

HANDBOOK

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Abstract	This report provides guidance to the project consortium of the SPATIAL project in relation to various management aspects of the project. It is intended that this report will act as a handbook that can be consulted by the consortium partners throughout the project. Guidance is provided in relation to the organizational structure of the project, communication between project partners and dissemination activities, quality management, responsibilities, procedures, and project risk management. The
	SPATIAL project handbook is a living document which is created at the early phase of



	the project and will be updated regularly throughout the life cycle of the whole project, until the end of the project.
Keywords	Project Management; Procedures; Communication; Organizational Structure;

Document Revision History

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Nature of	Nature of the deliverable:			
Dissemination Level				
PU	Public, fully open, e.g., web		1	
CL	Classified, information as referred to in Commission Decision 2001/844/EC			
со	Confidential to SPATIAL project and Commission Services			

^{*} R: Document, report (excluding the periodic and final reports)

DEM: Demonstrator, pilot, prototype, plan designs

DEC: Websites, patents filing, press & media actions, videos, etc.

OTHER: Software, technical diagram, etc





EXECUTIVE SUMMARY

Purpose of this Document

This Project Management Plan has mainly two functions. Firstly, it is a reference source for all consortium members covering many day-to-day activities. Secondly, it intends to standardise various elements of the Project, e.g., Project reports, deliverables, etc. through the use of agreed procedures and templates where and when relevant.

It will be a dynamic document and will be updated as required throughout the Project.

Precedence

The general principles for the project execution are defined in the EU Grant Agreement (EU GA), the Description of the Action (DoA) and the Consortium Agreement (CA). The Project Management Plan does not replace any of these established agreements, nor does it replace any of the EU guidelines for Project implementation and documentation.

Where there are any inconsistencies between these documents, the following order of precedence should be applied:

- EU Grant Agreement, including Description of the Action, also referred to as the Grant Agreement (EU GA) Annex 1;
- Consortium Agreement (CA);
- Project Management Plan (present document).





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ABBREVIATIONS

SPATIAL Security and Privacy Accountable Technology Innovations, Algorithms, and

machine Learning

IPR Intellectual Property Rights

PC Project Coordinator

EM Exploitation Manager

STM Scientific & Technical Manager

DSM Data Security Manager

AB Advisory Board

EC European Commission

GA General Assembly
WP Work Package

OLAF The European Anti-Fraud Office

EMDESK EMDESK is a single, flexible project and work management platform that unifies

planning, controlling, execution, and collaboration in project web-based

collaborative platform for project and files management

F-SIGN Financial Signatory (nominated by the LEAR)

LEAR Legal Entity Appointed Representative





1 GENERAL PROJECT INFORMATION

1.1 INTRODUCTION TO THE SPATIAL PROJECT

Black box AI refers to AI systems that receive input and produce output without the end-user understanding. As inputs and outputs cannot be easily seen or understood, it can lead to issues within and across organisations. The EU-funded SPATIAL project will address the challenges of black box AI and data management in cybersecurity. To do this, it will design and develop resilient accountable metrics, privacy-preserving methods, verification tools and system framework to pave the way for trustworthy AI in security solutions. In addition to this, the project aims to help generate appropriate skills and education for trustworthy AI in cybersecurity on both societal and technical aspects.

1.2 PROJECT ORGANIZATION

The SPATIAL Project has a clear organizational structure to ensure that the project objectives are met and that all tasks and associated reports are successfully completed. The project activities are divided into Work Packages (WPs) and are further subdivided into Tasks. All WP leading organizations have a designated representative who is responsible for that WP. An Advisory Board will also be established within the project to provide guidance to the project. In addition, the project has a Management Committee that will regularly meet to discuss and resolve pertinent issues related to the project. An overview of the organizational structure is provided in Figure 1.

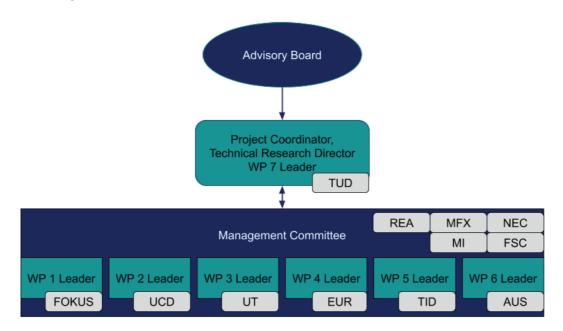


FIGURE 1: SPATIAL ORGANISATIONAL STRUCTURE





An accession to the Consortium Agreement has been signed by each of the SPATIAL consortium partners. This agreement between the Project Coordinator (TU Delft) and each of the consortium partners sets out the rights and responsibilities for all parties in relation to financial provisions and project results, including access rights and non-disclosure of information. In addition, a Grant Agreement has been signed between the European Commission and Project Coordinator (TU Delft), which outlines the obligations and conditions of the agreement.

1.2.1 Consortium partners

The list of consortium partners for the SPATIAL project is provided in Table 1. In accordance with the SPATIAL Grant Agreement, section 41.2.a, the consortium partners are obliged to:

- Keep information stored in the Participant Portal Beneficiary Register up to date.
- Immediately inform the coordinator of any events or circumstances likely to affect significantly or delay the implementation of the project or specific tasks.
- Submit a) financial statements and b) technical reporting data to the Project Coordinator in due time (i.e. within the timeline set by the Coordinator).

No.	Participant organisation name	Acronym	Country
1	Delft University of Technology	TUD	Netherlands
2	F-Secure	FSC	Finland
3	Montimage	MI	France
4	Mainflux	MFX	Serbia
5	Telefónica I+D	TID	Spain
6	Fraunhofer Institute for Open Communication Systems	FOKUS	Germany
7	University College Dublin	UCD	Ireland
8	University of Tartu	Tartu/UT	Estonia
9	NEC Europe Laboratories	NEC	Germany
10	Erasmus University Rotterdam	EUR	Netherlands
11	AUSTRALO	AUS	Spain
12	Reaktor	REA	Finland

TABLE 1: SPATIAL CONSORTIUM PARTNERS

1.2.2 Management Committee

The Management Committee is the ultimate decision-making body of the consortium, which includes representatives from all project partners. The Management Committee's primary responsibility is to monitor and ensure compliance of the activities in SPATIAL with the





contractual obligations as laid down in the Grant Agreement and the Consortium Agreement and that would necessitate consultations with the European Commission. As such it is the appropriate body for taking decisions that (potentially) affect the grant Agreement and/or Consortium Agreement. The Management Committee will have regular meetings over the duration of the project, including virtual consortium meetings. In the event a consensus cannot be reached the Management Committee will decide on the basis of a simple majority provided that at least 50% of its members are present. The procedures involved with Management Committee decision making will be detailed in the Consortium

1.2.3 Project Coordinator and technical research director

The project coordinator is formal coordinator of the SPATIAL project and carries the responsibility for project management. The coordinator is the primary liaison between the consortium partners and the European Commission. The coordinator is also the central communication point for the Advisory Board. The project coordinator role will be fulfilled by Dr. Aaron Ding of Delft University of Technology (TUD). Aaron has significant experience within EU funded research projects and will be fully supported by Prof.dr. Catholijn Jonker and Prof.dr. Marijn Janssen of Delft University of Technology. In addition, focusing on the technical developments for the research project, Dr. Aaron Ding will further act as the technical research director for the SPATIAL project.

1.2.4 Exploitation Manager

In addition, to the Project Coordinator and Technical research director, the SPATIAL project has appointed an Exploitation Manager (EM) to oversee all the communication and social media activities. Miguel García from project partner AUS will take this role for the SPATIAL project. Moreover, the Exploitation Manager support the entire consortium in the elaboration and implementation of the exploitation strategy, seconded by Jose Gonzalez as deputy in charge of the exploitation. The Exploitation Manager also plays a crucial role on gathering the Community of practice and moderates the Advisory Board.

1.2.5 Data Security Manager

Considering all the implication of working with data collected from different sources using a variety of means, the SPATIAL Project has appointed a Data Security Manager (DSM) responsible for IPR protection, data security and privacy. Dr. Jason Pridmore from the project partner EUR will take this role for the SPATIAL project.

1.2.6 Work Package Leaders

The work package leaders are responsible for the implementation and coordination of the work packages and tasks, primarily the timely completion of the associated deliverables. Work package leadership includes the following responsibilities:

Planning and organising the activities of the work plan as outlined for each WP;





- Monitoring the completion of deliverables and milestones associated to their WP, within budget and allocated time frame;
- Progress reporting to the project coordinator and research director, timely submission
 of deliverable reports according to the templates incorporated in the Quality Assurance
 Plan:
- Interacting with consortium partners, including proactive information exchange among WPs:
- Solving issues in case of difference of opinions within a WP or between WPs. If needed, WP leaders should involve the project coordinator.

TABLE 2: WORK PACKAGE LEADERS

Work Package	Work Package Leader	Lead Person
WP 1	Fraunhofer FOKUS	Nikolay Tcholtchev
WP 2	University College Dublin	Shen Wang
WP 3	University of Tartu	Huber Flores
WP 4	Erasmus University Rotterdam	Jason Pridmore
WP 5	Telefonica I+D	Nicolas Kourtelis
WP 6	Australo	Miguel García
WP 7	TU Delft	Aaron Ding

1.2.7 Crisis Communications Point of Contact

To be able to deal with possible uncomfortable questions about the SPATIAL project we have designated a specific Crisis Communications Point of Contact (POC) by the name of João Gonçalves of the consortium partner EUR. The project coordinator will regularly remind all consortium partners who the POC is because partners and personnel might leave the project). To create speed of reaction the SPATIAL project chooses a rather simple and straightforward structure for their crisis communications agreeing that all press/third-party inquiries go first to the crisis communications POC. To anticipate disadvantageous campaigns (by journalists or civil groups) a concise, but balanced, statement has been pre-defined (see: 1.5.3) to ensure that any project personnel can, if needed, refer to when dealing with critics¹.

1.2.8 Advisory Board

The overall project will be guided by a group of high-profile experts from different stakeholder categories throughout the lifetime of SPATIAL. Members of the consortium will help in selecting members for the advisory board in order to both ensure representation of discipline

¹ see: AVOIDING BAD PUBLICITY FOR YOUR PROJECT





and crucial geographic or cultural contexts of interest to the project. The expectations of the advisory board members:

- Advise the project coordinator and research director regarding the design and development of project deliverables research activities;
- Monitor the social and ethical aspects of the SPATIAL project and project generated data:
- Assess whether the SPATIAL project consortium is able to control its own progress and implementation of project tasks and deliverables, detect inconsistencies, and provide solutions to hard-to-solve situations;
- Participate in and contribute to meetings, conferences and other activities that facilitate dissemination and exploitation of SPATIAL in the future.

1.2.9 Conflict resolution (see also section 1.3.4)

Conflict resolution will be carried out from lower to higher project levels (from task to WP level and from WP to the GA), where respective project leaders will act as mediators. In the case of difficulties in solving a conflict, a voting procedure will be launched. In this case all decisions will be taken by the majority. The voting procedure and minimal number of partners required to make legal decisions is indicated in the Consortium Agreement.

1.3 PROJECT INTERNAL COMMUNICATION & DEVELOPMENT STRUCTURE

A strongly-integrated project like SPATIAL requires effective communication between the collaborating participants. Standard communication techniques including email, phone and teleconferences will be used for regular communication throughout the project. Face-to-face meetings, if the COVID-19 regulations allow, will be reserved for more in-depth project discussions and general meetings of the project consortium to minimize travel costs.

Based on the description of the work packages, the SPATIAL project has set out a specific timetable for the development of the project. In order to ensure the smooth development of the projects results, certain key milestones have been identified during the project lifetime. These are outlined in Section 1.4. The project coordinator will direct and monitor the processes and progress of SPATIAL in cooperation with the management committee. To guarantee the success of the project, the Coordinator will confer regularly with Task Leaders and on specific occasions with the Advisory Board. While Task Leaders and Work Package Leaders are responsible for the timely completion of the work they lead, it is the Project Coordinator who carries the final responsibility to the European Commission. The GANTT chart shown in Section 1.4 and provided in real-time through the EMDESK system gives all consortium members an indication of the time allocated for each task and when deliverables are due. Some of the deliverables lead to key moments, or milestones, in the project.

1.3.1 Project Meetings





TABLE 3:LIST OF MEETINGS

No	Month	WPs involved	Meeting	Partners involved	Location
1	1	7	Kick-Off meeting	All consortium partners	Delft, NL
2	9	2, 3	Analysis and framing workshop*	All consortium partners, Advisory Board	Berlin, DE
3	17	3, 4, 5	Pre-deployment workshop	All consortium partners	Barcelona, ES
4	25	4, 5	Specifications, methodology and tools*	All consortium partners, Advisory Board	Dublin, IE
5	31	5, 6	Internal demonstrations and education module development	All consortium partners	Tartu, EE
6	36	6, 7	Final Conference*	All consortium partners, Advisory Board	TBD**

^{*} The Advisory board will be present at these meetings ** We have left this open for purposes of flexibility. We aim to do this in cooperation with a large-scale technology conference.

1.3.2 Data Sharing

For sharing research data, both Zenodo and SURFDRIVE may be used. Given the international reach of Zenodo, we will prefer that repository for public dissemination. Should the SURFDrive platform be needed for internal data sharing (cross partners) it is readily available so that the research results of all consortium members can be stored and accessed online. Data that can be stored on SURFDrive are:

- research data, that is evaluations and/or data required for the verification and reproduction of research results such as consolidated raw data, scripts, time records, calculations, etc;
- publications with academic content such as journal articles (including pre- and postprints), monographs, excerpts from monographs, public lectures, research reports, studies, series, collected editions, electronic journals and conference proceedings;
- publications that must be made public in connection with examination regulations (doctoral theses and post-doctoral theses);
- final theses of researchers related to the SPATIAL project (PhD degree, Magister's, Master's or state examination theses).
- Publicly available deliverables.





If agreed with the demonstration project owners, Data generated for demonstration projects should be solely stored and managed on the SPATIAL platform. Depending on their preferences, other storage solutions might be proposed and used. The SPATIAL platform will be the central deliverable of the entire project. By managing all demonstrations' project data consistently and completely through the platform, we can ensure the targeted development of a well working platform that can truly assist design, construction, and operation toward achieving improvements in health, safety, and productivity.

Before sharing data publicly in any repository, the general legal, ethical, and non-disclosure issues should be considered and transparently discussed with the consortium members. In any case, the relevant sections in the grant agreement and the consortium agreement need to be followed to safeguard breaches of confidential data. All data management procedures and regulations for the project will be detailed in Deliverable 7.2 Research Data Management Plan.

The SPATIAL internal document repository is available via EMDESK https://spatial.emdesk.com/#!/documents/all/

The SPATIAL Open Access repository is available at this link.

The publication of papers, articles, scientific publications, blog entries, etc in the context of the project will be coordinated by WP6 leader, AUSTRALO, as defined in the Internal Guidelines for Communication and Dissemination, made available already via EMDESK.

1.3.3 Internal Communication Platforms for Progress monitoring and reporting

The management tools will be based on a number of management platforms. The main channel for internal communication is the mailing lists and the EMDESKplatform https://spatial.emdesk.com for which the coordinator will grant access upon request. For group communications partners should use the mailing lists specified in table 4. As a convention the sender, using her/his own email client, To: (any of the group email addresses from table 4) with a subject string: "[SPATIAL_Group name] subject of the email". Change request with respect to the mailing list subscriptions should be addressed to the project coordinator.





TABLE 4: SPATIAL MAILING LISTS²

Group name	Member count	Group Email Address
ALL SPATIAL mailing list	43	SPATIAL ALL@groups.emdesk.com
WP LEADERS SPATIAL mailing list	9	SPATIAL WP LEADERS@groups.emdesk.com
WP1 SPATIAL mailing list	36	SPATIAL WP1@groups.emdesk.com
WP2 SPATIAL mailing list	29	SPATIAL WP2@groups.emdesk.com
WP3 SPATIAL mailing list	31	SPATIAL WP3@groups.emdesk.com
WP4 SPATIAL mailing list	27	SPATIAL_WP4@groups.emdesk.com
WP5 SPATIAL mailing list	23	SPATIAL_WP5@groups.emdesk.com
WP6 SPATIAL mailing list	34	SPATIAL WP6@groups.emdesk.com
ALL SPATIAL mailing list	43	SPATIAL ALL@groups.emdesk.com

To ensure smooth communication, all partners reduce the use of e-mails to a minimum. Instead of emails, all the task/deliverable related communication should be moved to the EMDESK platform (https://spatial.emdesk.com) that also provides functionality for online collaborations. Access to the platform can be requested by consortium partners form the coordinator TUD. Next to EMDESK the project will use the SURFDrive platform (https://www.surf.nl). Finally, project partners should organize face-to-face online video conferences using platforms such as EMDESK (integrated), Teams, Zoom or others to discuss important issues and to creatively move the project forward. Work Package leaders decide amongst their teams if an additional online collaboration using Microsoft and/or Google applications is acceptable with respect to their data privacy and/or security policies.

² HTTPS://SPATIAL.EMDESK.COM/#!/GROUPS





Further details of the management procedures will be provided in the Consortium Agreement and the Quality Assurance Plan. The essentials of these procedures are as follows: In line with the responsibility of the project coordinator and the research director to monitor compliance by the consortium partners, WP leaders will report to the project coordinator and research director to assess their own progress in their WP. Consortium virtual meetings will be held on a monthly basis to ensure ongoing progress on each deliverable. Minutes of these meetings will include a 'traffic light indicator' to demonstrate progress on the various research tasks. The minutes will display one of three 'traffic light' options for each milestone and deliverable discussed during the virtual meeting or in person project event:





'Red' means 'immediate action is required to address this issue'; 'Yellow' means 'further attention is required in this matter'; 'Green' means 'everything is still on schedule'.

This straightforward system has also been implemented into the EMDESK system so it will allow the project coordinator/technical research director as well as all team members to efficiently assess where additional management effort is required. As the screen shots illustrate this also facilitates efficient communication of the overall status of the project and builds up a paper trail of progress which can also be used to report the development of the project to the European Commission.

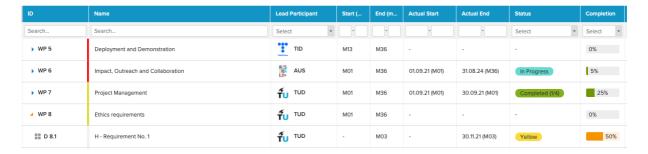


FIGURE 2 ABC: SPATIAL STATUS REPORTING IMPLEMENTATION IN EMDESK DASHBOARDS

1.3.4 Decision process and conflict resolution

In order to contain complexity in decision-making and to stimulate efficiency, SPATIAL will follow the principle that decisions will be made at the lowest possible level. For instance, decisions that concern one work package will be taken on a work package level under the supervision of the WP leader. Where possible, WP leaders will solve issues affecting other WPs on a lateral level whereby WP leaders are in direct contact. The coordinator will strive for consensus in its decision-making. The procedures involved with project management decision-making will be detailed in the Consortium Agreement (e.g., voting procedures, distribution of meeting agendas and minutes, voting quorum, proxies). As the project has a reasonable number





of partners, all of whom have worked actively on previous research projects, the likelihood for significant conflicts after the consortium agreement is signed remains low.

1.4 REPORTING AND QUALITY MANAGEMENT

1.4.1 Deliverables

The SPATIAL project results will be provided in the form of 36 deliverables (Table 5) that must be submitted through the EC's system for grant management. To ensure that all deliverables will be submitted in high quality, the SPATIAL project will follow a carefully designed quality assurance process that is described deliverable D7.4 – Quality Assurance Plan.

TABLE 5: SPATIAL PROJECT DELIVERABLES (R: DOCUMENT, REPORT; DEM: DEMONSTRATOR, PILOT, PROTOTYPE, PLAN DESIGNS; DEC: WEBSITES, PATENTS FILING, PRESS & MEDIA ACTIONS, VIDEOS, ETC.; OTHER: SOFTWARE, TECHNICAL DIAGRAM, ETC.; ORDP: OPEN RESEARCH DATA PILOT

Del. No.	Title	WP	Lead Partner	T y p e	Diss. Level	Due Date
D1.1	Requirements Analysis for AI towards Addressing Security Risks and Threats to System and Network Architectures	1	FOKUS	R	PU	30 Apr 2022
D1.2	Security Threats modelling for AI based System Architectures	1	FSC	R	PU	30 Nov 2022
D1.3	Final Requirements Analysis for AI towards Addressing Security Risks and Threats to System and Network Architectures	1	FOKUS	R	PU	31 Aug 2023
D1.4	Design Principles for Accountable and Resilient Al Architectures	1	UCD	R	PU	31 Dec 2023
D2.1	Existing AI Algorithms and their Accountability and Resilience Features within the Context of Applications to IoT, 5G, and Cybersecurity	2	FOCUS	R	PU	30 Jun 2022
D2.2	Robust Accountability Metrics for AI Algorithms	2	TID	R	PU	31 Dec 2022
D2.3	Process to Integrate Accountability and Resilience Features into AI Algorithms	2	UCD	R	PU	31 Aug 2023
D3.1	Detection mechanisms to identify data biases and exploratory studies about different data quality trade-offs for AI-based systems	3	Tartu	R	PU	28 Feb 2023
D3.2	An explanatory platform that accounts Al systems based on its quantified quality	3	TUD	R	PU	30 Jun 2023





D3.3	Automated diagnosis and mechanisms for tuning AI-based systems and Trusted Execution Environments for accountable and resilient AI	3	UCD	R	PU	30 Sep 2023
D3.4	Performance evaluation in controlled environments and guidelines to build the pilot studies in real testbeds	3	FOKUS	R	PU	31 Dec 2023
D4.1	Socio Technological analysis Framework	4	EUR	R	PU	31 Aug 2022
D4.2	Field research analysis report and integration action plan	4	EUR	R	PU	31 Aug 2023
D4.3	Education module full launch	4	REA	R	PU	31 Dec 2023
D4.4	Sociotechnical, regulatory and ethical implications and integration guidelines report	4	EUR	R	PU	30 Apr 2024
D5.1	Initial description of the use-cases, design, testbed, experimentation for all the pilots	5	TID	R	PU	28 Feb 2023
D5.2	Initial technology transfer and recommendations derived from each pilot	5	FOKUS	R	PU	31 Aug 2023
D5.3	Final description of the use-cases, experimentation and results for the pilots	5	FSC	R	СО	31 May 2024
D5.4	Final technology transfer and recommendations derived from each pilot	5	MI	R	PU	31 Aug 2024
D6.1	SPATIAL Impact Master Plan	6	AUS	R	PU	28 Feb 2022
D6.2	Dissemination & communication interim report	6	AUS	R	PU	28 Feb 2023
D6.3	Impact Assessment and Exploitation Interim Report	6	MFX	R	PU	28 Feb 2023
D6.4	Dissemination and Communication Final Report	6	AUS	R	PU	31 Aug 2024
D6.5	Impact Assessment and Exploitation Final Report	6	MFX	R	PU	31 Aug 2024
D7.1	Kick-off Meeting Report	7	TUD	R	PU	31 Oct 2021
D7.2	Research Data Management Plan	7	TUD	R	PU	30 Nov 2021
D7.3	Project Management Plan	7	TUD	R	PU	30 Nov 2021





D7.4	Quality Assurance Plan	7	TUD	R	PU	28 Feb 2022
D7.5	Collated internal advice on SPATIAL project	7	TUD	R	PU	31 Aug 2024
D8.1	H - Requirement No. 1	8	TUD	Et h.	СО	30 Nov 2021
D8.2	H - Requirement No. 2	8	TUD	Et h.	СО	31 May 2022
D8.3	POPD - Requirement No. 3	8	TUD	Et h.	СО	28 Feb 2022
D8.4	NEC - Requirement No. 4	8	TUD	Et h.	СО	28 Feb 2022
D8.5	GEN - Requirement No. 5	8	TUD	Et h.	СО	30 Sep 2021
D8.6	GEN - Requirement No. 6	8	TUD	Et h.	СО	31 Mar 2022

1.4.2 Review Procedure for Deliverables

To monitor the technical quality of all deliverables and to ensure their timely delivery, an internal review procedure has been devised by the SPATIAL technical research director. The procedure is included and presented in detail in deliverable D7.4 – Quality Assurance Plan.

1.4.3 Milestones

The project milestones (Table 6) are carefully planned to enable the consortium and the European Commission to monitor the progress of the project along the most important path. The responsible partners for each of the milestones are clearly defined and all milestones should be completed at the due date. In case, a delay is expected for a delivery, the project coordinator needs to be informed immediately so that remediation activities can be started.

TABLE 6: SPATIAL PROJECT MILESTONES

Milestone	Name	WP	Due Date	Verification
MS 1	Kick-off meeting	1	M01	Verification: D7.1.
MS 2	Project Website	6	M02	Verification: Website live D6.1 https://spatial-h2020.eu/
MS 3	Completion of analysis framework	4	M12	Verification: D4.1
MS 4	First iteration of Requirements, Risks and potential Threats for AI based System Architectures	1	M12	Verification: D1.1





MS 5	Proposed metrics are accountable and resilient	2	M16	Verification: D2.2
MS 6	Final iteration of Requirements, Risks and potential Threats for AI based System Architectures	1	M24	Verification: D1.3
MS 7	Proposed process enables resilience and accountability features of existing AI systems	2	M24	Verification: D2.3
MS 8	Soft launch of education module	4	M24	Verification: D4.3
MS 9	Recommendations and tech transfer from Pilots provided	5	M24	Verification: D5.2
MS 10	Explanatory platform can be used to explain basic functionalities of Albased applications	3	M25	Verification: D3.3
MS 11	Final release of algorithmic metrics and methods	3	M28	Verification: D3.4
MS 12	Use cases Demonstrations Completed	5	M33	Verification: D5.3
MS 13	Final conference	7	M36	Verification: D7.5

1.4.4 Periodic and Final Reporting

In addition to the deliverables identified in section 1.4.1, the coordinator will submit technical and financial reports to the Commission, including requests for payment specifically:

- RP1: periodic report (both technical and financial), including requests for (interim) payment
- RP2: final report at the end of the project ('action') followed by the balance payment after project completion

The technical review covers issues related to the project implementation (e.g. work packages, deliverables, milestones, etc.), information related to the economic and social impact of the project, explanations of the work carried out by all beneficiaries and linked third parties during the reporting period and an overview of the progress towards the project objectives. The financial report consists of structured forms from the grant management system of the Commission, including financial statements and use of resources.





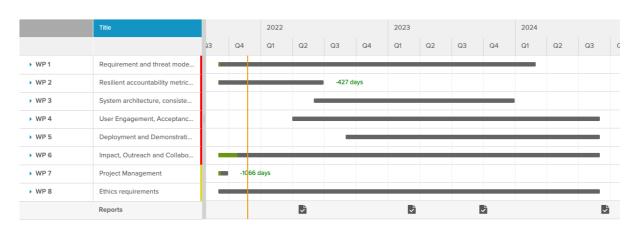


FIGURE 3: SPATIAL REPORTING PERIODS

RP1

Technical Review

RP

Interim Report

1.4.4.1 Reporting Responsibilities

The coordinator is responsible for the final submission of the technical periodic reports. Additionally, each partner is obliged to submit the following parts for the financial periodic reporting via the EMDESK portal:

- 1. Individual financial statement (EU Grant Agreement: Annex 4), for the reporting period concerned. This financial statement must detail the eligible costs for each budget category. Each partner must declare all eligible costs, even if costs exceed the amounts indicated in the estimated budget.
- 2. If necessary, an explanation of the use of resources and information on subcontracting and in-kind contributions provided by third parties from each partner for the reporting period concerned;

On this basis, a periodic summary financial statement will be automatically generated including the request for interim payment.

Note: Without all of the individual statements, it is not possible to submit neither the financial nor the technical report and request the correct interim payment. It is therefore important for all partners to keep track of the reporting timeline ('practice round' in Q2 2022).

1.4.4.2 Reporting Timelines

The reporting periods for both technical review and financial reporting are the following (see also Figure 3):

RP1 = from month 1 to month 18 01/09/2021 - 28/02/2023
 TR = from month 1 to month 25 01/09/2021 - 30/09/2023
 RP2 = from month 19 to month 36 01/03/2023 - 30/08/2024





- Within 30 to 45 days after each period, partners should submit their individual financial statement for a plausibility check to the coordinator. The coordinator will inform the partners on the exact deadline at the end of each period.
- 60 days after each period, the coordinator must submit the reports to the European Commission.
- Within 90 days from receiving the periodic report, the European Commission will pay
 to the coordinator the amount due as interim payment (except if there is the need to
 adjust the reports).
- On any problem regarding financial issues, partners should communicate this to the coordinator as soon as possible.

Please see Art. 20 & 21 of the Grant Agreement for further information.

1.4.4.3 Cost statements for Periodic Reporting

In the Periodic and Final Reporting, the actual costs must be reported and not the budgeted ones. The F-Sign of each partner will be able to complete online their own Financial Statement including the explanations on the use of resources, (also for their third parties). The coordinator will have a final check on the statements and submit it electronically to the European Commission.

- 1. Start at the Electronic System Funding & Tenders Portal, former Participant Portal https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home
- 2. On the site "My projects", click on "Actions" and in the dropdown menu "Manage Project".
- 3. On the site "Manage Project" Periodic Reporting, click on "Financial Part".
 - On the site "Financial Statement", fill in amounts for personnel costs and other direct cost for period.
 - For "personnel costs" click on "Actions" and the "R" button (use of resources). Please complete the personnel costs, and link person months to the respective work packages. Click on "Add Detail" for each WP and fill in person months with WP reference
- 4. Other direct costs: enter the total of all other expenses. The portal then gives the amount (above the 15%-personnel costs threshold) that you will need to explain in more detail.

For further guidance, please see the Horizon 2020 Online Manual.

1.4.4.4 Time recording

For personnel costs (declared as actual costs or based on unit costs), the beneficiaries must keep time records for the number of hours declared. The time records must be in writing and approved by the persons working on the action and their supervisors, at least monthly. As an





exception, for persons working exclusively on the action, there is no need to keep time records, if the beneficiary signs a declaration confirming that the persons concerned have worked exclusively on the action. If working on several projects, all hours of the person must be recorded, but for each project separately. During auditing, compliance with annual and sick leaves, conference attendance and work-related travel dates will be checked.

Minimum requirements of the time records are the following:

- the title and number of the project, as specified in the EU Grant Agreement;
- the partners full name, as specified in the EU Grant Agreement;
- the full name, date and signature of the person working for the project;
- the number of hours worked for the action in the period covered by the time record; for reasons of assurance and legal certainly it is highly recommended that the number of hours is detailed per day (hours worked for the action in each day);
- the supervisor's full name and signature;
- a reference to the work package described in the Description of Action (EU Grant Agreement: Annex 1), to easily verify that the work carried out matches the work assigned and the person-months reported to the action.

Please also see Art. 18 of the Annotated Model Grant Agreement for further information.

1.4.4.5 Certificate on Cost Statement and Audits

In case of a total contribution of EUR 325 000 or more including the indirect costs, the final financial report must contain a Certificate on the Financial Statements (CFS first level audit).

Additionally, each partner has to keep the financial records of the expenses in this project, for a minimum of 5 years after the final payment has been received (second-level audit). The partners must keep the records and documentation according to their usual cost accounting practices and internal control procedures. There must be a track between the amounts declared, the amounts recorded in accounts and the amounts stated in the supporting documentation. Checks, audits or investigations may occur conducted by the European Commission, European Anti-Fraud Office (OLAF) or the European Court of Auditors (third-level audit). Please see Annex 4 Model for the financial statements of the GA.

1.4.4.6 Finance

The relevant information for all financial rules and procedures of the SPATIAL project can be found in the signed Grant Agreement 101021808 and Consortium Agreement in final version dated 2021-04-19 available: https://spatial.emdesk.com/#!/documents/all/Agreements

Supporting document for these agreements is the Annotated Model Grant Agreement provided by the European Commission. Note: please always use the URL and do not use a downloaded version as it is continuously updated.





http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf

All guidance relevant for the reporting via the Funders and Tenders Portal can be found in the Online Manual Horizon 2020, URL:

https://webgate.ec.europa.eu/funding-tenders-opportunities/display/OM/Online+Manual

1.4.5 Projects Review

Internal project status reviews will be organized in line with the planned project meetings (see 1.3.3), to oversee status of the project resources versus performed and planned work. All partners will be obliged to report this to the PC, justifying the differences between work expected and work actually performed, if any.

1.4.6 Amendments

If the case, this section will include in the future any amendments made to the grant agreement.

1.5 COMMUNICATION AND DISSEMINATION

The quality management of dissemination and training materials is of a high importance for the impact of the project and the protection of the intellectual property rights of all project partners. The general procedure adopted by SPATIAL for rolling out dissemination material is described in the Deliverable D6.1 SPATIAL Impact Master Plan and through the **Communication and Dissemination guidelines** produced by AUS as part of WP 6. From that document participants have access to all the resources they need in terms of templates, presentations, shared excel files for monitoring the dissemination activities, etc. Here is the link: https://spatial.emdesk.com/#!/documents/direct/d15005 and main elements will be reported below. For the internal communications protocol the reader is directed to section 1.3.3.

Dissemination material that is strictly bound to IPR must be coordinated and confirmed in cooperation with the Project Coordinator, the Technical Research Director, the Exploitation Manager and the Data Security Manager and strictly adhere to the relevant provisions within the grant and the consortium agreement.

To allow all partners to safeguard their interests, prior notice of any planned publication shall be given to the other Parties at least 45 calendar days. To this end, the description or draft must be circulated within the consortium by email or written notification. This will allow consortium members to file objections against the publication of documents. Any objections to the planned publication shall be made in accordance to the Grant Agreement in writing to the Project Coordinator and to the Party or Parties proposing the dissemination within 30 calendar days after the receipt of the notice. Published disseminations will be shared with the consortium in the "Dissemination" folder of the EMDESK repository.





POINTS OF CONTACT FOR EXTERNAL REQUESTS

SPATIAL has established a formal point of contacts for different type of requests from outside parties (Table 7). The entry point for the requests is the email address info@spatial-h2020.eu listed on the project website. Based on its type, the request will be redirected internally.

TABLE 7: SPATIAL POINTS OF CONTACT

Type of Request	Point of Contact
General Inquires about the project	Aaron Ding (TU Delft)
Requests with respect to scientific development	Aaron Ding (TU Delft)
Requests with respect to technical development	Aaron Ding (TU Delft)
Requests with respect to dissemination and communication	Miguel García (AUS)
Requests with respect to IPR, data security and privacy	Jason Pridmore (EUR)
Crisis communications Pont Of Contact (see: <u>1.2.7</u>)	João Fernando Ferreira Gonçalves (EUR)

1.5.1 Technical and Scientific Publications

The technical and scientific dissemination plan is available in the [PROJECT REPOSITORY]

All scientific journal publications about research results of SPATIAL will be Open Access (OA) (free of charge online access for any user) using both 'green' open access (self-archiving) and 'gold' open standard, in accordance with EU Reg. no. 1290/2013.

Additionally, all SPATIAL partners are encouraged to present results on scientific and industry conferences. Accompanying conference papers will be published within the conference proceedings and must follow the access restrictions chosen by the conference.

All partners are welcomed to identify and propose opportunities to publish technical outcomes (articles, workshops, congresses) and share them with the Project Coordinator. Once approved by the Project Coordinator, please, inform WP6 project manager Miguel García at miguel@australo.org.

1.5.2 Website and Social Media

The public website https://spatial-h2020.eu/ will act as a communication and dissemination channel for the project's results and for involving and enlarging the stakeholders' community. It will serve as the main interface towards organisations and people outside of SPATIAL project consortium interested in the work and achievements of the project. The project website:

• Gives a general overview of the project.





- Shares updates about the achievements, including news from solutions.
- Promotes the Community towards external stakeholders.

Each partner should actively contribute to populating the project website by sending periodic contributions to blanca@australo.org. An editorial calendar will be released in Nov 2021. Content can include:

- Presentation of partners and Pls.
- Participation in events, conferences, scientific publications, awards, etc.
- A brief recap of main scientific and technical achievements of the project.
- News related to a given WP/ Task.

The public SPATIAL website has been formally launched early November 2021. The content will be updated and extended regularly for the whole duration of the project. Parts of the public website and the available publications/downloads, as well as the information regarding the project, made available via the company websites of the consortium partners, will be used for local dissemination (in English and/or in the national languages). This website has WordPress as an integrated content management system (CMS). AUS is responsible for the timely and accurate publishing of new content. The partners will be given access to deliver input in the CMS, in order to get as much as possible relevant content for effective dissemination.

SOCIAL MEDIA

Twitter account: @SPATIAL_H2020

LinkedIn account: company/spatial-h2020

Twitter All partners are kindly invited to follow (via their company and/or personal accounts) the project's Twitter account. Tweets related to any SPATIAL activity (e.g. meetings, events, news) must refer to @SPATIAL_H2020. It is important to talk about the project in a concise, informal and positive way. Talk engagingly, and use hashtags where possible in:

- Clear and simple language
- Innovative and different
- Speak personally
- And don't be afraid to use humour to be entertaining.

The hashtags #AI #ArtificialIntelligence #MachineLearning #Cybersecurity should also be used.

LinkedIn All partners are kindly invited to follow the SPATIAL account to share and to comment on the posts published. In addition, if you find an interesting article or you publish something on LinkedIn related to the project, please, mention the project's LinkedIn page in your post.

1.5.3 Pre-defined statements; the project in a Nutshell





The following text is a short description of the SPATIAL objectives and actions. It can be used in different contexts: emails, presentations, social media posts, Crisis communications (1.2.7) etc.:

The SPATIAL (Security and Privacy Accountable Technology Innovations, Algorithms, and machine Learning) project seeks to address the challenges of black-box AI and data management in cybersecurity by designing and developing resilient accountable metrics, privacy-preserving methods, verification tools and system framework that will serve as critical building blocks to achieve trustworthy AI in security solutions.

The main objectives include: 1) To develop systematic verification and validation software/hardware mechanisms that ensure AI transparency and explainability in security solution development; 2) To develop system solutions, platforms, and standards that enhance resilience in the training and deployment of AI in decentralized, uncontrolled environments; 3) To define effective and practical adoption and adaptation guidelines to ensure streamlined implementation of trustworthy AI solutions; 4) To create an educational modules that provide technical skills, ethical and socio-legal awareness to current and future AI engineers/developers to ensure the accountable development of security solutions; 5) To develop a communication framework that enables accountable and transparent understanding of AI applications for users, software developers and security service providers.

Besides technical measures, SPATIAL project aims to facilitate generating appropriate skills and education for AI security to strike a balance among technological complexity, societal complexity and value conflicts in AI deployment.

The project covers data privacy, resilience engineering, and legal-ethical accountability that are in line with EU top agenda to achieve trustworthy AI. In addition, the work carried out in SPATIAL on both social and technical aspects will serve as a stepping stone to establish an appropriate governance and regulatory framework for AI-driven security in Europe.

For more information: www.spatial-h2020.eu

1.5.4 House Style and Templates

1.5.4.1 Logo and Corporate Design

The corporate design style of the SPATIAL project was produced and should be followed for all kinds of documents and presentations reporting project activities. The purpose of the corporate design style is to brand the project by establishing a visual identity that ensures quick recognition and conjures a positive image. To this end, the SPATIAL corporate design style provides a logo, colour, style and images. The SPATIAL logo contains the name of the project and an object.

1.5.4.2 Presenting and Documents Templates





NEWSLETTERS

In case your company/organisation/university is going to release a newsletter including information about SPATIAL, please inform the Communication Manager Miguel García (AUS) who can help you when it comes to present the project and its achievements.

Providing content for third parties newsletters is also recommended. Please, share with Blanca (blanca@australo.org) the third parties' newsletters which could be of interest for the project. If you are contributing to some newsletters, please inform the AUSTRALO team at least one month prior to publication.

If you need any graphic or textual input to be used in the newsletter, you are kindly invited to contact blanca@australo.org

PR MATERIAL

SPATIAL material, logos and templates are openly available on the **Zenodo Repository**

The PR material will be available as e-documents, printing will occur as required (e.g. for events, workshops, etc.). AUSTRALO is in charge of this activity.

All PR material whether in electronic or paper form (as well as videos) will use the specific project logo.

Mandatory in all PR material:

- SPATIAL Logo
- European Union emblem
- SPATIAL social media and website links
- Mention: "This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 101021808.

MERCHANDISING

For any merchandising material that you have to print or produce, please contact the AUSTRALO team explaining your needs for production via email to miguel@australo.org

SLIDE-DECK

A slide-deck presenting the project in a nutshell, its objectives, activities and partners can be found here.

This slide-deck can be used during your meetings/events while promoting the SPATIAL project. Please, use the pdf version when presenting.

PARTICIPATION IN EVENTS





A partner participating in an event with impact on SPATIAL should inform the Consortium and the communication team in advance (at least two weeks prior to the event, if possible) via the project mailing list in order to prepare a proper dissemination and communication campaign.

- 1. BEFORE THE EVENT
- Inform the communication team blanca@australo.org
- Report your participation in the SPATIAL table of events <u>here</u>
- Use <u>SPATIAL PPT template</u> if you are representing the project. If you are just mentioning the project in your presentation, you can use your company template but you must indicate that you are part of the SPATIAL and you must add the SPATIAL logo and the <u>EU Flag logo</u> with the acknowledgement "SPATIALhas received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 101021808.
- 2. DURING THE EVENT
- Tweet and mention @SPATIAL-H2020.
- In case you do not have a Twitter account, you should send the text you want to be published on Twitter and some pictures to blanca@australo.org. Please inform the Communication team about this need at least one week prior to the event
- 3. AFTER THE EVENT
- Prepare a blog post summarizing your participation in the event

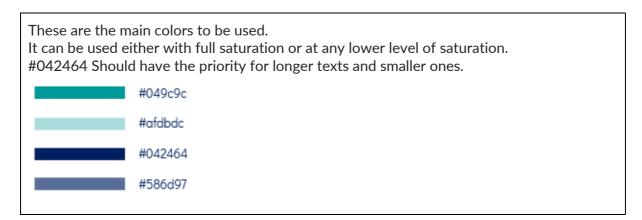
Send the blog post to <u>blanca@australo.org</u> who will take care of publishing it on the SPATIAL website.

BRANDING

The branding includes the fonts, colours, logos and banners that should be used in all project-related communication. Please find the Branding Guidelines <u>here</u>.

Colour palette

Use colours from the dedicated palette:







Logo

Please find the logo available here.

<u>USAGE OF THE LOGO</u> As part of the project, you can use the logo in your communication and dissemination activity and material. Please follow the branding guidelines about the usage of the logo <u>here</u>.

The logo of the SPATIAL must be visible in its entirety and placed on a background which does not compromise its integrity. The logo is unalterable and inseparable in all its component elements. Modifying the logo in any way is strictly prohibited. For reasons of integrity and visibility, it should always be surrounded by a clear space, or "protection area", which no other element (text, image, drawing, figure...) can infringe upon.

If partners want to add the logo to the website, please link the logo to the SPATIAL website.

BANNERS

Find the banners available here.



FIGURE 4: SPATIAL BANNER

EU LOGO, ACKNOWLEDGMENT & DISCLAIMER

Beneficiaries of EU funding shall use the European emblem in their communication to acknowledge the support received under EU programmes. Please find the acknowledgement according to the guidelines. You can adjust the text depending on what you are handing over or presenting.







SPATIAL has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 101021808.

For any document to hand over, please note that a disclaimer is needed, "The content of this document does not represent the opinion of the European Union, and the European Union is not responsible for any use that might be made of such content".

For further information, please follow the guidelines

(https://ec.europa.eu/info/sites/info/files/use-emblem_en.pdf) on the use of the EU emblem in the context of EU funding and apply the graphical rules

(http://publications.europa.eu/code/en/en-5000100.htm). The text can be displayed to the right, to the left, bottom or up, depending on your needs. There is a choice amongst several fonts to write the text.

1.6 RISK MANAGEMENT

During grant writing and the grant negotiation phase, 12 critical project risks have been identified. Each risk is related to a specific work package and work package leaders are required to carefully monitor the risks and inform the project coordinator in case some of these risks are about to materialize. In case of the identification of a risk item, the project coordinator will immediately organise a meeting with Management Committee to establish a risk mitigation strategy to avoid that the risk actually materialises. Additionally, in Deliverable 7.4 Quality Assurance Plan, a strategy for risk identification, analysis, monitoring and control is described that will be followed throughout the project.

TABLE 8: SPATIAL CRITICAL RISKS FOR IMPLEMENTATION

Description of risk	% level	WPs Invol	Proposed risk-mitigation measures
A partner leaves the consortium before the end of the project	Low	All	All partners are closely involved in the conception and development of the SPATIAL project. Each partner expressed their motivation and devotion to the success of the project. However, unforeseen circumstances may lead to a partner leaving the consortium. Should this be the case, the project management team will involve all WP leaders to discuss their options to take over the t asks or involve new partners.
A partner is unable to produce work on time	Low	All	Each consortium partner has experience in delivering work on time. Partners have been consulted in setting out the timeline for the SPATIAL project. However, should it become clear that timely contribution is at stake, early mitigation is essential. Option is to have





			another representative from the partner organisation take over the work or assist in completing the work. In extreme cases, it may be necessary to remove work from the partner organisation.
A partner unable to effect. work together with partners or stakeholders	Low	All	A partner is unable to effectively work together with other partners or stakeholders
A partner is unable to produce work up to standards of EC	Low	All	The risk for this task is likely to be low as most partners have experience in working on this type of project. However, a revision cycle is included in the project quality assurance plan in order to ensure high quality documents.
Deliverables are late or milestones are missed	Med	All	A timely delivery is essential, and all consortium partners are dedicated to the timeline. Consortium members are consulted and informed of the project timeline. Should the risk occur of a deadline to be missed, earlier mentioned strategies may apply. However, the management structure will help mitigate the risk of falling behind schedule.
The budget is exceeded	Low	All	To prevent the SPATIAL project to go over the allocated budgets, an extensive budget plan was established before the start of the project. Additionally, the risk is low due to the fact that only financially viable organisations are included in the project consortium. Still, budget excess should be reported so that WP leaders, or if needed the project management team, can respond accordingly and implement measures to restore the budget plan.
Diverging paths in development process are taken by consortium members	Med	All	Projects with international teams run the risk of diverging in their development paths. Risk is mitigated by holding regular face to face meetings as well as scheduled consortium conference calls and ad hoc contact via email or other communication methods.
Required technical components are not available or there are difficulties with implementation	Med	WP 2, 3, & 5	The risk of technical setbacks exists in projects where innovation and technological development are central tasks. However, this risk is mitigated by having included four research organisations and five corporatives that combine long-standing research expertise in the relevant domains of the SPATIAL project.
A data leak occurs	Med	All	In current times, data leaks are increasingly likely to occur, whether they are due to deliberate attacks or accidents. However, working with responsible and expert organisations, and an extensive data





			management plan that is in compliance with GDPR, this risk can be mitigated.
There is no uptake of the project outputs, such as the educational module	Med	All, but spec. WP6	It is possible that the target audiences do not adopt the several outputs of the SPATIAL project. This risk can be mediated by doing in-depth analysis and using this to optimise the fit with the needs of our target audiences. Investing in effective promotion and dissemination will further diminish this risk.
Privacy regulations affect negatively or even make it impossible to complete project objectives	Med	All	As part of technological developments, testing and implementation, data is used and processed to which privacy regulations may/will apply. This risk will be mitigated by keeping privacy as a core objective during the development and implementation of SPATIAL project deliverables.
COVID impact on project	High	All	We will plan all meetings by respecting regulations and travel restrictions. Telco conferencing will always be available to ensure communication in the SPATIAL consortium. We will also be closely monitoring the COVID situation across Europe and the corresponding warnings regarding risk and travel areas across the world when planning travel arrangements and deciding on particular conferences and meetings. No risks will be taken with regard to meetings and travelling which could lead to potential COVID related health complications,

1.7 CONCLUSIONS

This report has provided guidance to the consortium partners of the SPATIAL project in relation to key management processes that will be employed for the duration of the project. Consortium partners are encouraged to refer to this throughout the project to ensure effective management and the successfully delivery of all project outcomes.

The project handbook provides guidance in relation to the organisational structure of the project, including the consortium, the coordinator, the executive and advisory boards and engagement with the European Commission (EC). Key names and contact details are provided. In addition, the roles and responsibilities of the various parties are specified. Guidance in relation to communication processes to be employed throughout the project is also provided.

The handbook describes the reporting processes to be adopted in relation to periodic reports, deliverables and milestones. A quality management plan is specified to ensure that all project outputs are produced to the highest quality standard. Guidance is provided in relation to project dissemination activities. This handbook will be updated as necessary throughout the project.

2 APPENDIX 1: PROJECT GANTT CHART





