of food chains by increasing food safety and reducing food fraud through systemic innovations that:

1. Frame the problem: Increase transparency in food supply chains by improved track-and-trace mechanisms.
2. Provide the tools: Equip food safety authorities and policy makers with data, knowledge and tools.
3. Spread the word: Raise the consumer awareness on food safety and value.

Based on the above, here are the target audiences that Watson will communicate with:

1. **Food Industry Stakeholders:** This includes food producers, manufacturers, distributors, and retailers. Watson aims to enhance food safety and reduce food fraud within the industry. Therefore, effective communication with these stakeholders is crucial for the implementation of systemic innovations.
2. **Food Safety Authorities:** Watson seeks to equip food safety authorities with data, knowledge, and tools to improve their regulatory capabilities. Effective communication with relevant governmental and regulatory bodies is essential to ensure that the project's innovations align with regulatory standards and can be effectively integrated into existing systems.
3. **Policy Makers:** Policy makers play a vital role in shaping food safety regulations and standards. Watson should engage with policy makers at the local, national, and international levels to advocate for the adoption of systemic innovations that enhance food safety and reduce food fraud.
4. **Consumers:** Raising consumer awareness on food safety and value is one of Watson's objectives. Therefore, effective communication with consumers is essential to educate them about the importance of food safety and how systemic innovations can benefit them by ensuring the safety and authenticity of the food they consume.
5. **Academic and Research Community:** Watson's systemic innovations and data-driven approaches may have significant academic and research implications. Engaging with the academic and research community can foster collaboration, knowledge sharing, and the development of further advancements in food safety and fraud prevention.
6. **Industry Associations and Trade Organizations:** These entities often represent the interests of food industry stakeholders. Engaging with industry associations and trade organizations can facilitate the dissemination of Watson's innovations and garner support from key industry players.
7. **International Organizations:** Collaboration with international organizations focused on food safety and security, such as the World Health Organization (WHO) and the FAO, can help promote the global adoption of systemic innovations to improve food safety and reduce food fraud.
8. **Technology and Data Analytics Experts:** Given Watson's emphasis on data-driven tools, effective communication with experts in technology and data analytics is crucial to develop and implement innovative solutions effectively.
9. **Supply Chain Partners:** Collaborating with partners along the food supply chain, including logistics providers and suppliers, is vital for the successful implementation of track-and-trace mechanisms to increase transparency.
10. **Non-Governmental Organizations (NGOs):** NGOs dedicated to food safety and consumer rights can be valuable allies in advocating for systemic innovations and raising consumer awareness.

Effective communication with these diverse target audiences will be pivotal in achieving Watson's goals of enhancing food safety and reducing food fraud within food supply chains while increasing transparency and consumer awareness.

In addition, given Watson's alignment with the Farm-To-Fork Strategy and its contributions to the Food 2030 priorities, Watson will also communicate with the following target audience:

1. **European Commission and Regulatory Bodies:** Engage with the European Commission and relevant regulatory bodies responsible for shaping policies related to food safety, sustainability, and nutrition. Communicate how Watson's innovations align with and support the objectives of the Farm-To-Fork Strategy and Food 2030 priorities.
2. **Health and Nutrition Agencies:** Collaborate with health and nutrition agencies at the national and international levels. Highlight how Watson's contributions can help promote sustainable and healthy diets, a key focus of Food 2030.
3. **Environmental and Sustainability Organizations:** Engage with environmental and sustainability organizations to emphasize how Watson's systemic innovations contribute to food systems that support a healthy planet, aligning with sustainability goals.
4. **Consumer Advocacy Groups:** Communicate with consumer advocacy groups to raise awareness among consumers about the benefits of Watson's initiatives, especially in terms of food safety and sustainability.
5. **Agricultural Associations:** Collaborate with agricultural associations to ensure that Watson's innovations consider the needs and challenges faced by farmers and producers, particularly in promoting sustainable and healthy food production practices.
6. **Food Industry Associations:** Communicate with industry associations to involve key players in the food sector, promoting the adoption of Watson's innovations and their role in enhancing food safety and sustainability.
7. **Supply Chain Stakeholders:** Engage with stakeholders along the food supply chain, including producers, distributors, retailers, and logistics providers. Communicate how Watson's innovations enhance transparency and support sustainable practices.

4.2 Communication strategy

Watson recognizes the significance of a comprehensive and well-structured approach to dissemination, communication, and community building. The goal is to ensure broad promotion of the design studies, developed concepts, technologies, and future implementation potential results. The consortium will adopt a phased approach, carefully defining, planning, organizing, and exploiting a diverse range of activities and instruments in the most impactful manner. The plan for public outreach, community building, and engagement in Watson begins by identifying and outlining key activities and dependencies. This initial step is crucial for enhancing the effectiveness of the public outreach strategy. By carefully considering these activities and dependencies, the consortium aims to maximize the reach and impact of their communication efforts. While the plan and specific actions will be further refined in the initial months of the project, the core structure and main activities have already been organized. This proactive approach allows for a solid foundation to be established from the start, ensuring that the communication and dissemination efforts are well-coordinated and strategically executed. By implementing this well-defined plan, Watson aims to engage with various stakeholders, create meaningful interactions, and foster a sense of community around the project. The consortium recognizes the importance of effective public outreach in maximising the project's visibility, impact, and potential for future implementation. A list of KPIs for Watson dissemination and communication materials are listed in Annex I.

To achieve meaningful interactions with different target groups, Watson adopts a set of principles focused on the long-term sustainability of the project. These principles include:

- *Long-term relationship building and earning trust:* Watson understands the significance of establishing long-term relationships and earning the trust of its stakeholders. The project aims to cultivate respect and recognition from the research, academia, and industry sectors. By leveraging sector-specific expertise and experience, Watson will effectively market its offerings to the target audiences, building trust in its ecosystem.
- *Personalized, multi-channel communication:* Watson recognizes the importance of delivering relevant and personalized messages to its targeted audiences. By utilizing multiple communication channels, the project aims to enhance interactions and foster closer links with stakeholders within its identified ecosystem. This approach ensures that the right information reaches the right individuals through various touchpoints, increasing the effectiveness of communication.
- *Empowerment:* Watson aims to create a mutually beneficial environment when interacting with its target audiences. The project seeks to empower members of its ecosystem, enabling them to overcome obstacles in their digital transformation journey. By providing valuable resources, support, and guidance, Watson aims to facilitate the growth and success of its stakeholders.

By adopting these principles, Watson's communication and dissemination plan aims to establish strong connections with its target audiences. Through long-term relationship building, personalized communication, and empowerment, the project endeavours to create a positive and impactful engagement experience for its stakeholders.

4.3 Stakeholders' engagement


In order to maximize the scientific and socio-economic impact of the project, Watson will undertake a thorough analysis of the needs and priorities of its diverse stakeholders. This analysis will serve as the basis for defining and implementing a set of actions aimed at effectively promoting the project's outcomes. The objective is to identify the most suitable approaches for reaching, interacting with, and communicating with each group of relevant stakeholders. To achieve this, Watson will engage in the following activities:

- *In-depth stakeholder analysis:* Watson will conduct a comprehensive analysis to understand the specific needs and priorities of different stakeholder groups. This analysis will provide insights into the most effective modalities of engagement and communication for each group.
- *Establishment and management of liaisons and synergies:* Watson will actively collaborate and build relationships with relevant initiatives at both national and pan-European levels. This includes leveraging existing communities and fostering synergies to enhance the project's impact.
- *Participation in events:* Watson will actively participate in relevant events and also organize its own events. These events will provide opportunities for knowledge sharing, networking, and showcasing the project's outcomes.
- *Stakeholder engagement, community building, and capacity building:* Watson will prioritize stakeholder engagement by actively involving them in project activities. The project will also focus on community building efforts to foster collaboration and knowledge exchange. Additionally, Watson will support capacity building initiatives to enhance the skills and capabilities of the stakeholder community.

An overview of the current Watson stakeholder engagement strategy is provided in Table 6. As the workplan progresses, more details and specific actions will be added to the plan. This iterative approach ensures that

the communication and engagement strategy remain dynamic and adaptable to the evolving needs of the stakeholders.

Table 6: Watson stakeholder engagement strategy

Stakeholder engagement overall approach	
<p>The overall aim is to grow the size, reach, and activities of the multidisciplinary user community, leading to increased scientific and socio-economic impact of the project. The task will build on the strong existing networks of Watson partners.</p>	
 <p>01 Engagement Strategy Set vision and level of ambition for future engagement and review post engagements.</p> <p>02 Stakeholder Mapping Define criteria for identifying and prioritizing stakeholders and select engagement mechanisms</p> <p>03 Preparation Focus on long-term goals to drive the approach, determine logistics for the engagement and set the rules</p> <p>04 Engagement Conduct the engagement itself ensuring equitable stakeholders' contributions and mitigating tension while remaining focused on priorities</p> <p>05 Action Plan Identify opportunities from feedback and determine actions, revisit goals and plan next steps for follow-up and future engagement</p>	
<p>This will be achieved by pursuing the following concrete activities with stakeholder groups:</p>	
Producers, Retailers, Consumers, Industrial Companies:	
<p>Watson has identified key stakeholders in the agrifood sector, including Producers, Retailers, Consumers, and Industrial Companies. To effectively engage with these stakeholders and promote the benefits of the Watson blockchain platform for data transparency, the following actions will be taken:</p> <ol style="list-style-type: none"> (1) Co-creation workshops: Watson will organize co-creation workshops that bring together stakeholders from the agrifood sector. These workshops will serve as collaborative platforms to collect user needs, gather feedback, and facilitate the further development of the Watson blockchain platform. By involving stakeholders in the co-creation process, Watson aims to ensure that the platform meets their specific requirements and addresses their challenges. (2) Training activities: To educate and familiarize end users with the tools and services provided by Watson, the project will organize open farm days and training activities. These events will provide opportunities for stakeholders to learn about the functionalities of the blockchain platform and understand its benefits in enhancing data transparency in the agrifood sector. By offering hands-on training and demonstrations, Watson aims to empower stakeholders to effectively utilize the platform and leverage its potential for their businesses. <p>Through these targeted actions, Watson aims to actively involve stakeholders, gather their input, and provide them with the necessary knowledge and skills to utilize the Watson blockchain platform effectively. By promoting collaboration and education, Watson aims to drive the adoption of transparent data practices in the agrifood sector, benefitting producers, retailers, consumers, and industrial companies alike.</p>	
Research Community Special Issues organization:	
<p>To promote the research achievements of the Watson project worldwide and engage the research community, the consortium has planned the following activities:</p> <ol style="list-style-type: none"> (1) Special Issues in Journals: The consortium will organize at least one special issue in renowned journals such as IEEE Transactions on Industrial Informatics, NATURE, IEEE Security & Privacy Journal, Springer (Discover 	

Food Journal), Elsevier (Sustainable Agriculture Journal, Smart Agricultural Technology Journal, Sustainable Horizons Journal), or related journals. The high scientific profile of the participating academic and research institutes ensures the success of these special issues. They will serve as platforms to showcase the research achievements of the project and disseminate them to a global audience.

- (2) Workshops: Throughout the duration of the Watson project, the consortium will organize workshops targeting interested researchers and industry professionals. These workshops will provide a forum for knowledge exchange, discussions, and collaboration. By bringing together experts and stakeholders, the workshops will facilitate the dissemination of Watson's research findings and results. The consortium's principal investigators, who are recognized experts in their respective fields, will actively participate in these workshops, ensuring the successful dissemination of Watson's outcomes.

Additionally, the consortium will set achievable qualitative and quantitative targets during the dissemination planning process. While the specific targets will be determined in the planning phase, the initial goals include reaching a certain number of publications in high-impact journals, organizing a specified number of workshops, and achieving widespread recognition and adoption of Watson's research findings.

By strategically organizing special issues and workshops, and by involving esteemed researchers and academics, Watson aims to effectively disseminate its research outcomes, foster collaboration, and contribute to the advancement of knowledge in the field of sustainable agriculture and smart agricultural technologies.

Industrial and Business world:

To effectively disseminate the outcomes of the Watson project to the industry, the consortium will leverage its group of industrial partners, SMEs, and public bodies with strong networking profiles. The following dissemination strategies and activities will be employed:

- (1) Direct Dissemination Activities: The consortium will engage in direct dissemination activities, including e-marketing campaigns, participation in news groups, distribution through mailing lists and e-Zines (electronic magazines), online press releases, and on-site promotions. These activities will target industry stakeholders and provide them with up-to-date information on the project's outcomes and advancements. The use of digital channels and online platforms will ensure widespread reach and accessibility.
- (2) Dissemination through Partners' Websites: The industrial partners and SMEs within the consortium will play a crucial role in disseminating the project's outcomes through their own websites. They will share their experiences with the Watson framework, highlighting the benefits and showcasing the high level of service provided. By leveraging the expertise and credibility of the consortium partners, the dissemination efforts will gain added credibility and reach a wider audience.
- (3) Participation in Specialized Events and Platforms: The consortium members, many of whom are prominent members of specialized events, fora, and platforms, will actively participate in exhibitions and events relevant to the project's focus areas. This involvement will provide opportunities to showcase the project's results, engage with industry professionals, and foster collaborations. By targeting the scientific and innovative business scenes within the EU, the project's outcomes will gain visibility and recognition among key stakeholders.
- (4) Indirect Dissemination: The consortium partners' public relations activities, word-of-mouth recommendations, articles, and assessments by independent reviewers will contribute to the indirect dissemination of the project's outcomes. Positive reviews, testimonials, and endorsements from trusted sources will enhance the credibility and visibility of the project, attracting the attention of industry stakeholders.

By employing a combination of direct and indirect dissemination approaches, leveraging partners' websites, participating in specialised events, and engaging in targeted promotional activities, Watson aims to effectively reach the industry audience and ensure widespread dissemination of its outcomes.

General Public

To engage the general public and raise awareness about the Watson project, the following dissemination strategies will be employed:

- (1) **Traditional Dissemination:** The consortium will utilize traditional dissemination methods such as advertising in newspapers, magazines, flyers, and periodicals. These mediums will be used to reach a broad audience and inform them about the project's objectives, outcomes, and potential benefits.
- (2) **Articles and Papers:** The consortium members will write articles and papers for publication in relevant outlets. These publications will provide in-depth information about the Watson solution, its innovation, and its impact. Additionally, the project team will actively participate in public speaking events, such as conferences and seminars, to share their insights and findings with a wider audience.
- (3) **Blogger Engagement and Social Media Presence:** The consortium will actively engage with blogger groups to write about the Watson solution. By collaborating with influential bloggers, the project can tap into their existing readership and gain exposure to new audiences. Additionally, establishing a strong social media presence will enable the project to interact directly with the general public, share updates, and engage in discussions about the project's progress.
- (4) **Search Engine Optimization (SEO):** To maximize visibility and reach specific target audiences, the project will focus on optimizing its online presence for search engines like Google. By employing SEO techniques, relevant keywords and phrases related to the Watson project will be strategically incorporated into online content. This will enhance the project's visibility in search engine results, making it more accessible to individuals conducting related keyword searches.

By implementing these strategies, Watson aims to effectively disseminate information about the project to the general public. Through traditional dissemination channels, publications, public speaking events, blogger engagement, social media presence, and search engine optimization, the project aims to raise awareness and engage the broader public in understanding the significance and potential benefits of the Watson solution.

In addition, throughout the duration of Watson, a series of mini programs will be created that serve as platforms for discussing the project's main challenges, necessary actions, and outcomes. These programs will involve experts, stakeholders from the food chain industry, and interested local communities. The aim is to raise awareness about Watson's activities and results while fostering discussions on relevant topics. Conducted in parallel with the pilots, these mini programs will focus on highlighting the importance of data sharing in the food chain, specifically targeting transparency, traceability, and authenticity. By showcasing suitable practices, the programs will demonstrate how data sharing directly impacts consumers. Additionally, the theme of "green jobs" will be explored, emphasizing the employment opportunities and wealth generation associated with environmentally friendly practices within a more sustainable economy, particularly in relation to authentic food products. All the topics covered in the mini programs will be made available to the public through a dedicated section on the EUN website. Users will have access to additional content, including full interviews with experts and verified references to scientific articles.

4.4 Communication tools

4.4.1 Watson logo

Creating a unique and impactful brand identity for Watson that stands out from other smart Horizon Europe projects was achieved through thoughtful design choices. Here are some considerations for developing the logo, headline, and key visuals:

1. Logo Design:

- Visually striking and memorable logo that represents the core focus points of Watson, such as data transparency, authenticity assurance, and sustainability in the agrifood sector.
- Abstract shapes, custom typography, or innovative symbols to create a distinctive logo that communicates the project's message effectively.
- Fresh and modern colour palettes that align with the project's values and differentiate it from other projects in the same field.
- Elements that visually represent the synergy between technology, agriculture, and sustainable practices.

2. Headline:

- Concise and impactful headline that encapsulates the essence of Watson and its key messages.
- Compelling language that emphasizes the project's focus on data transparency, authenticity assurance, and sustainable practices in the agrifood sector.
- Incorporating words or phrases that evoke innovation, collaboration, and positive impact.

3. Key Visuals:

- Visuals that visually reinforce the core themes of Watson, such as transparent data flow, secure food supply chains, and sustainable agriculture.
- Unique imagery, illustrations, or infographics that highlight the benefits and outcomes of the project in a visually engaging way.
- A mix of modern and nature-inspired elements to reflect the fusion of technology and agriculture.

4. Consistency and Coherence:

- Ensuring that the logo, headline, and key visuals align with each other and convey a coherent message.
- Maintaining consistency in design elements, colour schemes, and typography across different communication materials to create a unified and recognizable brand identity.
- Regularly reviewing and refining the brand identity to ensure it remains fresh and aligned with the project's goals throughout its lifespan.

Collaborating with professional designers and branding experts provided valuable insights and expertise in developing a visually impactful and unique brand identity for Watson, including the Watson logo (Figure 3). Their expertise helped ensure that the brand identity effectively communicates the project's focus points while standing out from other initiatives in the agrifood sectors.



Figure 3 Watson logo

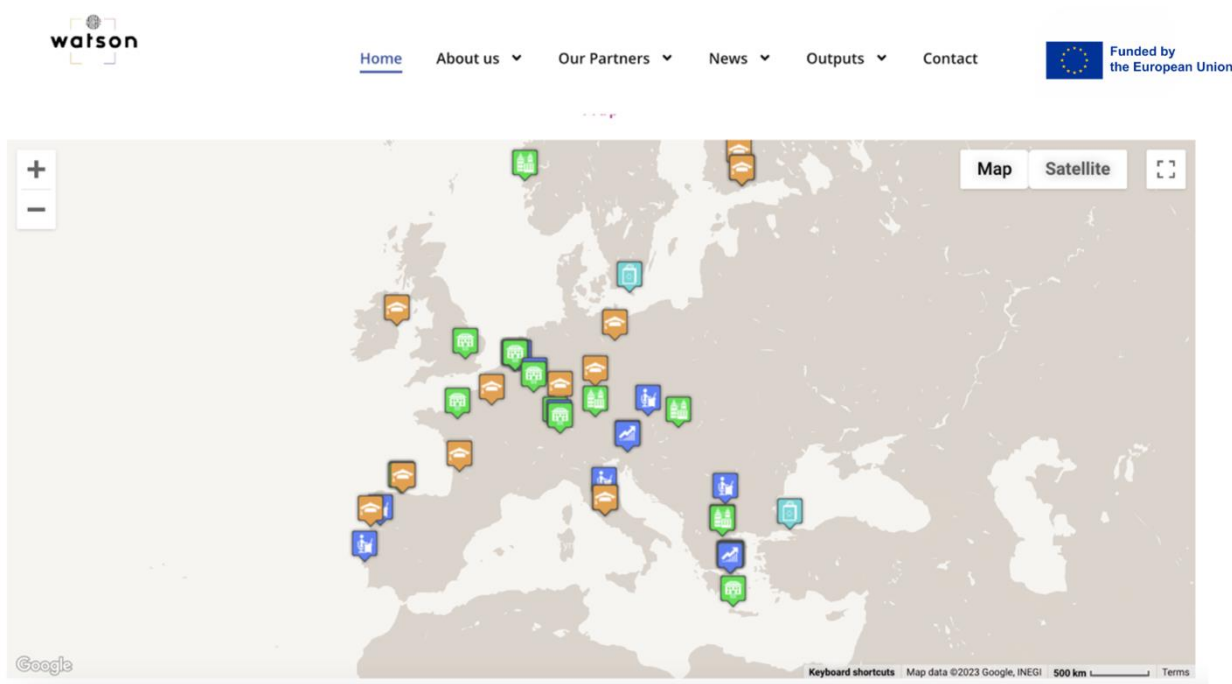
4.4.2 Watson project website


Creating a user-friendly and visually appealing website for the Watson project is crucial to effectively communicate with target groups and make project data accessible. Here are the key focus points that were considered and implemented during the website development:

1. User-Friendly Design:
 - a) Ensure the website has an intuitive and user-friendly interface, making it easy for visitors to navigate and find information.
 - b) Use clear and logical site architecture with well-organized menus and sections for different topics and project materials.
 - c) Implement a responsive design that is compatible with various devices and screen sizes, providing a seamless experience for all users.
2. Easy Access to Data:
 - a) Design the website to serve as a central hub for accessing all data generated by the Watson project.
 - b) Provide clear and easily searchable data repositories or databases, allowing users to find specific information, research findings, reports, and other project materials.
 - c) Implement filters, search functionalities, and categorization to facilitate easy retrieval of data based on different criteria, such as topic, date, or relevance.
3. Graphical Appeal:
 - a) Create a visually appealing website that aligns with the target groups' preferences and expectations.
 - b) Use appropriate colours, fonts, and visuals that convey professionalism, trustworthiness, and innovation while avoiding distractions or excessive elements that may hinder usability.
 - c) Incorporate relevant imagery, infographics, and videos to enhance understanding and engagement.
4. Comprehensive Content:
 - a) Ensure that the website includes all necessary details, data, and materials related to the Watson project.
 - b) Provide comprehensive information about the project's objectives, methodologies, partners, and outcomes.
 - c) Include downloadable materials, such as flyers, videos, infographics, and press releases, for easy access and sharing.
5. Newsletter Subscription:


- The website is regularly updated and maintained to ensure the availability of the latest information and materials. User feedback and analytics are also monitored to continually improve the website's usability and address any potential issues. A visual overview of the key elements of the Watson website is provided below in Figure 4.








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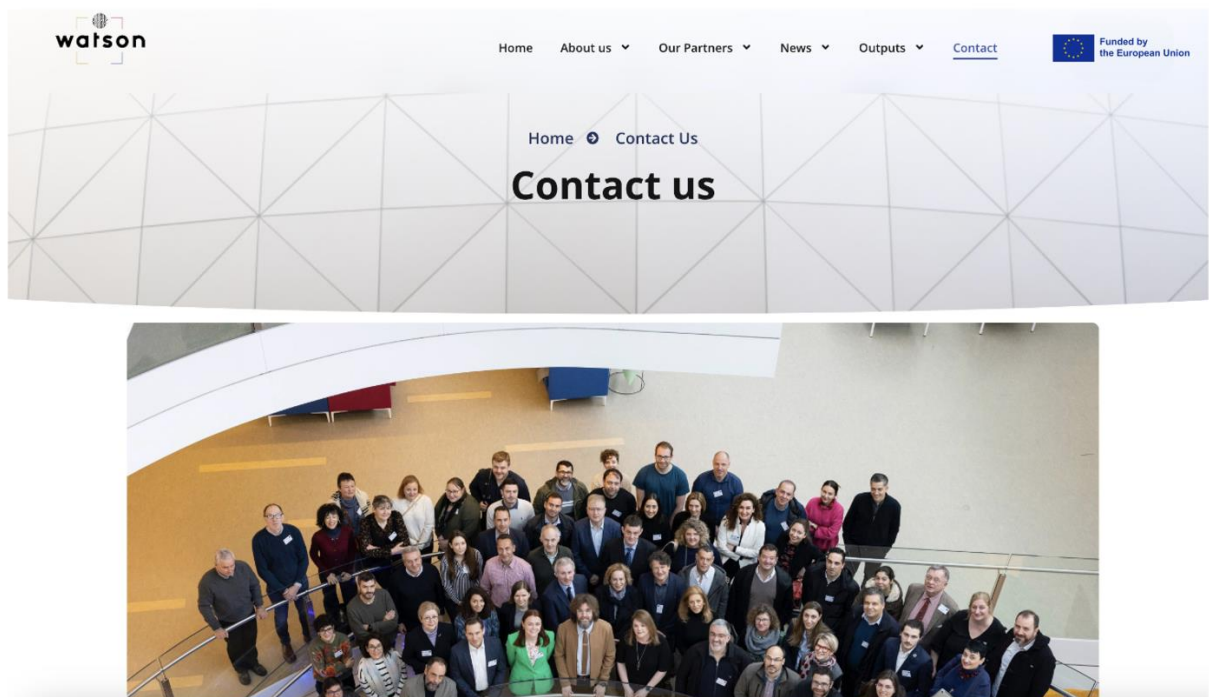
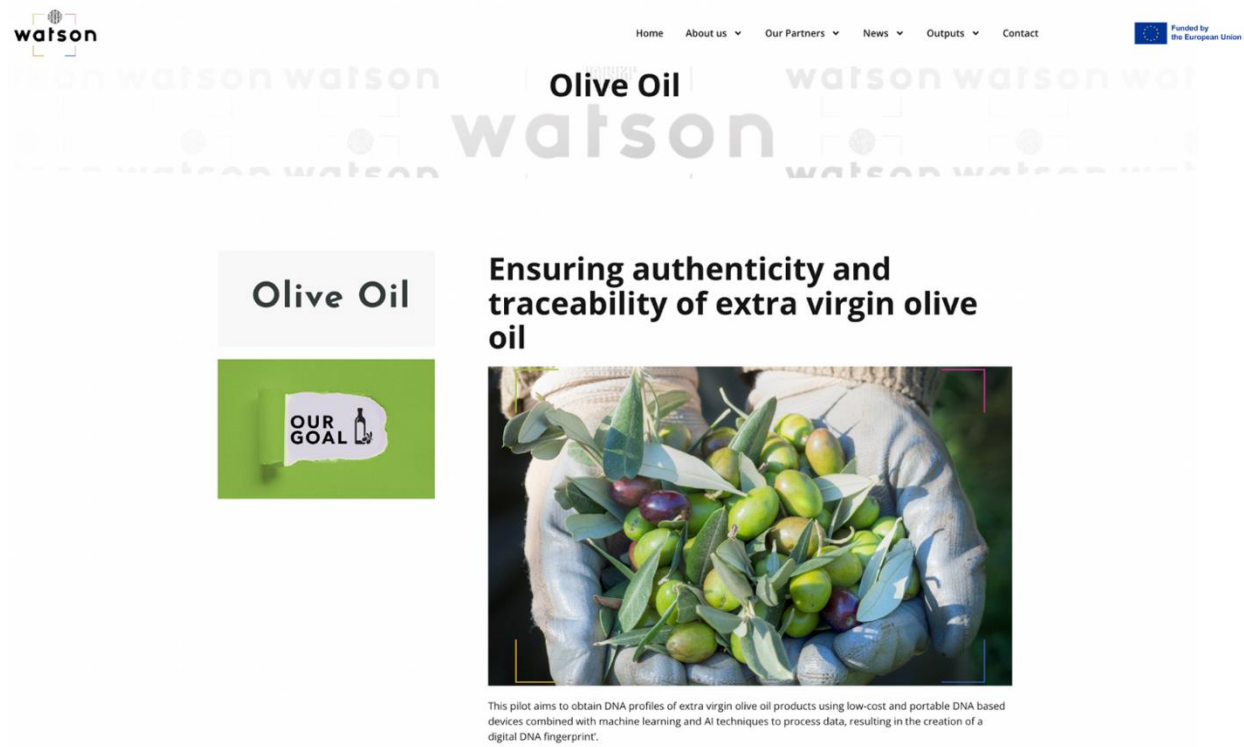


Figure 4 Watson website key elements: (a) Home page; (b) Use case information; (c) News updates; (d) Example of Wine use case profile; (e) Contact page

4.4.3 Watson branded materials

Providing branded materials for the kick-off event of the Watson project in Dublin was a great way to create visibility and reinforce the project's logo and brand. The materials, including a leaflet, a Watson branded USB stick, and a Watson kick-off tote bag, served as practical items that project partners can use to increase awareness and promote the project. Here's a brief description of each item:

4.4.3.1 Booklet

The booklet provides essential information about the Watson project, including its objectives, key activities, and anticipated outcomes. It features visually appealing designs, incorporating the project's logo, key visuals, and relevant project images. The booklet is informative, concise, and engaging, capturing the attention of the readers and encouraging them to learn more about the project. Excerpts from the booklet are provided in Figure 5.

4.4.3.2 Poster

The Watson poster (Figure 6) measuring 100 cm X 70 cm and consisting of a single page, is suited for use as an informational focal point at fairs, events, or booths rather than for distribution purposes.

4.4.3.3 Roll up banner

The roll-up banner (Figure 7) of Watson will provide a versatile, portable, and cost-effective marketing tool to create project awareness, and effectively convey information in a visually appealing manner. A plastic rollup of 200cm x 90cm size that includes basic information about Watson project. One common roll-up has been produced for all partners in order to use it during the project events or participation in third workshops and events as promotional image of the project.

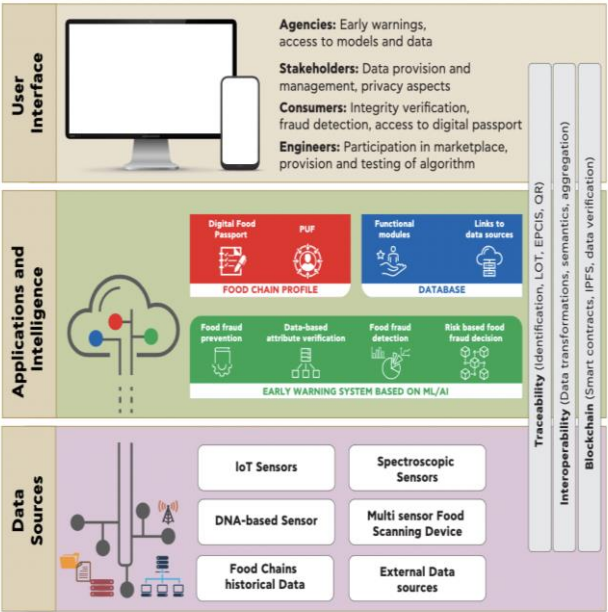
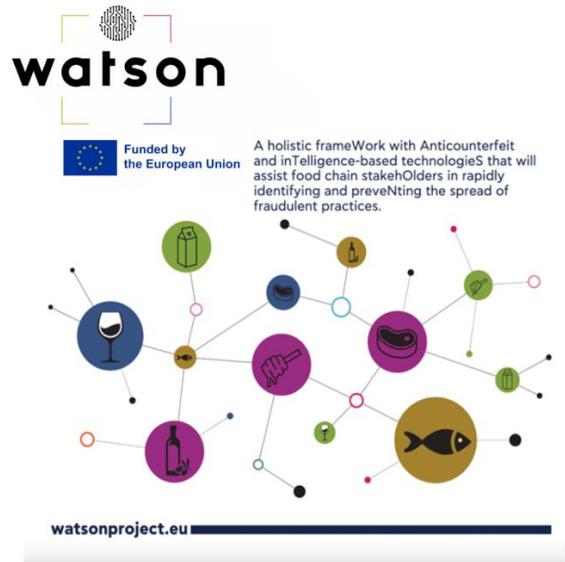


Figure 5 Excerpts from the Watson booklet: (a) Cover page; (b) Partner information; (c) Overview of project’s technological integration

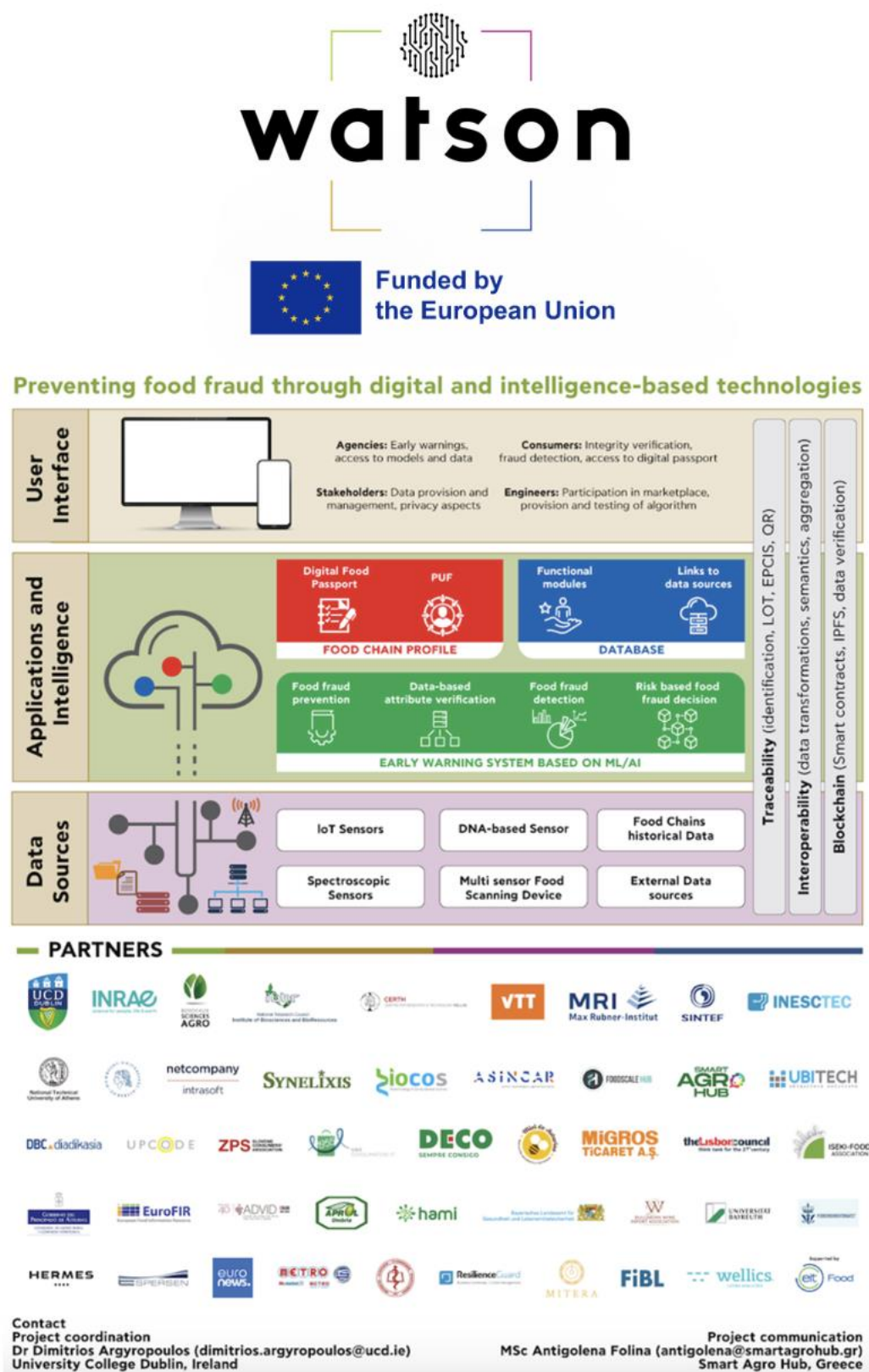


Figure 6 Watson poster

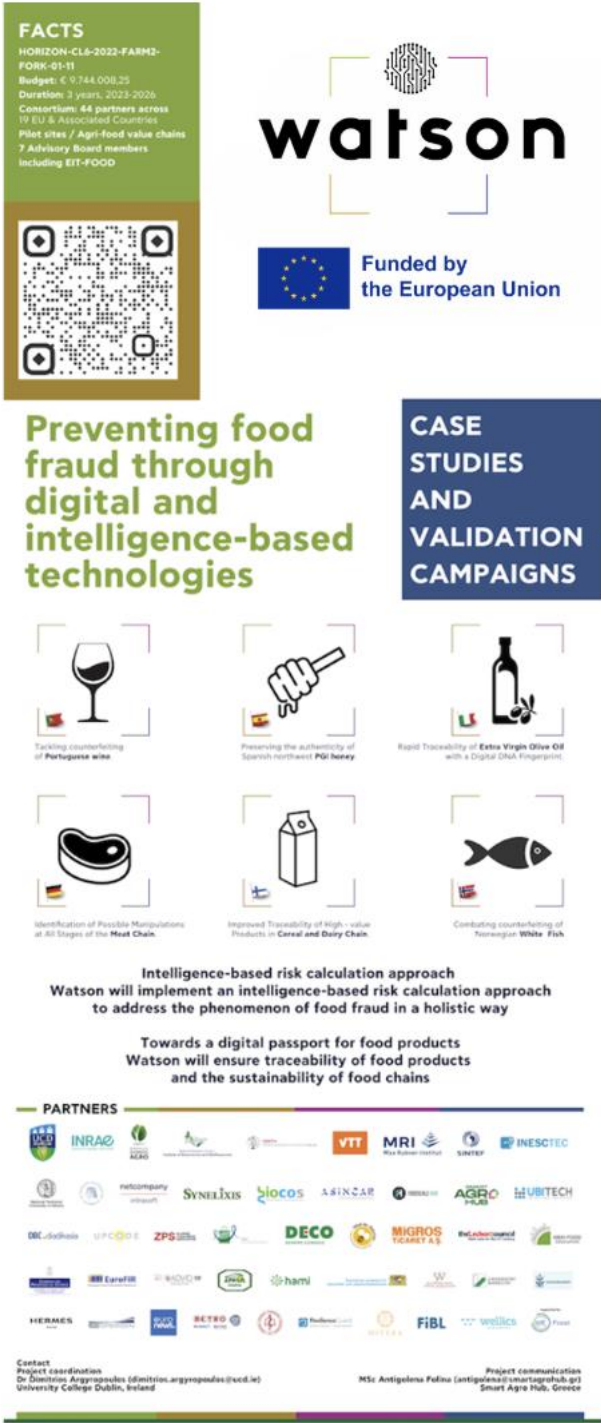


Figure 7 Watson roll-up banner

4.4.3.4 Teaser video

A teaser video for the project was made (Figure 8) and upload it on the Watson’s YouTube channel. This video is a highly effective strategy to generate interest, anticipation, and excitement among the target audience.

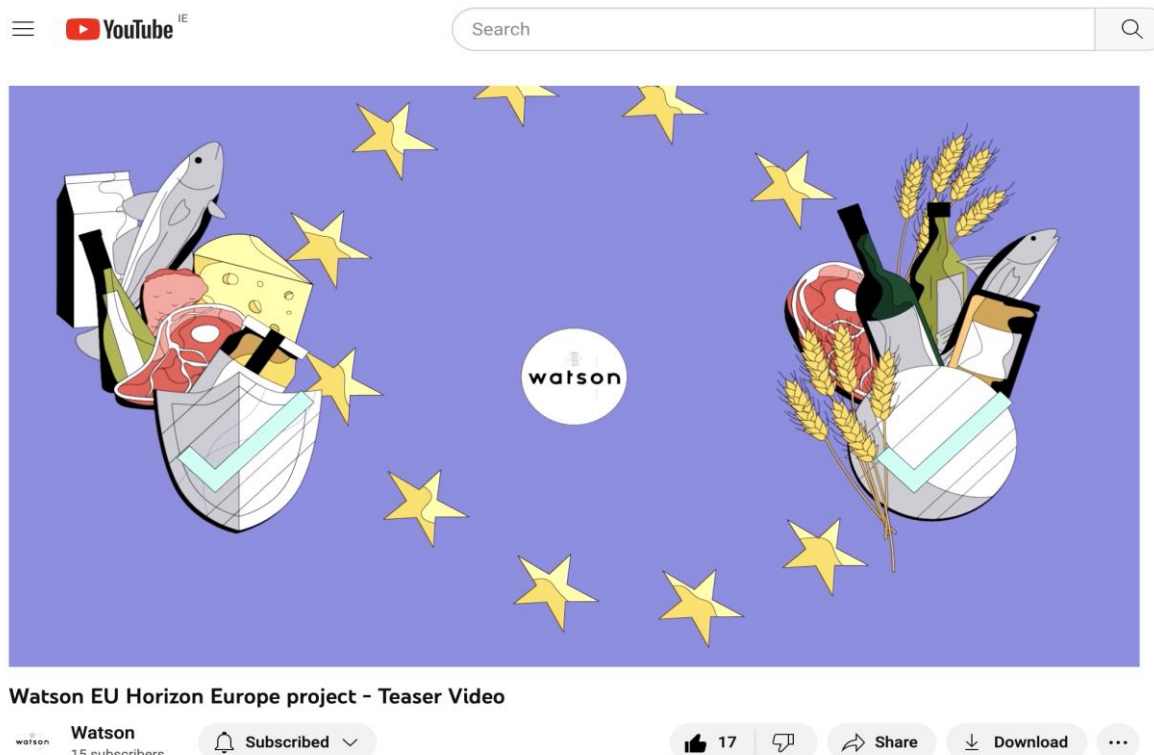


Figure 8 Watson teaser video

4.4.3.5 Watson branded USB stick

The Watson branded USB stick (Figure 9) serves as a useful tool for storing and sharing project-related documents, reports, presentations, or other digital resources. The USB stick is customized with the Watson project logo or branding elements, ensuring its association with the project.



Figure 9 Watson USB stick

4.4.3.6 Watson kick-off tote bag

The Watson kick-off tote bag (Figure 10) provided a practical and eco-friendly way for project partners to carry their belongings during the event and beyond. The tote bag features the Watson project logo prominently, helping to increase brand visibility and recognition. The tote bag uses durable and sustainable materials to align with the project's focus on sustainability and environmental consciousness.

By providing these branded materials, the Watson project aims to create a cohesive and professional image while ensuring that project partners have practical items that they can use in their day-to-day activities. These materials serve as tangible reminders of the project and can help spark conversations and generate interest among individuals who come into contact with them.



Figure 10 Watson kick-off tote bag

4.4.4 Watson social media

The project's dissemination strategy aims to harness the power of various social media platforms to effectively share project developments and engage a wide audience. These platforms provide a convenient avenue for the consortium to not only communicate crucial project outcomes but also to enhance the project's visibility and garner attention from pertinent stakeholders as well as the general public. In line with the objectives of the Watson project, the team has taken steps to establish a presence on social media. Specifically, they have set up a dedicated LinkedIn group page and initiated Twitter, Instagram, and Facebook account. These digital channels will play a pivotal role in the project's outreach efforts. Through these social media outlets, the project intends to maintain an active online presence by consistently posting updates that

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showcase intriguing insights and achievements related to the Watson project. Additionally, these platforms will be instrumental in promoting upcoming events, activities, workshops, and other initiatives planned throughout the project's duration.

The social media accounts created for the Watson project include the following:

1. **X; [Watson Horizon](#):** Watson's X account (Figure 11) serves as a real-time platform for sharing project updates, news, and announcements. It enables the project to reach a wide audience, including stakeholders, industry experts, and the general public. Through the use of relevant hashtags, mentions, and retweets, the Twitter channel helps amplify Watson's messages and facilitates engagement with the online community.
2. **LinkedIn; [WATSON](#):** Watson's LinkedIn presence (Figure 12) provides a professional platform to connect with industry professionals, policymakers, and other relevant stakeholders. The LinkedIn page allows Watson to share in-depth articles, research findings, and project updates. It also facilitates networking opportunities, collaboration with other organizations, and participation in industry-specific discussions and groups.
3. **Instagram; [Watson Horizon](#):** Watson's Instagram account (Figure 13) offers a visual platform to showcase project activities, events, and behind-the-scenes content. By sharing captivating images, videos, and stories, Watson can engage with a younger and visually oriented audience. Instagram enables the project to convey its key messages in a visually appealing and accessible manner.
4. **Facebook; [WatsonProject](#):** Watson's Facebook page (Figure 14) serves as a comprehensive platform to share project updates, videos, informative articles, and event announcements. It allows for broader engagement with a diverse audience, including project partners, stakeholders, and the general public. The Facebook page encourages interactions through comments, likes, and shares, fostering a sense of community and facilitating the dissemination of project-related content.

By maintaining an active presence on these social media channels, Watson can effectively reach its target groups, increase awareness about its activities and objectives, and promote engagement and collaboration within the agrifood community. The use of multiple channels ensures a broader reach and enables the project to adapt its communication approach to the preferences and behaviours of each target group.

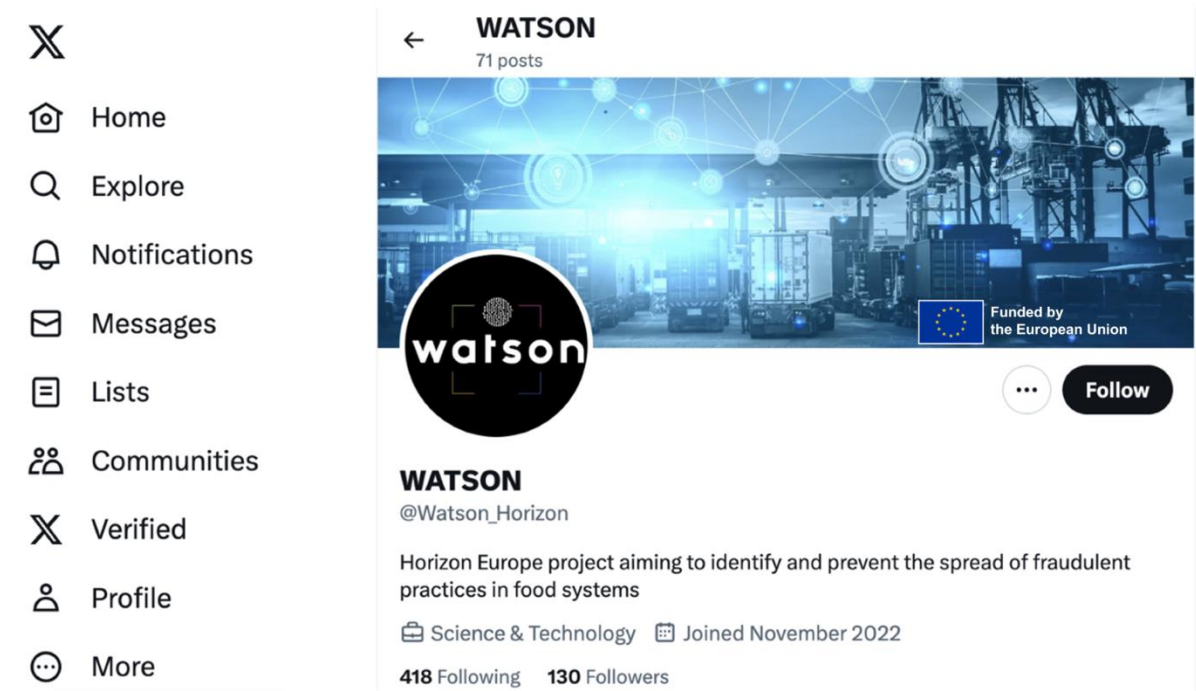


Figure 11 Watson X account

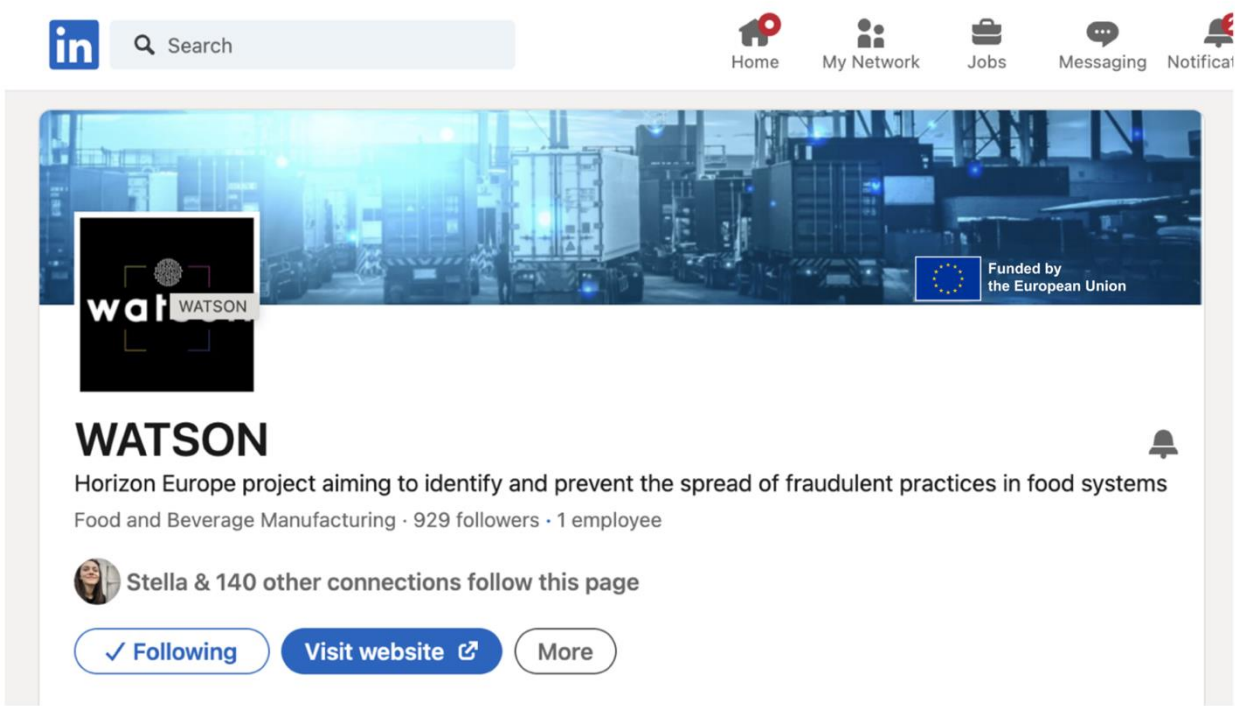


Figure 12 Watson LinkedIn account

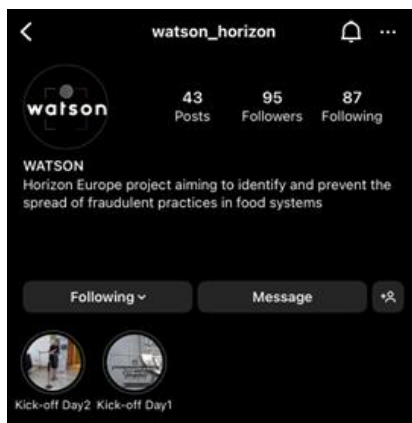


Figure 13 Watson Instagram account

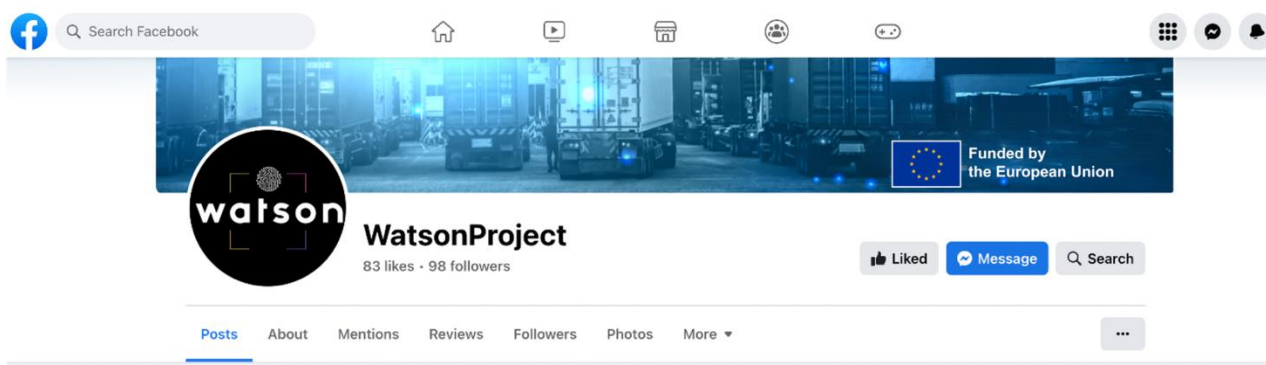


Figure 14 Watson Facebook account

4.5 Media communication and press releases

Media communication and press releases are crucial for reaching a wider audience, including the public, industry professionals, and policymakers. The Watson consortium recognizes the importance of utilizing classic media channels to disseminate project information and engage with stakeholders. Here are the key points related to media communication and press releases within the Watson project:

1. **Press releases:** The consortium plans to issue press releases at significant milestones of the project. These press releases serve as official announcements and provide concise and compelling information about the achievements, breakthroughs, and key findings of the project. Press releases effectively generate media interest and capture the attention of journalists and reporters.
2. **Targeting media outlets:** The Watson consortium aims to contact media outlets that cater to the project's target audience, including public, industry, and policy stakeholders. This may include newspapers, magazines, online news platforms, and relevant trade publications. By targeting specific media outlets, the consortium can ensure that the project's message reaches the desired audience.
3. **Regional media engagement:** In addition to reaching out to mainstream media, the consortium recognizes the importance of engaging with regional media outlets. This can be achieved through members involved in demonstration processes or by actively seeking coverage from regional media organizations. Regional media coverage enhances visibility within specific geographical areas.

4. *Creating a compelling narrative:* To capture the attention of the media and maximize impact, each milestone achieved by the Watson project should be approached as part of a larger story. By framing the milestones within a broader narrative, the consortium can generate media interest and establish a strong presence in relevant media channels. This approach helps to highlight the significance of the project's achievements and engage the target groups effectively.
5. *Media relations and outreach:* The consortium may also engage in media relations activities to foster relationships with journalists, reporters, and media professionals. This includes proactive outreach to media contacts, providing them with project updates, inviting them to project events, and offering interviews with key project members. Building positive relationships with the media can lead to increased media coverage and better visibility for the project.

5. Dissemination strategy: principles and implementation

5.1 Target audience

Within the framework of the Watson project, every consortium member takes an active role in disseminating the project's outcomes. The consortium is comprised of partners hailing from diverse backgrounds and possessing varied areas of expertise. This diversity in expertise and backgrounds equips them with a wide array of mechanisms and approaches to effectively share the latest project developments and achievements. Given this diversity, each consortium member will leverage their unique skills and resources to spread news about the project. They will employ a range of methods and channels tailored to their specific strengths and networks, ensuring a comprehensive and far-reaching dissemination effort. This approach capitalizes on the consortium's multifaceted composition, ultimately enhancing the project's visibility and impact.

The key target audiences for dissemination activities of the Watson project are presented in Table 7.

Table 7 Target audience for the Watson project

Target Audiences	Description
Association of Consumers	Organizations representing the interests and rights of consumers in the food sector
Farmers	Individuals or organizations engaged in agricultural production.
Food Products Transportation Companies	Companies involved in the transportation and logistics of food products.
Food producers	Companies involved in the production and processing of food products.
Retailers	Businesses engaged in the sale of food products to consumers.
Food Processors	Companies involved in processing raw food materials into finished food products.
Nutritionists	Professionals specializing in the study of nutrition and dietary practices.
Food Safety and Certification Authorities	Government or regulatory bodies responsible for ensuring food safety and quality.
Researchers in the agrifood and technology sectors	Academics and scientists conducting research in the fields of agriculture, food, and technology.
Industrial communities representing the food industry	Associations and organizations representing various sectors of the food industry.
Policy makers and regulators in agrifood sectors	Government officials and policymakers involved in formulating food-related policies and regulations.
Members of EIT Food, FAO, WDP, and other relevant associations	Individuals or organizations affiliated with EIT Food, FAO, WDP, and other relevant associations working in the agrifood sector.
Standardisation organisations at EU and global level	Bodies responsible for establishing and maintaining standards in the food industry at the EU and global levels.

5.1.1 Dissemination to European food industry stakeholders

The collaborative efforts of our industrial partners and public bodies will involve actively promoting the utilization of Watson within their respective companies and organizations, extending well beyond the specific departments or units responsible for Watson participation. This promotion will encompass their extensive networks, thereby ensuring broader exposure and adoption. In addition to this, we have high expectations that these industrial partners and public bodies will take it upon themselves to share information and insights about the Watson project with other key stakeholders within the European food industry. This dissemination of knowledge is aimed at fostering a deeper understanding of the project's objectives and potential benefits. It's worth noting that the strategy for disseminating information will be tailored to the specific audience. We

will employ different approaches when targeting partners directly involved in the Watson project compared to when we reach out to external entities. More comprehensive details regarding these tailored dissemination strategies for internal and external European food Industry stakeholders are outlined as follows.

5.1.1.1 Internal dissemination strategy

When industrial project partners embark on the dissemination of Watson within their respective organizations, the following detailed mechanisms are anticipated to be employed:

- **Informal Knowledge Transfer:** This will occur through internal channels such as organization-wide websites, social media platforms, dedicated portals, and newsletters. These channels will serve as vehicles for sharing insights and updates related to Watson within the organization.
- **Cross-Functional Meetings:** Teams and individuals involved in the Watson project will actively engage with colleagues outside the project's immediate scope. These meetings will facilitate the identification of synergies and the exchange of knowledge between project participants and other personnel within the organization.
- **Engagement with Business Interest Groups:** Partners will extend their dissemination efforts to include relevant Business Interest Groups. This outreach will utilize a variety of dissemination channels, with a predominant focus on electronic media. Additionally, partners will participate in conferences and collaborative events to actively promote and discuss the Watson project with industry peers.

5.1.1.2 External dissemination strategy

When industrial project partners extend their efforts to disseminate Watson beyond their own organizations, they will complement the global dissemination mechanisms like newsletters and social media channels with targeted actions designed to reach specific groups of European food industry stakeholders and promote project results more comprehensively.

The dissemination strategy will encompass the following steps in detail:

- **Identifying stakeholder groups:** The first step involves identifying the primary stakeholder groups within the European industry.
- **Collaboration with European Commission's Joint Research Centre (JRC) Knowledge Centre for Food Fraud and Quality:** Close collaboration with the JRC Knowledge Centre for Food Fraud and Quality will be established, targeting not only the technical knowledge exchange, especially regarding interoperability of food systems and connection with databases but also wide visibility of the foreseen activities of the JRC.
- **Targeting specific industrial entities:** After identifying stakeholder groups, specific industrial entities within these groups will be targeted for engagement.
- **Assigning project representatives:** For each targeted entity, a dedicated project representative will be assigned to oversee the dissemination activities. These representatives will play a crucial role in establishing a direct connection with their associated entities.
- **Interactions and Information Transfer:** Project representatives will engage with their associated entities to present project results and gather feedback. The method of interaction and information transfer will be determined on a case-by-case basis. Options may include online meetings, physical

visits to the associated entity's premises, or site visits to project demonstrators. The format of content presentation (e.g., presentation or demonstration) and the specific information to be shared (e.g., project overview, implementation details, results) will also be customized to suit the needs of the audience or departments within the associated entity.

- **Audience targeting:** The information will be directed to the relevant audience or departments within the associated entity, which may include technical teams, marketing departments, or management.
- **Feedback incorporation:** Feedback received from these interactions will serve as valuable input that can influence the project's communication strategy and content. It will help adapt the messaging and approach based on the needs and interests of the stakeholders.
- **Networking events:** As a culmination of these efforts, there may be consideration for organizing focused events aimed at enhancing networking opportunities between project partners and external industrial stakeholders. These events will foster collaboration and further dissemination of project insights and outcomes.

5.1.2 Dissemination to wider public and scientific community

The Watson consortium is deeply committed to delivering technological and scientific results that hold substantial importance for both academic and public audiences. To effectively disseminate these outcomes, a multifaceted approach will be employed, including the following detailed strategies:

- *Comprehensive online presence:* The Watson project will maintain an actively managed and regularly updated website that will serve as the primary digital platform for sharing project developments, research findings, and related content. This platform will not only offer detailed information but also facilitate ongoing engagement with the scientific community and the wider public.
- *Strategic social media engagement:* The project will maintain a strong presence on various social media platforms, where it will actively share updates, research highlights, and relevant discussions. These channels will be used to foster engagement, encourage discussions, and expand the project's reach among a diverse audience.
- *Active Participation in scientific and agrifood society meetings:* Watson will engage with scientific conferences, agrifood society meetings, and industry-specific events. This active participation will include presenting research findings, hosting workshops or sessions, and collaborating with experts and peers in the agrifood sector. These interactions will facilitate knowledge exchange and strengthen the project's footprint in the academic and industrial communities.
- *Rigorous selection of peer-reviewed journals:* When submitting research outputs for publication, the project will employ a meticulous selection process for peer-reviewed journals. This selection will take into account the relevance of the discipline and content, ensuring alignment with the goals and objectives of Watson. To make informed decisions, objective metrics such as the Impact Factor will be considered, alongside expert input from specialists within the respective disciplines. This approach will guarantee that the project's scientific content is disseminated through the most suitable and influential academic channels.
- *Strategic press releases:* To reach a broader audience and enhance public awareness, Watson will issue targeted press releases. These releases will provide concise summaries of key findings and achievements, making them accessible to a wide range of readers. The distribution will encompass both popular magazines, sector-specific publications, and newspapers to ensure that the project's impact is felt by both the general public and industry professionals.

- *Promotion of Open Access policies:* The project is committed to advocating for Open Access policies to promote transparency, collaboration, and accessibility. By adhering to these principles, Watson aims to make its research outputs readily available to a global audience, facilitating knowledge sharing and advancement.

The subsequent section 6.3 offers an illustrative example of the types of journals that are being considered as potential candidates for publishing Watson scientific outputs. The selection process will be thorough and rigorous, combining quantitative metrics like Impact Factor with qualitative assessments from subject-matter experts. This approach ensures that the chosen journals align with the project's objectives and effectively disseminate its scientific contributions to the academic community and beyond.

5.1.2.1 Public deliverables and scientific publications

Watson recognizes the significance of sharing project outcomes and research findings through public deliverables and scientific publications. These forms of communication play a crucial role in disseminating knowledge, engaging stakeholders, and contributing to the scientific community.

1. *Public deliverables:* Watson produces public deliverables that provide detailed information about the project's progress, methodologies, and results. These deliverables are intended for a wider audience, including stakeholders, policymakers, industry professionals, and the interested public. They may include reports, technical documents, guidelines, and best practice recommendations. The deliverables outline the project's objectives, methodologies, and key findings, making the information accessible and informative.
2. *Scientific publications:* Watson aims to contribute to the scientific community by publishing research findings in reputable scientific journals and conference proceedings. Scientific publications undergo a rigorous peer-review process, ensuring the quality and validity of the research. These publications are typically targeted towards researchers, academics, and professionals in the relevant fields. By disseminating findings through scientific publications, Watson expands the knowledge base, promotes collaboration, and fosters advancements in the agrifood domain.

Both public deliverables and scientific publications serve distinct purposes in communicating Watson's work:

1. *Public deliverables* are tailored for a broader audience, emphasizing the practical implications and applicability of the project's outcomes. They provide comprehensive insights into Watson's methodologies, technological developments, and recommendations for stakeholders. Public deliverables may be made available on the project's website, shared with relevant organizations, and used as reference materials for future projects and initiatives.
2. *Scientific publications*, on the other hand, focus on contributing to the academic and research community. These publications undergo rigorous scrutiny by subject-matter experts, ensuring the accuracy, reliability, and scientific rigor of the research. By publishing in renowned journals and conferences, Watson enhances its visibility, credibility, and impact within the scientific community. Scientific publications may include detailed analyses, statistical models, theoretical frameworks, and empirical evidence, making them valuable resources for researchers and academics.

In addition, the consortium will organize at least 1 special issues in IEEE Transactions on Industrial Informatics, NATURE, IEEE Security & Privacy Journal, Springer (Discover Food Journal) and Elsevier (Sustainable Agriculture Journal, Smart Agricultural Technology Journal, Sustainable Horizons Journal) or related journals.

The high scientific profile of the participating academic and research institutes guarantees the success of these special issues, which will demonstrate the project's research achievements worldwide.

5.1.2.2 Workshops and conferences

Watson recognizes the importance of workshops and conferences as valuable platforms for sharing knowledge, exchanging ideas, and engaging with stakeholders. Workshops and conferences provide opportunities for Watson to present its research findings, innovative solutions, and advancements in the agrifood and technology sectors. Watson aims to actively participate in relevant workshops and conferences within the agrifood and technology sectors at national, European, and international levels. By leveraging these platforms, the project can contribute to the scientific community, foster collaboration, and promote the adoption of innovative solutions for a more sustainable and transparent food system.

The main objectives of workshops and conferences within the Watson project are as follows:

1. *Knowledge exchange:* Workshops and conferences serve as forums for researchers, experts, industry professionals, policymakers, and other stakeholders to exchange knowledge, insights, and best practices. Through presentations, panel discussions, and interactive sessions, Watson can share its research outcomes, methodologies, and lessons learned with the wider community.
2. *Networking and collaboration:* These events facilitate networking and collaboration among participants from various sectors and disciplines. Watson can establish connections with potential partners, industry representatives, and other research projects. This enables the exploration of collaborative opportunities, joint initiatives, and partnerships to further advance the objectives of the project.
3. *Stakeholder engagement:* Workshops and conferences provide a platform for engaging with stakeholders, including policymakers, regulators, standardization organizations, and industry associations. Watson can actively involve these stakeholders in discussions, seek their input, and gather feedback on the project's outcomes and proposed solutions. This engagement helps ensure that the project aligns with stakeholders' needs and addresses key challenges in the agrifood and technology sectors.
4. *Dissemination of results:* Workshops and conferences offer a wide audience for disseminating the results and achievements of the Watson project. Through presentations, posters, and demonstrations, Watson can showcase its research findings, innovative technologies, and practical applications. This helps raise awareness about the project, its impact, and the potential benefits it brings to the agrifood and technology sectors.
5. *Feedback and validation:* Workshops and conferences provide a platform for receiving feedback on Watson's methodologies, approaches, and solutions. The project can engage participants in discussions, gather insights, and validate its findings and recommendations. This feedback loop is crucial for refining the project's outcomes, addressing potential gaps, and ensuring the relevance and applicability of the proposed solutions.

5.1.2.3 Lectures

Watson aims to organize and participate in lectures at various events, conferences, workshops, and academic institutions. By leveraging lectures as a communication and dissemination tool, the project can effectively share its research outcomes, engage with stakeholders, and contribute to the advancement of the agrifood and technology sectors.

Lectures provide a platform for Watson project members to share their expertise, research findings, and insights with a targeted audience. Experts and researchers from various disciplines can deliver lectures on specific topics related to agrifood and technology, highlighting the advancements, challenges, and potential solutions. Moreover, lectures serve as educational tools to enhance the understanding of key concepts, methodologies, and technologies related to the project. They can be organized within the project consortium or in collaboration with academic institutions, fostering a learning environment for project members and other stakeholders. Furthermore, lectures can be tailored to specific audiences based on their interests, backgrounds, and roles within the agrifood and technology sectors. These audiences may include researchers, industry professionals, policymakers, regulators, students, and the general public. By customizing the content and delivery, lectures can effectively address the needs and interests of different target groups.

Lectures can incorporate interactive elements such as Question and Answer sessions, discussions, and hands-on activities. This promotes active engagement, encourages participants to ask questions, and facilitates a deeper understanding of the topics being presented. Interactive lectures create opportunities for knowledge exchange and collaboration among attendees. In addition, lectures provide a platform to disseminate the outcomes and achievements of the Watson project to a wider audience. By presenting research findings, innovative technologies, and practical applications, lectures help raise awareness about the project's impact and contribute to the broader dissemination and adoption of its results. Finally, lectures can also serve as a catalyst for collaboration and partnerships. They offer opportunities for networking, connecting with potential collaborators, and building relationships with stakeholders from academia, industry, and other relevant sectors. These connections can lead to future collaborations, joint initiatives, and the sharing of resources and knowledge.

5.1.3 Dissemination to policy makers

To effectively disseminate best practices in EU food systems to policy makers, we will employ a targeted and comprehensive approach, with a detailed plan as follows:

- Compile and Summarize Best Practices:
 - ✓ Begin by identifying and collecting best practices in EU food systems from various sources, including government agencies, research institutions, and industry reports.
 - ✓ Summarize these practices into easily digestible briefs or reports, highlighting their impact, sustainability, and relevance to current policy goals.
- Create Policy Briefs:
 - ✓ Develop concise policy briefs that showcase the most critical and actionable best practices.
 - ✓ Tailor each brief to address specific policy areas or challenges within the EU food system, such as sustainability, food safety, nutrition, or food waste reduction.
- Establish an Online Knowledge Hub:
 - ✓ Create a dedicated online platform or knowledge hub where policy makers can access all the compiled best practices, policy briefs, and related resources.
 - ✓ Ensure the platform is user-friendly, searchable, and regularly updated with the latest information.
- Organize Workshops and Webinars:
 - ✓ Host workshops and webinars that bring together policy makers, experts, and stakeholders from the food industry.

- ✓ Use these events to present and discuss best practices, encouraging active participation and collaboration.
- Engage in Stakeholder Dialogues:
 - ✓ Foster ongoing dialogues with stakeholders, including policymakers, industry representatives, NGOs, and researchers.
 - ✓ These dialogues can be facilitated through roundtable discussions, focus groups, or forums dedicated to specific food system challenges.
- Tailored Policy Recommendations:
 - ✓ Customize policy recommendations based on the best practices to address specific challenges faced by EU food systems.
 - ✓ Ensure that these recommendations are practical, evidence-based, and aligned with the EU's policy goals, such as the Farm to Fork Strategy.
- Policy Briefings and Reports:
 - ✓ Regularly share policy briefings and reports with policymakers, highlighting the relevance of best practices in achieving policy objectives.
 - ✓ Use data, case studies, and success stories to demonstrate the impact of these practices.
- Leverage Existing Policy Networks:
 - ✓ Collaborate with existing EU food policy networks and organizations to disseminate best practices to a broader audience.
 - ✓ These networks often have established relationships with policymakers and can facilitate access.
- Advocate for Pilot Projects:
 - ✓ Encourage policymakers to initiate pilot projects that implement best practices in specific regions or communities.
 - ✓ Monitor and evaluate the outcomes of these projects to provide concrete evidence of success.
- Regular Progress Updates:
 - ✓ Provide regular updates on the adoption and impact of best practices through newsletters, emails, and periodic reports.
 - ✓ Highlight success stories and areas where further policy adjustments may be needed.
- Feedback Mechanism:
 - ✓ Establish a mechanism for policymakers to provide feedback, ask questions, or request additional information.
 - ✓ Use this feedback to tailor future dissemination efforts and policy recommendations.
- Advocate for Funding and Support:
 - ✓ Advocate for funding and support for initiatives that promote the adoption of best practices in EU food systems.
 - ✓ Engage with relevant EU agencies and bodies to ensure resources are allocated to these efforts.

By following these detailed steps, we will effectively disseminate best practices in EU food systems to policy makers, helping drive positive changes and improvements in the food system policies of the EU.

The actors involved in the process of policy forming in the agrifood sector are:

- Policy makers i.e. agrifood regulatory authorities at a National level
- Government officials and policymakers involved in formulating food-related policies and regulations.
- Standardization organizations at EU and global level: Bodies responsible for establishing and maintaining standards in the food industry at the EU and global levels.
- Farmers: Individuals or organizations engaged in agricultural production.
- Food products transportation companies involved in the transportation and logistics of food products.
- Food producers: Companies involved in the production and processing of food products.
- Retailers: Businesses engaged in the sale of food products to consumers.
- Food Processors: Companies involved in processing raw food materials into finished food products.

5.1.3.1 Dissemination to other research projects

Watson is committed to fostering a holistic and inclusive approach by involving a wide spectrum of stakeholders and adopting an inter- and trans-disciplinary methodology. Our strategy is rooted in the synthesis of knowledge accumulated through both previous and ongoing EU-funded research initiatives. In addition, we plan to establish synergies with upcoming projects aligned with the HORIZON-CL6-2022-FARM2FORK-01-04 theme, with a specific focus on devising innovative solutions to counteract food adulteration issues, particularly within the context of quality labels such as organic products and geographical indications.

To fortify our efforts, we will harness the resources provided by existing research infrastructure and collaborate closely with relevant initiatives. Of noteworthy significance is our intent to collaborate with the JRC Knowledge Centre for Food Fraud and Quality. This center is renowned for its profound expertise in the realms of food science, including the authentication and quality assessment of food products distributed across the EU.

The prospective involvement of the JRC in the Watson project holds immense value. It will ensure that the outcomes of our project are not only harmonious with but also possess the potential to elevate the existing databases and tools utilized by the European Commission. This alignment will, in turn, streamline the accessibility of our project's findings. We are particularly dedicated to promoting open access to the knowledge generated, and this dissemination will be primarily channeled through the European Commission Knowledge Centre for Food Fraud and Quality. The primary aim is to facilitate the broad dissemination of Watson results, targeting the competent authorities of EU Member States.

This collaborative approach embodies Watson's commitment to fostering transparency, enhancing the reach and utility of our research findings, and actively contributing to the overarching mission of upholding the integrity of food quality within the EU. By aligning with established research bodies and authorities, we aim to create a seamless synergy that maximizes the impact of our project and benefits the broader European food industry.

5.2 Dissemination strategy

The Watson project recognizes the critical role of dissemination activities in achieving its objectives and ensuring its long-term success. These activities, which encompass the management of intellectual property rights (IPR) and data, are carefully coordinated across all work packages to create a cohesive and effective plan of action. The overarching goal is to promote Watson's solutions, facilitate knowledge exchange, and foster a technology-enabled dialogue among stakeholders.

The detailed objectives of the Watson dissemination strategy are as follows:

1. *Define a clear and distinctive brand identity:* The strategy aims to establish a strong and recognizable brand identity for Watson that represents its core values and objectives. This identity will be consistent across all communication channels, both online and offline, ensuring a cohesive and unified presence.
2. *Ensure broad visibility and dissemination of Watson's work:* The strategy seeks to increase awareness and promote the visibility of Watson's activities and outcomes. It targets specific stakeholder groups, including researchers, industry professionals, policymakers, and the general public, to effectively communicate the value and impact of Watson's solutions.
3. *Facilitate the exploitation of Watson outcomes:* The strategy focuses on maximizing the utilization and impact of Watson's outcomes by fostering collaboration and knowledge exchange. It aims to encourage project partners, as well as the wider research community, to build upon Watson's results and develop innovative solutions that contribute to socio-economic growth and sustainability.
4. *Extend visibility and promotion beyond program borders:* The strategy aims to extend the reach of Watson's message and impact beyond the boundaries of the program. This involves strategic coordination with relevant communities, organizations, and initiatives at regional, national, and international levels. By leveraging existing networks and partnerships, Watson aims to amplify its visibility and engage a wider audience.
5. *Support the sustainability of Watson:* The strategy recognizes the importance of ensuring the long-term sustainability of Watson's outcomes and impact. It includes measures to support the continued adoption and implementation of Watson's solutions beyond the project's lifetime. This may involve providing resources, guidelines, and training materials to assist stakeholders in incorporating Watson's practices into their operations.

To achieve these objectives, the Watson dissemination strategy employs a range of activities and channels. These include the development of informative materials such as brochures, fact sheets, and reports, the organization of workshops, conferences, and webinars, the establishment of an interactive website and online platform for data accessibility, and the active engagement with stakeholders through social media, newsletters, and direct communication. Overall, the detailed dissemination and communication strategy of the Watson project aims to create a strong brand identity, ensure broad visibility and dissemination of project outcomes, facilitate exploitation and collaboration, extend the project's impact beyond its duration, and support the long-term sustainability of Watson's solutions. By effectively communicating and engaging with stakeholders, Watson strives to maximise the reach and effectiveness of its activities and contribute to positive transformations in the food supply chain.

Within the framework of the Watson project, we have strategically planned a dedicated task, Task 6.2, to establish strong collaborations and partnerships with various stakeholders in the field. This task specifically focuses on engaging with other EU-funded initiatives and projects that share similar objectives or have complementary targets. One notable example is the projects funded under the HORIZON-CL6-2022-FARM2FORK-01-04 topic, which aims to develop innovative solutions for preventing food adulteration, particularly focusing on organic food and geographical indications. Through these collaborations, we aim to foster joint communication and dissemination activities, ensuring that our collective efforts have a broader impact and reach a wider audience. We recognize the value of sharing knowledge and expertise with other projects in the field, and we intend to explore opportunities for joint validation campaigns. By aligning our activities and leveraging synergies, we can amplify the visibility and effectiveness of the results we achieve.

Furthermore, Watson recognizes the importance of liaising with other projects funded in similar domains for knowledge exchange and technology transfer, to leverage the expertise and experiences of these projects. This collaboration will also extend to the development of joint policy recommendations at both national and EU levels, aiming to influence and shape policies that support the Farm-to-Fork and Food 2030 strategies. Additionally, we will actively participate in public fora and working groups dedicated to systemic innovations in the agrifood sector, further expanding the visibility and impact of the Watson project. By fostering these collaborations, knowledge sharing, and active participation in relevant initiatives, Watson contribute to the broader research community and the advancement of sustainable and transparent food systems.

5.3 Dissemination tools

This section offers an exploration of the dissemination channels strategically integrated into the framework of the Watson project. Our dissemination strategy is diversified to resonate with a wide-ranging set of target audiences. These audiences encompass academic institutions, industry stakeholders, national agencies, governmental bodies, and an assortment of other key stakeholders vital to the project's success. Dissemination efforts are pivotal not only in paving the way for the productive exploitation of our project's accomplishments but also in catalyzing their eventual commercialization. This signifies that our dissemination endeavors are designed to exert maximum influence and engagement, transcending sectoral boundaries and leaving a lasting imprint across a diverse spectrum of stakeholders and industries.

5.3.1 Online and electronic dissemination

The Watson website serves as a central platform for communicating the project's scope, objectives, recent developments, upcoming events, and publications to a broad and diverse audience. Furthermore, to maximize our outreach and capture the interest of pertinent stakeholders, we are committed to publishing public deliverables online. Additionally, to leverages the existing networks and audiences of each organization in the consortium, we have ensured that the project's information is prominently featured on the websites of all participating partners. To further expand our project's visibility, we have also established official social media accounts for the Watson project on platforms such as Twitter and LinkedIn. Through regular and informative posts, we aim to disseminate breaking news, share significant results, and celebrate key milestones achieved during the project's course. Recognising the critical role that publications play in amplifying the project's success, the Watson consortium is committed to making a significant impact. To this end, we are diligently exploring potential channels for disseminating project-related news. We have identified relevant journals that hold the potential to efficiently distribute the outcomes and findings of the project. This strategic approach not only enhances the project's impact but also bolsters its engagement with research communities, ensuring that our contributions resonate widely and effectively. Table 8 presents journals which will be targeted by the communication plan as the project progresses.

Table 8 Relevant Journals targeted by the Watson consortium

Journals
IEEE Transactions on Industrial Informatics
NATURE
IEEE Security & Privacy Journal
Springer - Discover Food Journal
Elsevier - Agriculture, Ecosystems & Environment Journal
Elsevier - Smart Agricultural Technology Journal
Elsevier - Sustainable Horizons Journal

5.3.2 Non-electronic dissemination

The Watson consortium is highly committed to actively seeking opportunities to effectively communicate and promote the project's overarching objectives and the tangible results it achieves. To this end, we have curated a thorough list of potential conferences and events that could serve as ideal venues for the project's participation and presentations in the future. These events span a range of relevant domains and are chosen with the intent of maximizing the project's outreach, impact, and visibility within the academic and industry communities.

6. Mapping of communication and dissemination tools with stakeholder groups

Table 9 provides an overview of the mapping of which dissemination and communication tools reach specified targeted stakeholder groups.

Table 9 Mapping of the tools and the targeted stakeholder groups

Tool	Practitioners/ Public	Policymakers/ Funders	Enterprise/ Industry	Scientific Community	Other Research Projects	Agrifood Organizations	Media
Webpage	✓	✓	✓	✓	✓	✓	✓
Social Media	✓	✓	✓	✓	✓	✓	✓
Press Releases	✓		✓	✓	✓	✓	✓
Events, Workshops & Conferences	✓		✓	✓	✓		
Peer-reviewed Journal	✓	✓		✓	✓	✓	✓
Newsletter	✓	✓	✓	✓	✓	✓	✓
Project Deliverables			✓	✓	✓		
Project Video	✓	✓	✓	✓	✓	✓	✓
Plenary Meeting	✓					✓	
Policy Papers		✓				✓	

7. Periodic dissemination and communication report

The periodic Dissemination and Communication report from month 1 – month 4 (March-June 2023) is provided in Figure 15.



Figure 15 Watson periodic Dissemination and Communication report M1-4

7.1 Participation in conferences and events

Since the commencement of the Watson project, several partnering organizations have attended conferences and events across Europe to communicate the project. These events included the recently concluded Beyond Expo, in Thessaloniki Greece (Figure 16) and the "Funding, Networking and Technology Transfer Opportunities for Mature Research Groups of the Agricultural University" information day in Athens, Greece. Four partners (BioCoS, IBBR-CNR, APROL UMBRIA, and MITERA GbmH) also presented the olive oil use case during the 54th edition of Agriumbria, the largest national fair for agriculture, livestock, and food.



Figure 16 Watson partners at the Beyond Expo

7.2 Watson kick-off meeting in Dublin

On the 14th and 15th of March 2023, the project coordinators UCD hosted the Watson kick-off meeting in Dublin, Ireland. This meeting was attended by representatives of all 44 project partners plus the EC Project Officer. The meeting was held on UCD campus and involved presentations and information sessions about all aspects of the project. This event was a great way for partners to meet in person and come together to start their collaboration, and to ensure all partners had all the relevant information and guidelines to commence their contribution to the project. Pictures from the event provided key materials to commence the communication and dissemination activities of the project and were circulated on social media and on partnering organization's websites. This allowed for a strong image of the project to be circulated from the beginning and to capture the project team of this large consortium. Samples of pictures from the event are provided in Figures 18-22 below.



Figure 17 First day of kick-off meeting hosted by project coordinator Dimitrios Argyropoulos



Figure 18 Watson consortium on UCD campus



Figure 19 Watson official launch led by project coordinator Dimitrios Argyropoulos



Figure 20 Watson official launch guest speaker Pamela Byrne CEO of the Food Safety Authority of Ireland



Figure 21 Watson consortium closing the kick-off meeting in UCD's O'Brien Centre for Science

7.3 Articles at partners' website

Partners have actively been communicating the activities on their own organizations' websites. As an example, shown in Figure 22, on the 4th April 2023, INESC TEC announced the project on its website.



Figure 22 Article on website of Inesc Tec

Additionally, on the 31st of May 2023, UCD discovery page upload the coordinator of the project talking about smart farming and the digital transformation of agriculture (Figure 23).



Figure 23 UCD discovery article

7.4 Social media posts

Thus far, a significant quantity of posts on social networks has been observed (Table 10). Social media enables Watson project to share its research findings, publications, and insights with a wide audience beyond traditional academic circles. It allows them to reach a broader community, including policymakers, journalists, and the public, facilitating the dissemination of knowledge and increasing the impact of their work. An example of a post on Watson's LinkedIn page is shown in Figure 24.

Table 10 Overview of social media activities of Watson project

Social Media account	Account Start date	Followers/ subscriptions	Number of posts & stories/ videos
LinkedIn	18/06/2022	859	64
Facebook	08/11/2022	87	44
Instagram	08/11/2022	93	90
Twitter	08/11/2022	129	53
YouTube	05/06/2023	14	1

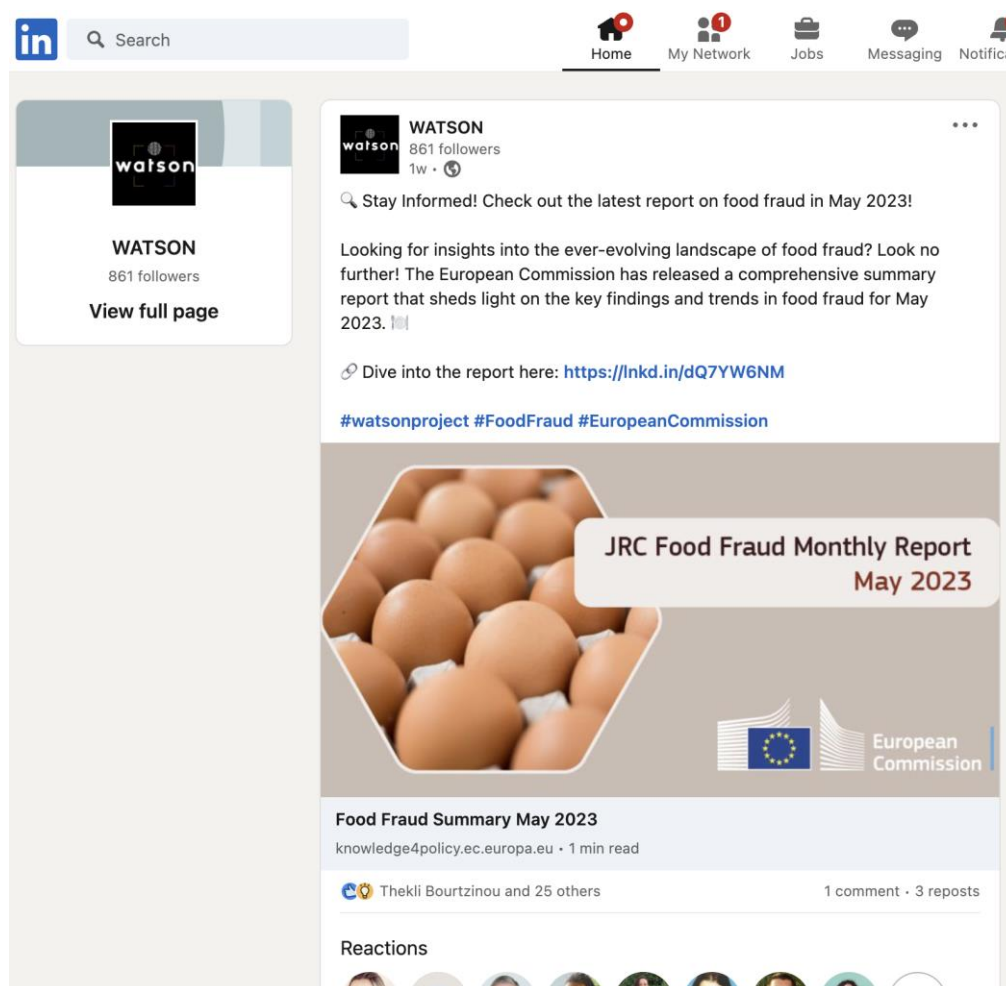


Figure 24 Post on LinkedIn from the official account of Watson project

8. Exploitation plan

This Section describes the initial approach of Task 6.3 (T6.3) on the exploitation planning and contribution to innovation management. It is included in D6.2 deliverable to inform on the planning of the activities and the initial time plan. It has also been an opportunity to engage the consortium into the description of the exploitable results of the project and the ways to exploit them. The main activities of T6.3 include the market analysis, the description of the exploitable results (and preparation of their exploitation), the management of IPR issues, the support to the partners to develop their business models, the preparation of exploitation plans (individual and joint, if applicable) and the support to the innovation management activities of the project.

The initial, internal time plan of T6.3 is depicted in Figure 25 and it is expected to be updated at the beginning of the task. The submission of the two deliverables in months 18 (D6.6) and 36 (D6.7) of the project will mark the provision of the interim and final versions of the market analysis, the Key Exploitable Results (KER) and the exploitation plans.

T6.3 Timeline	Months																	
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
Market Analysis (interim)																		
Market Analysis (final)																		
Description of key exploitable results (interim)																		
Description of key exploitable results (final)																		
Description of integrated platform																		
IPR management																		
Preparation of business models																		
Preparations of exploitation plans (individual)																		
Preparation of joint exploitation plans																		
Support to innovation management																		

Figure 25 Draft, internal T6.3 timeline

As part of WP6, T6.3 relates to WP6 tasks and especially with T6.2 mainly in the identification and approach of the stakeholders. T6.3 is expected to consider technical activities and to contribute to Watson innovation management in terms of informing and aligning with the market needs. The current methodological approach will be further edited and adapted, especially in D6.6 deliverable, based on the activities of T6.3.

In the following subsection, we discuss our initial, shared understanding and planning on the key activities related to the exploitation planning. The Section is linked with Annex II, which includes our first consideration of the KERs.

8.1 Value proposition

Watson aims to boost the establishment of food systems, that are fair, healthy, safe, climate- and environment-sustainable and resilient from primary production to consumption, ensuring food and nutrition security and authenticity for all within planetary boundaries in the EU and globally.

The project outcomes, according to Watson's Grant Agreement, are expected to include the following:

- A robust knowledge base of the underlying reasons for/drivers of food fraud (e.g. economic and social) and the extent of food fraud.

- Innovative strategies and solutions (tools and devices) to prevent fraudulent practices by improving traceability and safeguarding authenticity and fostering solutions for fraud prevention.
- Improved assistance to control bodies and authorities in fraud prevention.
- Improved transparency through digital solutions (such as IoT, artificial intelligence, blockchain and distributed ledger technologies) that meet consumer demand for food transparency, with a focus on demonstrating authenticity of food to reduce food fraud and boost consumer confidence in food origin and quality.
- Contribution to further development of policies for food authentication and traceability and for fighting food fraud/food crime.
- Support official control by providing guidance on detection and mitigation of fraudulent practices.

8.1.1 Systemic innovations - exploitable results

The expected outcomes of the project will be transformed into exploitable results of the project. While the description of these results will be formulated and discussed in detail in the 1st deliverable of the task (D6.6), as the technical tasks are starting during this period, we can consider as a starting point the systemic innovations as identified in the GA. These are largely based on previous partners' activities and will be enhanced / adapted so that they evolve into the project KER.

According to the above, Table 11 provides the initial list of systemic innovations, which we expect to be transformed into KER, with indication of the responsible tasks and leading partners:

Table 11 Initial and brief description of key exploitation results

#	Key Exploitable Results (KERs)
Systems for improving food traceability along the supply chains	
1	Blockchain Platform for Interconnection of Systems in the Food Chain [T3.2 and T3.3], Leading Partners: NTU (for Blockchain aspects) and SYN (for interoperability aspects) Description: Blockchain platform developed towards circular economy will be extended to accommodate additional ICT systems and data sources also covering the proposed use cases and food chains. Interoperability among different blockchains already by food chain stakeholders will also be pursued through Watson Interledger approach, thus reaching TRL7 before the initiation of the validation campaigns.
2	Digital Food Product Passport [T3.5], Leading Partner: INT Description: Virtual food product passport will be adjusted and customised to the needs of specific products - including a suitable user interface - for all food chain stakeholders, reaching TRL7 by the end of the project.
3	Blockchain-enabled IoT platforms [T3.4], Leading Partner: CER Description: Existing IoT platforms are siloed, offering data largely to their own ecosystem. Watson will employ the designed data model and open API, along with the Blockchain infrastructure to further enhance existing platforms (SynField, AgIoT) offered by SYN, INT and INE and allow the provision of added-value services. Starting from TRL4 integrity-enabling modules, we expect to reach TRL7.
4	Physical Unclonable Functions for Improved Traceability [T4.3], Leading Partner: VTT Description: Related to PUFs VTT has relevant background in printed intelligence, image processing and cryptographic solutions, also silicon based PUFs have been investigated. E.g., cryptographic solutions have been validated in the lab (TRL4) through the D4FLY H2020 project. Along with off-the-shelf technologies, the PUF related project outcome (based on most feasible approach) will be demonstrated in a relevant environment (TRL7).
Systems for safeguarding the authenticity of food products	
5	Mobile Applications for Food Product Authenticity and Consumer Engagement [T4.4] Leading Partner: WCS Description: LIVIQ is already available in Google Play as a beta version. The suggested developments of cutting-edge AI algorithms for food authenticity will result to a TRL8 before the end of Watson. The final application will be available for free in both Google Play and App Stores.
6	Multi-Sensor food product scanning devices for food safety [T4.5], Leading Partner: ASI

Description: The multi-sensor food scanning device will be able to detect food hazards, spoilage and food fraud through heterogeneous micro-scale photonics. It will evolve to TRL7 by being demonstrated for the purposes of the project to multiple operational environments with a system prototype.	
7	Hand-held Near Infrared Spectroscopy (NIRS) Device [T4.5], Leading Partner: INRAE (task led by ASI)
Description: INRAE has already developed an NIRS spectral database of bovine muscle as well as several models to predict different chemical determinations related to meat quality in INTAQT, VAMOS and SMARTER H2020 projects. NIRS models obtained from these studies are already available (TRL4) and it will be extended through an application software that will be then created and coupled to the aforementioned models tested in-line and on-line in operational environment (TRL7).	
8	DNA-based Sensor for Transparency in Transport and Storage [T4.2], Leading Partner: BIO
Description: DNA-based sensor to reach a TRL 7 by the end of the project, by applying it in an operational environment covering the production stages from packaging-to-store.	
9	Fast, inexpensive and Flexible Wine Colour Inspection [T3.1], Leading Partner: INE
Description: Starting from TRL3 the technology will be configured for applications to wine colour analysis in mobile or computationally constraint devices reaching TRL7.	
10	Smart Tag with Printed Intelligence and Functional Codes [T4.3]; Leading Partner: VTT
Description: This result includes smart tags based on printed sensors (i.e., using functional ink) and a modified GS1 barcode standard enabling unique identification of objects on a per item-level. During Watson, the printed marking methods will be integrated into food packages using the same material as the package or as labels, thus reaching TRL7 by the end of the project.	
11	Automatic Product (Label) Identification [T3.1], Leading Partner: INE
Description: This result is related to automatic detection of product labels. Starting from TRL3, the information included in the packaging will be analysed, identifying sets of brand and product and interpreting a set of information on the product labels (e.g., compounds) with a special focus on assisting visual-impaired people and achieving a TRL6-7 at the end of the project.	
12	Vineyard production monitoring with IoT developed using AgIoT solution [T3.4], Leading Partner: INE
Description: This result is focused on the development and extension of the AgIoT solution with advanced sensorial technology aiming at an advanced monitoring of the vineyard cultivation conditions. This will be done considering interoperable standards allowing the connection of any standard sensor to acquire information.	
Systems for early warning alerts	
13	Early Warning System for Food Fraud Prevention [T4.1], Leading Partner: UBI
Description: AI-supported Early Warning System or Detection and Prevention of Fraudulent Practices. The stakeholders expected include the following: food safety and certification authorities, policy makers and regulators in agrifood sectors, members of EIT food, FAO, WDP other relevant associations, 68 standardization organisations at EU and global level, Non-European agencies or institutions and initiatives such as FAO, OECD, WFP, IFAD, SDG.	
14	Risk-Based Food-Fraud Decision Support Module [T4.1], Leading Partner: REG
Description: The in-house risk assessment engine developed by REG, is already capable of quantifying the risk of complex uncertain systems but it still requires extensive modifications to be applicable to the food fraud problem and to be interfaced with the Watson early warning system. Development throughout the project's duration will allow it to reach demonstration level in an operational environment (TRL7).	

8.1.2 IPR Management

Aspects of Intellectual Property Rights (IPR) management have been included in the Consortium Agreement (including reference to background and foreground knowledge), according to the policies and context for EU funded projects under Horizon Europe and will be further addressed by the continuous IPR Management, while the exploitable results mature.

The IPR plan of Watson includes the following steps:

- Results identification
- Results description with identification of ownership,

- Establishing the relevant IPR protection measures

To this end, the task leader has prepared a questionnaire to address the owners of / responsible for the (initially) identified exploitable assets, on the following aspects:

- a. Brief description
- b. Owner
- c. Starting and target Technology Readiness Level (TRL)
- d. Nature of the results
- e. Potential use and scope,
- f. Planned form of IP,
- g. Type of IPR claim (background and foreground),
- h. Indicative stakeholders.

There has been a mobilization of the project partners leading the KER and the initial description is included in Annex II.

8.2 Market analysis

The project encompasses a complex and dynamically changing landscape in the food industry. The market is related to food fraud detection, prevention, and confrontation. Fraudulent activities are intentional aim to make an economic gain, in violation of legal rules and at the expense of the customer and pose risks to human, animal or plant health, to animal welfare or to the environment.

According to the European Commission's 2019 annual report¹, fraudulent activities predominantly occur in the supply chains of fats & oils, fish & fish products, meat & meat products, fruits & vegetables, poultry & poultry products. The most common types of food fraud include a) mislabelling, b) replacement/delusion/addition/removal, c) unapproved treatment and/or process, d) absent, falsified, or manipulated documentation and e) IPR infringement.

The food industry is constantly evolving, and new trends are emerging regularly. The latest market trends include the following:

1. *Increasing demand for transparency and traceability:* Consumers are becoming more conscious about the safety and origin of their food products. They are demanding transparency in the supply chain, and companies are responding by adopting traceability technologies such as blockchain, DNA tagging, and RFID.
2. *Stringent food regulations:* Governments across the world are introducing new regulations to protect consumers from food fraud. The EU, for example, has introduced the Food Fraud Network and the Food Safety Authority to combat food fraud and ensure compliance with safety standards.
3. *Growing awareness of food fraud risks:* The prevalence of food fraud incidents and the potential health risks associated with them have raised awareness among consumers and businesses. Companies are taking proactive measures to mitigate risks, such as conducting regular audits, implementing quality control systems, and investing in new technologies.

¹ https://food.ec.europa.eu/system/files/2021-09/ffn_annual-report_2020_1.pdf

4. *Advances in food fraud detection technologies:* Advancements in technology, such as machine learning, artificial intelligence, and spectroscopy, are enabling more accurate and efficient detection of food fraud. New testing methods and analytical techniques are being developed to identify the presence of adulterants, contaminants, and other forms of food fraud.
5. *Collaboration and information sharing:* Collaboration among stakeholders in the food industry is essential in combating food fraud. Companies are partnering with regulators, industry associations, and other stakeholders to share information, best practices, and expertise to enhance food safety and security.
6. *Focus on prevention rather than reaction:* Rather than reacting to food fraud incidents after they occur, companies are focusing on prevention by implementing preventive measures such as traceability systems, supplier management programs, and risk assessments.

The market identification and analysis are expected to identify opportunities, reveal risks, indicate trends, and orient towards exploitation. T6.3 will monitor market needs and technical evolutions throughout Watson's lifetime, identifying market characteristics and dynamics. The analysis will investigate the positioning of current competitors. Points to investigate include the following:

- Identification of market needs allows to determine feasibility by exploring if there is demand for the product or service. Demand according to the market needs will determine if the exploitation of the project outcomes is likely to succeed.
- Market size is a critical factor for the commercialization of a product service. A small market could be a deterrent factor. A large market indicates that there are more potential customers which increase the chances of achieving the expected revenue.
- Market growth – Compound Annual Growth Rate (CAGR): A growing market is a healthy market. CAGR is the mean annual growth rate over a specified period of time longer than one year. A positive rate (growth rate) indicates an attractive market/industry with positive prospects.
- Positioning of current competitors: This is a significant part of the market analysis. Knowing the positioning of current competitors, we can compare and evaluate the projects outcomes and market offerings. A strong value proposition against the competition is critical.
- Emerging trends: The market is constantly evolving. The initial and thorough market analysis that will be performed during the project lifetime, will monitor the market for possible emerging trends. This is a significant factor that could possibly lead to innovation in order to successfully meet the market needs.
- Technical evolutions: Technological evolutions could alter the market value of current product or service offerings. This aspect of the analysis is essential to confirm the technical superiority of the project outcomes.
- During the market analysis, Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis will be performed which identifies the strengths, weaknesses, opportunities, and threats for the project outcomes.

Furthermore, considering that the project targets a huge market, its potential segmentation can ease the upcoming analysis and provides valuable insights. Market segmentations can be based on:

- The use case / product involved, i.e., vertically (wine, honey, extra virgin olive oil, meat, cereal and dairy, fish).

- The stakeholder / role, i.e., horizontally (including the production, processing, distribution, retail and consumption).

Initial market stakeholders include the association of consumers, farmers, food producers, transportation companies, retailers, food processors, nutritionists, food safety and certification authorities, researchers in the agrifood and technology sectors, industrial communities representing the food industry, policy makers and regulators in agrifood sectors, members of EIT food, FAO, and other relevant associations, standardisation organisations at EU and global level.

8.3 Contribution to innovation management

T6.3 contributes to the overall innovation management of the project, sharing the results of the market analysis and contributing, with the collaboration of the project and the technical coordinator to align the market analysis and needs with the Watson work plan and results to support and facilitate innovation management. This will result in an effective positioning of Watson outputs and feedback to partners to calibrate their innovation activities considering the market trends.

According to the Grant Agreement, the innovation management of the project will follow a 4-steps approach, including:

- The Baseline, understanding of the main reasons and motivations of fraudulent activities in the food chain.
- Innovation, designing and implementing the systemic innovations leveraging data driven technologies for prevention and identification of fraudulent activities in the food chain.
- Demonstration of the technologies, processes and frameworks through scenarios and validation campaigns and
- Consolidation through social innovations and governance models assesses the applicability and relevance of digital transformation of food systems towards authenticity and traceability of food systems in different localities and regions.

WP6 and T6.3 leaders will periodically inform and discuss the project and the technical coordinators (UCD and VTT respectively) on the findings of the market analysis so that they are considered in the technical orientation and fine-tuning of the modules to be developed may take place. In parallel, T6.3 will also discuss with WP/task leaders and especially those that are responsible for the KERs (as they will be decided/refined when the task proceeds) and bilaterally exchange information on the market needs, trends, and the characteristics of the results. A dedicated session will be included in each of the plenary meetings.

8.4 Commercial roadmap and exploitation strategy

The exploitation methodology of Watson, according to the Grant Agreement, will follow three main stages of expansion with specific short-term, medium-term, and long-term objectives (as reflected in Figure 26).

- *Short-term objectives:* This first stage corresponds to a period beginning with the start of Watson activities and ends in parallel with the project. During this period, the main objective is to verify and validate through the industrial demonstrators, the quality and effectiveness of the Watson results, concepts, models, tools, and services.

- **Medium-term objectives:** This second stage corresponds to a period beginning with the end of Watson and ending after two or three years, depending on the maturity and completion of the project results. The main objective includes the commercialization of the “to date” results and developments of semi commercial products and services, while it further relates to potential fine-tuning, or expansion of the Watson framework.
- **Long-term objectives:** Corresponds to the commercialization of the Watson framework products and services derived from the first and second stage.



Figure 26 Short, medium, long-term objectives layering

All Watson partners participate in the exploitation and business sustainability tasks of the project. Below in Table 12, the exploitation planning is briefly described per partner category.

Table 12 Exploitation plan per participant category

Exploitation Plan per partner category	
Technology Providers	Partners: INT, SYN, WCS, BIO, EUN, SAH, UPC, UBI, REG, DBC, HER
This category includes technology providers for ICT, smart labelling and tagging, business and risk consultants, etc. They are mainly interested in developing new products, expanding their market presence, as well as founding of spinoffs and start-ups to commercially exploit the developed research results.	
Universities/RTOs	Partners: UCD, INR, CNR, CER, VTT, MRI, SIN, INE, NTU, HUB, HAI, ASI, BAU
This category includes universities, engineering schools, public/private training providers, research centres, etc. They are mainly interested in the research exploitation model, aspiring re-utilisation of the research know-how acquired in future research activities. But also technology transfer.	
Processors/Retailers/Food Service Providers	Partners: MET, MIG, ESP
This category includes all food producers and the associations, processors and retailers. They are mainly interested in the technological exploitation model, developing and delivering products and/or services built on top of Watson’s results and services.	
Food Organizations, Public Authorities and Policy Makers	Partners: ZPS, UNC, DEC, MIT, IGP, EUF, IFA, ADV, APR, BWE, LIC, FIB, FSH, PDA, UVMB, LGL
This category includes food organisations, consumer and farm associations, policy makers, safety authorities, ministries of agriculture and chamber of commerce, etc. They can capitalize on Watson results and on the demonstrators’ outcomes and best practices identified so as to design national or regional policies.	

Partners of the Watson consortium will share their initial exploitation plans (commercial and non-commercial) which will be further enriched during the project. As we are in the initial phase of the Watson project, we focus our efforts on the identification of the KERs. The basis for the investigation is the systemic innovations of Watson, along with the starting and foreseen TRL, included in the Grant Agreement (section

8.1.1 of the present document). The overall exploitation process is considered in Figure 27. At the present time information collection template 1 was circulated among the partners of the consortium. For each KER, the leaders, and the IPR claims (background and foreground) will be identified. This process will also reveal potential joint exploitation and will assist the creation of Watson business models.

The exploitation process includes a deeper analysis that will be performed for each KER to collect more information contributing to the project's exploitation strategy. Thus, templates will be circulated among the partners (Information collection Templates 2).

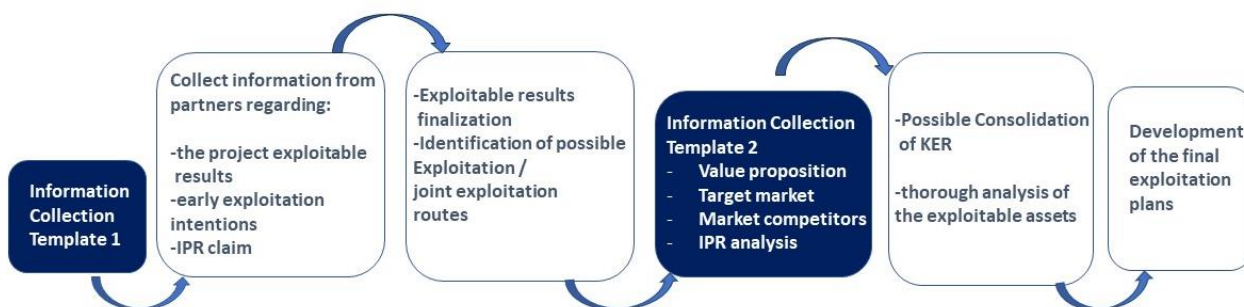


Figure 27 Overall exploitation process

These templates will be used to identify the partners exploitation intentions and to collect information regarding the identification of Key Exploitable Results, the target market and possible competitors of each KER, the value proposition, the ownership of the results and IPR claims. Finally, Business Model Canvas (BMC) will be utilized as a strategic planning tool to summarize and develop business models.

9. Conclusion

In conclusion, the Watson project has developed a comprehensive communication, dissemination, and exploitation strategy that aims to maximize the reach and impact of the project's objectives. The strategy involves a diverse range of channels and approaches tailored to the specific needs and preferences of the targeted stakeholders.

One of the key channels identified is social media, including platforms such as Twitter, LinkedIn, Instagram, and Facebook. The project has set up dedicated accounts on these platforms to regularly share updates, news, and relevant content to engage with the target audience. The project website serves as a central hub for information, resources, and data generated by Watson. It is designed to be user-friendly and accessible, allowing stakeholders to easily access and search for the project's data and materials.

Participation in related events and conferences is another important aspect of the communication and dissemination strategy. These platforms provide opportunities to present the project's findings, exchange knowledge and experiences with other experts, and create networks and collaborations for future initiatives. Publishing scientific papers and delivering presentations at conferences are crucial for sharing the project's research findings and insights with the scientific community. These activities contribute to the project's credibility, visibility, and impact. In addition, press releases will be regularly issued at major milestones of the project to attract media attention and raise awareness about Watson. Regional media outlets will also be targeted through the involvement of consortium members in local demonstration processes.

To ensure the effectiveness and continuity of the communication and dissemination activities, all consortium members are actively involved in this task. Each partner will promote the project through their own websites and leverage their professional networks to spread the news about Watson's objectives and achieved results. This collective effort strengthens the project's visibility, expands its reach, and enhances its impact. The communication, dissemination, and exploitation activities are planned to be carried out throughout the entire duration of the project. This sustained effort ensures that stakeholders, including end users, policy makers, media representatives, and the wider public, are continuously engaged and informed about the project's progress, outcomes, and potential benefits. The ongoing outreach and knowledge exchange are expected to facilitate the successful exploitation and adoption of the Watson solution.

It is important to note that this report represents the first phase of the communication and dissemination activities, and subsequent iterations will provide more detailed information on the upcoming phases, including specific plans, activities, and outcomes. The project is committed to regularly evaluating the effectiveness of the communication and dissemination efforts, using predefined key performance indicators to measure the impact and make necessary adjustments for improved outcomes.

The report also includes the initial planning of the exploitation activities of the project. As discussed, these activities will take place in the context of T6.3, which is expected to start at a later stage of the project (month 12). It has been decided to include this planning for better preparation of the partners and it includes aspects of market analysis, business planning and relative time-plan. Furthermore, the task has pursued to mobilize the whole consortium to validate, update and enhance the description of the Key Exploitable Results, starting from the Grant Agreement. This effort has been successful as for all KER updated, working descriptions have been achieved (including the leading partners per result), paving the way for a fruitful consortium-wise collaboration in the exploitation aspects.

Annex I: Key performance indicators for dissemination and communication

Defining key performance indicators (KPIs) to assess the progress of dissemination and communication in line with the overall project's approach is important to closely monitor the progress of our activities and measure their impact. A set of KPIs (Table 13) which address dissemination and communication activities will be monitored and managed by WP6. This will allow corrective measures to be taken and enforced, whenever the performance and progress marked by the consortium are not aligned with the set objectives.

Table 13 Watson Dissemination and Communication Key Performance Indicators

Measure	Indicators	Target	Means of verification
Watson brochures	Number of brochures distributed	At least 200 per year	Dissemination reporting activities
Posters	Number of posters produced	2 in total	Dissemination reporting activities
High-level materials for policy makers	Number of sets (mission statement, slide-deck, brochure)	At least 1 per year	Dissemination reporting activities
Watson website	Number of unique visitors	> 1000 visitors/year	Google analytics
Social networks	Number of followers in: Twitter, LinkedIn, YouTube	> 5000/ > 2000/ > 10000	Active profiles on such networks via regular posting & monitoring
Watson Workshops	Number of workshops and number of participants	3 workshops (100 participants/event)	Attendance proofs (e.g., photos, presentations, videos, interviews)
Videos	Number of videos published on the project's YouTube channel and average number of views	2 videos and > 1000 views per video	Videos published via the YouTube channel of the project
TV spots	Number of TV spots in TV	3 TV spots	TV spots shown in TV channels
Scientific publications	Number of peer-reviewed papers/articles	At least 15 by the end of Watson	Papers/articles published in proceedings & online in premium quality conferences and journals.

Annex II: Initial description of key exploitable results

The following Table 14 provides a brief and initial description of the key exploitable results as identified in this first phase of the project. Task 6.3 with the support of the coordinator have successfully involved the responsible partners, extracted information, and pursued a first alignment. The results will be presented and discussed in the forthcoming plenary meeting (September 2023 in Athens) and pave the way for a fruitful collaboration of the project partners in the context of the project exploitation activities.

Table 14 Watson Key Exploitable Results

KER Title	Related task	Leading partner	TRLs (start and end)	KER nature	Potential use	Scope of KER	Planned form of IP protection	Type of IPR claim (background and foreground)
Early Warning System	T4.1	UBI	From 3 to 7	Software AI pipeline	Commercial use (to be specified)	Turnkey solution	Copyright	Background: ML/AI knowledge Foreground: Early warnings algorithms, pre-trained models, AI – pipeline
Blockchain Platform for Interconnection of Systems in the Food Chain	T3.2 and T3.3	NTU, SYN	From 5 to 7	Methodology: Enhancing transparency and trust in food product supply chains. Software: Blockchain platform for data storage and use by different stakeholder groups, key Watson technologies interfaces, web and mobile applications for managing the Watson platform, interoperability mechanisms in Food Systems. Dataset: Comprehensive dataset comprising detailed information about food products from all supply chain stages.	Internal: Integration of the platform within the supply chains of partner companies. Commercial: The platform will serve as a supportive infrastructure for Watson key technologies, utilizing blockchain-based data storage. To access the platform and perform transactions,	The scope of the KER encompasses the implementation and commercialization of the blockchain platform, interfaces with key Watson technologies, web and mobile applications, and interoperability mechanisms in Food Systems.	Licensing	Background: Blockchain ledger and standard-based interoperability mechanisms. Foreground: The combination of Blockchain capabilities and data interoperability flows to be pursued in the context of Watson.

				Database: Distributed ledger database to securely store and manage the collected food product data.	payment fees will be required.			
Digital Food Product Passport	T3.5	INTRA	From 3 to 7	<p>Methodology: Track and manage food product data for transparency and trust.</p> <p>Hardware: Cloud-based servers</p> <p>Software: Decentralized data management network, web-based application (front-end / back-end), distributed ledger.</p> <p>Dataset: Data describing food products, meta-data on food product journey-to-shelf, decentralized identifiers.</p> <p>Database: Distributed ledger.</p> <p>Market: Digital solution for enhancing transparency and trust in food industry.</p> <p>Policy/Regulation: Consumer protection laws mandated by EU.</p> <p>Prototype: Functional end-user application to demonstrate the Digital Food Product Passport capabilities.</p>	<p>Internal: Implementation within the partner companies' supply chains</p> <p>Collective: Collaboration with other companies in the food industry for broader adoption</p> <p>Open Use: Free access to basic features for consumers</p> <p>Commercial: Premium subscription model for enhanced features and services</p>	The scope of the KER encompasses the development, testing, and successful commercialization of the blockchain-based Digital Food Product Passport application, as well as the establishment of strategic partnerships and collaborations within the food industry.	<p>Patents: Secure patents for the unique blockchain-based methodology and algorithms</p> <p>Trademarks: Register trademarks for the Digital Food Product Passport brand name and logo</p> <p>Copyright: Protect software code, design, and content under copyright laws</p> <p>Trade Secrets: Maintain confidentiality of proprietary algorithms and database structures</p>	<p>Background: The background technology for the Digital Food Product Passport (DFP) includes blockchain technology as a fundamental layer, ensuring secure and transparent data transactions. Complementing this, database management systems efficiently organize the collected data, while web development technologies facilitate user interaction with the DFP platform</p> <p>Foreground: The unique combination of blockchain technology, food traceability methodology, and software development form the core of the Digital Food Product Passport's IP</p>
Mobile Applications for Food Product Authenticity and	T4.4	WCS	From 7 to 8	Smartphone application that can be used either stand-alone or by being integrated with the project's core infrastructures.	Commercial	The scope of the application generates value regarding the nutritional value of each consumer product as well as	Licensing	<p>Background: A first version of the application is developed and it is available on Google Play.</p> <p>Foreground: A new version will be developed (utilizing core</p>

Consumer Engagement						provides information (for awareness developing) on the production of each product.		features of the previous one), available in both App Stores and integrating features related with Watson.
Multi-Sensor Food Product Scanning Devices for Food Safety & Authenticity	T4.5	ASI	From 3 to 7	Software	Internal/commercial	Turnkey solution/consulting	Confidential information (secret)	Background: Know-how about the use of NIR and HSI technologies for the characterization of regional honeys Foreground: Technology, based on portable NIR and in-line HSI, for the detection of main honey frauds in regional PGI value chain
DNA-based Sensor for Transparency in Transport and Storage	T4.2	BIO	From 5 to 7	Device+Software Method: genetic identification of olive oil authentication /traceability through a portable molecular device that can be utilized on-site. The dataset will be fed on a blockchain system. Dataset: numerical data on a .csv file Targeted market: olive oil industry reshaping, full transparency along the value chain Prototype: functional DNA-based sensor for end-user application	Commercial utilization to be discussed later on the Project	Enhance strategic partnerships from the food industry, successful commercialization of the device.	Confidential information	Background: deep knowledge of DNA-based authentication solutions for the genetic identification of olive oil. Foreground: scale-up the technology to be utilized on-site with the same robustness.

Blockchain-enabled IoT platforms	T3.4	CER	From 4 to 7	Methodology: (1) design a data model for tracking and tracing products and assets in the food chain (2) development of an IoT middleware platform that will support food traceability. Dataset: Data will be collated and subjected to analysis which will feed into useful decision support tools for the stakeholders along the food supply chain making optimal use of existing data streams, allowing the optimisation of processes, reduction of food waste as well as further assurance of safety and integrity along the chain. The data model will extend the EPCIS object model with sustainability and environmental performance parameters.	Internal and commercial	The scope of the KER focuses on the development and further deployment of the blockchain-enabled IoT platform within the Watson platform.	Confidential Information	IoT platforms/assets of INT, (notably INT's DataCrop and OpenIoT platforms), INE (AgIoT platform) and SYN's (SynField Platform).
Fast, Inexpensive and Flexible Wine Colour Inspection	T3.1	INE	From 3 to 6	Software, models and results from analysis with other technologies	Internal and commercial	The scope of the KER encompasses the analysis of the use in the specific scenario and wrapping for running on specific type of devices	Patent and copyright	Background: ML/AI knowledge and CoSi patent family comprising the priority patent applications PT109847, PCT/IB2018/050184, currently granted in China (CN110199297), Japan (JP7082129), South Korea (KR102447599), Europe (EP3568806), and USA (US11216980).

								Foreground: Configurations for coarse monitoring of food product colors; results of this application
Smart Tag with Printed Intelligence and Functional Codes	T4.3	VTT	From 4 to 7	know-how and expertise for manufacturing of smart tags with printed intelligence combining identification and monitoring technologies,	Commercial use (to be specified)	Turnkey solution	Patents, licencing	Background in smart tags and functional codes
Automatic Product (Label) Identification	T3.1	INE	From 4 to 7	Software	Internal and commercial	The scope of the KER encompasses the development and testing of the food product label and processing, as well as the establishment of strategic partnerships and collaborations within the food and ICT industry	Copyright: Protect software code, design, and content under copyright laws Trade Secrets: Maintain confidentiality of proprietary algorithms and database structures	Background: ML/AI and computer vision knowledge Foreground: models and algorithms for label information extraction
Vineyard production monitoring with IoT developed using AgIoT solution	T3.4	INE	From 5 to 6	Hardware and Firmware	Internal and commercial	The scope of the KER encompasses the development and testing of the solution in the laboratory and in the vineyard.	To be defined	Background: AgIoT solution Foreground: extended AgIoT solution with advanced sensorial technology towards advanced monitoring.
Physical Unclonable Functions for Improved Traceability	T4.3	VTT	From 3&4* to 7	production of PUF solutions for item level identification in traceability	Commercial use (to be specified)	Turnkey solution	patents, licencing	Background in printed intelligence, image processing and cryptographic solutions, also silicon based PUFs have been investigated. E.g.

								cryptographic solutions have been validated in the lab (TRL4) through the D4FLY H2020 project.
Risk-Based Food-Fraud Decision Support Module	T4.1	REG	3 to 7	Methodology: Tracking risk factors through the supply chain, quantifying the risk, and propagating it through to the final product. Software: Implementation in a digital product	Commercial use (to be specified)	Turnkey solution	Copyright: Protect software code, design, and content under copyright laws Trade Secrets: Maintain confidentiality of proprietary algorithms	Background: Risk assessment and uncertainty propagation methodologies Foreground: Risk model for food fraud
Hand-held Near Infrared Spectroscopy (NIRS) Device	T4.5/T5.5	INRAE and BSA (task led by ASI) /MSI	From 4 to 7	Software	Commercial use (to be specified)	Turnkey solution	Copyright	Background: Chemometric knowledge Foreground: NIRS authentication models.

