Funded by the European Union

DIVINE - Grant Agreement 101060884 HORIZON-CL6-2021-GOVERNANCE-01-20

DIVINE - DemonstratIng the Value of agri data sharIng for boostiNg data Economy in agriculture

Deliverable D1.2

Title: Project Report Year 1

Dissemination Level:	**PU**
Nature of the Deliverable:	**R**
Date:	**30/09/2023**
Distribution:	**WP1**
Editor:	**Ioanna Roussaki (ICCS)**
Contributors:	**Stavros Xynogalas, George Routis, Marios Paraskevopoulos (ICCS); John McLaughlin, Kieran Sullivan, Christine O'Meara (SETU); Sergio Comella, Delia Milazzo (ENG); Soumya Kanti Datta (DIGI); Raul Orduna Urrutia (VICOM); Iraj Namdarian, Concetta Cardillo (CREA); Alessandra Diana, Adalgisa Martinelli (FE); Nikos Kalatzis (NP); Tomaz Bokan (ITC); Anil Turkmayali (Anil); Kevin McDonnell (UCD); Juan Enriquez (ADSC)**
Reviewers:	**Ronan Frizzell (INLE); Adalgisa Martinelli (FE); Konstantina Giannakopoulou (ICCS)**

European Union
European Regional Development Fund

Disclaimer

Revision History

Date	Rev.	Description	Partner
31/08/2023	1	Table of Contents	ICCS
15/09/2023	2	Delivery of inputs to all chapters	ALL
19/09/2023	3	Integration of partner inputs. Preparation of draft for internal review.	ICCS
25/09/2023	4	Review process completion	INLE, FE
29/09/2023	5	Addressing of review comments	ALL
30/09/2023	6	Deliverable finalisation and preparation of version to be submitted.	ICCS

Table of contents

1 Executive Summary

The current document constitutes the deliverable D1.2 “Project Report Year 1” of the DIVINE project. Herein, the progress made during the first year of the project by all the partners of the consortium is presented. This deliverable is the output of Tasks 1.1, 1.2, 1.3, 1.4 and 1.5, reporting activities related to administrative coordination, technical management, agricultural coordination, risk management, quality assurance and innovation management, as well as data and ethical management, planning and assessment, which took place during the first year of DIVINE. The Project Management Handbook where all the management, administrative and communication protocols are described is also integrated into the current report.

More specifically, the current status of the work performed both on a work package (WP) level and holistically towards achieving the objectives of the project is presented against the initial planning of the respective activities. For all the tasks of each work package, progress made along with significant results achieved during the first year of the project are reported. Moreover, potential risks, deviations from the Description of Action and corrective actions taken, if needed, are described. Then, planning of next steps and actions in the next period is reported. In the end, deliverables submitted, and milestones achieved in the reporting period are listed.

Overall, during the first 12 months of the DIVINE project, we have made significant progress relative to our identified project objectives, as discussed below. In addition, each WP has undertaken its various tasks without significant variation from the Description of Work, while the project risks were minimal during this reporting period. The project has embarked on its technical activities and piloting work and has achieved a substantial level of dissemination and communication of results. Finally, the success of the preliminary activities of DIVINE during its first year is largely attributed to the unobstructed communication and collaboration among the partners of the consortium irrespectively of the highly diverse background of each one of them.

2 Introduction

DIVINE aims to demonstrate the value of agri-data sharing to boost the data economy in agriculture. To achieve this, specific objectives have been set, including the establishment of an ecosystem to aggregate public and private agri-data and connect existing agri-data spaces; the adaptation of information models to enable agi-data interoperability; the exploitation of facilities to ensure transparency, trust and sovereignty, traceability and usage monitoring in data sharing; the establishment of an assessment framework for cost-benefit analysis of agri-data sharing and providing decision support tools to stakeholders in agriculture; the adaptation of agri-data sharing governance models and policies; the adoption of a multi-actor approach; the adaptation of data-driven business models for agri-data exploitation; and the assessment of the impact, the efficiency and the performance of the ecosystem through specific pilots.

The work that needs to be performed towards achieving these objectives has been divided into 7 interdependent WPs, which in turn are decomposed into 31 tasks, according to the DoA. All the WPs have launched their activities during the first year of the project. Some tasks have progressed to a mature stage while others are still at their infancy, in line with the timeline set in the DoA. All of them are connected with WP1 which corresponds to the management and the coordination of the entire project, encompassing tasks about administrative coordination, technical management, agricultural coordination, risk management, quality assurance and innovation management, as well as data and ethical management, planning and assessment. The current deliverable D1.2 “Project Report Year 1” is the output of WP1 tasks, and its purpose is to document the progress of DIVINE against our stated objectives, and to highlight planned vs achieved activities on a per WP / Task level.

During the first year of the DIVINE project, significant progress has been made producing important results, towards achieving the objectives and the milestones of the project without many deviations from the DoA. All the preparatory technical activities planned during the reporting period have been successfully performed, enabling the unobstructed launch of the 4 DIVINE pilots thanks to the effective communication and collaboration among the partners of the consortium. The respective preliminary achievements have also been disseminated and communicated to large, targeted groups of stakeholders. Some minor deviations from the DoA and the respective corrective actions taken due to unforeseen risks and challenges encountered during this first period are justified and are taken into consideration throughout the planning of the next steps for the upcoming period of the project.

3 Planned versus Completed Work on Overall Project Objectives

3.1 Objective 1

3.1.1 Description

Establish an **ecosystem** to aggregate private and public agri data that interconnects existing agri data spaces, thereby enabling the sharing of data among stakeholders.

3.1.2 Status

The development of the DIVINE ecosystem is primarily based on WP3 – Agriculture Data Spaces Ecosystem (ADSE) and secondarily on WP2 – Ecosystem Architecture and Technical Integration.

From a WP3 perspective, significant progress has been achieved in the first development of an ecosystem for aggregating private and public agricultural data, interconnecting existing data spaces. First, the initial DIVINE Agriculture Data Model (AIM+) has been built based on the DEMETER AIM, aiming to support semantic interoperability based on well-known ontologies. A comprehensive data management and integration plan has been developed to enable receiving data and sharing them with external stakeholders. Moreover, quality assurance, and privacy measures have been implemented, motivating farmers and interested SMEs to share their data. Stakeholder engagement is robust, having approached all the targeted groups of stakeholders identified in the DoA, including farm/business advisory service providers, dataspace providers, Farm Management System developers and manufacturers. Additionally, pilot projects are ongoing, fostering the integration of data derived from them. The respective initial prototype that will be used in the first round of the pilots has been implemented and is described in D3.1 - Agriculture Data Spaces Ecosystem – Release 1, which was submitted on M11.

Under Task 2.2, WP2 has carried out a state-of-the-art review on existing agri-data spaces and extracted a summary of features in relation to public-versus-private, costs for users, accessibility and APIs, available demos, etc. Six existing data spaces of interest (both private and public, both national and European) have been identified. The WP2 dashboard (Task 2.3) and stakeholder collaboration space (Task 2.4) are also central to the wider ecosystem. In the first case, the main features and the main functionalities of user interfaces and adaptive dashboard visualizations have been specified to enable the end-users to interact with data and resources related to their agricultural activity. In the second case, important steps have been taken towards the inclusion of all the different types of stakeholders to support their collaboration. All the respective information is published in D2.1[1], providing both context and examples of the options being pursued for these tools. Moreover, DIVINE reference architecture is under development, incorporating all the lessons learnt during technical development and the first pilot validation, and is planned to be released in M18.

[1] D2.1: “DIVINE technology integration tools – Release 1”, September 2023.

All these actions have incorporated the increased use of digital/data technologies and are expected, after their adoption in agricultural practice, to contribute to a significant increase in agri-data sharing.

3.2 Objective 2

3.2.1 Description

Analyse and adapt **information models** in the agriculture sector to enable data interoperability across existing agriculture data spaces, Farm Management Information Systems (FMIS), and Agricultural Knowledge Information Systems (AKIS).

3.2.2 Status

This objective is also based on WP3 – Agriculture Data Spaces Ecosystem (ADSE) and on WP2 – Ecosystem Architecture and Technical Integration.

WP2 completed a 'worked example' of the interaction between a data provider and a data consumer to explore how information models and interoperability affect the exchange. While information models will vary significantly across different agri-food sectors, the structure and storage of the data is something that can be addressed and improved by all data providers. A state-of-the-art review of existing approaches/standards to enable interoperability across several dimensions has also been performed in the context of Task 2.2. Finally, an initial set of tools and supports was identified and shared with the pilots to support technical interoperability.

Concerning WP3, the work done towards accomplishing Objective 2 can be mapped to the identification and comparison of different existing information models to be used to enhance data interoperability across existing agriculture data spaces, FMIS and AKIS in the agriculture sector. In Task 3.1, specific ontologies and data models have been identified to ensure semantic interoperability in the DIVINE AIM+.

Both technical and semantic interoperability are supported by the use of advanced digital and data technologies. Once they are achieved, they are expected to increase agri-data sharing and facilitate the work of standardization bodies, manufactures, dataspace providers, Farm Management System developers and software developers.

3.3 Objective 3

3.3.1 Description

Enhance the ecosystem with facilities ensuring increased **transparency** in: data sharing, data **trust** and sovereignty, data traceability and usage monitoring.

3.3.2 Status

From a WP3 perspective, significant progress has been made in improving the transparency of the data ecosystem through the ADSA identity management system. DIVINE ensures data transparency, protection, trust, sovereignty, traceability and usage monitoring in compliance with European regulations. Key objectives include privacy, security and optimisation of core modules. Users are empowered with self-sovereign identities, facilitating control over digital identities. The technical framework streamlines user and application processes, reinforcing the commitment to a secure, privacy-compliant and user-centric solution in line with European regulations.

Moreover, Objective 3, as a critical component of the development efforts within WP6, has made substantial progress and is currently in an advanced stage. This particular objective involves a multifaceted approach, combining practical considerations with theoretical foundations, especially as they related to the evolving development of the DIVINE project.

Task 6.1 has played a pivotal role towards the achievement of Objective 3. Through meticulous legislative analysis and a discerning examination of regulatory gaps (D6.1: Development & integration of governance models, policies and regulations for agricultural data sharing - Release 1 (produced at M12)) Task 6.1 has identified and elucidated key data-related facets essential for the ongoing development of DIVINE. This includes comprehensive insights into dealing with the development of new AI products, managing data spaces and considerations necessary for promoting robust data sharing and trust-building among farmers and other stakeholders.

Task 6.2 has been working diligently together with Task 6.1, complementing its efforts with the creation of an extensive guidelines' manual (D6.2: Agricultural Data Sharing Policy Framework Adoption Manual and Guidelines - Release 1 (produced at M12)). The completion of this task is critical to achieving the goal of improving the agricultural data sharing ecosystem. It focuses on integrating the DIVINE guidelines into the ADSE, providing clear guidelines through the development of a manual, and placing a strong emphasis on data privacy compliance. This work will ensure that the ecosystem not only promotes transparency, trust and data sovereignty, but also facilitates effective monitoring of data use, in line with the overarching objective.

Overall, the efforts made in WP6 to achieve Objective 3 have greatly advanced and will, for the next releases, be subjected to reviews which will be necessary to adapt the regulations and the manual to the specifics of DIVINE. All these consolidated actions will lead to the achievement of the KPIs set in the DoA, having 100% of the pilots with fair governance rules and positive Security, Privacy Impact Liability Assessment.

3.4 Objective 4

3.4.1 Description

Establish an **assessment framework** for cost-benefit analysis of agri data-sharing (economic, societal, environmental, climate-related, etc.) and based on these provide **transparent awareness and decision support facilities** to farmers and other stakeholders in the agriculture sector.

3.4.2 Status

The dashboards and collaboration spaces in WP2 are ensuring transparency and assessment remain at the forefront for data users. These tools allow users to establish the required metrics for their individual enterprises, e.g. setting up *as is* and *what if* scenarios.

From the WP3 point of view, the exchange of data, that is made possible within ADSAs, allows the creation of the conditions for the completeness of information so that farmers are able to make decisions based on transparent awareness foundation processes.

From a WP4 perspective, during the first year of the project, progress has been made in establishing data analytics, benchmarking, and decision support systems for agricultural data sharing. This includes the integration of analytics tools, the development of decision support systems, and efforts to create a customizable dashboard. Expected outcomes include increased stakeholder awareness, the ability to conduct comprehensive cost-benefit analyses, increased transparency and a tangible demonstration of the benefits of agricultural data sharing within the European Union. Anticipated outcomes encompass heightened stakeholder awareness, the ability to conduct comprehensive cost-benefit analyses, greater transparency, and a tangible showcase of the advantages stemming from agricultural data sharing within the European Union. These outcomes closely align with the WP's outputs.

3.5 Objective 5

3.5.1 Description

Analyse and adapt agri data-sharing **governance models and policies** to enable their use by public and government services; mechanisms to monitor the impact of these models will be built into the ecosystem.

3.5.2 Status

At present, the project has made significant progress towards achieving Objective 5. This objective involves a multi-faceted approach aimed at shaping the way agricultural data is managed, shared and monitored. Here's an elaboration of the ongoing work within WP6 to achieve this objective:

D6.1: Development & integration of governance models, policies and regulations for agricultural data sharing - Release 1:

This deliverable represents a significant step in the project. It marks the first release of governance models, policies and regulations specifically tailored for agricultural data sharing. This phase has involved a thorough analysis of existing regulatory requirements in the agricultural sector and the broader context of data governance.

The project partners have worked diligently to identify gaps and opportunities within the current data sharing governance landscape. This includes a comprehensive review of legal frameworks, ethical considerations and relevant policies. The ultimate goal is to develop guidelines which would ensure responsible data sharing practices in agriculture and would address issues such as: data ownership, privacy, security and global alignment.

Although this release is referred to as "Release 1", it means that the project has established a basic framework for agricultural data governance. However, it's important to recognise that this framework will be further refined and enhanced as the project progresses.

D6.2: Agricultural Data Sharing Policy Framework Adoption Manual and Guidelines - Release 1:

D6.2 complements the work of D6.1 by providing practical guidelines in a first draft for implementing the policies and regulations developed in Task 6.1. It focuses on bridging the gap between theory and practice by making these governance models workable in real world scenarios.

This deliverable emphasises the integration of these policies and regulations into the ADSE. Collaboration with WP3 has been crucial to ensure seamless integration, making the policies practically applicable within the context of the project.

In addition, D6.2 aims to promote replicability. It includes a comprehensive Policy Adoption Manual that provides step-by-step guidance and best practices for external stakeholders, including government agencies and other organisations. This manual in its next release will simplify the process of adopting the DIVINE guidelines and ensures consistent data sharing practices in agriculture. Finally, WP3 worked closely with WP6 to identify the policy framework that could be the most appropriate option for the DIVINE ecosystem. Trust and privacy aspects will be considered during the study and development by partners involved in authentication and authorisation.

The current status of WP6 reflects significant progress towards achieving Objective 5. The project has developed a basic framework for agricultural data sharing governance and provided practical guidance for its adoption. These deliverables D6.1 and D6.2 demonstrate the project's commitment to promoting responsible data sharing in agriculture, while actively monitoring its impact at both EU and global levels. As the project evolves, these frameworks and guidelines will continue to be refined and improved to achieve even greater effectiveness.

3.6 Objective 6

3.6.1 Description

Establish a specific **multi-actor approach** (MAA) to engage farmers and domain experts in the agriculture sector to enable co-created research design, deployment, and validation.

3.6.2 Status

This objective is mainly addressed through the work of WP7 in which the development of the project Multi-Actor Approach (MAA) was conducted. Moreover, it has also been tackled by WP2 and its Stakeholder Open Collaboration Space (SOCS), where (among others) KPIs to evaluate the effectiveness of the Multi-Actor Approach have been defined. The SOCS platform itself has been created within WP2, while WP5 aims to actively track the number of domain experts and suppliers teaming up to address the needs expressed by farmers. To push project impact, all tasks working to increase impact are based on a balanced power model, where supply and demand requirements are taken into consideration. Approaches are being selected on the basis of their openness (at the level of data models, APIs, SW licenses) so that companies of different sizes have more opportunities, where vendor lock-in is avoided and more innovation can happen (this is reflected in the communication strategy, the work on standards and the exploitation roots defined by WP7).

3.7 Objective 7

3.7.1 Description

Analyse and adapt data-driven **business models** for increasing and extending agricultural data exploitation, as well as promotion of the project to various audiences results via suitable Dissemination and Communication channels.

3.7.2 Status

Work towards this objective has been primarily carried out by WP7. More specifically, Task 7.1 has designed a survey circulated to all consortium members in order to collect different points of view, in particular regarding the business model that each of them considered most applicable to the Agricultural Data Space Ecosystem (ADSE). All the feedback collected have been coupled with the findings of a respective market analysis. Subsequently, they have been used as input for the work on the design/adaptation of suitable (new) data-driven business models that can be used in the agri-data economy and have the potential of increasing the agricultural data exploitation. DIVINE is currently focusing on the design/refinement of such business models, but it certainly keeps an eye out in the market and discusses relevant issues with various related players to be prepared. This is a work in progress and evolves as the project matures.

Moreover, within the framework of Task 7.2, DIVINE has been strongly promoted to numerous scientific or business related events, while significant impact has been ensured via the strong presence of the project across social media channels and via its website. The respective findings indicate that DIVINE managed to engage significant populations of various related stakeholders and audiences.

3.8 Objective 8

3.8.1 Description

Demonstrate and assess the impact, efficiency, and performance of the ecosystem and the developed solutions via complementary pilots to be carried out engaging the wide range of related stakeholders and pilot-specific technologies and tools.

3.8.2 Status

This Objective is tackled mainly by WP5 that has designed four complementary pilots aiming to demonstrate the outputs delivered by the technical WPs towards the establishment of an Agricultural Data Space Ecosystem. The design and specification of these pilots has been driven by a series of surveys, engaging pilot stakeholders and various players in the agriculture sector. The respective stakeholder requirements extracted will serve as reference for assessing the validity, performance and impact of the DIVINE outputs and the overall set of the technologies and tools developed by the project.

At this stage, the project has completed the design of the pilots and the implementation of the initial prototypes for most enabling services; moving forward, the project is about to start the integration and deployment process to enable the kick-off of the pilot round 1 execution planned for the next couple of months. The initial pilot design and requirements analysis are reported in Deliverable D5.1 (DIVINE pilot design, management, and deployment - Release 1).

4 Planned versus Completed Work on WP Level

4.1 WP1 – Project Coordination (ICCS)

WP1 is responsible for the overall management of the DIVINE project. In this respect, it aims to handle all administrative coordination matters, to manage the project from a technical and agricultural perspective, take care of any issues related to risk management, quality assurance & innovation management and to address all aspects related to data and ethical management, planning and assessment. The Consortium has set the ground for all matters above during the first month of the project's lifetime, putting together the DIVINE Project Handbook. Additionally, the project's initial data management plan was prepared and delivered. Overall, since the project kick-off, the respective WP1 tasks proceeded as planned and the WP1 partners are carrying out their duties as decided upon and no deviations have occurred so far.

4.1.1 Task 1.1

Task	**Title (Leader, Duration)**
1.1	Administrative Coordination (ICCS, M01-M36)
Contributors	ICCS
Summary of Progress during Year 1	
During this first 12 months of DIVINE, Task 1.1 was focused on establishing all administrative coordination processes and tools for the project, as documented in the Project Handbook produced. More specifically, it established the project communication procedures agreed upon, it designed suitable document/deliverable and presentation templates, it has been in charge of ensuring suitable time and human resource management and allocation, especially with regards to the project's deliverables and internal documents. Moreover, it handled any communication with the European Commission and respectively reported on the project's progress. It has planned for the physical or remote plenary project meetings. It has been responsible for the project's finance administration payment management and budget distribution. Finally, it has been responsible for the design, implementation and maintenance of the DIVINE website. All items above have been sufficiently addressed and have led to tangible outputs described below.	
Significant Results during the Year 1	
As already mentioned, the **DIVINE Project Handbook** has been prepared and delivered at M01. This corresponds to Internal Document (ID) 1.1 and is included as Annex A of this document. It elaborates on all processes, mechanisms and information for running the project, including but not limited to milestones, timeline, work structure, deliverables, templates to be used, communication platform details, meetings and teleconferences foreseen and procedures to be followed. It also provides the details of all partners' information as a one-stop information source,	

also elaborating on the partners' roles and hierarchy.

Regarding the financial administration of the project, this task has designed a detailed **Quarterly Financial Report** (QFR) template that has been circulated to and approved by the Consortium during the first couple of months of the project's lifetime. Since then, it has coordinated the collection of QFRs from all partners aiming to closely monitor the financial resource consumption across the various WPs/Tasks and early detect any deviations (i.e., cases of partners or Tasks over- or under-spending their allocated resources).

Moreover, under Task 1.1, the **DIVINE website** (https://divine-project.eu/) has been launched since the first months of the project to support its initial communication needs, in line with the respective KPI set in the DoA. It is a fully functional website built on the latest web development technologies, supporting both a desktop and a mobile version. It also encompasses a TLS/SSL certificate, complying with the current web security standards. Regarding its structure, it hosts several different sections/tabs, such as "Home", "Consortium", "Objectives", "Pilots", "Results" and "News". The website is frequently updated, especially its "News" page that features the latest news of the DIVINE project in reverse chronological order.

Finally, this task has been responsible for leading the preparation of the **DIVINE Consortium Agreement** that has been circulated, approved and submitted.

Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested

No significant risks have been identified during this period or deviations from the DoA. Nevertheless, there have been some administrative changes regarding key roles of the project, due to lack of sufficient resources from two partners (i.e., INLECOM and WFO). The respective roles have been reassigned to other partners, which sometimes was escorted by a respective PM reallocation. More specifically, the leadership of WP7 originally assigned to INLECOM is now handled by ICCS, the leadership of Task 1.4 originally assigned to INLECOM is now handled by ICCS, the leadership of Task 4.4 originally assigned to INLECOM is now handled by SETU, the leadership of Task 6.2 originally assigned to INLECOM is now handled by ENG, the leadership of Task 7.1 originally assigned to INLECOM is now handled by ENG, and the leadership of Task 7.2 originally assigned to WFO is now handled by ICCS. The reallocation of these roles was done upon project start to ensure a smooth project kick-off.

Next Steps in Next Period

Task 1.1 aims to carry on its administrative coordination activities in the next period. Moreover, as soon as all QFRs of partners for year 1 are delivered to the coordinator, there will be a crosscheck against the planned resource consumption and tha actual resource consumption for the period M01-M12, aiming to identify considerable under and overspending cases or cases where the cost claims are not aligned with the outputs delivered. In case any amendment is required in this respect or for any other management or technical reason, this task will be responsible for preparing the respective DIVINE contract amendment. Finally, this task will carry on maintaining the project's website and keeping it up to date with any new developments.

4.1.2 Task 1.2

Task	Title (Leader, Duration)
1.2	Technical Management (SETU, M01-M36)
Contributors	SETU

Summary of Progress during Year 1

Task 1.2 commences in M01 and will run for the duration of the project. It is complementary to the other tasks of WP1 and focuses on the coordination of the technical activities of the work packages. While much of the effort will be on the research and development activities of WP2-6, outputs of these are also a critical input to the exploitation and dissemination activities of WP7.

Different organisations have different philosophies when it comes to developing software solutions. Some may adopt rigorous agile methodologies, others a pick and mix approach (e.g., kanban boards). Experience has shown it to be counterproductive to attempt to impose a single methodology across a disparate development team spread across several organisations, so the organisation within individual development teams has been left as an internal matter.

Having said that, the overall coordination takes the form of an iterative agile style approach, with each iteration comprising the following:

i. **Gather requirements** – the technical partners interact with the end-users (i.e., the pilots) to understand initial requirements and in subsequent iterations refine those based on results.

ii. **Plan** – based on the requirements, derive a set of use cases and associated user stories, which will drive the development phase.

iii. **Develop** – develop solutions to satisfy the requirement.

iv. **Deploy** – deploy the solutions to the testbed/platform and make them available to stakeholders.

v. **Evaluate** – did the deployed solution meet the requirements? Do any changes need to be made?

A major part of this first year's activities has been to elicit the stakeholder requirements (in this case, from the pilots) to gain an understanding of the problems they aim to address (phase i). Bi-lateral meetings have been held between pilots and relevant technical partners, as an ongoing series. This has been the prime responsibility of Task 5.1 and is reported in Deliverable 5.1. Phase ii involved the analysis of the requirements and identification of relevant use cases, evaluation of existing datasets, identifying additional datasets which may be required. While phase ii is still

ongoing to an extent, development (phase iii) has commenced on prototype solutions.

Overall coordination between technical partners (and other relevant stakeholders) takes the form of a technical ”stand-up” meeting where brief updates are given for each task, and any issues or impediments raised. This is currently a bi-weekly meeting and kept brief and focused (around 30 minutes). This gives a good perspective of general technical progress and allows the identification of the need for more focused meetings between individual partners.

Significant Results during the Year 1

As outlined in the previous section, a deep understanding of the pilot requirements has been achieved. Ongoing communication channels between the relevant stakeholders has been put in place. Overall communication between the technical partners has been facilitated by the stand-up meetings, and regular contact and discourse is maintained where necessary on specific issues.

From a platform perspective, a Gitlab repository (https://git.divine-project.eu) has been created (T2.5), and work has started on the creation of infrastructure components to support the pilot testbed (T5.2). As stated above we are currently primarily in the “Develop” phase with work ongoing in developing prototypes across all pilots. Initial deployment of the Stakeholder Open Collaboration Space (T2.4) has been completed, and Vicomtech and SETU have collaborated closely in identifying a unified platform for the creation of the various user interface components required (T2.3 and T4.4 respectively).

Finally, a shared document repository and Microsoft Team for the project has been created and made available by SETU. This step was taken to avoid potential GDPR issues through use of alternative cloud platforms.

Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested

At the time of writing, no significant risks have been identified. Similarly, no deviations from the stated goals of the grant agreement have occurred.

Next Steps in Next Period

As stated above, development work on pilot solutions is ongoing. Work has started on the deployment platform (phase iv) and in the next 1-2 months deployment of the initial solutions will commence.

The bi-weekly stand-up meetings will continue, and the option remains to increase the frequency of these to weekly. Additionally, these will be augmented by scheduling regular meetings between the technical and pilot partners. These will be longer – 1 hour in duration – allowing feedback and input from the pilots. This is particularly important with the upcoming pilot rollouts. The first meeting will be in M12 and initially will be every 4 weeks.

4.1.3 Task 1.3

Task	Title (Leader, Duration)
1.3	Agricultural Coordination (CREA, M01-M36)
Contributors	CREA

Summary of Progress during Year 1

This task is responsible for handling the coordination of agricultural matters and stakeholders in the project. In this respect, the of prime importance is the 6th objective of DIVINE that aims to "Establish a specific multi-actor approach (MAA) to engage farmers and domain experts in the agriculture sector to enable co-created research design, deployment, and validation". Under this perspective, the multi-actor approach (MAA) ensures that projects, such as DIVINE, focus on real needs and problems that an end-user is facing. As we are building innovative solutions that address specific needs or problems, while involving the end-user in the process, the resulting product is highly adopted. The multi-actor approach is used to ensure that newly developed technical solutions meet real life needs. In order to ensure the acceptance of the technical solution and thus its long-term use, usefulness and usability are both crucial.

Starting from the objectives relating to the MAA in DIVINE set out in the DoA and applying the MAA conceptual framework applied in DIVINE (Co-creation with all actors, Knowledge exchange, Targeted dissemination, Cross project collaboration, Real problem), DIVINE has created the conditions to successfully achieve the following outputs: a) diversity of participants in terms of expertise and collaborative structure along the WPs and tasks; b) coherent WP structure and management plan; strong engagement of stakeholders, which will critically follow, monitor, steer, and advice on progress; c) different means for participation of stakeholders are foreseen: participation in pilots, participation in advisory board, specific stakeholder engagement and liaising activities.

Nevertheless, it should be clearly highlighted that the MAA is not only tackled by Task 1.3. Task 7.4 is responsible for all activities concerning the governance of MAA activities and for stakeholder mobilization. Task 1.3 oversees this and is responsible for setting the overall framework of MAA activities in DIVINE.

Significant Results during the Year 1

The MAA in DIVINE is primarily built on our 4 pilots that are active in several European countries and in different agri-domains. The pilots represent our key users and also bring their domain knowledge and experience to the iterative development, thus being an active part of the co-creation of the technical solution. With the support of our pilots, DIVINE relevant stakeholders are regularly analysed with their needs, interests and goals requested through interviews, workshops and surveys. This input is incorporated into the technical development, which is also done in close cooperation with the pilots, i.e., the users.

The first results deriving from the application of MAA in DIVINE in relation to the pilot projects

currently being implemented can be summarized as follows:

- DIVINE developing solutions seem to address the real problems and are therefore perceived as useful by the users.
- The developing solutions represent the current state of the art because current scientific discussions and innovations are taken into account.
- Because the users are involved throughout the MAA process, solutions are more readily adopted.

Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested

Recommendation to WP Leader on the greater diffusion of activities relating to the implementation of the MAA in order to allow greater supervision activity.

Next Steps in Next Period

To realize a fully-fledged, functioning successful MAA, in the next few months in collaboration with Task 7.4, we plan to strengthen the integration of the MAA into the Project management structure; engage task leaders to identify where the stakeholders potentially contribute and participate; identify relevant stakeholders and third parties who can be interested in the project; identify methods and channels on how you could mobilize your network best by disseminating news & other outputs of the DIVINE project to interested stakeholders. The other parts of the Project's communication, dissemination, and exploitation shall consider the MAA as well, and find common solutions.

4.1.4 Task 1.4

Task	**Title (Leader, Duration)**
1.4	Risk management, Quality Assurance & Innovation Management (ICCS, M01-M36)
Contributors	ICCS, ENG

Summary of Progress during Year 1

This task has been responsible for the design and implementation of suitable quality assurance processes across the project. Additionally, it has dealt with risk management issues, while it kicked off the risk management processes. Finally, it establishes links with the Technical Manager and Task 1.2 (Technical Management), as well as the Exploitation Manager and Task 7.1 (Exploitation strategies, market analysis and business modelling) to ensure that the implementation and integration activities are adopting contemporary best practice and market developments and the innovations targeted by the project are still valid and will eventually find

their way to the market via adequate exploitation and business plans.
Significant Results during the Year 1
During the first year of the project, the work on this task focused on the specification of a sufficient quality assurance process focusing on the timely preparation of high-quality deliverables that meet the project's objectives and fully address the DoA. In this respect, the collaboration of the various partners is required and a deliverable review process is set that foresees two rounds of internal reviews before the delivery of the project's outcomes to the EC. In addition to the deliverable review process established, a list of appropriate, available reviewers for each document was set in place. All 8 deliverables submitted to the EC during the first year of the project's lifetime have been through this quality assurance review process prior to submission/delivery. Regarding the innovation management process, this activity is strongly related with Task 7.1 of WP7; the innovation process has identified the relevant players, both inside and outside the consortium and has also observed the market evolution to adapt the project if necessary. The risk management process has been specified focusing on risk identification, update, maintenance and tracking. During the Palermo General Assembly, the innovation management process identified by ENG to was shared with the entire consortium, reinforcing the commitment to driving innovation and excellence throughout the project. This important step underlines the commitment to adopt best practice and market developments, and to closely align partners' efforts with the project's objectives. A risk description template has been designed and agreed upon and the identified risks have been described based on this template.
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested
The risk register needs to be updated and a well described process of regularly updating is missing. There is therefore the chance of a late identification of a new risk and the late identification of the respective mitigation/contingency plans. In relation to the Innovation management, further assessment and monitoring should be conducted to ensure IPR is cleared or that the commercialisation plans have no conflict with the rights held.
Next Steps in Next Period
Continue with quality reviews and refine innovation management practices. Revise the risk monitoring process to ensure that the risk register is regularly updated by the right people to ensure early identification of new risks and contingency/mitigation plans.

4.1.5 Task 1.5

Task	Title (Leader, Duration)

1.5	Data and ethical management, planning and assessment (DIGI, M01-M36)
Contributors	DIGI
Summary of Progress during Year 1	
Task 1.5 performed a comprehensive review of the GDPR, the European Code of Conduct for Research Integrity, and national regulations of partner countries defining the ethics requirements, and data management and protection policies.	
Significant Results during the Year 1	
An initial data management plan (DMP) has been prepared for data to be collected, processed and generated in DIVINE and its lifecycle, information on handling research data during & after the project, what will be made open access, and curation/preservation post project, and the methodology & standards to be applied. This is reported in Deliverable D1.1.	
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested	
No risk or deviation yet from the DoA	
Next Steps in Next Period	
(a) Continue monitoring the pilots for their generated and collected data follows the DMP described in D1.1. (b) Update the DMP and report the progress in yearly reports.	

4.2 WP2 - Ecosystem Architecture and Technical Integration (SETU)

WP2 provides the technical foundation for DIVINE. It is supporting the development of the ecosystem and data extraction/analysis in WP3 and WP4, and it will ensure the pilots' requirements are included in the final suite of tools for validation in WP5.

The main outputs for WP2 in M1-M12 are D2.1 – Technology Integration Tools, and ID2.1 – Initial version of the DIVINE Reference Architecture (RA). The integration tools deliverable formally records the suggested tools from three technology partners in the project (SETU, VICOM, ENG) and initial feedback on those tools from the four project pilots. The next steps will be to advance those tools and refine them for the pilots' specific (and common) needs. The reference architecture design work has also started. At M06 a preliminary version of the DIVINE RA has been delivered, driven by a thorough state of the art review, by the DIVINE project objectives, by the stakeholder requirements identified by WP5 and by the technical requirements extracted by WP2, WP3, WP4 and WP6. This work is captured by ID2.1 that will evolve in the final DIVINE RA in the next period of the project.

4.2.1 Task 2.1

Task	Title (Leader, Duration)
2.1	DIVINE Reference Architecture (ICCS, M01-M18)
Contributors	ICCS, SETU, ENG, DIGI, CREA, IDSA

Summary of Progress during Year 1

Various activities took place during this first year of the DIVINE project under Task 2.1 concerning the definition of the DIVINE Reference Architecture (RA). A key objective of the project is the establishment of an ecosystem for the aggregation of agri data and the interconnection of existing agri data spaces for the facilitation of data sharing. Having this in mind, the appropriate Reference Architecture has been designed to address this challenge.

The ISO/IEC/IEEE 42010 architecture design standard has greatly influenced our approach, as the initial step has been the collection and analysis of the technical requirements for the system. Close collaboration with WP5 has been needed and the result was the creation and categorization of the requirements that have been crucial to the formulation of the initial design of the RA. Requirements from the other technical WPs have also been taken into account through the process.

Then, we conducted research and analysis on the State-of-the-Art approaches as the alignment with relevant models and architectures (e.g., AIOTI and GAIA-X) is fundamental to address the aforementioned objective and the experience of previous projects (DEMETER, IoF2020, ATLAS, DATABIO) provides insights on the procedure to be followed. The resulting architecture builds upon the various approaches mentioned, adopting and extending the good practices and exploiting the advantages that have been effectively tested.

The DIVINE RA adopts the multi actor approach and the design suggests various enablers, consisting of the core and the optional (advanced) enablers. The former refers to enablers like AIM+ data model, communication components and security components, while the latter refers to decision support systems, data analytics and machine learning tools, visualisation tools and interfaces. The enablers can be found via the DIVINE ecosystem's Stakeholders Open Collaboration Space (SOCS), accessible through the DIVINE Dashboard and also via the Agora that provides all the catalogues of services that might be of interest to the end users.

Finally, the task is in close collaboration with the remaining tasks of the WP2 and contributes to the implementation of the components of the Reference Architecture and also with the relevant WPs, as well as the pilots, to ensure that the objectives and stakeholders' requirements are properly addressed.

Significant Results during the Year 1

We can summarize the core results of Task 2.1 for the Year 1 of DIVINE project, as follows:

• Thorough research and analysis of the related State-of-the-Art initiatives, naturally focused on large scale IoT and big data projects, but not exclusively, to effectively select both the methodology and the components comprising the DIVINE Reference Architecture. • Work on the technical requirements for the design of the Reference Architecture (collection, analysis, classification) in close collaboration with all stakeholders via WP5 • Design of the Reference Architecture, defining the core parts and properly documenting by presenting the various views of the architecture, e.g. high level view, data view, functional view, etc. • Preparation of Internal Document (ID) 2.1 carrying the initial version of the DIVINE RA. • Continuous work on supporting and monitoring the creation of the actual components and enablers that implement the architecture and integrate the pilots.
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested
The purpose of Task 2.1 is to provide a Reference Architecture that addresses the DIVINE requirements and needs in a sufficient manner. Despite completing the creation, the task still needs to actively participate in the ongoing work for the development of the actual components and the operability on the pilots, as the quick detection of any deviations and issues in the design of the architecture is crucial in view of the final release of the RA. At this stage, no deviations from the DoA have occurred.
Next Steps in Next Period
First, we need to collect, process and evaluate the results after deploying the components of the Reference Architecture. The pilot rollout will give valuable insights and findings to study regarding the deployment of the DIVINE systems and the feedback from all stakeholders after the first round execution needs to be properly analysed. This will drive the work to refine the RA requirements and potentially revise the initial release of the RA. Second, we continue the collaboration with the remaining tasks of the WP2 to support the implementation of the components of the Reference Architecture and also with the relevant WPs, making sure that the needs, requirements and objectives are properly fulfilled for all stakeholders.

4.2.2 Task 2.2

Task	**Title (Leader, Duration)**
2.2	Technical Interoperability, Connectivity and Service Provisioning (SETU, M03-M22)
Contributors	SETU, ENG, IDSA, ADSC
Summary of Progress during Year 1	
The initial job for this task was to break down the overall objectives into a time-series of sub-	

goals. Internal analysis by SETU, together with other discussions between WP2 task leaders and pilot partners, meant an initial focus on the interoperability aspects of this task. It was concluded that interoperability is a natural first step towards connectivity and service provisioning.
Significant Results during the Year 1
The chief result from T2.2 is its contribution to D2.1, submitted at M12. This contribution covered a state-of-the-art review for approaches to data interoperability and existing agriculture data spaces, a worked example of how data interoperability affects a data provider-consumer interaction, and a series of tools and supports for organisations who wish to make their data more interoperable.
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested
The main risk for T2.2 was that SETU worked in isolation too much and did not build a relationship with the pilot partners. This may have led to a series of overly technical interoperability tools aimed more at software developers than agri-food data providers. Equally SETU could not present the pilots with a blank page, so some initial suggestions were necessary on which the relationship and technical understanding between pilots and technology providers were built.
Next Steps in Next Period
To continue the work started in year-1. This involves setting up a monthly telco with the pilot partners to discuss progress and potential technical bottlenecks. Connectivity and service provisioning will also be explored to a greater extent. Moreover, efforts will be made to build solutions that are more user-friendly to agri-food data providers and in general stakeholders in the agri-food chain.

4.2.3 Task 2.3

Task	**Title (Leader, Duration)**
2.3	User Interfaces and Adaptive Dashboard Visualisations (VICOM, M05-M22)
Contributors	VICOM, DIGI, ENG
Summary of Progress during Year 1	
Different technological alternatives have been considered for addressing the development and implementation for the data integration and data visualization dashboard of the global platform. As a result, it's been agreed to implement the dashboard by means of free, community version framework KNOWAGE. This has been agreed due to the high potential of compatibility, integrability, scalability of the framework, as well as its high potential for adequately meeting project pilots' dashboarding requirements (starting from Spanish pilot).	

Significant Results during the Year 1
Having selected the software framework with which the project global platform dashboard development and implementation will be tackled is considered to be the most significant result of the first year.
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested
No major risks have been identified so far. However, these may appear during the development and implementation of the dashboard. In such a case, it is believed that taking corrective actions will be feasible as KNOWAGE is in phase of development and open to changes and improvements coming from the project.
Next Steps in Next Period
Next major step is to start building the first dashboard prototypes, for which the following corresponding steps are: to set up KNOWAGE and initial dashboard framework; integrate data from pilots into dashboard (starting from Spanish pilot); analyse possible implementation of predictive models for pilots and according to the obtained results, and, finally, integrate such models into dashboards (starting from Spanish pilot).

4.2.4 Task 2.4

Task	**Title (Leader, Duration)**
2.4	Stakeholder Open Collaboration Space (ENG, M03-M22)
Contributors	ENG, VICOM, DIGI
Summary of Progress during Year 1	
In Year 1, we conducted a resource analysis and gathered pilot feedback on functional and non-functional requirements. We launched a beta version of SOCS and initiated projects to improve it based on pilot requirements. Our progress sets the stage for future innovation and user-driven improvements.	
Significant Results during the Year 1	
A key outcome of Year 1 was the successful implementation of pilot requirements, including the integration of key features such as real-time chat and language translation. These enhancements not only met the immediate needs of our pilot users, but also laid the groundwork for a more versatile and user-friendly platform in the future.	
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested	
A notable challenge encountered could be the limited adoption and utilization of the Stakeholder	

Open Collaboration Space to its maximum potential, which posed a risk to project. To mitigate this challenge, some suggestion could include targeted user training programs, awareness campaigns to boost participation, and ongoing efforts to align SOCS features with stakeholder needs. These actions aimed to ensure the platform's effective utilization and bring it in line with project objectives.
Next Steps in Next Period
The next step in the coming period is to roll out SOCS to our pilot users, enabling them to actively engage with the platform and populate it with valuable information. We will encourage the use of key features such as discussions and wikis to foster collaboration and knowledge sharing within the pilot community. This phase marks an exciting transition from development to practical implementation, where our focus will be on supporting and improving the user experience.

4.2.5 Task 2.5

Task	**Title (Leader, Duration)**
2.5	System Integration, Deployment Tools and technical support of pilots (SETU, M07-M33)
Contributors	SETU, ENG, ICCS, DIGI, VICOM, IDSA, ADSC
Summary of Progress during Year 1	
The initial goal from the start of the task was to gain an understanding of the general requirements for a platform to support the DIVINE ecosystem. This primarily required a good understanding of the needs of the pilots (tasks 5.1, and 5.2), but also an understanding of the platforms which will support the solutions to be developed. To this end, we have been working with the pilots through task 5.2 and with the other technical partners through the regular technical stand-up meetings of T1.2 and ad hoc meetings as appropriate.	
Significant Results during the Year 1	
Progress in the task is directly dependent on the artefacts produced by the technical tasks of WPs 3 and 4. These are currently in the process of development and validation, so the work of the task has been to put in place support infrastructure to assist with deployment. A Gitlab instance has been created for the project by SETU (https://git.divine-project.eu) and made available to the partners. This will provide the following: • Code repositories so that features can be worked on • Wiki pages for project documentation • A Docker container registry which will provide support for continuous integration and deployment	

Kubernetes is considered the prime candidate as a deployment environment and initial testing of cluster configuration has started. This will complement the CI services provided by Gitlab
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested
At the time of writing, no significant risks have been identified. Similarly, no deviations from the stated goals of the grant agreement have occurred.
Next Steps in Next Period
As the development of technical solutions for the pilots is now underway, the services provided by T2.5 will become more important. All project partners have some familiarity with Gitlab, and some have familiarity with Kubernetes. One of the early tasks in the next period will be to create documentation around the technology stack, the processes around the development pipeline and, if necessary, workshops on the platform. Having partners use the Gitlab instance is also a key goal for the period. The physical architecture for the Kubernetes cluster – which component are running and where – will also be made concrete, and the cluster made ready for solution deployment.

4.3 WP3 - Agriculture Data Space Ecosystem (ENG)

WP3 will handle data extraction, modelling, and sharing for the agrifood sector. It defines technical requirements, ensuring interoperability, security, and integration. This data will be integrated into the DIVINE Agriculture Data Spaces Ecosystem (ADSE), enabling seamless, secure data sharing across diverse systems. WP3 will also support WP5 pilots in deploying its models and modules.

Main output in M1-M12 is D3.1 - Agricultural Data Space Ecosystem which is an initial WP3 prototype, slated for the first round of pilots, consolidates data models, enablers, and modules. This prototype encompasses the initial outcomes of Tasks 3.1, 3.2, 3.3, and 3.4, offering a comprehensive specification and prototype implementation.

4.3.1 Task 3.1

Task	**Title (Leader, Duration)**
3.1	Common Agricultural Data Models and semantic interoperability (ICCS, M01-M19)
Contributors	ICCS, ENG NP, IDSA
Summary of Progress during Year 1	

Various activities took place during this first year of the DIVINE project under Task 3.1 concerning the establishment of the DIVINE Agriculture Information Model+ (AIM+). The model is crucial for the whole project, since the whole data pipeline and the project-enabled applications need to be encoded accordingly. The end goal is to facilitate the interoperability between well-known and/or dominant existing solutions and DIVINE and deploy the relevant mechanisms.

Our work started with an extensive research and analysis of the State of the Art, including mostly the well-known or/and standardised solutions in the agri-domain, but also approaches from other domains that could be relevant to parts of our work (e.g. modelling-wise). After that, we collected, analysed and compiled the technical requirements related to the Information Model under the derived classes of representing agricultural data and achieving semantic interoperability in the agri-domain. There has also been involvement in the respective work for the other tasks, since there is collaboration between the tasks and AIM+ plays an important role in the whole data pipeline.

Then, the actual Information Model needed to be produced for the initial release, based on the components and ontologies from the DEMETER AIM and tailored to the DIVINE pilots' needs. The core principles remain the same and the main difference lie in the content and the coverage of the AIM+, since not all parts of DEMETER AIM are relevant to DIVINE and the complete adoption of the model brings some drawbacks with, such as worse response times, type or/and name conflicts and higher maintenance needs.

Next, the possibility of extending the interoperability between DIVINE and other agri data spaces has been examined and this research keeps going as new initiatives emerge. The translation mechanisms from and to AIM+ have been revised and the model is extended with the appropriate semantic mappings, as well.

Last but not least, Task 3.1 collaborates with the other tasks and mostly those related to the pilots roll-out and the development of the enablers that will comprise the DIVINE ecosystem, especially in terms of data sharing and compatibility with AIM+.

Significant Results during the Year 1

Preparation of the section for AIM+ in D3.1, contributing to MS2. The significant results can be summarised as follows:

- thorough State of the Art research and analysis about the related recent work on ontologies, models, systems and even data spaces
- work on the technical requirements for our Information Model (collection, analysis, classification)
- analysis on the exact components and ontologies of DEMETER AIM to be adopted by DIVINE
- establishment of the AIM+ data model and of the respective semantic mappings to well-known ontologies and data models

Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested
The main danger for the task is the fact that data in the agriculture domain come from various, heterogeneous sources and consequently, the pilots happen to use data that are not standardised or are modelled for specific cases. Such data are not essentially compliant with our Information Model. This threat is tackled by working in close collaboration with WP5 and the pilots to implement wrappers and similar translating mechanisms to match the AIM+ format. After the pilot roll-out and by analysing the acquired data, we will be able to tell whether any updates to the Model are required. Another tricky point is the extension of AIM+. Doing this in a sub-optimal way can really hinder the proper representation of concepts, integration of pilots and data interoperability. The way to tackle this is reusing terms from dominant and well-known ontologies as much as possible and only defining new concepts when necessary.
Next Steps in Next Period
First, the maintenance of the AIM+ still is among the most crucial parts of Task 3.1 and we are ensuring that all semantic mappings and alignments remain valid, since some data models are also updating and editing is needed for the semantic interoperability to keep happening. Second, there is ongoing work to update AIM+ to include necessary terms, concepts and definitions to be in line with the appropriate regulations and policies suggested by the EU, agricultural sectors, etc. This work will be crucial for the establishment of interoperability with other data spaces. Third, we are constantly looking to extend and enhance the model with additional concepts that are missing and are necessary for our pilots or are important to achieve interoperability with some other model. Emphasis is given on new initiatives that produce outputs in the representation of agrifood data. Finally, we are always collaborating and supporting the remaining tasks that develop enablers that need to be compatible with the Information Model or are just involved in the data pipeline.

4.3.2 Task 3.2

Task	**Title (Leader, Duration)**
3.2	Data Management and Integration (DIGI, M03-M21)
Contributors	DIGI, ENG, VICOM
Summary of Progress during Year 1	
Task 3.2 is dedicated to preparing, analysing and integrating the incoming data from pilot sites that support the project use cases in a horizontal manner and provide mechanisms to access &	

share them. During Y1, DIGI has set up a secure data pipeline (Apache Kafka) that connects the data publishers (i.e., data sources) from all pilots to the DIVINE reference architecture.
Significant Results during the Year 1
The main result during the Y1 is establishing a microservice based Apache Kafka implementation in DIGI's cloud platform and connecting data sources of all pilots to it. This allows all pilots to publish their data to DIVINE's reference architecture component through a scalable, data-centric pipeline.
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested
One challenge is data integration, as merging data from different pilot sites can be complicated due to differences in data formats, structures and quality. Ensuring interoperability is essential. Security is another concern, as any data breach or unauthorised access could jeopardise data integrity and privacy. While the microservices-based Apache Kafka system offers scalability, unanticipated increases in data volume or traffic could overwhelm the system, potentially causing delays or disruptions. To mitigate these risks and address potential variances, it is critical to implement robust data quality control measures, prioritise data security, regularly monitor system performance and scalability, and ensure compliance with data privacy regulations. In addition, maintaining open communication between project stakeholders and having contingency plans for technical challenges can help minimise the impact of these risks on project progress.
Next Steps in Next Period
Ensure that only authenticated and authorised users of the pilots can publish data to the pipeline. It will be done by integrating the pipeline with VICOM's IAM solution.

4.3.3 Task 3.3

Task	**Title (Leader, Duration)**
3.3	Data Transparency, Protection, Trust, Sovereignty, Traceability & Usage Monitoring (VICOM, M03-M21)
Contributors	VICOM, DIGI, ENG, IDSA
Summary of Progress during Year 1	
During this year we have worked mainly on the development of the modules necessary to provide authentication and authorization services to DIVINE users. The objective is to have an environment based on self-sovereign identities (SSI), based on 6 main components: Identity Provider, MySQL Database, Authorization Server, PEP Proxy, Blockchain Module, and a Wallet App. All modules have been implemented in a first version or proof of concept. In particular, efforts have focused on the development of the Blockchain module (based on Ethereum Smart Contracts), the Wallet (with which users can add credentials to their identity to later access	

DIVINE applications) and the Identity Provider (Keyrock), which has undergone profound modifications in its code to adapt it to the proposed SSI ecosystem and to integrate it with the rest of the modules. Currently, the system requires the implementation of the part corresponding to the verification of the credential to grant the access token to the users. When this last step is completed, a first version can be deployed so that DIVINE users can interact with the access control system.
Significant Results during the Year 1
The main result of this year was the implementation of the first version of the Access Control System based on Self-Sovereign Identities. To this end, this year we have completed the development of the Smart Contracts necessary to have the SSI functionalities in a private Ethereum blockchain, we have a first version of the Wallet for users (both at app level for the phone and at service level in the form of REST API) and we have adapted the Identity Provider (Keyrock) for integration with these modules and to make it compatible with an SSI environment.
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested
The objective for this year was to have a first version of the access control system available for DIVINE partners. However, the development of credential verification is still necessary. No associated risk is foreseen in completing this subtask, as it is known what changes need to be made to the code to achieve this. On the other hand, there may be a risk associated with the complexity for users in handling the tool. Concepts such as Self-Sovereign Identities, Wallet or Blockchain are not well known by the community. Therefore, it is important to have clear and detailed documentation system. If the documentation is not enough, telematic workshops will be proposed, explaining step by step with examples and use cases, how to use the system.
Next Steps in Next Period
In the following year we expect to have a solid version of the access control system based on self-sovereign identities. In this way, it is expected that during this year, DIVINE users will be integrated into the system and will be able to interact with the functionalities it offers.

4.3.4 Task 3.4

Task	**Title (Leader, Duration)**
3.4	Agricultural Data Space Ecosystem development & Data Stakeholder Interaction (ENG, M03-M33)
Contributors	ENG, ICCS, VICOM, NP, ITC, IDSA
Summary of Progress during Year 1	
During the first year, the different types of dataspaces were analysed, and the focus was on the creation of a unified gateway for the integration of existing agricultural data spaces. The	

methodologies for exchanging data and enabling security in this process were studied. Particular emphasis was placed on Gaia-X Federation Services (GXFS) to create federated ecosystems, ensuring transparency, reliability and data sovereignty. Enablers and modules are integral components for data processing, transformation and access control. Pilot projects are underway in several regions, offering insights into the practical implementation of ADSE.
Significant Results during the Year 1
The main result is the study of the pilot's dataspace, and the identification of what components need to be developed to enable interoperability across different dataspaces. A list of APIs and services was created to provide useful information before the components are tested.
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested
The development of a unified gateway for integrating agricultural data spaces faces several challenges. Technical complexities, security concerns, and interoperability issues may cause delays. Ensuring regulatory compliance is critical. Resource constraints and scope changes can impact progress, as can integration challenges. External factors like regulations and market changes may require adaptability. A comprehensive risk management plan, open communication, and a focus on security and compliance are essential to mitigate these risks and deviations. Corrective actions could include: establishing a dedicated technical approach to address compatibility issues, ensuring stringent security measures, testing interoperability with different data spaces, monitoring regulatory compliance, managing resource constraints, implementing change management processes, and developing a detailed integration plan.
Next Steps in Next Period
Setting up the TestBed and essential components to validate a scenario derived from pilot projects. Creating the gateway/proxy connector required to ensure seamless interoperability among dataspaces.

4.4 WP4 - Knowledge Extraction, Decision Support and Benchmarking (CREA)

4.4.1 Task 4.1

Task	**Title (Leader, Duration)**
4.1	Targeted agri data analytics, fusion and knowledge extraction (ICCS, M03-M33)
Contributors	ICCS, ENG, VICOM, NP, ITC, IDSA

Summary of Progress during Year 1
During Year 1 of the DIVINE project, there was extensive research in the existing literature in order to identify the current technology that could be used or extended regarding the pilots' application. To analyse that a bit more, the current task T4.1 was pilot-driven. There was a development of three applications related to the UCD pilot, ITC pilot and NP pilot. The NP application, written in Python programming language, calculates up to 23 different agronomic indices, according to user's choices. It also depicts graphic representations of the time-series input. This occurs, by letting the user choose the suitable .csv which includes timestamps, and the corresponding values such as temperature, rain, wetness etc. The UCD application, written in Python programming language, lets the user include a UAV image with plants and an output folder. The user clicks the "Calculate" button and the application using Machine Learning is able to calculate the number of plants contained in the image and output that in a message to the user. The ITC application, written in Python programming language, uses a GUI interaction with the user. The latter also occurs with the 2 previously described applications. So, the user picks a .csv file and he can get output optimizations about the parameters he sets in the application. The application also uses a Machine Learning (ML) scheme and more specifically Multiple linear regression.
Significant Results during the Year 1
Year 1 brought significant outputs to the DIVINE project. Firstly, observing NP application, we have knowledge extraction coming from the agroclimatic indicators, helping the end user, who can be the farmer, to have an overall knowledge of his field, and make decisions. Secondly, UCD applications, via the use of ML models that can identify and calculate the number of plants in the field, provide knowledge extraction and data analytics. The latter occurs by "transforming" UAV images to a number of plants, to a number in other words. Thirdly, the ITC application provides information about optimization of values by giving as input an Excel file, something related to knowledge extraction and data fusion.
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested
Although Year 1, brought significantly interesting results to DIVINE targets and objectives set, there were some risks throughout the implementations. To start with, the UCD application needs some enhancements as far as the trained ML model it uses. To analyse it a bit more, object detection can be improved in order to identify more plants. However, what occurs with object detection and more specifically CNNs is a classical problem. When the object to be detected has similar colours with background colours, is quite difficult to identify all the plants because the ML model confuses the plants with the background and does not identify them as plants, mitigating in that way the number of detected plants. Another risk was with the ITC dataset, that was used for the ITC application. The dataset was very small and the number of ML models to choose was very limited. The ITC application works, however, if we had bigger datasets, we could choose among more ML models.

Next Steps in Next Period
In Year 2, we are going to improve the developed applications regarding ITC application, UCD application and NP application. Efforts will take place in order to improve the UCD applications' accuracy and utilize more models in ITC applications so that could increase the data fusion, knowledge extraction and data analytics axis that was set for T4.1. As far as NP application, it could be used as an ML model in order to get predictions in various parameters such as temperature, rainfall, etc., at a local level.

4.4.2 Task 4.2

Task	**Title (Leader, Duration)**
4.2	Agricultural domain benchmarking & KPI monitoring support (CREA, M03-M33)
Contributors	CREA, FE, NP, UCD
Summary of Progress during Year 1	
During Year 1 of the DIVINE project, our working group tried to carry out an intense research activity on the meaning of KPIs and benchmarking and carried out an analysis of the existing literature on this topic. The work was not easy, and some aspects still need to be examined, but it is hoped that through the collaboration of the various partners and the exchange with the other WPs and tasks we can define a more complete picture during the next steps of the project. We planned to continue the work started and propose the evaluation of different pilots.	
Significant Results during the Year 1	
During Year 1 we reached quite significant results in terms of collaboration with other partners of the task. We organized several meetings in order to exchange our ideas and experiences and to plan the work to do and aligning with the expected outcomes of the project. We were able to produce our contribution to the draft of the first deliverable and we will continue in this way, increasing our collaborations with other WP and tasks.	
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested	
Some progress was indeed made in Year 1 but there were some challenges and deviations from the original plan. Our work started a little late compared to other groups, it was because at the beginning it was not clear the entire framework of the project and the activities to do, and there was a lack of communication. Maybe too many emails and sometimes it has been difficult to understand the deadlines, the documents to prepare, the order of what to do and, sometimes, even the subjects to be involved. To address these problems, we plan to have more interaction with other groups and with the WP leaders in order to be informed about the progress of the entire activity.	

Next Steps in Next Period
In Year 2 and beyond, we will continue to make our efforts in order to realize the required actions and respect the deadlines. We will continue to analyze and identify the different indicators that are necessary to realize the activities of benchmarking and we will provide an evaluation of the single pilots. To do this we will start with the assessment of what is available from the census data and, as the first example, we aim provide the application of benchmarking techniques and identified indicators to the first pilot related to cereal production. This is in order to evaluate the data sharing costs, the benefits, the risks, and added values. Then we will continue even the other pilots' actions increasing the interaction of all the other subjects involved in the project.

4.4.3 Task 4.3

Task	**Title (Leader, Duration)**
4.3	Transparent Decision Making Support for agri stakeholders (ENG, M05-M33)
Contributors	ENG, ICCS, VICOM, NP
Summary of Progress during Year 1	
During Year 1, DIVINE achieved significant progress in the development of its Decision Support System (DSS) for agricultural stakeholders, with a primary focus on Pilot 2 - Crop Yield Prediction. One of the major achievements was the successful integration of Seldon Core, an open-source platform, into the DSS. This integration laid the foundation for efficient and scalable model deployment in line with the expected outcomes of the project. In addition, DIVINE's efforts contributed to increased awareness and informed decision-making in the agricultural sector. By using advanced machine learning models for crop yield prediction and sharing insights generated from Earth Observation data, the aim is to demonstrate the costs, benefits, risks and added value of agricultural data sharing from a European Union (EU) perspective. This increased awareness supports the project's goal of demonstrating the economic and societal potential of agricultural data sharing.	
Significant Results during the Year 1	
Year 1 delivered significant results for DIVINE, in line with the expected outcomes of the project. The successful integration of Seldon Core streamlined model deployment within the DSS, ensuring scalability and consistent performance. Machine learning models applied to EO data significantly improved the accuracy of crop yield predictions, providing valuable insights to farmers and stakeholders. These advances contribute to increased transparency in data sharing across the agricultural value chain, addressing one of the key expected outcomes of the project. Moreover, the DSS's provision of real-time crop yield forecasts via a REST API facilitates informed decision-making by farmers and other stakeholders. This transparency in sharing forecast	

information improves decision-making within the agricultural value chain, in line with the project's goal of promoting data transparency.
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested
While significant progress was made in Year 1, there were some challenges and deviations from the original plan. A notable challenge was the reliance on Python scripts for image preparation before prediction, which limited code agnosticism. To address this, there are plans to reduce code dependency and support alternative input formats such as encoding in future iterations, in line to make data sharing more accessible and user-friendly. To ensure the long-term sustainability and transparency of data sharing, DIVINE is actively engaged in maintaining and upgrading the models deployed, in line with the project's aim to demonstrate the economic and societal potential of agricultural data sharing.
Next Steps in Next Period
In Year 2 and beyond, the DIVINE roadmap includes several key initiatives that further align with the expected outcomes of the project. Efforts will continue to reduce code dependency, increase code agnosticism and make data sharing more accessible to stakeholders. The refinement of machine learning models for crop yield prediction will contribute to increased accuracy and further demonstrate the economic and societal potential of agricultural data sharing. The development of the DSS user interface will improve usability, thereby promoting transparency and informed decision-making within the agricultural value chain. In addition, extending the functionality of the DSS to meet the specific needs of other pilots in different agricultural sectors will increase the impact of the project by promoting awareness and informed decisions. Finally, maintaining a proactive approach to model updates, versioning and system performance will ensure to demonstrate the costs, benefits and added value of agricultural data sharing from an EU perspective, further enhancing transparency across the agricultural value chain.

4.4.4 Task 4.4

Task	**Title (Leader, Duration)**
4.4	Stakeholder decision criteria specification and feedback collection dashboard (SETU, M07-M33)
Contributors	SETU, ENG, VICOM, CREA, UCD
Summary of Progress during Year 1	
Analysis of the task and related work packages and tasks has determined the need for close dialogue in particular with (but not limited to) WP2 [T2.3, UIs and Adaptive Dashboard Visualisations], WP4 [T2.1 – T2.3, Data Analytics, Benchmarking and Decision Support] as well as	

WP5 [Pilots]. The key goal is to develop a customisable dashboard to support pilot stakeholders.
Significant Results during the Year 1
Methodological Approach (Requirements): A five-step design thinking approach has been chosen and is being implemented to understand the needs of each of the pilots. Based on surveys and pilot partner insights, user personas are being created to understand how users might interact with the dashboard. Miro boards are being used to create user flow maps, documenting the users' interaction pathway with the dashboard. From here wireframes will be created and used as a basis for soliciting feedback and finalising the design of the dashboard. The user personas and user flow maps are well-advanced for most of the pilots and some early work on wire framing has progressed. *Technical Specification*: Two approaches to implementing the dashboard are being analysed and considered. One option is to develop a mobile responsive web app from the ground up using React, eventually React Native. A second option is to use KNOWAGE a web application for dashboarding. A community edition of this tool is available through consortium partner Engineering. *Results to date*: This task just commenced in Month 7 and much of the early work is focussed on scoping and getting a process up and running for delivering the required innovation. To date, user personas and user flow maps are well developed for 3 of the 4 pilots and the 4th pilot is in progress. The user flow maps break down a user's interaction with the dashboard into user goals (e.g. login, view data) and into related sub-tasks that will represent dashboard features. Pilot leaders have been engaged in the process. Wireframes are in progress. A technical investigation is ongoing. SETU is working very closely with T2.3 lead Vicomtech and project partner Engineering around common approaches for these related tasks and the possible adoption of the community edition of KNOWAGE.
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested
User personas indicate that there may be low levels of technical expertise among some cohorts. Early pilot demonstrations will involve expert-users, but the design process will consider the needs of eventual end users through an intuitive, straightforward UI with supporting guides. Technical risks vary depending on the selected implementation approach. If a mobile responsive web app is developed, this contrasts with T2.3 which has selected KNOWAGE and may introduce complexity at a project level. Risks associated with the use of KNOWAGE are still being determined but may include limitations related to the level of customisation. A risk minimisation approach will drive the final implementation decision.
Next Steps in Next Period
By the end of October, the requirements gathering at the pilot level (user personas and user maps) will be completed and work will begin to finalise a common user map. Dashboard design

will be supported by the elaboration of wireframes. Technical specifications will be produced based on the chosen implementation route.

4.5 WP5 - Pilots, Applications and Evaluation (DIGI)

WP5 concerns piloting the reference architecture of DIVINE, its software building blocks, and pilot specific applications. In this respect, the objectives of WP5 are twofold - (a) establishing and managing the four pilot sites across Europe to deploy, test, validate, and evaluate the technical solutions involving different local, regional, national stakeholders, within different pathways and (b) performing impact assessment of each pilots using a standardized methodology, KPIs.

4.5.1 Task 5.1

Task	**Title (Leader, Duration)**
5.1	Stakeholder requirements, pilot design, specification and planning (DIGI, M01-M21)
Contributors	DIGI, SETU, CREA, NP, ITC, WFO, UCD, KGZS, ADSC
Summary of Progress during Year 1	
At the beginning of Task 5.1, all pilot leaders have surveyed their internal and external pilot stakeholders to gather technical and operational specifications. They have been analysed to determine pilot requirements. Following this activity, each pilot team has prepared a first description of the pilot design, prototyping, data sources etc.	
Significant Results during the Year 1	
To main results of Task 5.1 accomplished during Year 1 are – (a) Survey of pilot stakeholders leading to pilot specifications and requirements, and (b) Preparation of an initial yet detailed pilot design. The results are reported in D5.1 (submitted at M12 of the project).	
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested	
No risks or deviations noted in Task 5.1 yet.	
Next Steps in Next Period	
Next steps for Y2 and Y3 focus on performing in-depth analysis of the outcomes of the round 1, which will be fed directly into finalising the requirements and specifications of pilot round 2.	

4.5.2 Task 5.2

Task	Title (Leader, Duration)
5.2	Pilot testbed management, pilot applications, system extensions and deployment at pilot sites (SETU, M03-M32)
Contributors	SETU, DIGI, NP, ITC, UCD, ADSC

Summary of Progress during Year 1

Task Scoping - The overall objective of this task is to develop and manage pilot testbed resources that will be shared among pilot applications. Task analysis has determined therefore that it is important to understand the resource needs common to each pilot. Those needs have been determined to extend beyond technical ones. Key technical and knowledge building blocks essential to pilot execution are being delivered through WP2 [Ecosystem architecture & technical integration], WP3 [ADSE], WP4 [Knowledge extraction, decision support, benchmarking, visualisation] and WP6 [Agri Data Sharing Governance Models and Policy]. Task 5.2 is collaborating with these WPs to best understand and mitigate the gaps that might hinder pilot execution.

Methodological Approach (Requirements) - A pilot testbed matrix has been developed to capture needs across a variety of categories. These categories are (1) Stakeholder needs analysis, (2) Technical Processes, (3) Pilot participation management and (4) Pilot optimisation. Using detailed pilot description templates, the template has been mapped against the DoW on a pilot by pilot basis. A traffic light system highlights any gaps or challenges that might exist. This document is stored on a shared repository and updated as needed. It can also act as a risk identification / risk management tracker for the pilot actions.

Significant Results during the Year 1

The current version of the pilot test bed matrix has considered four different categories of needs and a number of sub-categories across each of the pilots. Several gaps and testbed actions have been identified. For example, under the 'Stakeholder Needs' category, a permission policy in line with GDPR will need to be developed for pilot participation. This is likely to be more relevant in the second round of pilots.

In phase 1, it is likely that there will be a reliance on datasets which are publicly available or pertain to active partners within the consortium. Regarding technical process, a number of challenges exist, for example related to data interoperability. It is anticipated that many of these challenges will be resolved through the relevant work packages. The rate of progress in addressing these challenges is monitored through participation in the bi-weekly technical stand-up sessions as well as the respective monthly work package calls. The pilot test bed matrix is also reported to D5.1.

Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested

One area where all pilot partners have flagged concerns is related to data access. These concerns included lack of automated data collection tools, a lack of APIs to securely share data from different software packages and a variety of data structures and formats. Work in various work packages, e.g. T2.2 [Technical Interoperability] is being done to address these challenges. Furthermore, close collaboration with pilot partners [worked examples] is yielding a good understanding of how best to support the pilot actions. An approach which prioritises organisational and semantic interoperability over technical interoperability is also useful for delivering workable solutions. The pilot matrix and regular meetings are proving a suitable means to highlight potential risks and to ensure that execution of the DoW will meet the needs of pilot partners for roll out of their respective use cases.
Next Steps in Next Period
Task 5.2 will continue pilot testbed management, interfacing with each pilot to determine its necessity on pilot specific applications and deployment planning.

4.5.3 Task 5.3

Task	**Title (Leader, Duration)**
5.3	Pilot roll-out and execution management (NP, M11-M32)
Contributors	NP, ITC, UCD, KGZS, ADSC
Summary of Progress during Year 1	
Since this task just started in M11, it is currently finalising the plan to roll-out DIVINE software components to the pilot sites.	
Significant Results during the Year 1	
It is currently finalising the plan to roll-out DIVINE software components to the four pilot sites.	
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested	
No risk is noted yet in Task 5.3.	
Next Steps in Next Period	
The task will periodically monitor the pilots (pilot round 1 begins in M13), allowing for timely intervention if necessary. The monitoring analysis will be reported on at monthly meetings between relevant task/WP leaders and stakeholders.	

4.5.4 Task 5.4

Task	Title (Leader, Duration)
5.4	Pilot assessment, evaluation and stakeholder validation (DIGI, M15-M33)
Contributors	DIGI, SETU, CREA, NP, ITC, WFO, UCD, KGZS, ADSC
Summary of Progress during Year 1	
This task has not commenced during Year 1.	
Significant Results during the Year 1	
N/A	
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested	
N/A	
Next Steps in Next Period	
Task 5.4 will evaluate all pilots from two perspectives: (i) the extent the TRL of each pilot site has improved by deploying DIVINE innovative technologies; and (ii) sustainability assessment.	

4.5.5 Task 5.5

Task	Title (Leader, Duration)
5.5	Cross-Pilot Coordination, Fertilization and Optimization (CREA, M01-M33)
Contributors	CREA, NP, ITC, UCD, KGZS, ADSC
Summary of Progress during Year 1	
Task 5.5 is currently finalising cross-pilot coordination for the four pilots, especially managing the shared resources and interfacing with the DIVINE technology developers for any upgrades and technical optimisation(s) that the pilots may require during the project.	
Significant Results during the Year 1	
A cross-pilot coordination methodology has been developed in this task.	
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested	
N/A	
Next Steps in Next Period	
The main next step is to implement the cross-pilot fertilisation from M13 when the pilot round 1	

commences.

4.6 WP6 - Agri Data Sharing Governance Models and Policy making (FE)

Overall, WP6 Tasks have all been successfully developed respecting the initial timetable set up. Even after the internal review was completed, no big adjustments or changes were needed. In terms of next steps, Task 6.1 and 6.2 will be necessarily reviewed and implemented to tailor the data governance model to DIVINE's case, and exchanges, meetings with policy makers will be planned.

Task 6.3 started in M12 and has already been structured.

4.6.1 Task 6.1

Task	**Title (Leader, Duration)**
6.1	Analysis of agri regulatory requirements and development of agri data-sharing governance models, policies, regulations (FE, M01-M22)
Contributors	FE, VICOM, CREA, KGZS
Summary of Progress during Year 1	
• After having defined a previous version of the Table of Contents (ToC) for the development of the Deliverable 6.1, the transcript was reviewed, updated and implemented considering new regulations. The D6.1 was completed keeping into account a larger policy pool, which will be adapted to DIVINE's needs in the next months. • Meetings with WP6 participants were done to brainstorm and introduce different viewpoints in the analysis. • During the month of April, an exchange of view was organized with the EC, which lead to a further implementation of the ToC.	
Significant Results during the Year 1	
• The SoTA analysis of current policies and regulation in EU regarding the agri-data sector was completed. • A mapping of the regulation was successfully developed. • Regulation gaps were highlighted. • Similar Projects were analysed.	
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested	
• Risk: Missing the analysis important regulations; Solution: brainstorming with WP6 and other WPs over which regulation to consider, call with the EC. • Risk: Not being update on regulation proposal modifications; Solution: analyse the most	

recent proposal, review eventual updates during the month before the deadline.
Next Steps in Next Period
• Monitor the development of DIVINE, adapt the regulation analysed and the data governance mapping in order to create a tailor-made and appropriate data governance model. • Engage with Policy Makers, in order to align on how to best build the data governance model.

4.6.2 Task 6.2

Task	**Title (Leader, Duration)**
6.2	Data sharing policy integration in ADSE and agri data policy adoption framework & guidelines specification (ENG, M01-M22)
Contributors	ENG, VICOM, FE, KGZS
Summary of Progress during Year 1	
Collaboration with WP3 has played a pivotal role in our progress. We have actively engaged in discussions with partners involved. Specifically, for the deliverable D6.2, we have closely aligned with the policy framework provided by D6.1, ensuring seamless integration and consistency.	
Significant Results during the Year 1	
As a result of our collaboration with WP3 and our adherence to the policy framework from D6.1, we have successfully produced Deliverable D6.2. This deliverable, which was due on M12, includes the initial release of the Agri data sharing policy framework adoption manual and guidelines, which account for current policies and new proposed regulations. The cooperation with WP3 has enriched the content and approach of D6.2, helping in adapting the guidelines to Divines case and needs.	
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested	
While our collaboration with WP3 has been fruitful, one potential risk is the divergence of interpretations regarding the policy framework's implementation and timing. To mitigate this risk, we will continue to being in communication with Farm Europe and constantly monitor the legislative framework.	
Next Steps in Next Period	
Over the next period, multiple actions will have to be taken to follow up and implement the second release of D6.2. Specifically, multiple calls with Farm Europe (WP Leader) and partners will be organised to monitor eventual legislation changes. Moreover, a strict collaborations with other	

WPs (especially WP3) will be necessary to evaluate DIVINEs' adoption of the outlined guidelines.

4.6.3 Task 6.3

Task	**Title (Leader, Duration)**
6.3	Impact Monitoring and Assessment for the developed agri data-sharing governance models, policies, regulations (FE, M12-M33)
Contributors	FE, ENG, CREA, KGZS
Summary of Progress during Year 1	
Brainstorming Sessions were organised with partners, in order to define how to best prepare for the beginning of the Task 3 (Month 12). A first task separation among partners was defined. Overall, decision to separate the work among partners, to better follow-up on the different pilots work and results.	
Significant Results during the Year 1	
Initial action plan defined: closely work with WP5 in order to monitor the impact of the data governance model on pilots. Each partner will follow-up with one pilot, and will create short reports on its developments. The results will be taken into account to understand how to modify the work done in Task 6.1.	
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested	
Risk: Lack of clarity in understanding how the pilots' results will be influenced by the data governance model. Solution: Close work with pilots, trying to understand when a problem derives from too strict/too broad regulation.	
Next Steps in Next Period	
First, a target is to cooperate with different partners, once the pilots have started, to discuss about how to better monitor the results and how to properly evaluate them. Second, we aim to define how the results of the previously-mentioned monitoring will impact the work of the other WP Tasks.	

4.7 WP7 - Business Modelling & Exploitation, Dissemination, Standardisation and Stakeholder Mobilisation (ICCS)

WP7 aims to deliver the following results: (i) develop a commercialisation strategy for DIVINE; (ii) manage IP generated and engage in standardisation; (iii) engage with relevant stakeholder groups to increase awareness of the project. During the first year of the project's lifetime, WP7 focused on the following: delivery of preliminary version of market analysis, business plan & exploitation strategy; design of initial DIVINE dissemination & collaboration plans and kick-off of their implementation, design of the initial plan for Multi-Actor Approach activities & stakeholder mobilisation and start the respective implementation; delivery of D7.1 on the DIVINE IPR Protection Planning and Strategy. More details on the activities conducted under WP7 and the respective accomplishments are presented in the subsequent tables.

4.7.1 Task 7.1

Task	**Title (Leader, Duration)**
7.1	Exploitation strategies, market analysis and business modelling (ENG, M01-M36)
Contributors	ENG, DIGI, VICOM, CREA, FE, NP, ITC, IDSA, KGZS, ADSC
Summary of Progress during Year 1	
In March, as announced during the Palermo General Assembly, a survey was designed and sent to all consortium members in order to collect different points of view; in particular, regarding the business model that each of them considered most applicable to ADSE. The data collected provided useful information that was processed and used as input for the writing of the internal document ID7.2, which was delivered and will be extended at M18 for D7.2, the Table of Contents of which has been defined. Taking into account the aspects of the innovation strategy, the work carried out in collaboration with Task 1.4 has defined the steps of the innovation management process, which were presented at the Palermo GA.	
Significant Results during the Year 1	
Delivery of the preliminary version of Business Plan (ID7.2) and definition of D7.2 Table of Contents, setting the basis for future exploitation activities.	
Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested	
Data accuracy is a critical issue due to the complex nature of agricultural data spaces and the potential for different perspectives within the consortium. The risk of incomplete/unreliable data is a significant challenge as it could undermine the validity of our decision-making processes. In addition, market uncertainty in this emerging sector compounds the problem, making it difficult to accurately predict market trends and dynamics. This uncertainty complicates the formulation of a business plan and requires a flexible approach to adapt to changing conditions. To address	

potential deviations from the action plan, it is essential to conduct ongoing market research and consider different market opportunities to maintain the resilience of the plan. Adopting an agile data collection methodology allows us to make iterative improvements and adjustments as new insights and data emerge in the ever-evolving agricultural data spaces, ensuring our approach remains adaptable and informed
Next Steps in Next Period
The next period will focus on refining the business plan, incorporating insights from the consortium perspectives and the identification of DIVINE outputs, with a focus on the comprehensive identification of DIVINE project outputs and exploitable assets to inform further exploitation strategies.

4.7.2 Task 7.2

Task	**Title (Leader, Duration)**
7.2	Global outreach, dissemination and communication (ICCS, M01-M36)
Contributors	ICCS, WFO, SETU, ENG, ITC, IDSA, UCD, KGZS, ADSC
Summary of Progress during Year 1	
During the first year of the project, significant progress has been noted regarding dissemination and communication activities, in line with the DEC plan that was initially proposed in the DoA. During this period, the first phase of the dissemination strategy has been implemented, developing a comprehensive users and relevant stakeholders outreach plan. According to this, the building of the DIVINE stakeholders' community has been initiated, identifying key target groups and performing multiple dissemination actions to approach them and raise awareness about DIVINE objectives. Moreover, a comprehensive social media strategy has been built, identifying the targeted audience, selecting the most suitable platforms, setting specific measurable goals, and tracking social media performance. The initial network of stakeholders has been mainly built via social media, as well as through the hosting and the participation of DIVINE partners in various high-profile events. Moreover, additional targeted events that will take place during the next months have been identified. All the respective dissemination updates have been reported in dedicated live spreadsheets shared across the consortium. Finally, throughout the first year of the project, communication has successfully taken place through the social media accounts and the website of DIVINE. So far, a large number of social media posts have been made, gaining a continuously increasing number of followers from diverse targeted groups of stakeholders.	
Significant Results during the Year 1	
The progress made during the first year of the project has led to the achievement of some first milestones. First, from the launch of the project, DIVINE logo and brand identity have been produced, including color palettes and fonts. Additionally, Word templates for the deliverables of	

the project and PowerPoint templates for presentations have been circulated to the consortium.

DIVINE accounts have also been created on LinkedIn, Twitter and Facebook, along with a YouTube channel, to leverage the power of these platforms and spread DIVINE key messages to hundreds of potential stakeholders. Dozens of posts have been made on each platform from the beginning of the project, informing the DIVINE network about its main activities and preliminary milestones accomplished. Additionally, two videos from the first two plenary meetings of the project have been uploaded to the YouTube channel. Respective posts have received high numbers of impressions/shares, increasing the visibility of DIVINE activities and confirming its popularity.

Moreover, a live spreadsheet has been created to store engagement metrics and monitor the performance of DIVINE social media through time. By M12, DIVINE has gained more than 700 followers on LinkedIn, 120 followers on Twitter and 110 followers on Facebook, obtaining hundreds or even thousands, in some cases, of impressions per post. Almost every type of stakeholders that has been initially identified in the DoA has been approached, including people and companies/organizations in the agriculture, research, policy making, ICT domain and food industry, as well as relative national and EU-funded projects.

Furthermore, by M12, various stakeholders have also been approached via in-person and virtual events that have been documented in a live spreadsheet circulated to the consortium that is continuously being updated. Until now, DIVINE has been presented in a diverse spectrum of 18 events, including but not limited to Data Week 2022, IoT Week 2022, Agri Sparks 2022, EU "R&I in Agricultural data" synergy workshop, 125th OGC Member Meeting, AgriDataSpace Conference, a series of IDSA tech talks, WFO General Assembly 2023, 2023 EU AgriResearch Conference, WFO Gymnasium, IEEE COINS 2023, AGRA 2023 International fair, Irish National Ploughing Championship 2023, etc. Multiple presentations, videos and brochures have been also created to support the dissemination of the DIVINE objectives and preliminary results in these events.

Finally, another live spreadsheet has been circulated to the consortium to document new potential dissemination targets identified, including academic journals, special issues, conferences, campaigns or other events of interest. This live document is being periodically updated by all the DIVINE partners, counting dozens of entries until now.

Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested

Overall, the initial dissemination and communication plan has been implemented. However, there have been a few deviations due to unforeseen risks. For example, the original T7.2 leader (WFO) was unable to undertake this role due to an unexpected shortage of human resources. ICCS undertook the leadership of the task, assuring the prompt and smooth initiation of the D&C activities of the project. Nevertheless, WFO contributes to this task, sharing DIVINE updates with its global network of farmers and relevant stakeholders.

Another challenge faced corresponds to keeping the interest of DIVINE stakeholders intact in social media. To this direction, we continuously aim to create appealing content, keeping DIVINE posts maximally concise, including images/videos, and making use of specific hashtags and emojis.

Finally, the 6-month newsletter and the mass media publications have not been launched yet. We considered that the project was not at a mature enough level to share results with a much broader audience of targeted stakeholders. Therefore, it was preferred to delay these actions until the project reaches a more stable state.
Next Steps in Next Period
We will move to the second phase of the dissemination strategy, which corresponds to a more targeted approach, aiming to identify key players in the market and in the target users' ecosystem, as well as to expand the current initial community of stakeholders via social media and other communication channels established. During the next months, more attention is required regarding the social media strategy, as DIVINE pilots will be running, producing shareable results. So, posting content will be planned well beforehand following a social media content calendar, while frequent posts will keep the DIVINE network updated. Moreover, we plan to enrich the type of content focusing on the pilots, to further expand the DIVINE stakeholders' network in social media. Furthermore, it is planned to launch the 6-month DIVINE newsletter, as well as to initiate mass media publications, e.g., in national and local newspapers and specialized magazines, during the next period of the project. These actions are expected to attract even more stakeholders and interested parties and expand the current DIVINE stakeholders' community. Finally, in year 2, DIVINE will be featured in more targeted events, such as SmartAgriHubs Synergy Days, IEEE WF-IoT 2023 and European Big Data Value Forum, where DIVINE is already planned to participate. Besides these, more related events will be identified and all of them will be recorded in the respective live spreadsheet circulated. Similarly, more academic journals, special issues and conferences will be identified and added to the respective lists, and the submission of DIVINE-based articles will kick-off. Last but not least, T7.2 results and milestones achieved during the first 1.5 years of the project will be documented in D7.3 "Global outreach, dissemination, standardization and external collaboration plan and activities" that is due on M18.

4.7.3 Task 7.3

Task	**Title (Leader, Duration)**
7.3	Collaboration with related projects (ICCS, M01-M36)
Contributors	ICCS, SETU, ENG, DIGI, FE, NP, WFO
Summary of Progress during Year 1	
During the first year of the project, some important first steps have been taken towards the collaboration with other related projects. The first step to this direction was the identification of related EU-funded (under H2020 and Horizon Europe) projects, as well as national and international programmes, that share a similar vision with DIVINE. The initial list of such projects presented in the DoA has been significantly expanded throughout the first year of DIVINE.	

Next, a comprehensive plan has been developed to approach key partners involved in related projects. Most of the DIVINE partners participate in other related projects, facilitating the initiation of communication with them. Besides these direct links, presenting DIVINE in many events has fostered networking with key partners in other related projects. Similarly, initial bonds have been developed with sister projects through social media.

Finally, some bi-lateral discussions and meetings with sister projects have taken place throughout the first year of DIVINE. The focus of these meetings was to identify common paths, align targeted activities, complement some actions and potentially produce joint outputs to achieve the ultimate goal of transforming the agricultural domain in Europe. In this context, specific tools and methodologies developed by other projects have been selected to be adopted by DIVINE and will be evaluated in practice through the 4 DIVINE pilots.

Significant Results during the Year 1

As a result of the effort put into Task 7.3, more than 30 related projects have been identified so far, including but not limited to: DEMETER, SmartAgriHubs, ATLAS, ZeroW, PLOUTOS, AgriDataSpace, Robs4Crops, Nefertiti, AgriDISCRETE, AgriBit, OPEN DEI, NIVA4CAP, MEF4CAP, IoF2020, DIY4U, Farm Manager, ENVISION, EKOGEN, SFIB, Papillons, Data4Food2030, FAME, ScaleAgData, EU FarmBook, EUHubs4Data, LINKDAPA, WATERAGRI, FAIRShare, AgriDataValue, LIFE Farm4More and TRUSTyFOOD. For each one of these projects, specific related WPs, tasks and potentially useful outputs have been identified to build bridges with DIVINE.

Moreover, DIVINE has been presented in many conferences, workshops and other events that are listed in T7.2 progress report above, creating new bonds and strengthening the already developed ones with related projects. Additionally, targeted joint actions have been performed and dedicated meetings have taken place to support cooperation with sister projects. For example, DEMETER and DIVINE have been jointly represented in IEEE COINS 2023, as DIVINE will be based on DEMETER's AIM and knowledge extraction module. Similarly, three meetings have already taken place with the AgriDataSpace CSA project to consolidate joint actions, as DIVINE will build on AgriDataSpace's framework, establishing it in practice through its 4 pilots.

All the sister projects identified and the respective joint actions scheduled have been reported in a dedicated live spreadsheet which has been circulated to the DIVINE partners and is periodically being updated.

Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested

Despite the achievement of certain milestones regarding the collaboration with related projects during the first year of the project, some challenges and issues have been encountered and required our attention. First, sometimes it is difficult to approach specific projects, especially the ones that have completed their lifecycle and have not been so active lately. This issue has been partially overcome by demonstrating the activities and some preliminary results of DIVINE in social media, conferences and other high-profile events, attracting more and more stakeholders, including related projects.

Moreover, specific joint actions need to be performed, including discussions to identify potential overlaps or unmet needs and scheduling joint events. These tasks are very challenging since they require the alignment of actions from multiple projects and the cooperation of many partners and diverse work groups. Therefore, during the first year of the project we invested in building strong links and establishing robust communication channels through social media networking and other events, to facilitate the consolidation of joint actions and ensure that our efforts will bear fruit.
Next Steps in Next Period
In the second year of DIVINE, collaboration with related projects will be intensified. First, we aim to identify more projects that share a similar vision with DIVINE. We will focus on newly launched projects after the latest Horizon Europe calls, especially projects funded under cluster 6: food, bioeconomy, natural resources, agriculture and the environment. Besides EU-funded projects, we also aim to identify more national and international initiatives. It is planned to approach these projects through social media and by attending common events or inviting key partners of them to participate in future events co-organized by DIVINE and other sister projects. To this direction, it is our priority to strengthen bonds and communication with collaborating projects and expand joint actions. In this context, more dedicated meetings, workshops and other joint events will be scheduled. The organization of larger joint events is expected to attract the interest of more stakeholders in the market, promoting our common goals. Of course, besides these joint events, DIVINE will continue to participate in other events to expand its network of collaborating projects as much as possible. DIVINE will also be featured in the SmartAgriHubs Synergy Days organized by the homonym H2020 project. Additionally, DIVINE will leverage tools and frameworks provided by other projects. For example, DIVINE will build on DEMETER's AIM and knowledge extraction module and on the framework proposed by AGriDataSpace. These activities have already been initiated and will be further intensified as the project progresses. The respective live spreadsheet will continue to be periodically updated to keep track of related projects and joint activities of interest. Finally, T7.3 results obtained from the first 1.5 years of the project will be documented in D7.3 "Global outreach, dissemination, standardization and external collaboration plan and activities" that is due on M18.

4.7.4 Task 7.4

Task	Title (Leader, Duration)
7.4	Governance of Multi-Actor Approach activities & stakeholder mobilisation (FE,

	M01-M36)
Contributors	FE, ENG, CREA, IDSA, WFO

Summary of Progress during Year 1

During the initial phase of the project, we have created an opened and working Excel file. The development of the Excel shared file among all partners of the consortium is aiming to allow all partners from all WPs to insert their opinions and feedback on who may be an interesting and relevant stakeholder for DIVINE.

Additionally, on July 7th 2023, at the conference hosted by WFO, we have actively participated and presented the DIVINE project, mostly focused on the activities undertaken regarding the analysis of agri regulatory requirements, agri data-sharing governance models, policies, regulations under WP6.

Significant Results during the Year 1

As result of the work undertaken under Task 7.4, several information and relevant contacts of stakeholders are constantly being collected. In preparation of the first Deliverable to be produced by Spring 2024, we have prepared a comprehensive overview of DIVINE project which aims to ease the understanding of the scope of the project to the relevant stakeholders. This document was drafted aiming to facilitate the dissemination strategy and boost stakeholder's curiosity towards the consortium work.

Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested

At the current stage of the project, the risk is not finding interested and relevant stakeholders to disseminate the project work and future results.

Solution: continuously update their list and enlarge it. Moreover, we have been discussing the organization of an official event for the DIVINE project launch.

Next Steps in Next Period

Moving forward the next steps, we aim at further implementing the Stakeholders list. Additionally, soon as more information and results from DIVINE are available, initiate the phase of dissemination of the results, work plan, strategies, etc. to all relevant stakeholders.

Among the other tasks, it is essential the close collaboration and the division of work among all the partners. Finally, we have proposed to start the Horizon Booster procedure, the free tool provided by the EU Commission to foster and ameliorate the dissemination results,

4.7.5 Task 7.5

Task	**Title (Leader, Duration)**

7.5	Management and Protection of IPR (INLE, M01-M36)
Contributors	INLE, DIGI, VICOM

Summary of Progress during Year 1

Task 7.5 focused on developing a process and methodology for identifying tangible and intangible assets that are necessary for the project's execution. This task also focuses on the identification of commercially sensitive innovations and guiding partners towards filing at least one patent application.

A key outcome of the task was the initial version of DIVINE's IPR Directory (presented in D7.1). The directory provides an overview of ownership of the baseline assets being brought into the project, including their open-source or proprietary nature. The register also covers ownership of expected outcomes of the project that have been defined up to month 09 of the project's lifetime. This directory will be monitored and updated as the project matures to provide partners with up-to-date information throughout the project life cycle.

The process and methodology to support patenting activities, which is being followed in the project, was also discussed with partners and presented as part of D7.1. These activities will be led by INLE, who will work with all members of the consortium to identify and protect commercially sensitive IP. To support this work, the Agri-Tech patent and market landscapes was examined and presented in D7.1, and project-specific guidance was also developed to highlight areas of the project that may be suitable for patent protection.

The key outcome of the analysis of the Agri-Tech solutions space was that current solutions tend to focus on private entities who tend to use tightly-controlled data sources, often gathered from their own machines / day-to-day operations. The solution doesn't typically focus on the challenges associated with data sharing, which is a key area of interest for DIVINE. It is expected that solutions that solve these challenges of data sharing and/or facilitate decision-making for Agri-Data stakeholders will likely demonstrate considerable market value.

It was also noted that patents can play a role in supporting the realisation of EC policy goals. This is because patents encourage investment in solutions, and so are a mechanism to support longer-term economic sustainability of research outcomes. Considering the policy-focused nature of DIVINE's objectives, it is expected that any of the project's solutions that are patented will target policy-related issues and therefore support longer-term realisation of policy objectives.

Additional activities were also carried out as part of this task during the project's first year, namely: the methodology for educating the consortium and capturing potential patent ideas was outlined for partners, a patent attorney quotation process was completed, and the methodology for assessing patents was outlined to partners. Further details of these activities and outcomes will be presented in D7.6, which is due in month 36.

Significant Results during the Year 1

- Deliverable D7.1: "IPR Protection Planning and Strategy" has been submitted to the EC for review.
- Initial IPR directory, which presents information on ownership of assets brought into the project and expected outcomes defined so far within the project's lifetime (month 09), has been compiled. This helps partners understand asset ownership and determine if IPR issues will hinder asset exploitation. The directory will be updated throughout the project lifetime to support partners in mitigating potential IPR challenges.
- The process and methodology to support the IPR protection plan and strategy has also been developed and presented to partners, along with an overview of the Agri-Tech patent and market landscapes.
- Activities to support the patent filing process have also been completed, resulting in the selection of a patent attorney, initial education of project partners on patents and communication of the patent assessment methodology that will be used in the project.

Risks, Deviations from the Description of Action and Corrective Actions Taken/Suggested

Risk: There is a commitment to file at least one patent based on the project's activities, and there is a risk associated with fulfilling this in timely fashion. This is driven by technical challenges and innovation requirements necessary to successfully file patents.

Mitigation: The project plan has resulted in a task focusing on patent protection (T7.5) and project partners that consist of innovative SMEs and industry members who are looking for opportunities to differentiate. Both these facts decrease the risk, which is further decreased due to the expertise from INLE, who are leading T7.5, in supporting consortia in filing patents from R&I projects. Monitoring of activities in Work Packages 1 to 6 is also ongoing to identify likely areas of focus for patenting activities.

Deviations and Corrective Actions Taken/Suggested: none

Next Steps in Next Period

- This IPR directory will be monitored and updated so information is maintained and up-to-date.
- Review of internal deliverables on business and market to ensure alignment between WPs, especially WP7 business impact discussions. This is important for ensuring market relevance of IP selected for filing from the project.
- Develop plan for IPR training session to educate the partners on IP benefits and approaches to identifying suitable ideas for patent filing.
- Project monitoring, especially WP3 and WP5.
- Conduct patent training session.
- Begin discussions with partners following initial call for ideas on the details of potentially patentable ideas.

4.8 Deliverables in this period

Deliv. num	Deliverable name	WP num.	Lead partici-pant	Type	Dissemi-nation level	Delivery date (Annex I)	Receipt Date	Status
D1.1	Data Management Plan	1	DIGI	R	PU	31/03/23	31/03/23	Submitted
D7.1	IPR Protection Planning and Strategy	7	INLE	R	CO	30/06/23	30/06/23	Submitted
D3.1	Agriculture Data Spaces Ecosystem – Release 1	3	ENG	R, DEM	CO	31/08/23	31/08/23	Submitted
D4.1	Knowledge extraction, decision support & benchmarking– Release 1	4	CREA	R, DEM	CO	31/08/23	30/09/23	Submitted
D1.2	Project Report Year 1	1	ICCS	R	PU	30/09/23	30/09/23	Submitted
D2.1	DIVINE technology integration tools – Release 1	2	SETU	R, DEM	CO	30/09/23	30/09/23	Submitted
D5.1	DIVINE pilot design, management, and deployment – Release 1	5	DIGI	R, DEM	CO	30/09/23	30/09/23	Submitted
D6.1	Development & integration of agri data sharing governance models, policies and regulations – Release 1	6	FE	R	PU	30/09/23	30/09/23	Submitted
D6.2	Agri data sharing policy framework adoption manual and guidelines – Release 1	6	ENG	R	PU	30/09/23	30/09/23	Submitted

4.9 Milestones in this period

Milestone number	Milestone name	Related WP(s)	Due date (Annex I)	Means of verification	Status
MS1	Project Launch completion; Release of Initial Planning & Guidelines	WP1, WP7	31/12/2023	Website, Project Handbook, initial internal WP7 documents delivered	Complete
MS2	DIVINE Enablers, Services, Integrated Ecosystem and Agri Data Sharing policy framework Release 1	WP2, WP3, WP4, WP6	30/09/23	D2.1, D3.1, D4.1, D6.1, D6.2 delivered	Complete

5 Summary and Conclusions

Deliverable D1.2 presents a summary of the work carried out by the entire DIVINE Consortium during the first year of the project's lifetime (M01-M12). The aim of this deliverable is twofold: first to elaborate on the status of the activities towards the accomplishment of the 8 project objectives and second to discuss the progress of the work across all Work-Packages and tasks. Thus, the present document discusses all aspects of the project, technical, agricultural and managerial of all considered domains such as research, scientific, policy-related, exploitation, dissemination, innovation, etc.

Annex A. Project Handbook

Funded by
the European Union

DIVINE - Grant Agreement 101060884
HORIZON-CL6-2021-GOVERNANCE-01-20

DIVINE

Project Handbook

Abstract: This document contains a set of guidelines and references for DIVINE Project (*full title: "DemonstratIng Value of agri data sharIng for boostiNg data Economy in agriculture"*). It is to be used as a quick start manual for newcomers, as well as a guide for the resolution of administrative issues.

A.1 Glossary - Acronyms

GA	Grant Agreement
ICT	Information and Communication Technology
IM	Instant Messaging
IP	Intellectual Property
IPR(s)	Intellectual Property Right(s)
KoM	Kick-off Meeting
PM	Person Month
PMC	Project Management Committee
QPR	Quarterly Project Report
WP	Work Package
WPL	Work Package Leader

A.2 Executive Summary

This document contains a set of guidelines, procedures, and references for the DIVINE Project (*full title: "DemonstratIng Value of agri data sharIng for boostiNg data Economy in agriculture"*). It is to

be used as a quick start manual for newcomers, as well as a point of reference for the resolution of complex issues. The project handbook contains all information for running the project, including but not limited to milestones, deliverables, templates to be used, communication platform details, and procedures to be followed. It also provides the details of all partners' information as a one-stop information source. It's based on formal documents, mainly the Grant Agreement (Number 101060884 — DIVINE) and the signed Consortium Agreement, which always prevail. Note this is a living document and will be updated as new people/systems/procedures are introduced to the project.

A.3 Introduction

This document contains a set of guidelines and references for the DIVINE Project. Further information is included in formal documents, such as the Grant Agreement, along with all agreed policies and rules. The Project Handbook offers quick information and answers to as many frequently asked questions as possible, while offering the full references for more information. It consists of two parts, the Quick Start Reference and the Procedure Outline and is to be used as a quick start manual for newcomers, as well as an initial point of reference for the resolution of complex issues.

Section 2 presents the main tools used by all participants for enhanced communication and collaboration.

Section 3 presents the management structure and the mechanisms that ensure smooth cooperation and swift resolution of complex issues.

A.4 Quick Start Reference

This section presents information expected to be most often sought, in order to ease progress and improve efficiency in everyday operation.

A.5 Documents & Code Repositories

A GitLab repository (private online space for file sharing) will be installed at ICCS premises. After having examined the most common tools (git, Redmine, Owncloud, SharePoint, …), Gitlab seems to be the most appropriate for DIVINE size and needs regarding documents and code, and the necessary accounts will be created for every partner.

The repository will be accessible at https://gitlab.telecom.ntua.gr/ and there are multiple options for using it:

- Web Interface
- Git client (e.g. Tortoise)
- Command line (for power users)

Detailed usage instructions will be included in this document as soon as the repository is created.

The main naming conventions partners need to remember are the following:

- Integrated deliverable versions:

  DIVINE_D<No>_v<Ver>.docx (e.g., DIVINE_D1.1_v01.docx)

- Deliverables with contributions:

  DIVINE_D<No>_v<Ver>_<Partner>.docx

  (e.g., DIVINE_D2.1_v02_ICCS.docx contains the contribution of partner ICCS inserted in v02 of D2.1)

Past experience has shown that the use of Microsoft Office "Track changes" mechanism enhances collaborative editing in similar cases, so it is highly recommended whenever someone edits submitted documents and uploads a new version.

A.5.1 E-mailing lists, IM

The main tool for project-wide communication is the mailing list **DIVINE-GA**@lists.cn.ntua.gr, which reaches all participants. Please make sure the list's name is correct when typing it in or "replying" to an email that was sent to the list. The following lists have also been created for DIVINE:

DIVINE-admin@lists.cn.ntua.gr (admin & financials people)
DIVINE-PMC@lists.cn.ntua.gr (PMC people)
DIVINE-WP1@lists.cn.ntua.gr (WP1 participants)
DIVINE-WP2@lists.cn.ntua.gr (WP2 participants)
DIVINE-WP3@lists.cn.ntua.gr (WP3 participants)
DIVINE-WP4@lists.cn.ntua.gr (WP4 participants)
DIVINE-WP5@lists.cn.ntua.gr (WP5 participants)
DIVINE-WP6@lists.cn.ntua.gr (WP6 participants)
DIVINE-WP7@lists.cn.ntua.gr (WP7 participants)
To subscribe to one of these lists, please use the following link:

http://lists.cn.ntua.gr/cgi-bin/mailman/listinfo/**divine-???**

where **divine-???** needs to be replaced by the list's name before the @ character (e.g., **divine-GA** or **divine-WP1**). Please subscribe only to the lists of your interest and not to all lists created, to ensure you will only receive emails you need to follow/respond to. When typing the list's name or "replying" to the list, please make sure that it is correct.

Additional lists can be created if needed, depending on the needs of the project.

Instant Messaging apps (slack, skype, whatsapp etc.) can also be useful, especially for small teams focusing on code development or specific documents, but these will be chosen in an ad hoc manner for each case, not centrally, in order to allow each team to work as efficiently as possible.

A.5.2 Social Media and Web Site

The domain name "divine-project.eu" has been registered for the project and visual material is being gathered by partners to be included in the project's web site. An appropriate visual identity for the project is being created by SETU. A press release regarding the project launch is planned to be circulated as soon as the visual material is available. Partners are expected to use it in relevant communication channels, translate it when needed and potentially add organisation-relevant quotes.

The social media handles of the project (Twitter and LinkedIn) will also be launched upon creation of the visual identity of DIVINE. Project-related tweets or LinkedIn posts are to go through the project's channels or at least include the hashtag #DIVINEproject in addition to other relevant hashtags partners might want to use to enhance visibility.

A.5.3 Meetings & Teleconferences

The consortium is planned to meet as a full group at least 2-3 times a year. Individual WP / Technical / Pilot meetings will take place physically wherever possible, according to project needs. Other meetings will take place via audio/video conference. The AC organiser will circulate dial in / access details in advance of the project (based on the organisers' platform of choice (e.g. Webex, GotoMeeting, Zoom…).

The following rules apply for invitations to meetings and their minutes (including phone/video conferences):

- The host will call a meeting, accompanied with an agenda and location information, with a copy to the Project Coordinator, in order to allow timely and good preparations by all participants and smooth travel organization. In case of phone/video conferences, the chairman will setup the technical platform and distribute connection details to all participants.
- For every official project meeting, minutes will be drawn by a representative of the hosting partner, unless stated otherwise in the meeting agenda. These minutes will contain (indicatively) the agenda, the attendance list, decisions taken, action points, next events etc. The draft meeting minutes will be sent by e-mail to all attendees for review and for consolidation purposes. Within 10 days after the meeting, the reviewed/consolidated version of the minutes will be uploaded to the Project Library. Minutes will be considered as approved, if within 7 days from upload, none of the attendees has objected in writing to the chairperson.

- All recurrent teleconferences will need to be listed in a simple table, which will contain the day, time, and link of the event, in order to increase efficiency.

A.6 Procedure Outline

The management structure and the mechanisms that ensure smooth cooperation and swift resolution of complex issues are presented in this section. Relevant information is gathered in this document for quick reference.

A.6. Participants – Roles & Hierarchy

The project partners are presented in the following table:

Table 1. DIVINE Partners

Partner No.	Participant Organisation Name (Full and Short)	Country	Type
1	INSTITUTE OF COMMUNICATION AND COMPUTER SYSTEMS (ICCS)	EL	Research Institute
2	South East Technological University (SETU)	IE	Research Institute
3	ENGINEERING - INGEGNERIA INFORMATICA SPA (ENG)	IT	Large Ind
4	INLECOM COMMERCIAL PATHWAYS COMPANYLIMITED BY GUARANTEE (INLE)	IE	SME
5	DIGIOTOUCH OU (DIGI)	EE	SME
6	FUNDACION CENTRO DE TECNOLOGIAS DE INTERACCION VISUAL Y COMUNICACIONES VICOMTECH (VICOM)	ES	Research Institute
7	CONSIGLIO PER LA RICERCA IN AGRICOLTURA E L'ANALISI DELL'ECONOMIA AGRARIA (CREA)	IT	Public Body
8	FARM EUROPE AISBL (FE)	BE	Research Institute
9	NEUROPUBLIC AE PLIROFORIKIS & EPIKOINONION (NP)	EL	SME
10	ITC - INOVACIJSKO TEHNOLOSKI GROZD MURSKA SOBOTA (ITC)	SI	Research Institute
11	INTERNATIONAL DATA SPACES EV (IDSA)	DE	Research Institute
12	ORGANIZZAZIONE MONDIALE DEGLI AGRICOLTORI (WORLD FARMER'S ORGANISATION - WFO)	IT	Non Profit Association
13	UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (UCD)	IE	Academic
14	KMETIJSKO GOZDARSKA ZBORNICA SLOVENIJE KMETIJSKO GOZDARSKI ZAVOD MURSKA SOBOTA (KGZS)	SI	Public Body

15	DYNAMIC & SECURITY COMPUTATIONS SL (ADSC)	ES	SME

All consortium partners have previous experience working in EU consortia or within large, complex, international projects. The project is managed and administered by the Project Management Committee (PMC). The PMC is the formal decision-making body for the project. It is led by the Coordinator, and will comprise the Technical Manager, the Innovation and Exploitation Manager, and the Work Package Leaders (WPLs). PMC meetings will be called in association with technical Meetings. The PMC is responsible for making and overseeing all technical decisions made within the project. It has the power to directly control all Work Packages (WPs) and Tasks, through the consensus of the partners. The PMC is responsible for putting into place mechanisms to be used by the WPs to ensure high quality of work.

The following management roles are assigned in the project:

- Project Coordinator (responsible partner: ICCS) – Ioanna Roussaki

Mandate: Represent the project to the European Commission (EC); report to the EC; monitor overall performance of the project and resolve urgent issues; promote project visibility; promote dissemination of project results in relevant international fora; promote acceptance of project results among relevant stakeholders; administrate project resources and monitor project spending.

Specific Tasks: Convene and chair Project plenary sessions; convene and chair Project coordination meetings; collect Quarterly-Monthly Control Reports from Partners and forward an overall Quarterly-Monthly Management Report to the Project Officer; collect input from Partners and forward the Periodic Progress report to the Project Officer; ensure financial operation of the project; communicate with Partner Representatives for coordinating the exploitation of the project's results; enforce compliance to the project's internal communication and editorial conventions; maintain a project document library; convene and participate in Review meetings.

- Technical Manager (responsible partner: SETU) – John McLaughlin

Mandate: Ensure accomplishment of the technical objectives of the project; supervise progress of the project's technical part; promote, in association with the Project Coordinator and the Innovation Manager, the project's visibility in international scientific fora; ensure preparation of Technical Audit Documentation; organise the team of delegates to the Technical Audit.

Specific Tasks: Coordinate technical activities of the project; convene and lead technical meetings; report to the PMC on the technical progress of the project; coordinate the production of technical deliverables; coordinate the representatives of the project in relevant Special Interest Groups; attend the Technical Audit; ensure, in association with the Project Coordinator, the representation of the project in technical workshops on related topics.

- Innovation and Exploitation Manager (responsible partner: ENG) – Giulia Antonucci

Mandate: Design and realize effective innovation strategies; improve the consortium's innovation capability; establish contacts with external stakeholders; monitor IPR issues.

Specific Tasks: Identify project innovations (new ideas, concepts, knowledge, methods, products, or services) in a timely fashion; clarify the ownership model or IPR of the innovations; perform a SWOT analysis for each of the project innovations; identify the potential beneficiaries of these innovations (target groups) and the best methods to reach them (communication strategy); specify the action points, persons responsible and time plan for reaching the identified target groups; define the effort that will be spent for performing these actions and the relevant measurable goals (performance indicators, such as number of pre-agreements with possible investors); supervise the innovation processes made in scope of the project; provide a periodical overview of the innovations made in the project's field; analyse the cases of legal use of innovation solutions designed in the project; report to the PMC on the progress of the innovation activities of the project.

The WPLs are:

- WP1L (responsible partner: ICCS) – Ioanna Roussaki
- WP2L (responsible partner: SETU) – Kieran Sullivan
- WP3L (responsible partner: ENG) – Susanna Bonura
- WP4L (responsible partner: CREA) – Iraj Namdarian
- WP5L (responsible partner: DIGI) – Soumya Kanti Datta
- WP6L (responsible partner: FE) – Szabolcs Zoldreti
- WP7L (responsible partner: ICCS) – Stavros Xynogalas

A.6.2 Work Structure

The work plan has been structured in such a way, as to achieve high quality results as efficiently as possible. The DIVINE project Pert diagram illustrates the interdependencies in place across the DIVINE WPs, where the labelled arrows indicate what each WP feeds to the others.

The hierarchy and the communication flows of all WPs are depicted in **Figure 1**:

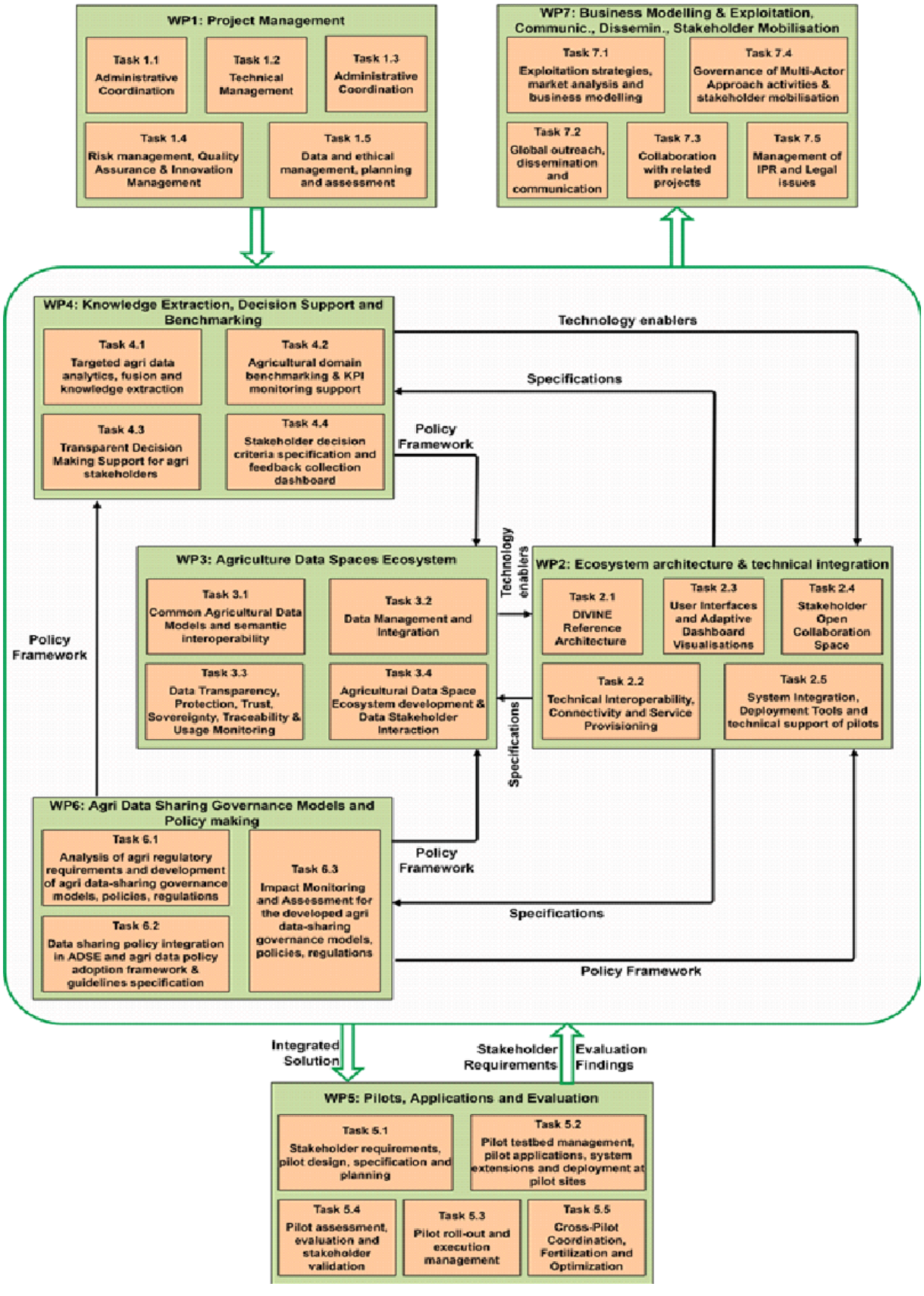

Figure 1. DIVINE Pert Diagram.

A.6.3 Timeline

The project timeline, its deliverables and milestones are briefly presented here in **Figure 2**, **Table 2**, and Table 3, respectively:

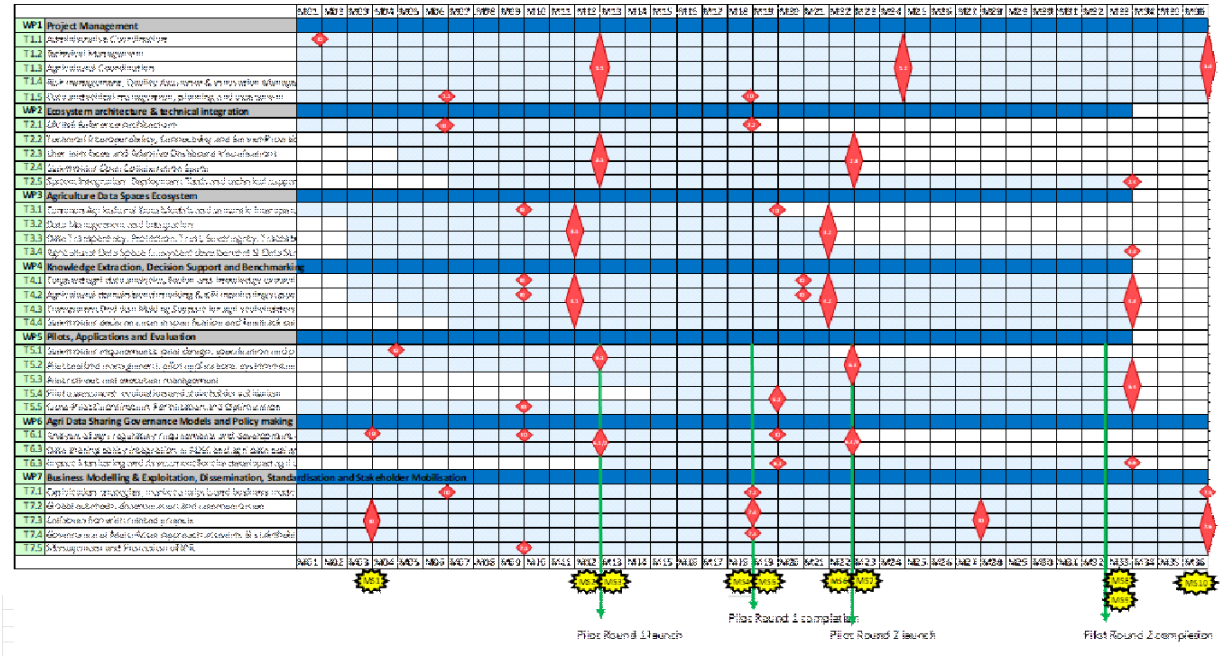

Figure 2. DIVINE Gantt Diagram.

All partners enter the project at the beginning and leave in the end, all fully committed.

Table 2. List of DIVINE Deliverables

Deliv. (num)	Deliverable name	Work package number	Short name of lead participant	Type	Dissemi -nation level	Delivery date (in months)
D1.1	Data Management Plan	1	DIGI	R	PU	M06
D7.1	IPR Protection Planning and Strategy	7	INLE	R	CO	M09
D3.1	Agriculture Data Spaces Ecosystem – Release 1	3	ENG	R, DEM	CO	M11
D4.1	Knowledge extraction, decision support & benchmarking – Release 1	4	CREA	R, DEM	CO	M11
D1.2	Project Report Year 1	1	ICCS	R	PU	M12

D2.1	DIVINE technology integration tools – Release 1	2	WIT	R, DEM	CO	M12
D5.1	DIVINE pilot design, management, and deployment – Release 1	5	DIGI	R, DEM	CO	M12
D6.1	Development & integration of agri data sharing governance models, policies and regulations – Release 1	6	FE	R	PU	M12
D6.2	Agri data sharing policy framework adoption manual and guidelines – Release 1	6	ENG	R	PU	M12
D2.2	DIVINE reference architecture	2	ICCS	R	CO	M18
D7.2	Market Analysis, Business Plan and Exploitation activities – Release 1	7	ENG	R	CO	M18
D7.3	Global outreach, dissemination, standardisation and external collaboration plan and activities	7	WFO	R	PU	M18
D7.4	MAA activity planning, roadmap and initial results	7	FE	R	PU	M18
D5.2	DIVINE pilot impact assessment, evaluation, and best practices – Release 1	5	DIGI	R	CO	M19
D6.3	Validated agri data sharing policy recommendations – Release 1	6	FE	R	PU	M19
D3.2	Agriculture Data Spaces Ecosystem – Release 2	3	ENG	R, DEM	CO	M21
D4.2	Knowledge extraction, decision support & benchmarking – Release 2	4	CREA	R, DEM	CO	M21
D2.3	DIVINE technology integration tools – Release 2	2	WIT	R, DEM	CO	M22
D5.3	DIVINE pilot design, management, and deployment – Release 2	5	DIGI	R, DEM	CO	M22
D6.4	Development & integration of agri data sharing governance models, policies and regulations – Release 2	6	FE	R, DEM	PU	M22

D6.5	Agri data sharing policy framework adoption manual and guidelines – Release 2	6	ENG	R	PU	M22
D1.3	Project Report Year 2	1	ICCS	R	PU	M24
D2.4	DIVINE technology integration tools – Release 3	2	WIT	R, DEM	PU	M33
D3.3	Agriculture Data Spaces Ecosystem – Release 3	3	ENG	R, DEM	PU	M33
D4.3	Knowledge extraction, decision support & benchmarking – Release 3	4	CREA	R, DEM	PU	M33
D5.4	DIVINE pilot impact assessment, evaluation, and best practices – Release 2	5	DIGI	R	PU	M33
D6.6	Validated agri data sharing policy recommendations – Release 2	6	FE	R	PU	M33
D1.4	Project Report Year 3	1	ICCS	R	PU	M36
D7.5	Market Analysis, Business Plan and Exploitation activities – Release 2	7	ENG	R	CO	M36
D7.6	Overarching report on global outreach, dissemination, standardisation, external collaboration, MAA and IPR protection activities	7	ICCS	R	PU	M36

Clear milestones have been set along the way, in order to keep the project alert and focused.

Table 3. List of DIVINE Milestones

Milestone number	Milestone name	Related work package(s)	Due date (in month)	Means of verification
MS1	Project Launch completion; Release of Initial Planning & Guidelines	WP1, WP7	3	Website, Project Handbook, initial internal WP7 documents delivered
MS2	DIVINE Enablers, Services, Integrated Ecosystem and Agri Data Sharing policy	WP2, WP3, WP4, WP6	12	D2.1, D3.1, D4.1, D6.1, D6.2 delivered

	framework Release 1			
MS3	Pilots Round 1 roll-out start	WP5	13	D5.1 delivered
MS4	Reference Architecture Specification; Stakeholder Ecosystem Creation and initial Impact Roadmap & Assessment completion	WP2, WP7	18	D2.2, D7.2, D7.3, D7.4 delivered
MS5	Completion of Pilots Round 1 execution & evaluation	WP5, WP6	19	D5.2, D6.3 delivered
MS6	DIVINE Enablers, Services, Integrated Ecosystem and Agri Data Sharing policy framework Release 2	WP2, WP3, WP4, WP6	22	D2.3, D3.2, D4.2, D6.4, D6.5 delivered
MS7	Pilots Round 2 roll-out start	WP5	23	D5.3 delivered
MS8	Completion of Pilots Round 2 execution & evaluation	WP5	33	D5.4 delivered
MS09	DIVINE Enablers, Services, Integrated Ecosystem and Agri Data Sharing policy framework Release 3	WP2, WP3, WP4, WP6	33	D2.4, D3.3, D4.3, D6.6 delivered
MS10	Overall Impact Assessment Completion; Sustainability Outlook, Stakeholder Ecosystem Grow and Final Reporting completion	WP1, WP7	36	D1.4, D7.5, D7.6 delivered

A.6.4 Reporting

Continuous Reporting is encouraged in Horizon Europe.

The two main Reporting Periods are:

- M1-M18
- M19-M36

Project responsibilities include scheduled Technical and Financial Reports (= Financial Statements), while an additional technical-only review can be requested at any time.

Efficient management relies on consistent internal reporting, which is expected from all partners. Three weeks after the end of each Project Quarter, ICCS will collect a QPR from each beneficiary (report effort per WP - use bullet points to describe main activities and outcomes per WP) containing:

- Effort spent and sum of Personnel costs
- Other expenses (direct costs, such as travel, equipment, etc.)
- Activities performed per WP and Results produced (key points)
- Problems encountered – Risks raised – Deviations

All partners need to keep timesheets updated and accurate, and always double-check relevant submitted information, as it is critical for internal and external reporting.

A.6.5 Publications

Significant project results are to be presented in international conferences or publications. Publications will be approved by the Coordinator and the Innovation and Exploitation Manager. If necessary, the PMC will be involved in order to ensure that IPRs are protected. Relevant guidelines are provided by the Consortium Agreement. All publications will be published as "open access" papers following either the "Gold" or the "Green" model.

A.6.6 IPRs

Management of Access Rights and IPR for DIVINE is fully detailed in the project's Consortium Agreement.

A.6.7 Ethics

Ethical issues will be addressed by DIVINE's Project Management Committee. Focus will be put on the compliance with existing ethical and legal frameworks for safeguarding human (European Union Directive 2010/63/EU) and animal welfare and care of experimental animals (European Union Directive 2010/63/EU). Furthermore, Soumya Kanti Datta (DIGI) is the Ethics Manager (WP1), responsible for Task 1.5 (Data and ethical management, planning and assessment), which will ensure compliance to ethics requirements, identifying potential ethical issues in a timely manner ensuring research is conducted at high levels of integrity, quality and transparency.

A.7 Summary

This document is meant to be a useful resource for all project participants, from the first moment they get involved to the end of the project and its aftermath. It presents tools and procedures, decision making and management mechanisms in place for quick and efficient support of all aspects of the work at hand. It is a live document, as the project's duration is long and potential significant changes affecting the project's internal flow will be reflected herein.

A.8 Contact details of DIVINE Team Members

Table 4. List of DIVINE Participants

Partner	Name of person	Position in Organisation	E-Mail	Contact Phone No.
ICCS	Ioanna Roussaki	Associate Professor	ioanna.roussaki@cn.ntua.gr	+30 210 7722422
	Stavros Xynogalas	Senior Researcher	stavrosx@cn.ntua.gr	+30 6932 981635
	George Routis	Researcher	georgios.routis@cn.ntua.gr	+30 210 7722485
	Marios Paraskevopoulos	Researcher	marios.paraskevopoulos@cn.ntua.gr	+30 210 7722485
	Konstantina Giannakopoulou	Researcher	konstantina.giannakopoulou@cn.ntua.gr	
	Arian Dimitrakaki	Admin	arian@telecom.ntua.gr	
SETU	John McLaughlin		John.Mclaughlin@waltoninstitute.ie	
	Kieran Sullivan		kieran.sullivan@waltoninstitute.ie	
	Kevin Doolin	Director of Research in Walton Institute (SETU)	kevin.doolin@waltoninstitute.ie	
	Jonathan Mullowney	Project Management Accountant in Walton Institute (SETU)	jonathan.mullowney@waltoninstitute.ie	
		Walton office		+353 51 302920
ENG	Susanna Bonura		susanna.bonura@eng.it	+393492895528
	Giulia Antonucci		giulia.antonucci@eng.it	+393208623192

	Sergio Comella		sergio.comella@eng.it	+393274019010
	Delia Milazzo		delia.milazzo@eng.it	+393928768579
INLE	Ronan Frizzell		ronan.frizzell@inlecomsystems.com	
	Pat O'Sullivan		patosullivan@inlecomsystems.com	
	Christos Roupas		christos.roupas@inlecomsystems.com	
	Angela O'Sullivan	Admin	angelaosullivan@inlecomsystems.com	
		Inlecom Commercial Pathways		+353 86 785 3470
DIGI	Soumya Kanti Datta		soumya@digiotouch.com	+33658194342
	Debolina Paul		debolina@digiotouch.com	
VICOM	Raul Orduna Urrutia	Cybersecurity Director	rorduna@vicomtech.org	
	Marco Quartulli	Director of Data Intelligence for Energy and Industrial Processes	mquartulli@vicomtech.org	
		Contact		+(34) 943 309 230
CREA	Iraj Namdarian	Head of the Statistical Office	iraj.namdarian@crea.gov.it	+39 06 478 565 30
	Concetta Cardillo		concetta.cardillo@crea.gov.it	+39 06 478 565 52
FE	Szabolcs Zoldreti		szabolcs.zoldreti@farm-europe.eu	+32496078718

	Yves Madre		yves.madre@farm-europe.eu	
	Luc Vernet		luc.vernet@farm-europe.eu	
	Morgane Schnoller		morgane.schnoller@farm-europe.eu	
	Adalgisa Martinelli	Research Assistant	adalgisa.martinelli@farm-europe.eu	
	Giacomo Guala		giacomo.guala@farm-europe.eu	
	Alessandra Diana	Data and Policy Officer	alessandra.diana@farm-europe.eu	
	Antonella Rossetti		antonella.rossetti@farm-europe.eu	
		General email address	info@farm-europe.eu	
NP	Veronika Ovcinnikova		v_ovcinnikova@neuropublic.gr	
	Vasilis Pyrgiotis		v_pyrgiotis@neuropublic.gr	
	Nikos Kalatzis		n_kalatzis@neuropublic.gr	+306997796467
		(please if possible cc all emails also to)	pm_funded@neuropublic.com	
ITC	Tomaz Bokan		tomaz.bokan@itc-cluster.com	+386 41 684 784
	Miran Bunderla		miran.bunderla@itc-cluster.com	
	Daniel Copot		daniel.copot@itc-cluster.com	
IDSA	Anil Turkmayali	Senior Project Manager	Anil.turkmayali@internationaldataspaces.org	
	Silvia Castellvi	Senior Consultant	Silvia.Castellvi@internationaldataspaces.org	
	Sonia Jimenez Moreno	Senior Consultant	sonia.jimenez@internationaldataspaces.org	

	Thorsten Huelsmann	CFO	Thorsten.Huelsmann@internationaldataspaces.org	
		Head Office		+49 (0) 231 70096 – 501
WFO	Ambra Raggi	Engagement Manager	ambra.raggi@wfo-oma.org	
	Giacomo Barbieri	Operations Practice Leader	giacomo.barbieri@wfo-oma.org	
		Contact		+39 06 421291
UCD	Kevin McDonnell	Professor	kevin.mcdonnell@ucd.ie	+353 (0)1 716 7472
	Conor Kehoe	Student	conor.kehoe1@ucdconnect.ie	
	Gary Gillespie	Assistant professor	gary.gillespie@ucd.ie	
KGZS	Damjan Jerič	Project leader	damjan.jeric@kgzs-ms.si	
	Jernej Pečnik	Financial & technical manager	jernej.pecnik@kgzs-ms.si	00 386 31 783 437
	Lara Resman	Project manager, implementation, content	lara.resman@kgzs-ms.si	00 386 70 613 795
ADSC	Juan Enriquez		jenriquez@analisis-dsc.com	+34 686 001 689
	Laura Torres	Main leader for WP7	ltorres@analisis-dsc.com	+34 630 329 254
	Enrique Martinez		emartinez@analisis-dsc.com	+34 655 91 4449