

<u>Progress towards Federated Logistics through the Integration of TEN-T into</u> A Global Trade Network

D6.1a Project Management Handbook – Management Plan

Document Summary Information

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1 According to PLANET's Quality Assurance Process

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Glossary of terms and abbreviations used

Abbreviation / Term	Description
АВ	Advisory Board
AD	Adoption (refers to project risks)
CA	Consortium Agreement
СоР	Council of Partners
D	Deliverable
DOA	Description of Action
EC	European Commission
EU	European Union
GA	Grant Agreement
KPI	Key Performance Indicator
LL	Living Lab

М	Month
MS	Milestone
PC	Project Coordinator
PMg	Project Manager
РО	Project Officer
PST	Project Steering Team
WP	Work Package

Executive Summary

The aim of the present Project Management Handbook & Plan is to provide an overview of the most relevant managerial aspects of the project, setting the rules and responsibilities of the partners aimed at ensuring a good quality and disciplined control of the work progress. This report summarises all the required processes for the efficient and structured management of the project and contains information related to the consortium's management and steering boards, a thorough implementation and control plan, reporting processes, a detailed and up-to-date risk log, templates to be used etc. This guide is live document, and will be updated in M17 and M35, extending this baseline information, by including newly identified risks and issues along with a revised implementation plan reflecting current achievements and anticipated prospects for the period ahead. The evolution of this report will take place with the active contribution of all partners, ensuring not only close control but proactive stakeholder engagement and buy-in.

1 Introduction

The Project Management Handbook – Management Plan gathers all the main aspects and procedures concerning the management of the PLANET project. Information related to the management structure, procedures, and instructions for reporting and using the project management tools is included, aiming at facilitating the smooth implementation of the project.

The present report has been developed within the framework of Task 6.1 "Project Coordination and Technical Management" and it aims to ensure that the project will be managed according to the rules and regulations set by the European Commission (EC). In particular, this deliverable sets the baseline for the following T6.1 action:

- Monitoring of the technical, scientific and innovation leadership towards the achievement of the PLANET's vision and objectives;
- Organisation of Project Management Team and liaison activities;
- Identifying project risks (including COVID-19 related);
- Detailing measurable KPIs for controlling activities active in the first year of the project;
- Providing an internal platform for information exchange between project partners;
- Providing the project's ethics protocol

1.1 Mapping PLANET Outputs

Purpose of this section is to map PLANET's Grant Agreement commitments, both within the formal Deliverable and Task description, against the project's respective outputs and work performed.

Table 1: Adherence to PLANET's GA Deliverable & Tasks Descriptions

PLANET GA Component Title	PLANET GA Component Outline	Respective Document Chapter(s)	Justification
DELIVERABLE			
D6.1 Project Management Handbook – Management Plan	The document will provide: a) details to project partners including procedures and instructions for reporting, using the project management tools, b) the project ethics protocol	Section 1 & 5	Detailed project plan documented and approved. Project boundaries defined. Project Handbook available by M2 (July 2020).
TASKS			
T6.1 Project Coordination and Technical Management	The task describes the overall legal, contractual, financial and administrative management of the project. Specific activities include: a) Planning and scheduling time and resources necessary for each stage of the project. b) Preparation of Progress Reports towards the European Commission. c) Management of the distribution of all required documents such as deliverables and progress reports.	Sections 2,3, 4, 5,6 and 7	Management Structure and Procedures, deriving from Grant Agreement and Consortium Agreement provisions, presented in Section 2. Work Plan rationale, as detailed in the Description of Action, including further practical details, available at Section 4.

d)	Cost management, budget controlling and								
	accounting	including	financial	audit					
	procedures.								
۱۵	Organisation	of Project N	/Janagemen	t Team					

 e) Organisation of Project Management Team meetings and their documentation (minutes).

f) Monitoring/control of the progress of the project according to the contractual schedule from the budget side.

g) Ensuring that ethical and gender equality issues are addressed.

Presentation of the tools and procedures to facilitate the smooth implementation of the project and the internal communication of the project partners, have been set by the coordinator and explained in Section 5.

GDPR compliance matters are discussed in Section 6.

Related sources are presented in Annexes

1.2 Deliverable Overview and Report Structure

The present report is divided into 9 main chapters as follows:

- Section 2 presents and describes the management structure of the PLANET consortium, together with the analysis of roles and responsibilities of the project partners.
- Section 3 includes a detailed implementation timeline including KPIs per WP to identify early in the project measurable outputs.
- Section 4 includes details of the Work plan and monitoring procedures as well as the EC periodic reviews and reporting, and the continuous progress monitoring.
- Section 5 describes the tools to facilitate the project management procedures for all consortium partners
 including the project web spaces, internal/external reporting, file-naming conventions, records keeping
 as well as emailing lists and support contacts.
- Section 6 includes the GDPR compliance policies and procedures that will be followed in PLANET.
- Section 7 includes the PLANET Ethics Protocol
- Sections 8 & 9 include the report conclusions and references respectively.

The Handbook also includes the following Annexes:

Annex I: WP Progress Reporting template Annex II: Meeting Minutes template

Annex III: Preliminary Advisory Board members list

Annex IV: Research Ethics Form Annex V: Ethics Approval Sheet

2 Management Structure and Procedures

The successful implementation of a collaborative research project, such as PLANET, requires efficient, well documented and structured project management processes and procedures. Of particular importance is a clear assignment and distribution of responsibilities and timely flow of information to allow execution within budget and schedule parameters. Thus, enabling smooth and efficient reporting of progress, controlling the project, compliance with respect to the deliverables and milestones (see Table 4 and Table 5), as well as managing and mitigating the risks.

The PLANET project management structure is designed to meet the objectives of all stakeholders, including the EC, by creating strong consortium engagement in the project management enabling responsiveness to the evolving needs of the project. Specifically, the proposed PLANET project management will:

- a) Ensure that the project meets its **contractual obligations**. This will entail continuous progress monitoring, managed by the Project Manager (PMg), communication and a shared understanding of roles & responsibilities.
- b) Ensure that the key priorities of the project are represented in a **balanced** way in project management decisions.
- c) Facilitate the delivery of high-quality **research & innovation**. Central to achieving this will be the coordination of the activities of the technical partners and the integration of their results particularly in the context of Living Lab requirements as well as requirements arising from the capacity building programme.
- d) Maximise, measure and validate the **impact** of the system on the target audiences, both within and beyond the technology enhanced learning research and industry communities.

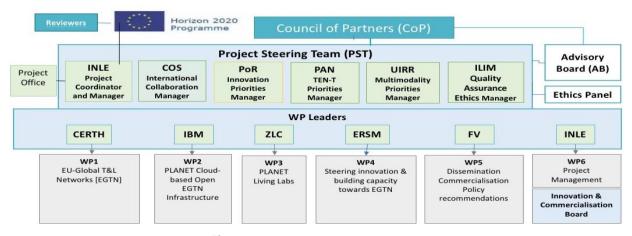


Figure 1: PLANET Management Structure

2.1 Instruments and Management Boards, Committees and Functions

PLANET's project management boards/committees are shown in Figure 1, including the Council of Partners (CoP) and the Project Steering Team (PST). The PST will be supported by the Advisory Board (AB) (reporting to CoP and Ethics Panels reporting to PST members).

The CoP has agreed a meetings schedule for the management boards which includes eight meetings for the PST and four for the CoP and AB. The schedule is fixed in advance, with more frequent meetings taking place during the first eighteen months to support the initial stages of the project. There will be biweekly PST and frequent cross-team meetings using the web and person to person meetings when this is considered necessary. The related management functions, roles and procedures are described in more detail in the following sections and are part of the Consortium Agreement.

Council of Partners (CoP): The CoP, chaired by the Project Manager, is the yearly meeting of all project partners who have decision-making power in the project. The CoP decides on matters relating to budget, work plan, partner performance, alteration of the Consortium Agreement (CA), or premature project termination. Voting

procedures are defined in the Consortium Agreement. The annual meeting agenda includes the following; (a) Report by the Project Manager, (b) Report by the Quality Ethics & Risk Manager, (c) Reports by the WP Leaders on technical implementation issues, (d) Approval of annual and final reports, (e) Approval of yearly implementation plans to be submitted by the PST to reflect required synchronisation of horizontal activities with the LLs.

Project Steering Team (PST): The Project Steering Team consists of the roles specified in table 3.2A and WP leaders. It brings to the project a wealth of experience of coordinating EU projects over many years and will ensure that the project satisfies the needs of the EC, Consortium and the EU Global Trade Logistics Network community as a whole. The PST will be responsible for the day-to-day management of the project and will report to the CoP. The PST will hold bi-weekly teleconference and additional meetings when necessary.

Innovation & Commercialisation Board (ICB): The ICB, chaired by INLE, includes BlockLab, UIRR, PAN, HARDT, FV, PP, COSTech, JD and PNO. Its role is to supervise the specification of the projects' Innovation & Commercialisation unified strategy and identify key open source components that will support progress towards a PI embracing EGTN. It will participate in PST meetings as appropriate.

Ethics Panel: Chaired by the Quality and Ethics Manager, ILIM, includes legal advisors of the participating members (experts on ethics, privacy and legal issues). An external expert will be invited to the panel, to act as independent reviewer and consultant to ensure compliance with legal and ethical regulations and adoption of best practice.

Advisory Board (AB): The AB will offer impartial scientific advice, support the PST and advise the consortium on social, environmental, technological, legal and economic factors that may influence the innovation management of PLANET. It will be chaired by one of its members, elected upon the AB's first meeting in M1. The AB comprises of a gender-balanced group of 24 external advisors representing research and business interests, drawn from across the world and embracing a range of knowledge of the project's focus areas. The AB will meet annually at the same time with CoP meetings, but members with specific expertise can be invited to PST meetings as and when appropriate. The organisations have confirmed their interest in and willingness to participate in the PLANET AB through Letters of Support provided in Annex 1 of Part B, Sections 4-5.

Supporting Partners (SP): The PLANET project benefits from additional support to the project Living Labs from Support Partners (SP) whist not included in the management boards these partners participate in the CoP by virtue of their collaboration in the specific LLs /generic EGTN Use Case and therefore will be included in CoP meetings where appropriate.

2.2 Management member roles

The main project management roles and responsibilities are summarised in the table below.

Table 2: PROJECT ROLES (R) AND ASSIGNED TASKS (T)

Project Coordinator (PC)

Role: Ensure efficient communication between partners and with the EU and mediate any conflict as necessary. As chair of the CoP, The PC is responsible for the integrative, cross-disciplinary issues of the project, for planning and monitoring progress and supervise implementation of any necessary corrective measures.

Tasks: Provide clear project vision in collaboration with PST, ICB and AB and ensure final reports submitted to the EU by the PMg are complete and accurate. In the event of a WP giving an unexpected result, flag the issue to the CoP, that will determine the appropriate course of action. Endeavor to maintain leadership and team motivation, encourage creativity amongst the project team, and ensure that corrective actions are taken as necessary.

Project Manager (PMg)

Role: Manage the project, and guide and monitor the technical progress of the project. Performs risk assessment in collaboration with PST members and implementation of mitigation measures Ensures high-quality deliverables and fully tested solutions. Reports to the PC and the CoP.

Tasks: Follow up the project status and continuously check progress against schedule and budget, if milestones are met and monitors the preparation of deliverables, submit deliverables. Aligns technical direction with innovation strategies and establishes and maintains the PLANET main outputs' summary specifications. Identify trends and technologies relevant to the project in collaboration with PST members. Produce agenda, minutes for the PST and CoP meetings. Manage the information flows between partners. Organise resolution procedures of consortium issues.

International Collaboration Manager (ICM)

Role: Advise and monitor international collaboration both from policy, technical and social aspects for accelerated progress towards EGTN objectives and related LL activities. Reports to CoP.

Tasks: In strong collaboration with PMg, supports EGTN focus in horizontal deliverables and LLs. Identify international trends relevant to EGTN.

Innovation Priorities Manager (IPM)

Role: Leads the Innovation Agenda and oversees the planning and the monitoring of all key innovation tasks (T6.3). PST Member reports to the CoP.

Tasks: Advise on business potential of the innovations arising and identify trends and technologies that could be of interest to the industry and consequently the project. Responsible for the creation of the Innovation Strategy reports for the AB. Member of the ICB.

TEN-T Priorities Manager

Role: Leads the identification of TEN-T priorities both in terms of interfacing to new global routes and adoption of innovative technologies towards the PI. PST Member reports to the CoP.

Tasks: Advise on TEN-T priorities and oversees interaction with TEN-T coordinators and Member States. Responsible for the creation of the TEN-T reports for the AB. Member of the IDCB.

Multimodality Priorities Manager

Role: Highlight the opportunities and challenges of multimodality in intercontinental transport services focusing on rail/rail and sea-rail combination for co-modal solutions up to last mile deliveries for market needs.

Tasks: Advises on the adaptation of different modes and the rail system to the requirements of the EGTN and on realistic timescales needed for the adaptation process.

Quality Assurance and Ethics Manager

Role: Develops and supervises quality plan, chairs the Quality Reviews and leads the project's ethical compliance monitoring the objectives and implications of PLANET, to ensure that it conforms to the highest ethical standards. Chairs the Ethics Panel, PST member, reports to CoP.

Tasks: Performs project quality checks, risk assessment and monitoring. Triggers QA project reviews, evaluation measurements and produces quality reports. Supervises implementation of quality plan. Organises and supervises quality review/peer reviews for all deliverables. Signs off all deliverables. Alerts PMg to any quality issues. Produces the project's ethics protocol (D6.5) for the project. Monitors tasks which have ethical considerations and guides partners in their work and provide input regarding ethical compliance.

Work Package (WP) Leaders

Role: Leader of a given Work Package (WP1 to WP6) reports to the PMg.

Tasks: Produce detailed work plans and progress reports. Manage the timely and effective execution of the WP work and ensure that deliverables meet the quality standards. Review WP results and flag underperformance. Provide input to management reports. Represent the WP at the PST.

2.3 Consortium Roles and Responsibilities

2.3.1 Role of EC Project Officer

The main role of the Project Officer (PO) is to manage the Grants on EC's side, for the evaluation, monitoring and negotiation of projects, as well as their financial evaluation. This includes the monitoring and control of the official deliverables submitted through the Participant portal, including the Project Periodic Reporting every 18 months.

The PO will be in communication with the Project Coordinator, who acts as the intermediary between the consortium partners and the Commission, and also as the Central Contact Point for the project. PO participates in the Kick-Off meeting, the Periodic Review meetings and the final project meeting. Main responsibilities include the management of:

- Objectives versus Achievements,
- Management and Collaboration Status,
- Financial Aspects,
- Monitor fulfilment of contractual obligations
 - O Via deliverables, periodic reports, on-site reviews, etc.
 - Check financial statements.

2.3.2 The role of the Project Coordinator

The role of the Project Coordinator is well explained in PLANET's Grant Agreement (GA) and Consortium Agreement (CA). As far as the contractual obligations between the coordinator and EC, the coordinator (according to Article 41.2 "Internal division of roles and responsibilities" of GA):

- monitors that PLANET Work Plan is implemented properly;
- is the Central Contact Point for the Commission regarding reporting, payments and acts as the intermediary for all communications between the beneficiaries and the Agency;
- represents all beneficiaries towards the Commission;
- requests and reviews any documents or information required by the Agency and verifies their completeness and correctness before passing them on to the Agency;
- submits the deliverables and reports to the Agency;
- reviews the reports to verify consistency with the projects tasks before submitting them;
- ensures that all payments are made to the other beneficiaries without any unjustified delay;
- informs the Agency of the amounts paid to each beneficiary, when required under the Grant Agreement or requested by the Agency.

In addition, as far as the Coordinator's role is concerned, the provisions of the Consortium Agreement are detailed in paragraph 6.3.2. The Consortium Agreement dictates that the Coordinator is the legal entity acting as the intermediary for efficient and correct communication between the consortium partners and the Funding Authority. In addition to its responsibilities as a Party, the Coordinator performs all tasks assigned to it as described in the GA and in the CA. In particular, the Coordinator shall:

- monitor compliance by the Parties with their obligations;
- keep the address list of the Parties and other contact persons updated and available;

- collect, review to verify consistency and submitting reports, other deliverables (including financial statements and related certifications) and specific requested documents to the Funding Authority;
- administer, prepare the minutes and provide the chair of the CoP and follow-up the decisions of the CoP;
- transmit documents and information connected with the Action to any other Parties concerned;
- administer the financial contribution of the Funding Authority and fulfilling the financial tasks;
- verify whether the Parties identified in the GA complete the necessary formalities for accession to the GA in accordance with the GA;
- provide, upon request, the Parties with official copies or originals of documents which are in the sole possession of the Coordinator when such copies or originals are necessary for the Parties to present claims;
- maintain details of approvals given in relation to material that is subject to Controlled Licence Terms;
 and
- maintain and on request circulate both during and for four years after the period of the Action set out in Article 3 of the Grant Agreement a brief annual synopsis of Exploitations as envisaged by Article 28.1 of the Grant Agreement as disclosed by the Parties to the Coordinator when requested by the Coordinator.

2.3.3 The role of Beneficiaries

Article 41.2 of the Grant Agreement dictates the roles and responsibilities of each consortium partner, since they are beneficiaries of the PLANET grant. The beneficiaries have full responsibility of implementing the action and complying with the provisions of the Grant Agreement. The beneficiaries are jointly and severally liable for the technical implementation of the action, as described in the Description of Action (DoA). If a beneficiary fails to implement its part of the action, the other beneficiaries become responsible for implementing this part (without being entitled to any additional EU funding for doing so), unless the Agency expressly relieves them of this obligation.

Each beneficiary must:

- carry out the work to be performed, as identified in the Annex I of the Grant Agreement,
- provide all data requested by the EC (financial statements, progress of work),
- keep information stored in the 'Beneficiary Register' (via the electronic exchange system) up to date,
- inform the coordinator immediately of any events or circumstances likely to affect significantly or delay the implementation of the action,
- inform the EC (through the Coordinator) of any event that might affect the implementation of the project,
- submit to the coordinator in good time:
 - ✓ individual financial statements for itself and, if required, certificates on the financial statements
 - ✓ the data needed to draw up the technical reports
 - ✓ opinions and notifications or authorizations for activities raising ethical issues
 - √ any other documents or information required by the Agency or the Commission Services
- ensure that confidential information and material are not circulated or shared with people outside the consortium.

Beneficiaries' duties and obligations are extended to the dissemination and promotion of the project results, as defined in Grant Agreement Articles 29: "Dissemination of results – Open Access – Visibility of EU funding of the Grant Agreement" and 38: "Promoting the action – *visibility of EU funding*". The following list summarizes the dissemination requirements for all PLANET beneficiaries; however, the PLANET Dissemination strategy and complete communications programme will be detailed in D4.5 'Communication and Dissemination Programme'.

Obligation to promote the action and its results

> All beneficiaries should provide targeted information to multiple audiences (media, public) in a strategic and effective manner. To avoid disclosing confidential information it is

- highly recommended that dissemination material is send to the coordinator and the dissemination manager prior to publications or other dissemination actions.
- > Before engaging in a communication activity expected to have a major media impact, the <u>beneficiaries must inform the Agency</u> (as per Article 52 of Grant Agreement) through the Project Coordinator.
- > <u>Before an official PLANET Press release is published, it should be first authorized by the Project Coordinator and Dissemination Manager.</u>
- **Obligation to disseminate results:** «as soon as possible» principal but with the obligation to give notice to the other beneficiaries who maintain the objection right.
- Open access to scientific publications: free of charge online access to all peer-reviewed scientific publications relating to its results should be granted. It is Important to ensure open access to the bibliographic metadata, as well, which must include all the following:
 - > the terms "European Union (EU)" and "Horizon 2020",
 - > the name of the action, acronym and grant number,
 - the publication date, and length of embargo period if applicable, and a persistent identifier.
- *Open access to research data:* Research data should be deposited in a research data repository for third parties to access, mine, exploit, reproduce and disseminate, free of charge.
- Information on EU funding Obligation and right to use the EU emblem: The following texts followed by the EU emblem must be included in any public announcement and/or dissemination material of the PLANET project, for general purpose material and for specific results respectively:



"This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 860274".

- In the case of scientific articles and journals created on the basis of the results of the project work, this note should also include the name of the project.
- Disclaimer excluding Agency responsibility: Any dissemination of results must indicate that it reflects only the author's view and that the Agency is not responsible for any use that may be made of the information it contains.

2.4 Project Communications and Reporting

The consortium fully recognises that one vital contributing factor towards the successful management of a project, is effective communication between consortium members. The coordinator has provided from the beginning of the project collaboration, project management and document management tools (TeamWork) enabling project members to access relevant information according to their roles, including short term actions specified by the management team. User rights to edit, delete, approve etc. are based on project roles, providing flexibility and increased quality control.

Other tools/features include mailing lists, a project calendar showing main events, meetings, deadlines and task start and end points, document repositories allowing project deliverables, project generic templates etc., to be stored in a structured way, uploaded and retrieved using an Internet browser.

2.5 Dissemination and Communication Activities

The communication plan and activities (e.g. development of the project's identity, brand, website and social channels) will be developed in detail under WP5. The plan incorporates specific objectives and key messages addressed to relevant target communication audience groups, setting out clear descriptions and timings for each

activity. The aim will be to ensure the visibility of PLANET and its results, ensure they can be understood even by non-specialists, and thus multiplied.

At the beginning of the project, a public website (www.planetproject.eu) has been released for external communications. This site will not only be used to disseminate the project's progress results, but it will also serve as a document sharing portal to provide access to all public domain documentation (public deliverables). For the cases of confidential type deliverables, the respective abstract of each deliverable will be uploaded to ensure public awareness of the nature and content overview of the work performed. In addition, the project social media accounts (LinkedIn and Twitter) have been set up in M1 of the project for facilitating large scale project dissemination by emphasising and prioritising interest from the broader public, scientific and industry communities. The table below depicts the initial plan for the communications activities and metrics:

Communication Means	Targeted # of outputs	Туре	Level	Success Indicators & Relevant KPIs	Target audiences	Timeline
Project Website	1	Online Presence	ı	SEO Metrics: 2000 unique visitors /year # documents: 50 updates / year	All	Ready by M1, regularly updated
Social Media	4 channels	Social	ı	# channels : 4 (Twitter, Facebook, LinkedIn, YouTube) # followers: > 300		By M24
Engagement via social Media and partner's websites	250+	Media	EU	# content pieces: >80 per channel # impressions: 10000+ total impressions	All	M1-M36
Promotional videos (Youtube)	2+	Online distribution	Р	# views: 1000 views in M12, up to 3000 by M36	All	M12, M24, M36
Newsletters	9	Online distribution	Р	# newsletters : 9 newsletters (3/year) # subscribers: >500 subscribers	All	M1-36
Press releases Factsheets & Success stories	10 3	Online distribution / Publications	N, EU, I	# press releases : 6 # published articles: 10	Press & Media professionals, General Public	M1-36
Partnership events, attendance in other R&D conferences and business exhibitions	9	Events	Р	# partnership events : 9 # other events attended: 12-16 # contacts established: 10-50 / event # resulting cooperation: 3	All in partic. end-user stakeholders, support & awareness and funding actors	M1-M36
Scientific publications and industrial white papers	6+	Publications	1	# publications: >10, # white papers: 2 # total reach: >5000 total readership	Academic & industrial end-user stakeholders	M12-M36
Capacity Building Programme and LL w/shops	1 CBP 3 LL W/shops	Events	1	# participants in CBP: >25 # participants in LL workshops: >80 # total contacts: >00	End-user stakeholders	M12-36
Briefings to early stage accelerators and Open Source community	3	Events	Р	# Participants: > 50 # Resulting Cooperation: >5	Open Source and startups in Logistics	M7-M36
Deliverables (Public)	>20	Publications	P, EU	QA Standards: All achieved # Downloads: >50/file, >1000 total	End-user & Exploitation stakeholders	M8-M36
Brochure and annual report	4	Publications	EU	# of recipients: >500	All	M1- M36

Table 3: Planned Communication activities, Channel and Metrics

2.6 Decision Making Mechanisms

Following the PRINCE2² methodology the project will be managed by exception. Therefore, individual WPs will be led by WP Leaders within the agreed boundaries and guided by decisions made from the Project Management Team. Whenever issues arise which exceed agreed deviation limits these will be handled in cooperation between the Task Leader(s) in each Work Package and the WP Leader. The first level of escalation will be the Project Manager. In the exceptional case that issues or conflicts cannot be solved at a WP level, with the facilitation of the Project Manager (PMg), the WP leader will formally escalate the conflict at the PST level, where the situation will be analysed and a consensus will be found to solve the conflict. If this is not satisfactory, the conflict will be escalated to the CoP. The CoP will count on a representative from every partner, it will be the forum where a vote can be taken to resolve the situation in line with the contractual information in the Consortium Agreement (one vote per partner). This decision will then be binding on all partners and other management bodies. The above organizational structure and decision-making mechanisms ensure that all elements of the project have

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² https://www.axelos.com/best-practice-solutions/prince2/what-is-prince2

clear ownership, and there is a pre-defined escalation and resolution path, where required. These multiple levels of control will guarantee compliance with the project plan and early warning of any potential deviation.

2.7 Meetings and Travel Management

According to the Consortium Agreement (CA) at least 3 Council of Partners (CoP) project meetings will be convened in the duration of the project. Due to COVID-19, a virtual kick-off meeting has been held at the start of the project, on 17^{th.} of June 2020. Additional meetings/teleconferences at a WP or cross-WP level may also take place. These will be organized by the work package leaders or the Project Steering Team (PST). Thus, a total of eight PST meetings are anticipated.

2.8 Deliverables

Each WP leader is responsible for the management and delivery of the deliverables for his/her work package, including activities of internal review of all reports, in cooperation with the Quality Assurance Manager. Once a report has been released by its owner, it will pass through a peer review process as defined in the quality manual (Deliverable D6.2a— Project Quality Handbook and Annual Quality Reviews). This process includes the peer review of each deliverable by two consortium members (partners) that will have a predefined timeframe to review the deliverable and provide comments to the authors. Then, the authors provide an updated document following the report issues/comments, that is in-turn submitted to the EC by the Coordination team. The PMg may additionally review any deliverables before submission and may return them for additional refinement if it is considered necessary.

2.9 Knowledge and IPR management

A specific clause in the PLANET consortium agreement (CA) has already been included regarding the explicit background that partners are bringing in the project. This is followed the EC DESCA model [1] and includes the description of background included, any specific limitations and/or conditions for implementations (relating to articles 25.2 and 25.3 of the PLANET Grant Agreement). Article 25 of the PLANET Grant Agreement also describes the legal basis and definitions of access to this background (included from each partner) and the terms and conditions that this can/will be shared to the consortium.

Regarding the ownership of results generated during the PLANET implementation, the PLANET Grant Agreement article 26 describes the definition of results (as any (tangible or intangible) output of the action such as data, knowledge or information — whatever its form or nature, whether it can be protected or not — that is generated in the action, as well as any rights attached to it, including intellectual property rights) that will be used in PLANET.

Two or more beneficiaries own results jointly if (a) they have jointly generated them and (b) it is not possible to: (i) establish the respective contribution of each beneficiary, or (ii) separate them for the purpose of applying for, obtaining or maintaining their protection (Grant Agreement Article 27). The joint owners must agree (in writing) on the allocation and terms of exercise of their joint ownership ('joint ownership agreement'), to ensure compliance with their obligations under this Agreement. If third parties (including personnel) may claim rights to the results, the beneficiary concerned must ensure that it complies with its obligations under the Agreement. If a third party generates results, the beneficiary concerned must obtain all necessary rights (transfer, licenses or other) from the third party, in order to be able to respect its obligations as if those results were generated by the beneficiary itself. If obtaining the rights is impossible, the beneficiary must refrain from using the third party to generate the results.

The Innovation Priorities Manager (BlockLab) will be responsible for identifying and managing innovation from the project, advising the partners on the scope and potential of the innovations arising and paying attention to discerning IP at regular checkpoints.

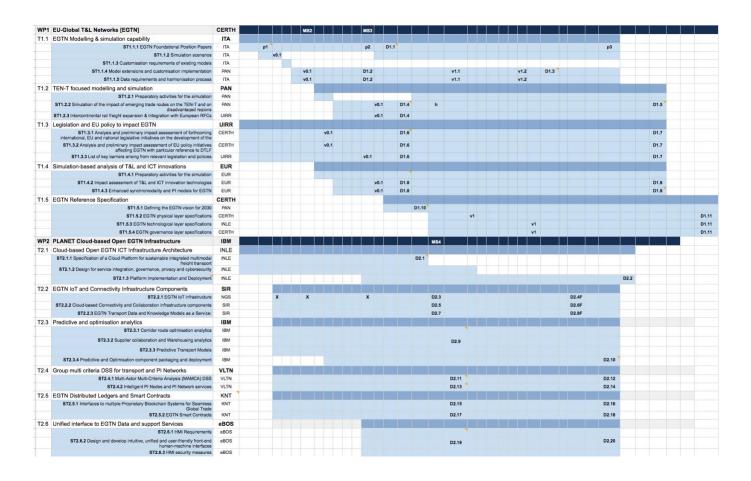
2.10 Gender Considerations

The gender-related ambitions of PLANET are to ensure that its platforms and tools are not discriminatory, or do not further perpetuate gender imbalances in the T&L environment. PLANET adopts a responsible research and innovation approach to all its activities, of which gender equality is integral part. PLANET will use various tools to address sex, gender and equality issues and align with a gendered and inclusive approach to innovation: PLANET will include different perspectives to avoid unintentionally biased, non-comprehensive outcomes in the project. Second, to ensure that our proposals are well-founded and effective, PLANET will "mainstream" the consideration of sex, gender and equality issues throughout all stages of the project.

3 Implementation Timeline

3.1 Gantt Chart & Interdependencies

The mechanisms implemented are the following: (a) controls of the project alignment and compliance with respect to the deliverables and the milestones (Table 4, Table 5), (b) the Project Management Structure (Figure 1) and the clear distribution of roles and responsibilities (Table 2) and (c) the management and mitigation of risks (Table 6). The described activities have been set in compliance with the overall project schedule as shown in the diagram below, which is an in-depth analysis and breakdown of PLANET's initial Gantt Chart, formalizing the project's Implementation Plan, at "subtask" level, depicting start and finish month of each subtask, along with the respective sub-task owner and deliverables.



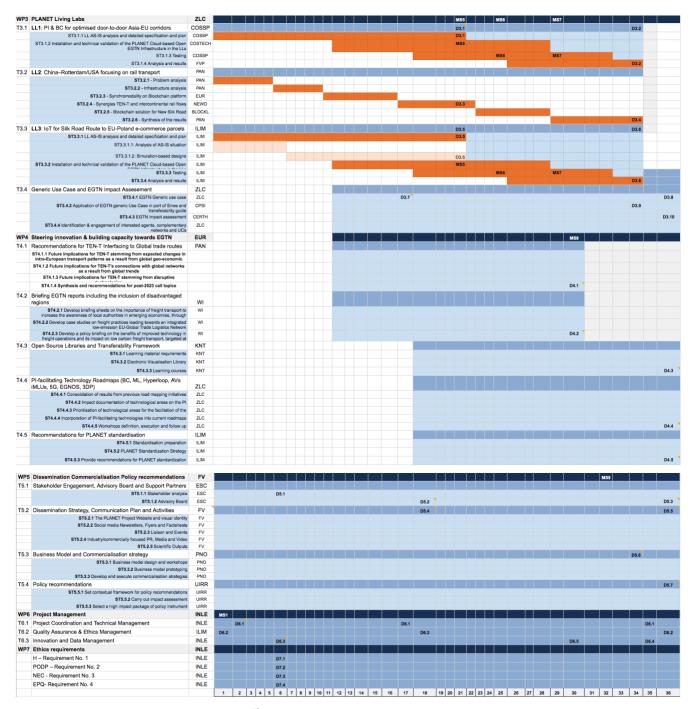


Figure 2: PLANET Detailed Gantt Chart

Key task dependences are illustrated in the diagram below, along with linkage to the project's milestones.

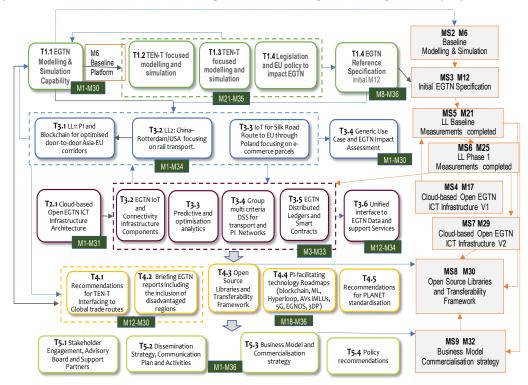


Figure 3: PLANET Pert chart

Considering that WP1 activities start in M1 of the project, the following diagram have been drawn to depict in detail the interrelationship among the underlying tasks and subtasks:

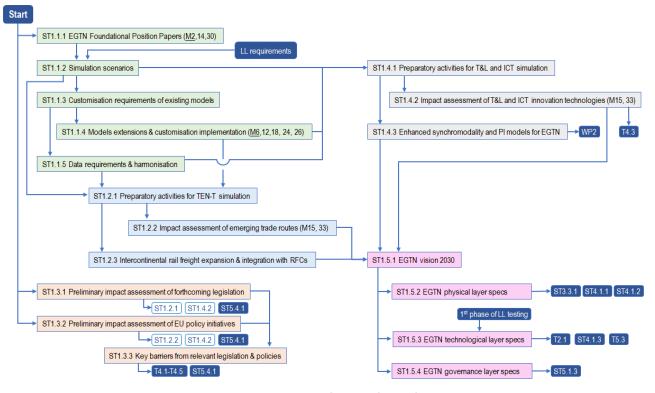


Figure 4: WP1 Task interrelationships

Furthermore, the following tables identify the contribution of each WP1 sub-task and respective deliverable in the follow-up work.

T1.1 EGTN Modelling & simulation capability (ITA)

	Internal Deliverables	To provide input to subtasks	Official Deliverable	Lead (*)
ST1.1.1 EGTN Foundational Position Papers	M02, M12, M30	ST1.1.2	D1.1 (M14)	ITA
ST1.1.2 Simulation scenarios	M03	ST1.1.3, ST1.2.1, ST1.4.1	D1.1 (M14)	ITA
ST1.1.3 Customisation requirements of existing models	M04	ST1.1.4, ST1.1.5		ITA
ST1.1.4 Model extensions and customisation implementation	M06, M18, M24	ST1.2.1, ST1.4.1	D1.2 (M12), D1.3 (M26)	PAN
ST1.1.5 Data requirements and harmonisation process	M06, M18, M24	ST1.2.1, ST1.4.1	D1.2 (M12), D1.3 (M26)	ITA

T1.2 TEN-T focused modelling and simulation (PAN)

	Internal Deliverables	To provide input to subtasks	Official Deliverable	Lead (*)
ST1.2.1 Preparatory activities for the simulation	M8	ST1.2.2, ST1.2.3		PAN
ST1.2.2 Simulation of the impact of emerging trade routes on the TEN-T and on disadvantaged regions	M13	ST1.5.1	D1.4 (M15), D1.5 (M33)	PAN
ST1.2.3 Intercontinental rail freight expansion & Integration with European RFCs	M13	ST1.5.1	D1.4 (M15), D1.5 (M33)	UIRR

T1.3 Legislation and EU policy to impact EGTN (UIRR)

	Internal Deliverables	To provide input to subtasks	Official Deliverables	Lead (*)
ST1.3.1 Analysis and preliminary impact assessment of forthcoming international, EU and national	M8	ST1.2.1, ST1.4.2, ST5.4.1	D1.6 (M15), D1.7 (M33)	CERTH

legislative initiatives on the development of the EGTN				
ST1.3.2 Analysis and preliminary impact assessment of EU policy initiatives affecting EGTN with particular reference to DTLF	M8	ST1.2.2, ST1.4.2, ST5.4.1	D1.6 (M15), D1.7 (M33)	CERTH
ST1.3.3 List of key barriers arising from relevant legislation and policies	M12	T4.1-T4.5, ST5.4.1	D1.6 (M15), D1.7 (M33)	UIRR

T1.4 Simulation-based analysis of T&L and ICT innovations (EUR)

	Internal Deliverables	To provide input to subtasks	Official Deliverables	Lead (*)
ST1.4.1 Preparatory activities for the simulation	M8	ST1.4.2, ST1.4.3		EUR
ST1.4.2 Impact assessment of T&L and ICT innovation technologies	M13	ST1.5.1, T4.3	D1.8 (M15), D1.9 (M33)	EUR
ST1.4.3 Enhanced synchromodality and PI models for EGTN	M13	ST1.5.1, WP2	D1.8 (M15), D1.9 (M33)	EUR

T1.5 EGTN Reference Specification (CERTH)

	Internal Deliverables	To provide input to subtasks	Official Deliverable	Lead (*)
ST1.5.1 Defining the EGTN vision for 2030		ST1.5.2, ST1.5.3, ST1.5.4	D1.10 (M16), D1.11 (M36)	PAN
ST1.5.2 EGTN physical layer specifications	M19	ST3.3.1, ST4.1.1, ST4.1.2	D1.11 (M36)	CERTH
ST1.5.3 EGTN technological layer specifications	M25	T2.1, ST4.1.3, T5.3	D1.11 (M36)	INLE
ST1.5.4 EGTN governance layer specifications	M25	ST5.3.1	D1.11 (M36)	CERTH

3.2 Key Performance Indicators

In the following sections, the KPIs of Work Packages during the first 12 months of the project implementation are outlined, identifying measurable outputs that could facilitate disciplined delivery and tight control, both at WP level and well as at the central coordination.

3.2.1 WP1 KPIs

WP1 will contribute to the achievement of two of the main project impacts defined in the GA, namely:

- Impact 1: Better understanding of the impact of emerging technologies on freight flows
- Impact 3: Better understanding of links between technology, trade and geopolitics.

Achieving the above impacts will require the delivery of project outputs from specific WP1 (sub)tasks, while their assessment will be based on specific indicators per impact. A variety of mechanisms will be used for assessing the achievement of the intended impacts, including qualitative surveys to selected stakeholder groups (e.g. LL actors, Advisory Board members), simulation results, and delivery of specific numbers of outputs (e.g. scientific journal papers, reports).

The following table presents the indicators to be used for assessing each impact (the ones corresponding to WP1); the WP1 (sub)task required to feed its results for achieving the corresponding indicator; the target values per indicator; the assessment methods to be used.

Impact 1: Better understanding of the impact of emerging technologies on freight flows

Assessment indicators	Results fed mainly from	Assessment mechanisms	Target values
Projected impact of autonomous vehicles in	ST1.4.2	Survey of industrial Living Lab actors	4 in qualitative scale 1-5
enhancing mode services towards green transport, future scenarios based on new		Survey of Advisory board members	4 in qualitative scale 1-5
vehicle/vessel concepts [R4³] LL1		Journal papers	3-7
		Innovation Chapters in deliverables	4-8
Level of contribution to the existing knowledge of warehousing automation impact on PI-corridors and lastmile delivery efficiency and	ST1.4.2	Survey of industrial Living Lab actors	4 in qualitative scale 1-5
		Survey of Advisory board members	4 in qualitative scale 1-5
sustainability [R4] LL1		Journal papers	3-7
		Innovation Chapters in deliverables	4-8
Models, best case scenarios and ICT systems to help promote	ST1.4.2	Survey of industrial Living Lab actors	4 in qualitative scale 1-5

³ Codes in brackets (e.g. [R4]) refer to the project Expected Results defined in pp.4-6 of the GA Part B

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the development of European and worldwide hyperloop network and standards [R4]		Survey of Advisory board members	4 in qualitative scale 1-5
		Journal papers	3-7
		Innovation Chapters in deliverables	4-8
Level of contribution to the existing knowledge of blockchain impact on corridor transparency, process integrity, efficiency & security [R4, R11]	ST1.4.2	Survey of industrial Living Lab actors	4 in qualitative scale 1-5
		Survey of Advisory board members	4 in qualitative scale 1-5
		Journal papers	3-7
		Innovation Chapters in deliverables	4-8
Level of contribution to the existing knowledge of Industry	ST1.4.2 ST1.4.3	Survey of industrial Living Lab actors	4 in qualitative scale 1-5
4.0's impact on intelligent transport node decision-making [R4, R10]		Survey of Advisory board members	4 in qualitative scale 1-5
		Journal papers	3-7
		Innovation Chapters in deliverables	4-8

Impact 3: better understanding of links between technology, trade and geopolitics

Assessment indicators	Results fed mainly from	Assessment mechanisms	Target values
Level of effectiveness of simulating the links between geopolitics and trade specified by trade change vectors [R1]	ST1.2.2	Scenario-based surveys of corridor actors	4 in qualitative scale 1-5
		Survey of Advisory Board members	4 in qualitative scale 1-5
Economic and environmental	ST1.5.1	PI simulation	OBOR > 5%
impact of PI on new trade routes to/from Europe [R4, R6,			NSR > 10%
R10, R20]			US-EU > 5% ⁴
Level of effectiveness of simulating the links between	ST1.4.3	Survey of LL actors	4 in qualitative scale 1-5

⁴ Here we have included the EU-US route which is not among the three emerging global corridors identified in the GA, but we did not include the International North-South Trade Corridor (INSTC) that was defined in the GA

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technology and trade [R4, R7, R8, R9]		Survey of Advisory Board members	4 in qualitative scale 1-5
Number of disadvantaged regions analysed [R3, R19]	ST1.2.2	Public reports	Minimum 3

3.2.2 WP2 KPIs

Task No	Month	KPI Description
T2.1 Cloud-based Open EGTN ICT Infrastructure Architecture	M4	Identify the requirements for the PLANET Cloud Platform, service integration and security mechanisms in collaboration with WP1 positioning and Living Lab (LL) use cases. Elicit the data expected to be involved in each of these areas and identify needed data sources
	M8	Identify the requirements for the PLANET Cloud Platform, service integration and security mechanisms in collaboration with WP1 positioning and Living Lab (LL) use cases. Elicit the data expected to be involved in each of these areas and identify needed data sources
	M12	Deliver first versions of the PLANET Cloud Platform, service integration mechanism and security system. The first versions will be accompanied by documentation for installing, running and integrating with relevant data examples. Provide an updated version of deliverable D2.1 – Open EGTN Platform Architecture containing descriptions of work to date
	M4	Identify the requirements for the IoT infrastructure in collaboration with the WP3 LL partners. Elicit Connectivity and Transport Data Knowledge Model (Data-as-a-Service) specifications based on WP2 T2.1-T2.5. Identify the data expected to be involved in each of these areas and identify needed data sources
T2.2 EGTN IoT and Connectivity Infrastructure Components	M8	Provide the initial documents for D2.2A – EGTN IoT Infrastructure, D2.2B – EGTN Connectivity Infrastructure and D2.2C EGTN Transport Data and Knowledge Models. These deliverables draft will contain the Table of Contents (ToC). Completed data source collection or creation and finalised development work plan
	M12	Deliver first versions of the IoT Infrastructure, Connectivity Infrastructure and Data-as-a-Service intelligence space. The first versions will be accompanied by documentation for installing, running and integrating with relevant data examples. Updated versions of deliverable D2.2A, D2.2B and D2.2C containing descriptions of work to date
T2.3 Predictive and Optimisation Analytics	M4	Identify requirements for the PI Corridor Route Optimisation, Supplier Collaboration, Warehousing and Predictive Transport Model analytics services. Identify the data expected to be involved in each of these areas and identify needed data sources

	M8	Provide the initial deliverable document for D2.3A – EGTN support services based on Big Data Analytics models. This deliverable draft will contain the Table of Contents (ToC). Completed data source collection or creation and finalised development work plan
	M12	Deliver first versions of the PI Corridor Route Optimisation (Real-Time) model(s), Supplier Collaboration model(s), Warehousing model(s) and Predictive Transport model(s). The first versions will be accompanied by documentation for installing, running and integrating with relevant data examples. Provide an updated version of deliverable D2.3A containing descriptions of work to date
	M4	Identify requirements for the Multi-Actor Multi-Criteria Analysis (MAMCA) Decision Support Service (DSS) and the Intelligent PI Nodes and Network service. Identify the data expected to be involved in each of these areas and identify needed data sources
T2.4 Group multi criteria DSS for transport and PI Networks	M8	Provide the initial documents for D2.4A – Multi-Actor Multi-Criteria Analysis DSS and D2.4B – Intelligent PI Nodes and PI Network services. These deliverable drafts will contain the Table of Contents (ToC). Completed data source collection or creation and finalised development work plan
inecworks ,	M12	Deliver first versions of the MAMCA DSS and Intelligent PI Node and PI Network services. The first versions will be accompanied by documentation for installing, running and integrating with relevant data examples. Provide an updated version of deliverable D2.4A and D2.4B containing descriptions of work to date
T2.5 EGTN Distributed Ledgers and Smart Contracts	M4	Identify requirements for the Blockchain Interoperability mechanisms and identify the scenarios where Smart Contracts will be needed. Identify the data expected to be involved in each of these areas and identify needed data sources
	M8	Provide the initial deliverable document for D2.5A – Integration and Interoperability of proprietary Blockchain Systems for Seamless Global Trade Workflows and D2.5B – EGTN smart contracts and associated PI motivated workflows in the context of SLA management. These deliverable drafts will contain the Table of Contents (ToC). Completed data source collection or creation and finalised development work plan
	M12	Deliver first versions of the Proprietary Blockchain Interoperability mechanisms and the identified Smart Contracts. The first versions will be accompanied by documentation for installing, running and integrating with relevant data examples. Provide an updated version of deliverables D2.5A and D2.5B containing descriptions of work to date
T2.6 Unified interface to EGTN Data and support Services	M12	Identify the UI requirements needed by the PLANET EGTN Cloud Platform and services defined in T2.1 – T2.5. Identify the security mechanisms needed to interact with the PLANET EGTN Cloud Platform and services defined in T2.1 – T2.5

3.2.3 WP3 KPIs

Task No	Month	KPI Description
T3.1 LL1: PI and	M3	"Detailed Textual Business Case Description". Specific Living Lab use cases description, including KPIs definition. Internal report.
Blockchain for optimised door-to-door Asia-EU	M4	"Identification of involved Data Flows, Sources and Access method". Internal report.
corridors	M8	"Simulation Model Specifications". Internal report
	M12	"Initial Simulation Model Setup in local Simulation Environment". Internal report.
T3.2 LL2: China– Rotterdam/USA	M4	" Report on problem analysis". Detailed Textual Business Case Description, including KPIs definition. Internal report.
focusing on rail transport	M10	"Report on infrastructure analysis". Internal report.
T3.3 LL3: IoT for Silk Road Route to	M4	Detailed Textual Business Case Description. Specific Living Lab use cases description, including KPIs definition. Internal report
EU the Poland focus e-commerce parcels	M5	"Identification of involved Data Flows, Sources and Access method". Internal report.
	M12	Simulation Model Specifications. Internal report.
T3.4 Generic Use Case and EGTN Impact Assessment	M3	Preliminary assessment of improvement recommendations in the LL scenarios. Qualitative analysis on potential KPIs improvements. Internal document.

3.2.4 WP4 KPIs

WP4 activities will be initiated in M12 of the project, so detailed KPIs will be presented in the next version of D6.1 to be submitted in M17.

3.2.5 WP5 KPIs

Task No	Month	KPI Description
T5.1	M12	Set up of the Stakeholders Group. Inclusion of 3 new members
Recommendations -	M12	Set up of the Advisory Board. Inclusion of 1 new member

for PLANET standardisation	М6	Stakeholders Analysis Report
T5.2 Dissemination Strategy,	M4	Planet website, social networking and visual identity created and published on-line
Communication Plan and Activities	M12	1 x Project newsletter published (within the first 12 months)
	M12	3 x Press releases publication (in the first 12 months)
T5.3 Business	M12	1 x Business workshop organisation
Model and Commercialisation	M12	1 x Business Model Innovation Game
strategy	M24	2 x virtual workshops per Living Lab
	M36	Minimum one Business model. The final amount of business models will be evaluated on a later stage (if more than one if prepared then we would proceed with several business models).
T5.4 Policy recommendations	M12	Set up of an Intercontinental Platform – at least two meetings per year (for 2020: one)
	M36	Presentation and validation of the policy recommendations by the DTLF
	M18, 30, 36	At least three scenarios for the impact assessment per selected policy instrument

3.3 Project Deliverables Timeline

The table below, includes all PLANET deliverables sorted by deliverables' due date and calendar month.

Table 4: LIST OF DELIVERABLES

D#	Deliverable name	WP	Lead	Туре	Diss.	Due	Date
D6.2a	Project Quality Handbook and Annual Quality Reviews (a)	WP6	ILIM	RE	СО	1	Jun-20
D6.1a	Project management handbook – Management Plan (a)	WP6	INLE	RE	PU	2	Jul-20
D5.1	Stakeholder Analysis Report	WP5	PNO	RE	PU	6	Nov-20
D6.3	Initial Data management plan	WP6	INLE	ORDP	PU	6	Nov-20
D7.1	H – Requirement No. 1	WP7	INLE	ETHICS	СО	6	Nov-20
D7.2	PODP – Requirement No. 2	WP7	INLE	ETHICS	СО	6	Nov-20

D7.3	NEC - Requirement No. 3	WP7	INLE	ETHICS	со	6	Nov-20
D7.4	EPQ- Requirement No. 4	WP7	INLE	ETHICS	со	6	Nov-20
D1.2	Modelling & Simulation Capability v1	WP1	ITA	Other	PU	12	May-21
D1.1	EGTN Foundational Position Papers and Simulation Scenarios	WP1	ITA	RE	PU	14	Jul-21
D1.4	Simulation based impact of new trade routes on the TEN-T and disadvantaged regions v1	WP1	PAN	RE	PU	15	Aug-21
D1.6	Legislation and EU policy to impact EGTN v1	WP1	UIRR	RE	PU	15	Aug-21
D1.8	Simulation-based analysis of T&L and ICT innovation technologies v1	WP1	EUR	RE	PU	15	Aug-21
D1.10	EGTN Reference Specification v1	WP1	CERTH	RE	PU	16	Sep-21
D2.1	Open EGTN Platform Architecture v1	WP2	INLE	RE	PU	16	Sep-21
D2.3	EGTN IoT infrastructure v1	WP2	NGS	Other	со	17	Oct-21
D2.5	EGTN Connectivity infrastructure v1	WP2	SIR	Other	СО	17	Oct-21
D2.7	EGTN Transport Data and Knowledge Models v1	WP2	SIR	Other	PU	17	Oct-21
D3.7	EGTN Generic use case v1	WP3	ZLC	RE	PU	17	Oct-21
D6.1b	Project management handbook – Management Plan (b)	WP6	INLE	RE	PU	17	Oct-21
D2.9	EGTN Support Services based on Big Data analytics models	WP2	IBM	RE	PU	18	Nov-21
D2.11	Multi-Actor Multi-Criteria Analysis DSS v1	WP2	VLTN	Other	PU	18	Nov-21
D2.13	Intelligent PI Nodes and PI Network services v1	WP2	VLTN	Other	PU	18	Nov-21
D2.15	Integration and Interoperability of proprietary Blockchain Systems for Seamless Global Trade Workflows v1	WP2	KNT	Other	PU	18	Nov-21
D2.17	EGTN smart contracts and associated PI motivated workflows in the context of SLA management v1	WP2	KNT	Other	PU	18	Nov-21
D2.19	Unified HMIs implementation and technical documentation v1	WP2	EBOS	Other	со	18	Nov-21
D5.2	Observations and Recommendations of the Advisory Board v1	WP5	ESC	RE	PU	18	Nov-21

D5.4	Communications and Dissemination Report v1	WP5	FV	RE	PU	18	Nov-21
D6.2b	Project Quality Handbook and annual quality reviews (b)	WP6	ILIM	RE	со	18	Nov-21
D3.1	LL1 Specification and Baseline measurements	WP3	cos	RE	PU	21	Feb-22
D3.3	LL2 Specification and Baseline measurements	WP3	PAN	RE	PU	21	Feb-22
D3.5	LL3 Specification and Baseline measurements	WP3	ILIM	RE	PU	21	Feb-22
D1.3	Modelling & Simulation Capability final version	WP1	ITA	Other	PU	26	Jul-22
D2.4	EGTN IoT infrastructure final version	WP2	NGS	Other	со	28	Sep-22
D2.6	EGTN Connectivity infrastructure final version	WP2	SIR	Other	со	28	Sep-22
D2.8	EGTN Transport Data and Knowledge Models final version	WP2	SIR	Other	PU	28	Sep-22
D2.10	Cloud deployment of EGTN logistics services	WP2	IBM	Other	СО	30	Nov-22
D2.12	Multi-Actor Multi-Criteria Analysis DSS final version	WP2	VLTN	Other	PU	30	Nov-22
D2.14	Intelligent PI Nodes and PI Network services final version	WP2	VLTN	Other	PU	30	Nov-22
D2.16	Integration and Interoperability of proprietary Blockchain Systems for Seamless Global Trade Workflows final version	WP2	KNT	Other	PU	30	Nov-22
D2.18	EGTN smart contracts and associated PI motivated workflows in the context of SLA management final version	WP2	KNT	Other	PU	30	Nov-22
D2.20	Unified HMIs implementation and technical documentation final version	WP2	EBOS	Other	СО	30	Nov-22
D4.1	Recommendations for TEN-T Interfacing to Global trade routes	WP4	PAN	RE	PU	30	Nov-22
D4.2	Briefing reports for public authorities and Guide on the inclusion of disadvantaged regions into the international trading system	WP4	WI	RE	PU	30	Nov-22
D6.5	Innovation management report and Patent Filings	WP6	INLE	DEC	PU	30	Nov-22
D2.2	Open EGTN Platform Architecture final version	WP2	INLE	RE	PU	31	Dec-22
D1.5	Simulation based impact of new trade routes on the TEN-T and disadvantaged regions final version	WP1	PAN	RE	PU	33	Feb-23

D1.7	Legislation and EU policy to impact EGTN final version	WP1	UIRR	RE	PU	33	Feb-23
D1.9	Simulation-based analysis of T&L and ICT innovation technologies final version	WP1	EUR	RE	PU	33	Feb-23
D3.2	LL1 EGTN Solution description and test results	WP3	FV	DEM	со	34	Mar-23
D3.4	LL2 EGTN Solution description and test results	WP3	PAN	DEM	СО	34	Mar-23
D3.6	LL3 EGTN Solution description and test results	WP3	PP	DEM	со	34	Mar-23
D3.9	Application of EGTN generic Use Case in port of Sines	WP3	CPSI	DEM	СО	34	Mar-23
D5.6	Business & Commercialisation plan	WP5	PNO	RE	СО	34	Mar-23
D6.1c	Project management handbook – management plan (c)	WP6	INLE	RE	PU	35	Apr-23
D6.4	Data set made available	WP6	INLE	RE	PU	35	Apr-23
D1.11	EGTN Reference Specification final version		CERTH	RE	PU	36	May-23
D3.8	EGTN Generic use case final version		ZLC	RE	PU	36	May-23
D3.10	EGTN impact assessment	WP3	CERTH	RE	PU	36	May-23
D4.3	Electronic Visualization Library of outputs from WP1-WP2 and WP3	WP4	KNT	RE	PU	36	May-23
D4.4	PI-facilitating technology Roadmaps for EGTN	WP4	ZLC	RE	PU	36	May-23
D4.5	Recommendations for PLANET standardisation	WP4	ILIM	RE	PU	36	May-23
D5.3	Observations and Recommendations of the Advisory Board final version		ESC	RE	PU	36	May-23
D5.5	Communications and Dissemination Report final version		FV	RE	PU	36	May-23
D5.7	Policy framework analysis		UIRR	RE	СО	36	May-23
D6.2c	Project Quality Handbook and annual quality reviews (c)	WP6	ILIM	RE	СО	36	May-23

Furthermore, the table below, identifies PLANET's 9 key milestones, along with the means of verification for each of them.

Table 5: LIST OF PROJECT MILESTONES

# Name WP Date Means of verification	
--------------------------------------	--

MS1	Project Plan	WP6	M1	Detailed project plan (including KPIs for each 6- month period) documented and approved
MS2	Modelling and simulation capability for design and analysis of geo-economics aware EU Global Trade Logistics Networks	W/P1	М6	 Initial Simulation capability including models and test data available for simulation testing of research ideas/ from WP2 and LLs
MS3	Reference specification of an Integrated Green EU-Global T&L Network [EGTN]	WP1	M12	Detailed V1 EGTN specification including requirements for the support platform
MS4	Cloud-based Open EGTN ICT Infrastructure V1	WP2	M17	All infrastructure components integrated in architectural prototype ready for LL use
MS5	Installation and technical validation of the EGTN Infrastructure in the LLs	WP3	M21	LLs Operational Baseline Measurement completed
MS6	All Living Labs first phase testing complete	WP3	M25	Phase 1 measurements and evaluation feedback
MS7	Second phase testing in LLs initiated	WP3	M29	 Second version of PLANET components Experiment plans updated.
MS8	Open Source Libraries and Transferability Framework and Capacity Building Programme in place		M30	 Dissemination Plan / Communication Program for early adoption activated Extended participation in LLs available Roadmaps and guides published
MS9	Business Model Commercialisation strategy	WP5	M32	 Consortium strategy and partner exploitation plan agreed

3.4 Critical risks for implementation

The scientific and technical risk management is a key responsibility of the Project Manager and the PST. Management of risks will be part of the regular meetings of the PST. Based on the experience of previous projects, while still in the proposal phase, PLANET has created a risk management framework. Risks in this project may arise in different areas such as in the technology maturity, the availability of data and information, risks related to integration, stakeholder and end user engagement buy in and commitment. The following tasks relate to the establishment and the updates of the risk Management Framework:

- Identification of risks with adverse effects or impacts.
- Evaluation and quantification of the risks, rating the probabilities of occurrence, and significance.
- Contingency Planning and contingency actions.
- Risk monitoring and control and related documentation.
- Managing outcomes minimising negative impact.

The PLANET risk analysis framework classifies risks per category, and prioritizes risk monitoring according to their probability of occurrence (low, medium and high) and their impact (low, medium and high), with the following interpretation:

- Low: risks that potentially can affect the success indicators of a Task. The PLANET process foresees that the Task leader will manage the risk and the WP leader is informed.
- Medium-Consequence: risks that potentially can affect the success indicators of a particular work package. WP leader manages risk, the project leader is informed, and the risk escalates the PST.

High-Critical: Risks with high impact are one that can seriously affect the success indicators of the whole project. Figure 16 provides a graphical heat map/layout of a "sample" (for practical reasons, out of set of ca. 300 known risks) of the monitored risks in the Table 3.2c. The table analyses critical risks, their impact on successful implementation of the project and the risk management actions to be taken by the consortium (ID symbols stands for: TEC: Technical Risk, ADO: Adoption Risk, PM: PM Risks, C: Category, P: Probability, I: Impact.

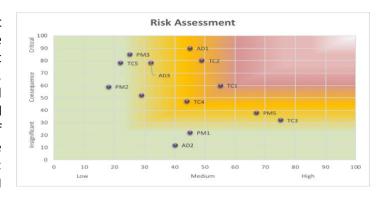


Figure 5: PLANET risks heat-map

Table 6: CRITICAL RISKS FOR IMPLEMENTATION AND CONTINGENCIES

ID	С	Risk	Contingency	Р	ı
PM1	PM WP1 - WP6	Budget (time/cost) issues due to complexity and changes as requirements for optimum solutions evolve.	The project baseline has been defined, utilising outputs from existing projects. Budget carefully monitored in the project.	M	L
PM2	PM WP1 - WP6	Project execution risks (e.g. critical deliverables are delayed or of poor quality). Possible delay in work plan.	Dependency analysis indicates that MT2 in month 6, EGTN Modelling & simulation capability is important. Experience of ITA and existing assets are key elements for mitigating this risk.	L	M
PM3	PM All	Partner problems (e.g. underperforming partner; a key partner leaves the project; disagreements). WP leaders monitor progress at WP level and communicate difficulties to PMg.	Consortium has strong R&D - delivery capacity. Partners overlapping skills fully cover needs. The Consortium Agreement fully covers conflict resolution. Problems that cannot be solved, are referred to PST & GA.	L	Н
PM4	PM WP1- WP6	Requirements are not properly passed or addressed by the Technology Enabling solutions.	The project iterative process has been set up to properly and timely capture user requirements. The main users are actively involved in the horizontal technology activities.	L	М
PM5	WP2- WP6	Requirements stability, rapidly changing or not agreed-upon baseline.	PLANET has an agile approach, so requirements are allowed to evolve and properly monitored.	Н	L
TC1	TEC WP2- WP6	Scenario generation and analysis is not a precise science and might not lead to useful results for example or the results of two scenarios analysis might wildly contradict each other.	EGTN simulation scenarios based on the LL requirements and the Foundational Position Papers are specified by month 3 and initial simulations will highlight any issues and will	M	М

			enable most promising scenarios to be selected.		
TC2	TEC WP3	Risk that LLs cannot provide significant data. Large data sets are necessary for analytical/ML proof.	PLANET has secured access to the necessary datasets for each LL. Data sources have been identified in the task descriptions.	L	Н
тсз	TEC WP3	Integration with existing (legacy) complex systems in the Living Labs will create unexpected delays or costs, or there are access restrictions.	Legacy systems have been identified. The consortium expertise in integrating legacy. Early integration planning and deployment of connectivity components in all LLs by experts such as SIR minimises this risk.	M	М
TC4	TEC	Hardware and Software Constraints and capacity; multiple platforms and different integration requirements.	Use Open standards software, adopt existing working solution components. Partners have high technology skills. Interoperability between blockchain platform is major research goal. Possibly the world leading experts, JD, IBM, BlockLab, FV are partners actively engaged in producing industry solution.	L	Н
AD1	ADO	Potential adopters/users will be hesitant to adopt these newly developed solutions and not willing to adopt changes in practices.	PLANET will provide valuable insights on the impact of new trade routes to TEN-T and blueprints of best practice for the T&L industry to adopt. Solutions will be produced with active involvement of users, COSSP, FV, BlockLab, DHL who will spearhead market take up of the PLANET outputs.	L	Н
AD2	ADO	Risk that technical effort/cost for non- Consortium organisations of participating in PLANET Nodes- Network evaluation may be prohibitive, affecting adoption.	The design of the PLANET Nodes ensures that potential participants minimise/rationalise required investment budget on IT.	M	L

In addition to the table above, COVID-19 situation in Europe forced the consortium to thoroughly study and analyse the implications generated due to this along with the mitigation measures that have to be put in place in order to effectively minimize its impact to project activities and outputs.

Table 7: COVID-19 Risks in PLANET

Risk Description	Impact	Probability	Mitigation Measures
COVID-19 associated risks: mainly on-line interaction (for all WPs, including projects' Living Labs)	Physical meetings most probably not possible until the end of 2020	High	Establish frequent and appropriate on-line communication channels
Working environment challenges due to COVID-19	Most participants are currently displaced from normal work environments.	Low	Proactive planning and early requirement identification. WP2

	Work/Life overlap can affect progress		participants were polled and reported no issues working remotely
WP5 highly depends on PLANET WPs inputs: Low degree of communication of WPs with WP5	Few communication actions due to low interaction of PLANET WPs with WP5	Low	Define regular and communication focused meetings with PLANET WP Leaders
Low engagement of stakeholders and Advisory Board	Lack of external assessment and inputs from the industry	Medium	Proactive communication and engagement of stakeholders in WP5
Low impact of PLANET project communication activities	Low visibility of the project in related industry forums	Low	WP5 will deploy a proactive communication strategy oriented to gain continuous visibility
Access to data to enable effective scoping maybe hampered due to COVID-19	Medium	Low	Rely on understanding of data headers and volumetrics from previous projects
Understanding the requirements and reaching a consensus may take longer due to COVID-19	Medium	High	Will aim to use as many collaborative tools as possible and follow up with smaller subgroup meetings till consensus is reached.
Too many different systems to integrate to adequately address LL needs	High	Low	Attempt to reshape/refocus.
Reluctance to share data to a centralised platform	High	Medium	Specifications of CLOUD EGTN will be conveyed to LL's to deploy internally
Impact of COVID-19 on freight transport from China	Minimisation/suspension of railway transport from China during the project	Medium	Focusing on increasing interest in the project results of many railway carriers (more trains from China to the EU)
Reluctance of business partners to implement GS1 standards	Limited possibilities for testing under LL3	Medium	Focusing and carrying out arrangements with key actors in the supply chain (Poczta Polska, ROHLIG SUUS, PKP Cargo)
Understanding the requirements for the PLANET EGTN Cloud Platform and reaching a consensus may take longer due to COVID-19.	Medium	High	WP2 aims to use as many collaborative tools as possible and follow up with smaller subgroup meetings until consensus is reached.

Reluctance to share data to a centralised platform.	High	Medium	Specifications of the PLANET EGTN Cloud Platform will be conveyed to Living Labs (LLs) to deploy internally.
Collaborative challenges due to COVID-19. No F2F consortium meetings possible in short term.	Medium	Medium	Use of collaboration tools such as GoToMeeting and Teamwork, with weekly meetings for WP2 in 2020.
Access to data to enable effective scoping of the PLANET EGTN Cloud Platform.	Medium	Low	WP2 can rely on understanding of data headers and metrics from previous projects (SELIS, ICONET)
Too many different systems to integrate to address LL needs.	High	Low	Collaborate with LLs to priorities initial work.
Working environment challenges due to COVID-19.	Low	Low	Proactive planning and early requirements identification. WP2 participants were polled and no issues were identified relating to working remotely.

4 Work Plan

4.1 Work Plan Rationale

The proposed Workplan is driven by a user led agile development process designed to produce quick demonstrable results supported by the rich domain knowledge, skills and the experience of the consortium. The project roadmap aims to maximise impact and to encourage the adoption of early results. The workplan rationale is explained in Figure 6 below and in the context of the following Work Packages (WPs):

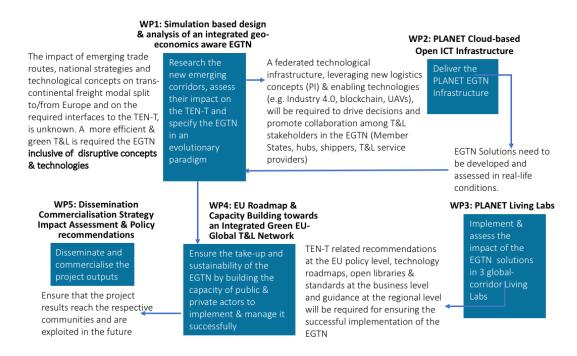


Figure 6: PLANET Work plan structure

WP1 delivers the project baseline by providing: (i) a simulation-based assessment of the expected impact of emerging trade routes, national strategies and technological concepts on the TEN-T corridors and PENs interfacing TEN-T to global trade; (ii) a definition of the operational & policy requirements for realising the EGTN.

WP2 provides the ICT infrastructure, building primarily on existing assets, enabling the development and operation of EGTN solutions in the LLs.

WP3 provides experimentation testbeds for EGTN solutions along three global corridors which will be linked to a generic simulation based EGTN use case to support broader use of knowledge and assets generated.

WP4 interfaces with the other work packages either by transforming insight into recommendations/guidelines, or capacity building programs, and embedding the findings in the PI-facilitating roadmap for EGTN. WP4 will provide Open Source Libraries as part of the Transferability Framework and Capacity Building Programme.

WP5 ensures sustainability of project outputs from WP1-4.

4.2 Work Breakdown Structure

The project's schedule is represented by a Gantt chart (Figure 2) that allows project monitoring throughout its progress and, at the same time, checking the consistency between the workload assigned to each group at a given time and actual resources available at that time. The following table depicts the work package structure of the PLANET project.

WP No	Work Package Title	Lead Participant	Short Name	Person- Months	Start Month	End month
WP1	EU-Global T&L Networks [EGTN]	P2	CERTH	181	1	36
WP2	PLANET Cloud-based Open EGTN Infrastructure	P19	IBM	208	1	34
WP3	PLANET Living Labs	P15	ZLC	255	1	36
WP4	Steering innovation & building capacity towards EGTN	P11	EUR	95	12	36
WP5	Dissemination Commercialisation Policy recommendations	P14	FV	88	1	36
WP6	WP6 Project Management		INLE	55	1	36
				882		

Table 8: LIST OF WORK PACKAGES

4.3 Project monitoring and control

4.3.1 Project Meetings

Project monitoring and control processes allow the planning, tracing and monitoring of the work progress and other events that have an impact to the project. The main formal occasions for the project's control will be PLANET's project meetings.

Any consortium partner who is a member of a Consortium Body as described in Section 2, should be represented in every meeting of the General Assembly. In addition, they may appoint a substitute or a proxy to attend and vote at any meeting and should participate in a co-operative manner in any of the meetings.

Project's Progress Meetings will be scheduled regularly and also in special occasions. Regular internal Progress Meetings, both physical and teleconferences, will be held by each project team. Project General Assembly meetings are normally planned annually or ad hoc, if an outstanding circumstance arises. After the completion of every meeting, the meeting minutes will be sent by the Project Coordinator, or the related meeting chairperson to all partners, with the use of the PLANET minutes' template (Annex II: Meeting Minutes template)

4.3.2 Milestones

The project's progress will be monitored according to PLANET's Milestones presented in Table 4: List of Milestones. These milestones will be used to measure the progress of the project at significant points of

time over the project's duration and also align project activities linking different WP activities into concise deliveries and project decision points.

4.3.3 EC Periodic Technical and Financial Reporting

The overall project implementation is divided into two reporting periods, meaning that two formal reports will be submitted (interim and final) to the Agency, one for each period:

- Reporting Period 1: from month 1 (1 June 2020) to month 18 (30 November 2021).
- Reporting Period 2: from month 19 (1 December 2021) to month 36 (31 May 2023).

Each partner should provide to the Project Coordinator the required information in order to draft progress reports (technical and financial). The Project Coordinator will elaborate partner's input and produce the periodic reports which will include:

- Technical report
- Explanation of the work carried out
- Overview of the progress towards objectives
- Public Summary for wide publication available to the Agency for further dissemination purposes
- A questionnaire related to the action implementation, economic and societal impact
- Financial report
- Individual financial statement for each beneficiary
- Overview of the Person-Month Status
- Explanation of the use of the resources

The deadline for delivering the reports to the Agency is 60 days after the end of the reporting period. Therefore, the internal deadline for providing the necessary input to the Project Coordinator is 15 days after the end of the period.

4.3.4 Continuous Progress Monitoring

The Project Manager and Technical team arrange recurring telco meetings with PLANET'S WP leaders and/or cross WP leaders meeting in order to align the work carried out under different work packages.

On a monthly teleconference all WP Leaders will report their progress to the Project Manager. In addition, <u>every 3 months</u>, each **Work Package Leader** will formally log the progress of their respective responsibilities (activities undertaken, results obtained, issues, risks, etc.), with the use of the provided excel template (presented in <u>Annex I</u> and available on TeamWork repository). The main scope is to ensure a proper degree of control between the different teams working in the project and an early detection of possible problems, risks and/or nonconformities.

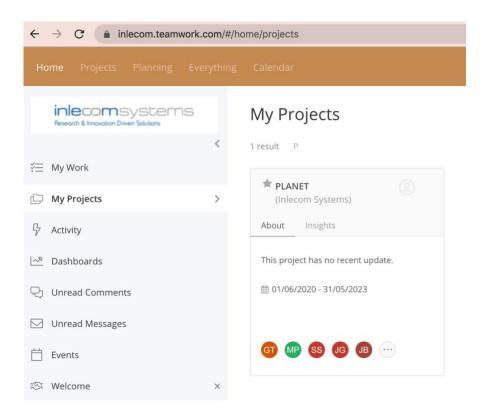
Templates for deliverables and periodic reporting can be downloaded from the files repository as shown in Section 5 of the document.

5 Project Management Tools

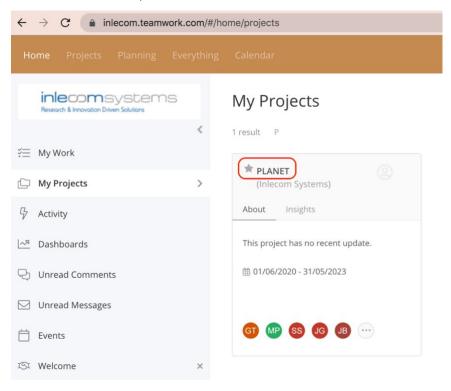
INLECOM as coordinator has setup a shared space to facilitate information exchange and file sharing between project partners. The platform will also be used for basic progress reporting at task, subtask and deliverable levels. The following sections have been circulated to the consortium as a guide which presents the basic features of the platform to help them with their first logins. The guide also included basic guidelines on other administration issues.

5.1 PLANET Project Space

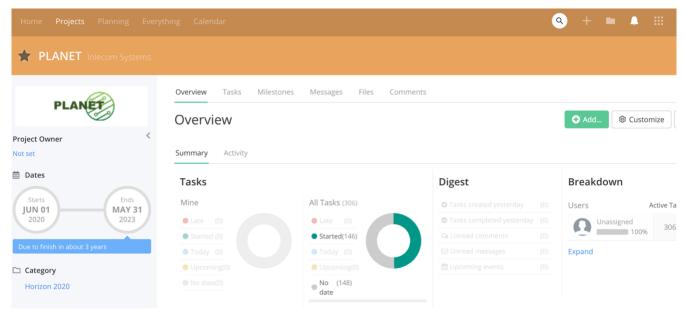
When logging in to TeamWork, the list of the projects available to the users appear on their screen as per the image below.



To access the project related information, users need to click on **PLANET** as shown below.



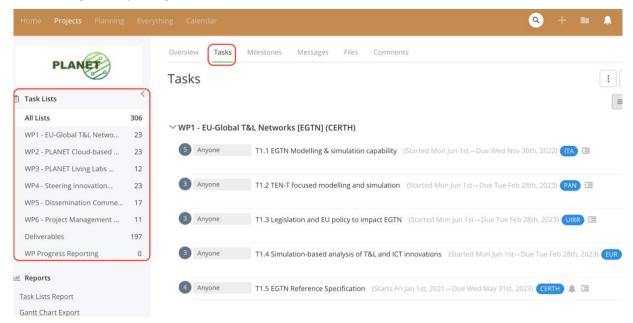
Once they have selected PLANET project, they will be able to see more project related information (Tasks, Milestones, Files).



5.2 Tasks Tab

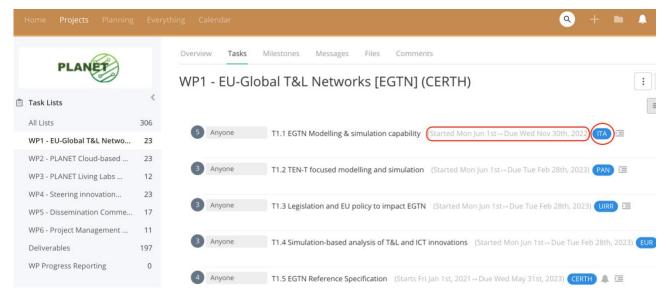
On the left-hand side of the tasks page, the users can see the following lists:

- Work Packages
- Deliverables
- WP Progress Reporting tasks



5.2.1 Work Packages

Once a specific WP from the left is selected, the following image appears on the screen. The information highlighted are the start and end dates of each task and the respective task leaders.



5.2.2 Deliverables

The Deliverables can be found under the generic task list. Automatic reminders have been scheduled by the coordinator to be sent to the Deliverable owner and Quality Assurance Manager by email on the following periods:

Due Date Month-1: ready for peer review

Due Date Day -2: To be officially submitted in 2 days to the EC after addressing all comments by the QA Manager (ILIM) and the peer reviewers

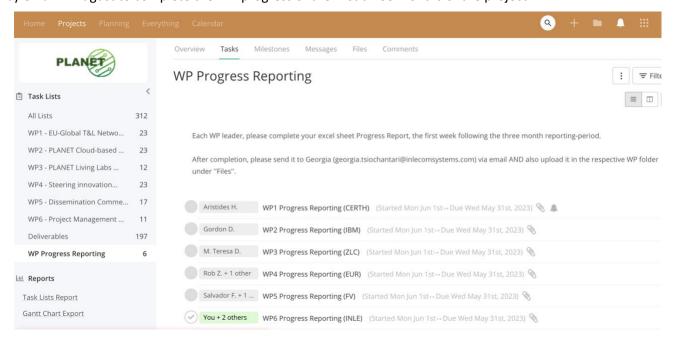
Below there is an example of milestone deadlines for a Deliverable that needs to be submitted at the 31st of July 2021.

No	Period	Task	Deadline
2	M-1	Ready for peer review	30/06/2021
3	Day -2	To be officially submitted in 2 days to the EC after addressing all	28/07/2021
		comments by the QA Manager (ILIM) and the peer reviewers	

5.2.3 WP Progress Reporting

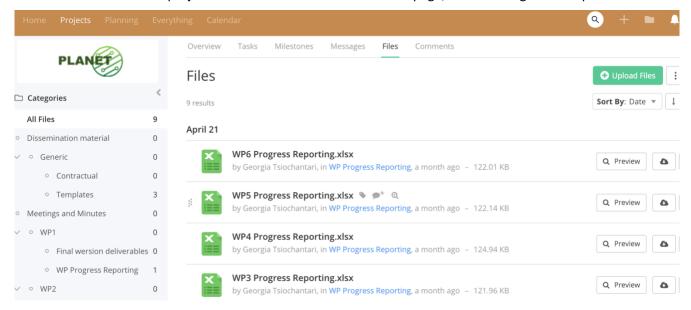
All WP leaders will need to report their WP progress or possible issues **every three months**. Under the "WP Progress Reporting" task list, an excel sheet is attached to be used as a template for reporting progress monitoring. Each WP leader will receive automatic notifications for completing the excel in the reporting fixed dates.

For example, if a WP starts in the beginning of the project (01/06/2020), the WP leader will receive a notification by email in August to complete the WP progress of the first three months of the project.



5.3 Files Tab

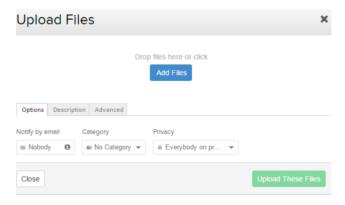
This area is used to share project files. On the left-hand side of the page, the file categories are presented.



Description of files

- Generic folder includes all the templates to be used during the project, the project workplan and the contractual files (e.g. Grant Agreement)
- <u>Dissemination material</u> includes all the files related to the dissemination activities of the project (e.g. project logo, PLANET generic PowerPoint template for events etc.)
- <u>Meetings & Minutes</u> includes all the agendas, presentations and minutes resulting after each meeting (face to face or telco), organized for the project.
- <u>WP folders</u> includes the respective WP reporting excel files and a subfolder for all final WP deliverables per WP

To upload files, users need to click on "Upload files" on the right-hand side of the page → Add Files→ Select "Category"→ "Upload these files"



5.4 File naming rules

In order for all PLANET documents to have a common title scheme and be easily traceable, the following referencing scheme should be followed, for any documents uploaded at the file repository.

PLANET documents templates, as shown in the table below, are available at Files/Generic/Templates: https://inlecom.teamwork.com/#/projects/547210/files?catid=1409675

Document Type	Types of templates to be used
Deliverables	PLANET D-No delTITLE_v0.0_date_partner.docx
Minutes following the organisation of a physical/telco meeting	PLANET meetingID_meetingCITY_TITLE_meetingDATE_Minutes_v0.0.docx
Presentations	PLANET MeetingID_PPTShortTITLE_meetingDATE_PARTNER.pptx

Deliverables

Examples:

PLANET D6.1a Project Management Handbook – Management Plan_v0.7_20.06.2020_INLE

General Rule:

PLANET D<DELIVERABLE no> <DELIVERABLE SHORT TITLE> version date partner

The Deliverables template can be found at: https://inlecom.teamwork.com/#/files/8160992

Physical/Telco Meeting Minutes

Meetings identifiers:

- KOM=Kick Off Meeting
- PM=Project Meeting (concerns regular General Assemblies)
- LL= Living Lab Meeting
- TM=Technical Meeting
- RM=Review Meeting
- Telco=Online meeting (skype, Go-to-meeting, etc.)

Example:

PLANET TM London WP2 Progress 07.11.2022 Minutes v0.3

General Rule:

PLANET < meeting ID> <MEETING CITY> <TITLE> < MEETING DATE> Minutes version

Teleconference Minutes

Examples:

PLANET Telco_WP Leaders_15.11.2021_Minutes_v1.0

```
PLANET Telco <ID - SHORT TITLE> <TELCO DATE> Minutes version
```

The Meeting Minutes template can be found at: https://inlecom.teamwork.com/#/files/8160994

Presentations

Examples:

PLANET KOM_WP2 progress overview_31.08.2020_IMB

General Rule:

```
PLANET < meeting ID> <TITLE> < MEETING DATE> partner
```

5.5 Meetings Records

All face to face and teleconference meetings' agendas, presentations and minutes should be stored in the folder **Meetings & Minutes**, according to the file naming rules mentioned above.

Major actions and decisions agreed on **face to face meetings** should be uploaded to the shared space in this folder: https://inlecom.teamwork.com/#/projects/547210/files?catid=1428428

Major actions and decisions agreed on **teleconference meetings** should be uploaded to the shared space in this folder: https://inlecom.teamwork.com/#/projects/547210/files?catid=1428429

5.6 Generic e-Mailing List

To facilitate the communication between the PLANET consortium partners, a general e-mailing list (all@PLANETproject.eu) has been created. If a member of the consortium wants to be included or excluded from the project general communications, they need to contact our consortium partner, Valencia Port, who is responsible for managing the general mailing list.

5.7 Support

For any questions or requests regarding:

- 1) The use of the platform
- 2) Changes that need to be done in the TeamWork platform (e.g. re-assigning a subtask leader)
- 3) Granting access to new members of your team
- 4) Deleting user accounts

please contact directly Ms. Georgia Tsiochantari: georgia.tsiochantari@inlecomsystems.com

6 GDPR Compliance

The imposition of the General Data Protection Regulation (GDPR) complements data-protection laws inside the European Union, following recent technology advances and communications. GDPR forces the related new rules to companies, government agencies, non-profits, and other organisations offering goods and services inside the EU or collect and analyse data of EU residents/citizens. The primal objective of GDPR is to provide total control of personal data to their owners and at the same time simplify the related regulatory frameworks inside the EU. Due to its regulatory (instead of directive) nature, GDPR has a direct application to all EU member states starting from the 25th May 2018.

GDPR defines the following roles and rules for parts for the GDPR implementation and compliancy:

- Controller: the person who determines the purposes and means of processing personal data
- Obligations apply ensuring trust and cooperation with the data processor
 - Processor: responsible for processing personal data on behalf of a controller
- o If required to maintain records of personal information and process them, will have legal liability in case of breach.
 - GDPR applies to processing carried out by organizations operating within the EU and organizations outside EU offering goods/services to EU citizens.
 - GDPR does not apply to any activities by the Law Enforcement Directive or for national security purposes or any activities carried out by individuals for personal use.

The above layers of implication for GDPR include a series of steps and activities that responsible institutions need to comply with regarding GDPR conformity.

1 Awareness
2 Information Keeping
3 Communication of Private Information
4 Data Owners' Rights
5 Access Requests
6 Lawful Data Processing
7 Consent Forms
8 Impact Assessment
9 Data Protection Officer
10 International Implications

Figure 7: GDPR Layers of implication

PLANET recognises the need for a centralised and structured approach in order to be compliant with the new EU regulation and also respects personal data intending to be GDPR compliant through the development of a series of policies that the consortium will comply with. These will be included in detail in the PLANET initial Data Management Plan (to be submitted by M6).

7 PLANET Ethics Protocol

7.1 Ethics Overview

PLANET project conforms to the relevant EU regulations (e.g. the recent Regulation on the protection of natural persons with regard to the processing of personal data and on the free movement of such data) and directives (e.g. the Directive on privacy and electronic communications) relating to the collection and storage of big data information, applying all possible means for the protection of privacy and Ethics in any personal data collection and processing, such as the Privacy Enhancing Technologies (PETs).

PLANET will encrypt, when necessary, and anonymise the data, in order to protect personal identities, and it will decisively not implement processing algorithms leading to "personally identifying" results. The following principles define the PLANET approach:

- Compliance with Legislation: Any real data collected for demonstration purposes will be handled in accordance with the Data Protection legislation and GDPR in the concerned countries, and each company handling the data will be registered to handle this type of information with their data protection authority.
- Purpose Specification: PLANET will also get informed consent from anyone participating in the Living Lab use case scenarios. The purpose(s) of the data collected will be clearly specified to the stakeholders which will be notified each time the purpose changes.
- **Use Limitation**: Personal data will not be stored, all information leading to person identities will be erased of any stored information record.
- **Security Safeguards**: Personal data will be kept secure from potential abuse, during all required processing before storing, until personal identities are eliminated.
- Openness: All collection processes will be transparent on how data is collected, used, and shared.
- **Accountability**: PLANET will be accountable to comply with all above principles.

7.2 Ethics Protocol

The project has been subject to stringent ethical review carried out through a committee of peers from ethics committees in projects managed by INLE, before the proposal submission stage. This process ensures compliance with ethical principles as outlined by the ESRC Framework for Research Ethics (FRE) 2010 (Updated January 2015)⁵. The research has been designed, reviewed and undertaken to: i) ensure integrity, quality and transparency; ii) make sure that all research staff and participants are informed fully about the purpose, methods and intended possible uses of the research, what their participation in the research entails and what risks, if any, are involved; iii) data will be treated in strict confidence by research participants and the anonymity of respondents will be respected; iv) Research participants will take part voluntarily, free from any coercion; v) harm to research participants and researchers will be avoided at all times; and the independence of research will be clear, any conflicts of interest or partiality will be made explicit.

Research ethics is important in order to:

- Protect participants and researchers from harm
- Preserve the rights and dignity of participants
- Create a culture of mutual respect and trust between participants and researchers
- Provide reassurance to the participants, wider public and funders regarding the ethical conduct of research
- Maintain the integrity and reputation of the researchers and host institution(s)

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⁵ https://esrc.ukri.org/files/funding/guidance-for-applicants/esrc-framework-for-research-ethics-2015/

7.2.1 Ethics Panel – roles and responsibilities

The main role of the Ethics Panel is to review and provide consultancy in order to ensure compliance with legal and ethical regulations and adoption of best practice within PLANET project.

The Ethics Panel is chaired by the Quality and Ethics Manager, ILIM, and it is supported by the WP Leaders and its assigned Legal Advisors (experts on ethics, privacy and legal issues). Additionally, an External Expert is invited to the panel, to act as independent reviewer and consultant to ensure compliance with legal and ethical regulations.

The project Partners are involved in Research Ethics Procedure by responding to the legal and ethical aspects of their tasks and deliverables if requested. Their response on ethical aspects of tasks/deliverables are assessed by the Reviewers supported with Legal Advisors within the Quality Assurance process.



Figure 8: Ethics Panel Structure

Table 9: Ethics Panel - roles and responsibilities

Body	Roles
Quality and Ethics Manager	Coordination of the procedures and processes for ensuring compliance with legal and ethical regulations to be held simultaneously with Quality Assurance process – co-creation of the procedures, processes and tools for the monitoring of legal

	and ethical aspects of the conducted research, tasks and deliverables.
External Expert	Providing expertise and consultancy to ensure compliance with legal and ethical regulations. Supporting creation and execution of the procedures, processes and tools for the introduction and monitoring of legal and ethical aspects of the research, tasks and deliverables.
WP Leaders supported by Legal Advisors	Identification of ethical issues arising in the work packages of their responsibilities, including deliverables and tasks that require evaluation of compliance with legal and ethical regulations. WP Leaders are supported by their Legal Advisors in evaluation of legal and ethical aspects of the research, tasks and deliverables.
Partners	Providing response on ethical issues within deliverables and tasks if requested by WP Leader.
Reviewers supported by Legal Advisors	Evaluating legal and ethical aspects of the tasks and deliverables.

The main tasks of the Ethics Panel:

- coordination of the research ethics procedures and processes of ensuring compliance with legal and ethical regulations
- providing expertise and consultancy to ensure compliance with legal and ethical regulations
- designing of the methods and tools for the assessment of ethical issues of the project, including creation of research ethics procedure and process of deliverable and task evaluation
- approval of the assessments of the ethical issues of selected project deliverables (as part of the preparation process) and tasks (at commencement and completion)
- collection of all evaluations and presentation of the results to the PST half-yearly.

The list of Legal Advisors supporting the evaluation of identified deliverables or tasks will be agreed in M2 of the project and will be included in the next version of the Project Management Handbook – Management Plan submitted in M17.

The list of Reviewers and Legal Advisors which are responsible for the evaluation of ethical issues of deliverables or tasks to be completed in the first 12 project months are presented below.

Figure 9: List of Reviewers or Legal Advisors for first 12 months

No	Deliverable name	Partner	Reviewers & Legal Advisors	Delivery date
D1.2	Modelling & Simulation Capability v1	PAN	Adriaan Roest Crollius	M12
D5.1	Stakeholder Analysis Report	ESC	Nathalie Rousseau	M6

D6.1	Project management handbook – management plan	ZLC	M. Teresa De la Cruz	M2
D6.2	Project Quality Handbook and annual quality reviews	INLE	Georgia Tsiochantari	M1
D6.3	Initial Data management plan	FV	Salvador, Furió Pruñonosa	M6
D7.1	H – Requirement No. 1	L-ILIM	Malgorzata Kirchner	M6
D7.2	PODP – Requirement No. 2	L-ILIM	Malgorzata Kirchner	M6
D7.3	NEC - Requirement No. 3	L-ILIM	Malgorzata Kirchner	M6
D7.4	EPQ- Requirement No. 4	L-ILIM	Malgorzata Kirchner	M6

7.2.2 Research Ethics Procedure

All research in the PLANET project that involve human participants or data requires approval by the Ethics Panel. Therefore, WP Leaders are responsible for raising any ethical aspects carried out in their WPs. Upon request of WP Leaders, deliverable or task Leaders should complete a RESEARCH ETHICS FORM that is reviewed by the Reviewers or its Legal Advisors in a Peer Review Process within Quality Assurance.

The Research Ethics Procedure is part of the Quality Assurance process.



Figure 10: Research Ethics Procedure

The following procedure apply to research affecting ethical issues to be carried out in specific WPs:

- 1) If requested by the WP Leader complete the PLANET RESEARCH ETHICS FORM to present ethical issues of your deliverable, task and provide it to your Reviewer to evaluate it when making a Quality Peer Review.
- 2) Together with WP Leader arrange a meeting with the project Ethics Panel to discuss ethical aspects of research.
- 3) In case of disapproval, modify the Research Ethics Form to reflect how the approach has changed and to act as a record of discussion and any decisions made.
- 4) In case of approval, a copy of the completed and approved form will be uploaded on TEAMWORK platform together with copies of all consent forms, information sheets, and materials to be given to participants.

The Ethics Panel meets on ad hoc basis when a need for evaluation of ethical issues is raised to the Quality and Ethics Manager and the forms are reviewed accordingly. In the case of serious disapproval, the Ethics Panel is informed and an internal meeting with the deliverable author or task leader and the Project Coordinator is organised to agree on improvements and mitigation measures.

7.2.3 Research specifics

Research in PLANET project involves working with human participants and particular methodological tools as follows; surveys, questionnaires, interviews, and focus groups. Interviews and focus groups will be recorded.

The scope of research that affect ethical aspects, methodologies and interviewing groups will be agreed in M3 of the project and will be included in the next version of the Project Management Handbook – Management Plan submitted in M17.

The proposed research does not involve any covert surveillance. Participation will be entirely voluntary, and we will obtain informed consent in advance. We will not be working with any vulnerable categories of individuals such as children, patients, discriminated people, minorities, persons unable to give consent, people of dissenting opinion, immigrant or minority communities, or sex workers. There are implications of the research on the project partners and informants, but care will be taken to ensure that this is done in an open manner.

The following process will be used to enroll participants, ensure informed consent and store data:

- 1) A request for volunteers to participate will be circulated which will include a project outline, a guide of how volunteers will be involved in the research (e.g. complete a questionnaire, attend an interview) and how the data will be used. All data will be anonymised. Requests will be made using project partners and traditional snowballing techniques will be used to reach as many people as possible. Potential volunteers will be asked to contact a specific named individual.
- 2) Once volunteers come forward **details of the data collection methods and events will be established** in negotiation with the participants. Names and contact details will be kept in an encrypted database private to the research project. These data will not be passed on or used for any purpose other than to contact the volunteers for inclusion in the research.
- 3) At the outset of every data collection event participants will be asked to complete **an informed consent form**. This will include a brief description and purpose of the event and how data will be used. The form will be in a language and in terms fully understandable to participants, describe the aims, methods and implications of the research, the nature of the participation and any benefits, risks or uneasiness that might be involved. The form will explicitly state that participation is voluntary and that anyone has the right to refuse to participate and to withdraw their participation, samples or data at any time without any consequences. Participants will be asked to sign the informed consent form and will be given a copy to keep. We will keep a copy for our records. If the consent cannot be given in writing, for example because of illiteracy, the non-written consent will be formally documented and independently witnessed.
- 4) There are implications of the research on the project partners and informants, but care will be taken to ensure that this is done in an open manner. The project seeks to empower participants by allowing them to anonymously contribute to the data collection and analysis around personal and professional understandings of climate change and possible adaptations. This has the potential to change their views on climate change adaptation and how people lead their day-to-day lives, but we do not expect there to be any negative repercussion. The topic of the research is not sensitive so the likelihood of participants actually incurring any harm is minimal. Through involvement in the Project Steering Team partners will have frequent and varied opportunities to feed into research plans, discuss results and discuss impacts of the research.
- 5) Monitoring devices will only be used openly and only with consent from participants.
- 6) All informants will be provided with updates about the research and a summary of our research findings. The research will be available to participants and the general public without any restrictions.

For all empirical data collection, we will establish and follow recognized procedures to help keep researchers and subjects safe. These will include: keeping careful notes of all research engagements; ensuring projects are adequately staffed; using mobile phones to keep in touch with the research base; conducting full risk assessments of fieldwork sites; formally notifying authorities of research being conducted in an area; carrying authorised identification; researcher preparation and training covering techniques for handling conflict, threats, abuse or compromising situations; debriefing after field research with an assessment of fieldwork safety; and reporting any health and safety incidents. Before any fieldwork is undertaken the relevant institutional Health and Safety clearance procedure will be followed, where data collection is taking place.

WP2, 3 and 4 will use secondary data and non-PII technical/sensor in the environment. Data will include system and sensor information. The research will not involve empirical monitoring of physical science data, nor will it include the use of elements that may cause harm to the environment, animals or plants, or endangered species. Secondary data will be used in accordance with data providers according to their license agreements.

Project Deliverables (as part of the preparation process) and Tasks (at commencement and completion) will be investigated towards compliance with legal and ethical regulations by specific WP Leaders and if needed evaluated and forwarded for approval by the Ethics Panel.

The Parties agree that any Background, Results, Confidential Information and/or any and all data and/or information that is provided, disclosed or otherwise made available between the Parties during the implementation of the Action and/or for any Exploitation activities ("Shared Information"), shall not include personal data as defined by Article 4 of the General Data Protection Regulation (2016/679) (hereinafter referred to as "Personal Data"). Accordingly, each Party agrees that it will take all necessary steps to ensure that all Personal Data is removed from the Shared Information, made illegible, or otherwise made inaccessible (i.e. deidentify) to the other Parties prior to providing the Shared Information to such other Parties.

Each Party who provides or otherwise make available to any other Party Shared Information ("Contributor") represents that:

- (i) it has the authority to disclose the Shared Information, if any, which it provides to the Parties under the Consortium Agreement;
- (ii) where legally required and relevant, it has obtained appropriate informed consents from all the individuals involved, or from any other applicable institution, all in compliance with applicable regulations; and
- (iii) there is no restriction in place that would prevent any such other Party from using the Shared Information for the purpose of this Action and the exploitation thereof.

Detailed information on the procedures for data collection, storage, protection, retention, and destruction, and confirmation that they comply with national and EU legislation will be included in the Data Management Plan. (D6.5 Initial Data Management Plan due on M6).

8 Conclusions

The successful implementation of the PLANET project relies greatly on the timely fulfilment of the reporting obligations of all partners, efficient collaboration facilitated by the project management structures, risks mitigation and efficient information sharing among different team members. The Project Handbook aims to clarify the key roles, procedures and responsibilities related to the internal management of the PLANET project.

Inside this report, all the project's processes and approaches have been included in detail so that participants are fully aware and follow them throughout the whole project execution. Internal processes include the project management structure and related procedures, consortium roles per level in the PLANET structure, project communications and reporting templates/processes, decision making mechanisms, meetings and travel management points, deliverables' and internal reports' composition as well as PLANET website and social media accounts. This report also includes an updated risk assessment of PLANET indicating the project related and COVID-19 risks (at all levels) and the already foreseen mitigation and/or avoidance strategy. An analysis of the knowledge management and protection of IPR aspects is also included followed by related ethics and gender issue management. For purposes of reference, the PLANET timeline has also been added as the project schedule and as a means of aligning project and tasks durations with the PLANET critical path analysis and smooth execution, including all PLANET deliverables, milestones as well as technical and periodic reporting stages. Additionally, KPIs per WP have been described identifying measurable outputs that could facilitate disciplined delivery and tight control, both at WP level and as well as at the central coordination.

Details on supportive tools for the efficient and smooth project implementation (e.g. the project document server), access control and connection details have been included as well. A detailed analysis of the project management tools used in PLANET and supporting day-to-day as well as technical and scientific project coordination is also described. Closing references and acknowledgement of the GPDR implications and how these are expected to affect PLANET internal and external processes as well as the project ethics protocol can also be found. Closing the reporting and other templates have also been annexed to this report.

This report has been submitted on M2 (July 2020) of the PLANET execution and is considered project's formal guideline regulating PLANET's Project Management procedures and policies well as potential updates to the PLANET risks registry following the project execution.

9 References

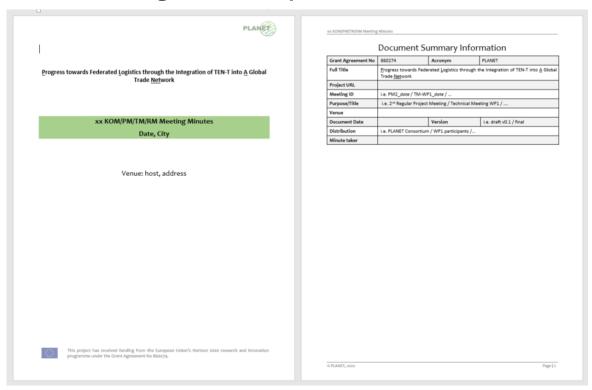
- [1] EC DESCA model
- [2] Inlecom Systems. Teamwork online project management tool. PLANET. 2020. Available: https://inlecom.teamwork.com/ [Accessed June 2020].
- [3] European Commission. GRANT AGREEMENT NUMBER 860274 PLANET. Research and Innovation action. 2020.

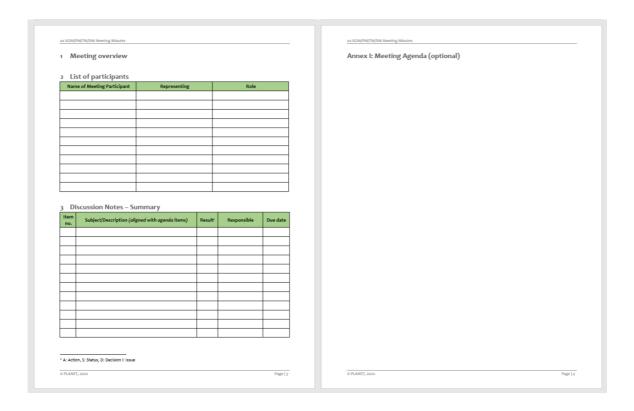
Annex I: WP Progress reporting template

To be completed by the WP Leader, in the first week following the 3 month reporting period
og achievements, planned goals, issues and required support in the respective tab of the reporting period
For issues requiring the Coordinators' attention, please also notify the project manager via email
Do report only major achievements, planned goals and issues/risks (ideally no more than 3-4 items per cell)
Under the column "Issues/Risks" do distinguish the items reported are issues or risks. Particularly for Risks, outline what is the potentially problematic event, what is the propability of occurring, and what will be the impact.
L(

		August 2021						
WP1	EU-Global T&L Networks [EGTN]	CERTH	Deliverable Due Date	Major Achievements during this reporting period	Planned Goals for the next reporting period	Issues/Risks	Required Support from the Coordinator	% completed
T1.1	EGTN Modelling & simulation capability	ITA	D1.1 (30 July 2021)					
T1.2	TEN-T focused modelling and simulation	PAN	D1.4 (31 August 2021)					
T1.3	Legislation and EU policy to impact EGTN	UIRR	D1.6 (31 August 2021)					
T1.4	Simulation-based analysis of T&L and ICT innovations	EUR	D1.8 (31 August 2021)					
T1.5	EGTN Reference Specification	CERTH						

Annex II: Meeting Minutes template







Annex III: Preliminary Advisory Board members

What follows is the initial list of approved PLANET advisory board members. This list is expected to be updated as the project activities progress.

#	Organisation	Contact person
1	Texas A&M Engineering Experiment Station and Transportation Institute	Mario Monsreal
2	Strome College of Business – IT and Maritime Institute	Ling Li
3	Panasonic	Oliver Dieter
4	MIT Center for Transportation & Logistics	Yossi Sheffi
5	LOGYCA / INVESTIGACIÓN	César Becerra and Hugo Herrera
6	Malaysia Institute for Supply Chain Innovation	David Gonsalvez and Shardul Phadnis
7	Ningbo Supply Chain Innovation Institute China	Jay Guo
8	Ederlog	Michael Roggenkamp
9	-	Arpad Bodor
10	Gemini Corporation	Lembrechts Marc
11	KWS SAAT SE	Andreas Romert
12	InterRail Europe	Hendrik Wehlen
13	UTLC ERA (United Transport and Logistics Company)	Kuznetsova
14	Samsung SDS Global SCL Netherlands	Robert van der Waal
15	GS1 Global	Jaco Voorspuij
16	Electrolux Appliances	Nicolas Leffie
17	CSP Iberian Valencia Terminal, S.A.U. (CSPV)	Ignacio Huet Grondona
18	Texas A&M	Eleutherios lakovou
19	Duisport	Beata Sanigorska
20	CSP Iberian Zaragoza Rail Terminal, S.L.(CSPZ)	Felipe Mendaña and Carolina Gay
21	Regional Customs and Excise Duties Office of Valencia	Mercedes Cano
22	Kühne Logistics University	Rod Franklin
23		Montserrat Guardia & Juan Luis Gozalo

Annex IV: Research Ethics Form

PLANET RESEARCH ETHICS FORM

Please consider the issues highlighted below and note any decisions made.

- 1. Information given to participants
- 2. Participant's right of withdrawal
- 3. Informed Consent
- 4. Complaints procedure
- 5. Safety and well-being of participants/researchers
- 6. Anonymity/confidentiality
- 7. Data collection
- 8. Data analysis
- 9. Data storage
- 10. Data protection
- 11. Feedback

Annex V: Ethics Approval Sheet

1(Name of peer reviewer)	have	reviewed	the	above	deliverable/task	ın	discussion	with
(Name of author) and in or	ır view:							
☐ Approval is given for the deliverable/tas	k to prod	ceed as doc	ume	nted				
☐ The deliverable/task requires further co	nsiderat	ion of ethic	s issu	ies				
Signature(s):								
Data								
Date:								