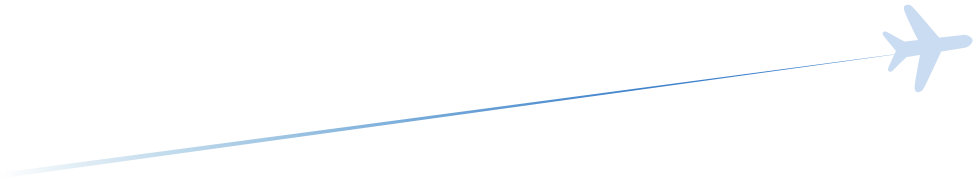


Project Management Plan

DART	
Grant:	**699299**
Call:	**ER-2-2015**
Topic:	**Data Science in ATM**
Consortium coordinator:	**University of Piraeus Research Center**
Edition date:	**19 September 2016**
Edition:	**[02.05.00]**

Founding Members
EUROPEAN UNION
EUROCONTROL
SESAR
JOINT UNDERTAKING

Authoring & Approval

Authors of the document

Name/Beneficiary	Position/Title	Date
George Vouros / UPRC	Project Coordinator / Professor	21/09/2016

Reviewers internal to the project

Name/Beneficiary	Position/Title	Date
Georg Fuchs/Fraunhofer	Fraunhofer Group Leader	21/09/2016
David Scarlatti/BR&T-E	BR&T-E representative, Dissemination and Exploitation Manager	21/09/2016
Jose Manuel Cordero/CRIDA	Project Member	21/09/2016

Approved for submission to the SJU By — Representatives of beneficiaries involved in the project

Name/Beneficiary	Position/Title	Date
George Vouros/UPRC	Project Coordinator	21/09/2016
David Scarlatti/BR&T-E	Project Member	21/09/2016
George Fuchs/FRHF	Project Member	21/09/2016
Jose Manuel Cordero/CRIDA	Project Member	21/09/2016

Rejected By - Representatives of beneficiaries involved in the project

Name/Beneficiary	Position/Title	Date

Document History

Edition	Date	Status	Author	Justification
00.05.00	04/07/2016	First Draft	George Vouros	
00.09.00	11/07/2016	Complete Draft	George Vouros	Also reviewed by partners
01.00.00	18/07/2016	Final	George Vouros	
01.08.00	18/08/2016	Major Revision	George Vouros	Addresses comments received from SJU
02.00.00	25/08/2016	Final	George Vouros	
02.05.00	19/09/2016	Minor revisions	George Vouros	Addresses 2nd round assessment comments received from SJU

DART

DATA DRIVEN AIRCRAFT TRAJECTORY PREDICTION RESEARCH

This document is part of a project that has received funding from the SESAR Joint Undertaking under Grant Agreement No 699299 under European Union's Horizon 2020 research and innovation programme.

Abstract

This document covers many of the day-to-day activities and provides links to further information where required, related to the management of DART. It provides succinct information on research objectives, scope approach and results, provides details on the management structure and on the assignment of roles, and provides details on management procedures according to the Grant Agreement [3], the Consortium Agreement [2], the ER Call for Proposals [6], and SESAR JU (SJU) standards and procedures [1] and H2020 financial/administrative processes [4]. It further provides information on the management of risks, issues and opportunities, grievance and conflict resolution procedures and on communication and dissemination tasks that should be further refined in subsequent deliverables. Finally, it aims to standardize various elements of the project e.g. project reports, deliverables, file naming conventions, publications clearance procedure etc. through the use of agreed procedures and templates where relevant, all according to SESAR JU (SJU) standards and procedures. [1]

[1] "The opinions expressed herein reflect the author's view only. Under no circumstances shall the SESAR Joint Undertaking be responsible for any use that may be made of the information contained herein."

Table of Contents

1 Introduction

1.1 Purpose and Scope

The DART Project Management Plan (PMP) has two main functions. Firstly, it acts as a reference source for all Consortium members, covering management processes and many of the day-to-day activities, also providing links to further information where required. Secondly, it provides information on communication and dissemination tasks that should be further refined in subsequent deliverables, and finally, it aims to standardize various elements of the project e.g. project reports, deliverables, file naming conventions etc. through the use of agreed procedures and templates where relevant, all according to SESAR JU (SJU) standards and procedures.

This Project Management Plan is delivered in M01 of the project, however it may be evolved by identifying further needs and by establishing best practices throughout DART lifetime.

For the avoidance of doubt, the Grant Agreement take precedence over this document. In order to facilitate the application of the H2020 and ER Programme Management Guidelines, text extracted from these references was integrated in the PMP[2]. However, the Grant Agreement itself, the applicable H2020 guidelines and the ER Programme management guidance doc will always remain the reference in case of conflicts.

1.2 Intended readership

This document is intended to be used by DART members.

1.3 Acronyms and Terminology

Term	Definition
ATM	Air Traffic Management
Horizon 2020	EU Research and Innovation programme implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness.

[2] Disclaimer: "The SJU will not check the accuracy and completeness of these extracts. Therefore the SJU acceptance of the PMP will not imply the completeness and consistency of these extracts with respect to the current guidelines, nor to their future updates"

IPR	Intellectual Property Rights
PMP	Project Management Plan
TRL	Technology Readiness Level
SESAR	Single European Sky ATM Research Programme
SJU	SESAR Joint Undertaking (Agency of the European Commission)
SJU Work Programme	The programme which addresses all activities of the SESAR Joint Undertaking Agency.
SESAR Programme	The programme which defines the Research and Development activities and Projects for the SJU.
WBS	Work Breakdown Structure
WP	Work Package
DB	Data Base
NDA	Non-Disclosure Agreement
GA	Grant Agreement [3]
ER	Exploratory Research

Table 1: Acronyms and Terminology

1.4 Legal Basis

The project operates within the SESAR 2020 Framework Programme.

The Grant Agreement with the SESAR Joint Undertaking under the H2020 programme No. 699299 is in operation. The current version of the Grant Agreement is file "Grant Agreement-699299-DART.pdf" and is dated 14/06/2016 on the top of each page.

A Consortium Agreement has also been signed by all partners.

1.5 Consortium Partners

1. UNIVERSITY OF PIRAEUS RESEARCH CENTER (UPRC)
2. FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG E.V. , represented by Fraunhofer Institute for Intelligent Analysis and Information Services IAIS (Fraunhofer)
3. BOEING RESEARCH & TECHNOLOGY EUROPE S.L.U. (BR&T-E)
4. CENTRO DE REFERENCIA INVESTIGACION DESARROLLO E INNOVACION ATM, A.I.E. (CRIDA)

1.6 Important Contacts

1.6.1 DART Project Coordinator

Prof. George Vouros

Dept of Digital Systems,
University of Piraeus, Greece
Gr Lambraki Str 126,
Piraeus 18534, Greece
Email: georgev@unipi.gr
Tel: +30 210 4142552

1.6.2 DART Project Officer

Mr. Alessandro Prister
Programme Manager Exploratory Research
SESAR Joint Undertaking
Avenue de Cortenbergh 100
B-1000 Bruxelles
T +32 2 507 80 25
Email: alessandro.prister@sesarju.eu

Please note that the details of the Project Officer are provided here for reference. However, all contact with the Project Officer relating to the project should be through the Project Coordinator.

2 Research Objectives, Scope, Approach and Expected Results

2.1 Research Objectives, Scope

DART (Data-driven AiRcraft Trajectory prediction research) project main research objective is to explore the application of different data-driven techniques to the aircraft trajectory prediction problem, accounting for complexity ATM network effects.

As part of this objective DART emphasizes the role modern visualization techniques can have in facilitating trajectory predictions.

To achieve this high-level main research objective, the following specific research objectives have been defined:

- Definition of requirements for the input datasets needed. The requirements will consider the trajectory prediction accuracy expected;
- Study of the application of big-data techniques to trajectory related data gathering, filtering, storing, prioritization, indexing or segmentation to support the generation of reliable and homogenous input datasets;
- Study of different data-driven learning techniques to describe how a reliable trajectory prediction model will leverage them;
- Formal description of the ATM complexity network to support correlated multiple trajectory predictions;
- Study of the application of agent-based models to the prediction of multiple correlated trajectory predictions considering the ATM complexity network;
- Description of visualization techniques to enhance trajectory data management capabilities;
- Exploration of advanced visualization processes for data-driven model algorithms formulation, tuning and validation, in the context of 4D trajectories.

2.2 Research Approach

(excerpt from the GA)

DART project has been structured in four WPs following a layer-based approach. The core WP1 will provide especially designed datasets to the remaining WPs. Upon this WP, the WP2 basically evaluates the suitability of proposed machine learning techniques to elucidate which is the best alternative to enable robust and accurate data-driven trajectory prediction capabilities, and under which conditions. This WP2 will make use of the outputs of WP1 and provide inputs to WP3. The WP3 will leverage the outputs from previous WPs to devise and evaluate a mechanism for detecting

the influence of surrounding traffic on a trajectory prediction and enhancing the prediction capabilities of algorithms towards a collaborative trajectory prediction process. This mechanism, based on collaborative reinforcement learning techniques will account for network complexity effects and will return updated predictions by considering the complexity of the actual ATM environment. Finally, WP4 will provide the project management activities required for the overall coordination of the defined WPs, including the dissemination and project impact activities.

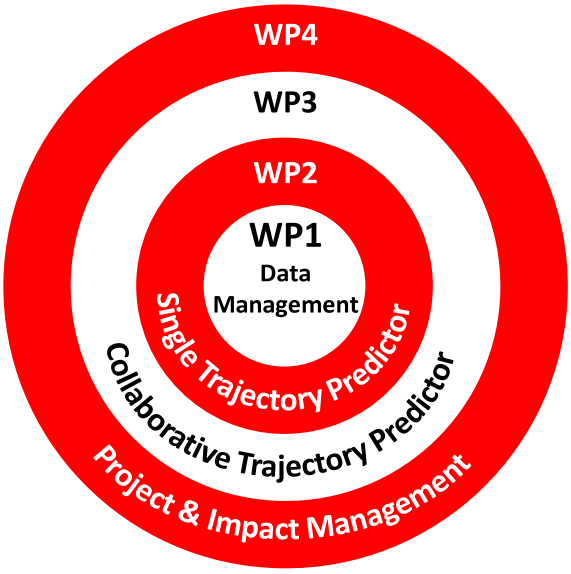


Figure 1 WP relationships and grouping in actions

Figure 1 shows a high level organization of the WP's planned for the DART project execution. The WBS has inspired the project logo. The following list describes how this project structure has been designed for meeting the project specific research objectives:

- **WP1 Data Management** is devoted to create useful, reusable and high quality datasets of recorded aircraft trajectory information. These datasets are themselves a valuable deliverable of the project, since the difficulties existing in any data-driven efforts to start with a high quality and well documented dataset from operational source are well known. WP1 will be generating datasets iteratively along the project and provide them to the other two research WPs (WP2 and WP3). It will start with smaller and simpler datasets. The size and complexity of the datasets will increase accordingly to the feedback from WP2 and WP3. The datasets will comprise raw data obtained from the ATM surveillance infrastructure and synthetic data generated offline thanks to the exploitation of the initial set of raw data. An important aspect is that the datasets will be accompanied by detailed data and metadata descriptions and a visual tool that will ease inspection, evaluation and exploitation of each dataset by data scientists.
- **WP2 Single Trajectory Prediction** is devoted to the analysis and evaluation of a wide range of data-driven techniques to the aircraft trajectory prediction problem. The most promising prediction algorithms obtained in WP2 will be evaluated in order to get knowledge about the pros- and cons- of their extensive usage.
- **WP3 Collaborative Trajectory Prediction** is devoted to unveil the complexity to be considered in a trajectory prediction due to the influence of the surrounding traffic. Relying

on the individual predictions provided by WP2, the application of reinforcement learning algorithms in an agent-based trajectory prediction framework will be studied in order to obtain improvement predictions thanks to the consideration of ATM network effects.

- **WP4 Project and Impact Management** will be devoted to project management tasks plus two specific tasks related to the impact management (Dissemination & Exploitation and Communication activities) that will promote the WP2 and WP3 results across the ATM research community. This WP will also deliver the project management plan and periodic technical and financial reports, and schedule project meetings, also with SJU, according to the work plan and Project Execution Guidelines for SESAR 2020 Exploratory Research (8 Feb. 2016, Edition 01.00.00) sections 3, 5 and 6.

In WP1 specific visualization techniques will be introduced in order to facilitate the identification of data errors and/or omissions and exploration of data correlation, while WP2 and WP3 will additionally explore interactive visual interfaces for supporting the sensitivity analysis of the proposed predictions algorithms driven by data.

2.3 Expected Results

(excerpt from the GA)

DART aims to present to the ATM community an understanding on what can be achieved today in trajectory prediction by using data-driven models. It is expected that data-driven techniques help to improve the performance and accuracy of predictions by complementing classical model-based prediction approaches. These improved predictions will enable advanced collaborative decision making processes, which finally will lead to more efficient ATM procedures.

The final goal for ATM community in this case is the improvement in predictability, which is usually considered as one of the main (if not the principal) ATM performance drivers. By increasing predictability (and the subsequent reduction in uncertainty), capacity buffers can be reduced (thus decreasing values of unused capacity and increasing effective capacity allocation), arrival punctuality will improve enhancing airport operations and reducing both primary and reactionary delays. Additionally, improvements in flight efficiency (caused by a more likely adherence to the agreed trajectory) and in safety can be expected from predictability improvements such as those that DART aims to achieve by using data science.

3 Organization (role allocation and named individuals)

The structure, presented in Figure 2 and detailed below, incorporates traditional project management roles with flexible communication and work flows, and has been developed to:

- Ensure effective and transparent management according to the GA, to H2020 reference documentation and to the Project Execution Guideline for SESAR 2020 ER Projects;
- Establish clear procedures for taking decisions and resolving conflicts effectively and efficiently;
- Establish quality control procedures with respect to all outputs and deliverables;
- Ensure the project proceeds within the framework of the project budget and according to administrative, financial and legal principles defined by European and national regulations;
- Ensure that the participants conform to their obligations under the contract and the consortium agreement;
- Manage background and foreground intellectual property;
- Plan and implement communication activities;
- Plan and implement dissemination activities.

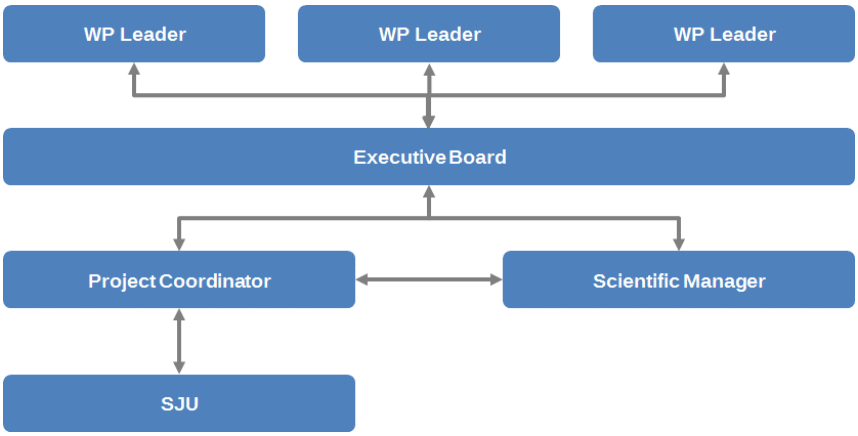


Figure 2: Management Structure of the DART project

3.1 Project Coordinator (UPRC – Prof. George Vouros)

This role is responsible for the execution and strategic management of the project. He will implement the agreed strategy, oversee the choice of techniques, and supervise the monitoring of the results and co-ordinate the quality assurance function. He will also implement the decisions taken by the Executive Board of the project and he will be in charge of all the communication with the SJU. SJU communicates with the project only through the Project Coordinator. Specifically, the responsibilities are:

- The Coordinator shall be the intermediary between the beneficiaries (parties) and the Funding Authority and shall perform all tasks assigned to it as described in the Grant Agreement.

He is responsible for:

- Completing H2020 processes in coordination with the SJU DART project officer, according to the provisions of the GA, regarding progress reporting, maintaining information up to date and informing about events and circumstances likely to affect the agreement, deliverables submission, amendments to GA and changes to PMP, preparation of project reviews, completion of payments and distribution to beneficiaries, .
- monitoring compliance by the Parties with their obligations;
- keeping the address list of beneficiaries and other contact persons updated and available;
- collecting, reviewing and submitting information on the progress of the project and reports and other deliverables (including financial and technical reports, and related certifications) to the Funding Authority;
- preparing the meetings, proposing decisions and preparing the agenda of Executive Board meetings, chairing the meetings, preparing the minutes of the meetings and monitoring the implementation of decisions taken at meetings;
- transmitting promptly documents and information connected with the Project ;
- administering the financial contribution of the Funding Authority and fulfilling the financial tasks concerning payments;
- reviewing progress in conjunction with the Executive Board, checking that progress and deliverables are produced according to the work plan; further advising the relevant bodies on delays, project issues and problems;
- managing overall DART risks;
- providing, upon request, the beneficiaries 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.

If one or more of the beneficiaries is late in submission of any project deliverable, the Coordinator may nevertheless submit the other parties' project deliverables and all other documents required by the Grant Agreement to the Funding Authority in time.

3.2 Project Scientific Manager (FRHF – Dr. Georg Fuchs)

This role is responsible for the

- Scientific vision of the project
- Scientific supervision of the WPs
- Planning and control of activities

- Risk management of scientific matters

The Scientific Manager is responsible for guiding all activities related to the research of the project on data management, data-science, complexity and visualization topics.

3.3 Executive Board (All WP Leaders)

This role consists of all group and WP leaders who will manage the operational activities within their WPs. It is responsible for making the higher-level decision within the borders of the DART consortium, also seeking expertise advice on difficult and critical technical issues. It also monitors progress across partners in the WPs and ensures that the objectives, timescales and milestones are met. WP leaders will be responsible for obtaining status/progress information from partners active within their WP for the specified reporting period.

The Executive Board is currently made up of the nominated representatives of UPRC, Fraunhofer, BR&T-E, CRIDA, enlisted below

University of Piraeus Research Center (UPRC)		
Contact 1	George Vouros	Project Coordinator, WP 4 Leader, WP 3 Leader UPRC Group Leader
	georgev@unipi.gr	
Contact 2	Yannis Theodoridis	
	ytheod@unipi.gr	

Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung E.V (Fraunhofer)		
Contact 1	Georg Fuchs	Fraunhofer Group Leader
	Georg.Fuchs@iais.fraunhofer.de	
Contact 2	Gennady Andrienko	
	gennady.andrienko@iais.fraunhofer.de	

Boeing Research and Technology Europe (BRTE)		
Contact 1	Vilaplana, Miguel	BRTE Group Leader
	miguel.vilaplana@boeing.com	
Contact 2	David Scarlatti	WP2 Leader
	David.Scarlatti@boeing.com	

Centro De Referentia Investigation, Desarrollo E Innovation ATM (CRIDA)		
Contact 1	Jose Manuel Cordero Garcia	CRIDA Group Leader
	jmcordero@e-crida.enaire.es	WP1 co-leader
Contact 2	Miguel Garcia Martinez	WP1 Leader
	mgmartinez@e-crida.enaire.es	

WP leaders are responsible for the deliverables and milestones for their WP. They are also responsible for reporting to the Executive Board primarily through the Coordinator and they should hold reviews with the WP partners, as required. As they are ultimately responsible for the delivery of the WP, they will be required to implement a project management regime consistent with this responsibility, as it also detailed in subsequent sections of this document.

Any partner member is able to attend meetings of the Executive Board, subject to the limitation that each partner only has one vote. Each representative shall be deemed to be duly authorised to deliberate, negotiate and decide on matters (to be agreed by SJU) listed below.

Matters concerning content, finances and intellectual property rights

- Proposals for changes to Annexes of the Grant Agreement
- Changes to the Consortium Plan
- Modifications to Background
- Additions of Third Parties
- Additions of Identified Affiliated Entities

Matters concerning evolution of the consortium

- Entry of a new Party to the consortium of the Project and approval of the settlement on the conditions of the accession of such a new Party

- Withdrawal of a Party from the consortium and the approval of the settlement on the conditions of the withdrawal
- Identification of a breach by a Party of its obligations under this Consortium Agreement or the Grant Agreement
- Declaration of a Party to be a Defaulting Party
- Remedies to be performed by a Defaulting Party
- Termination of a Defaulting Party's participation in the consortium and measures relating thereto
- Proposal to the Funding Authority for a change of the Coordinator
- Proposal to the Parties and the Funding Authority for suspension of all or part of the Project
- Proposal to the Parties and the Funding Authority for termination of the Project and the Consortium Agreement.

Voting rules are as follows:

- Decisions shall be taken by the representatives of at least two-thirds (2/3) of the consortium partners present or represented;
- Each partner shall have one vote;
- Defaulting partners may not vote;
- Any partner may appoint a substitute or a proxy to attend and vote at any meeting;
- Decisions shall be taken by a majority of two-thirds (2/3) of the votes of the partners present or represented.

3.4 Dissemination, Exploitation and Communication activities manager (BR&T-E– Mr. David Scarlatti)

This role is responsible for

- Delivering the DART dissemination, exploitation and communication plan, managing and coordinate dissemination, exploitation and communication activities and updating the plan according to needs and opportunities;
- Promoting of the DART concept and vision by highlighting its competitive advantage against existing approaches through social media, project wiki & newsletter, project website, etc.;
- Ensuring technical and scientific dissemination of the project results through publications in peer-reviewed journals, conferences and workshops, ATM Seminars;
- Coordinating of industrial/business and academic exploitation of project results.

4 Gantt Chart

The WBS, Workplan, Resources and Deliverables are as described in the GA No. 699299.

According to the WBS, the WPs are as follows:

WP Number	WP Title	Lead beneficiary	Start month	End month
WP1	Data management	4-CRIDA	1	24
WP2	Single Trajectory Prediction	3-BR&T-E	1	24
WP3	Collaborative Trajectory Predictions	1-UPRC	1	24
WP4	Project and Impact Management	1-UPRC	1	24

4.1 Gantt Chart

	Year 1												Year 2											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
WP 1	Data Management																							
Task 1.1	Data Gathering																							
Task 1.2	Data Set Definition,Assembly and Publishing																							
Task 1.3	Synthetic Data Generation																							
Task 1.4	Visual Exploration for Data Validation and Hypothesis Formulation																							
Deliverables	D1.1		D1.2		D1.2															D1.3 D1.4		D1.5		
Milestones			MS1																	MS4				
WP 2	Single Trajectory Prediction																							
Task 2.1	Dataset Features Extraction																							
Task 2.2	Data-Driven Algorithms: Selection & Training																							
Task 2.3						Data-Driven Algorithms: Test, Validation & Visualization																			
Deliverables						D2.1						D2.2								D2.3		D2.4		
Milestones						MS2														MS5				
WP 3	Collaborative Trajectory Predictions																							
Task 3.1	Scenarios setup and specification of requirements																							
Task 3.2				Collaborative reinforcement learning for trajectory predictions																				
Task 3.4													Model Test, Validation & Visualization											
Deliverables						D3.1														D3.2		D3.3		
Milestones												MS3												MS6
WP 4	Project and Impact Management																							
Task 4.1	Project Management & Quality Control																							
Task 4.2	Coordination and Reporting																							
Task 4.3	Dissemination, Communication and Exploitation Activities																							
Deliverables	D4.1		D4.2 D4.3																				D4.4 D4.5	
Periodic Reports							1st MS9						2nd MS10						3rd MS11					4th MS12
Reviews and Project Close-out Meeting												MS7												MS8
Project Working Meetings	KOM		1st				2nd								3rd			4th				5th		

A more detailed view of the gantt chart appears in the Annex of this document.

4.2 List of Deliverables

Deliverable Number	Deliverable Title	WP Number	Lead Beneficiary	Type	Dissemination Level	Due date (months)	Calendar Date
D1.1	Data Management Plan	WP1	4-CRIDA	Report	Confidential, only for members of the consortium (including the Commission Services)	1	19.07.2016
D1.2	Data Transaction Pipeline description	WP1	4-CRIDA	Other	Confidential, only for members of the consortium (including the Commission Services)	5 (This has been moved to M05 according to KOM minutes [5])	19.11.2016
D1.3	DART Data Pool	WP1	4-CRIDA	Other	Confidential, only for members of the consortium (including the Commission Services)	20	19.02.2018[3]
D1.4	Synthetic Data package	WP1	3-BR&T-E	Other	Confidential, only for members of the consortium (including the Commission Services)	20	19.02.2018
D1.5	Visualization Exploration Report	WP1	4-CRIDA	Other	Confidential, only for members of the consortium (including the Commission Services)	22	19.04.2018
D2.1	Initial set of Data-driven Trajectory Prediction algorithms	WP2	3-BR&T-E	Report	Confidential, only for members of the consortium (including the Commission Services)	6	19.12.2016
D2.2	Visual Interface	WP2	2-Fraunhofer	Other	Confidential,	12	19.06.2017

[3] DMP describes the data sources to be potentially exploited at high-level. Data sources exploited will be described in detail (with the potential inclusion of additional data sources, if necessary) in the document accompanying every dataset to be generated, constructed or provided during the iterative data provision process described in WP1. These documents are seen as early iterations and parts of the final D1.3 DART Data Pool deliverable, that will comprise of all the datasets iterations during the project lifecycle. These documents will be made available for SJU every time a new dataset is released, and finally in the form of D1.3 deliverable.

	for Algorithms Analysis				only for members of the consortium (including the Commission Services)		
D2.3	Enhanced Set of Data-driven Trajectory Prediction Algorithms	WP2	3-BR&T-E	Report	Confidential, only for members of the consortium (including the Commission Services)	20	19.02.2018
D2.4	Evaluation and Validation of Algorithms for Single trajectory Prediction	WP2	3-BR&T-E	Report	Confidential, only for members of the consortium (including the Commission Services)	22	19.04.2018
D3.1	Collaborative Trajectory Predictions Scenarios and Requirements Specification	WP3	1-UPRC	Other	Confidential, only for members of the consortium (including the Commission Services)	6	19.12.2016
D3.2	Collaborative Trajectory Prediction Algorithm	WP3	1-UPRC	Other	Confidential, only for members of the consortium (including the Commission Services)	20	19.02.2018
D3.3	Evaluation and Validation of the Collaborative Trajectory Prediction Algorithm	WP3	1-UPRC	Report	Confidential, only for members of the consortium (including the Commission Services)	22	19.04.2018
D4.1	Project management Plan	WP4	1-UPRC	Report	Confidential, only for members of the consortium (including the Commission Services)	1	19.07.2016
D4.2	Dissemination Plan	WP4	3-BR&T-E	Report	Public	3	19.09.2016
D4.3	Project website, wiki, social media channels	WP4	3-BR&T-E	Websites, patents filling, etc.	Public	3	19.09.2016
D4.4	Dissemination Report	WP4	3-BR&T-E	Report	Public	23	19.05.2018
D4.5	Project results final report	WP4	1-UPRC	Report	Public	23	19.05.2018

4.3 List of Milestones

Milestone Number	Milestone Title	WP Number	Lead Beneficiary	Means of Verification	Due date (months)	Calendar Date
MS1	First High Quality Dataset	WP1	4-CRIDA	This is the first version of the DART data Pool. It will be validated for acceptance by WP2 and WP3 leaders based on completeness and accuracy of the data described.	3	19.09.2016
MS2	First Data-Driven algorithms working for single –trajectory prediction	WP2	3-BR&T-E	The first version of the prediction algorithms selected is implemented and documented.	6	19.12.2016
MS3	First version of the agent-based modeling algorithm for collaborative trajectory predictions	WP3	1-UPRC	The first version of the algorithm is implemented and documented, with initial results on datasets.	12	19.06.2017
MS4	Full Dataset repository completed	WP1	4-CRIDA	The complete repository of datasets is finished and available for ongoing research.	20	19.02.2018
MS5	Full Data-Driven algorithms validation for single trajectory prediction completed.	WP2	3-BR&T-E	All data-driven single trajectory algorithms are validated and documented with quality metrics available.	20	19.02.2018
MS6	Agent-based modeling algorithms validation for Collaborative trajectory prediction completed	WP3	1-UPRC	Agent Based model is validated and documented with quality metrics available.	24	19.06.2018
MS7	Intermediate Review	WP4	1-UPRC	This is the first review meeting among DART partners and SJU	12	19.06.2017
MS8	Final Review and Project Close-out	WP4	1-UPRC	This is the final review and project close-out meeting among DART partners and SJU	24	19.06.2018
MS9	1st Reporting Milestone	WP4	1-UPRC	This is the first reporting milestone regarding the reporting period M01-M06	7	19.01.2017
MS10	2nd Reporting Milestone	WP4	1-UPRC	This is the second reporting milestone regarding the reporting period M07-M12	13	19.07.2017
MS11	3rd Reporting Milestone	WP4	1-UPRC	This is the third reporting milestone regarding the reporting period M13-M18	19	19.01.2018
MS12	4th Reporting Milestone	WP4	1-UPRC	This is the fourth reporting milestone regarding the reporting period M19-M24	24	19.06.2018

4.4 Project Meetings and Provisional Schedule of Working Meetings

Meeting Type	Meeting Description	Provisional Schedule (month)	Provisional Calendar Date	Physical/ Potential Location, or TelCo
KOM	Kick off meeting	M01	29.06.2016	Physical/Madrid
1st Working Meeting/Workshop	Project Plan and technical road map deep dive: Review of (draft) scenarios and initial data sources.	M03	26.09.2016	Physical/Madrid
2nd Working Meeting/Workshop	Technical and Scientific progress review and alignment meeting: Review of datasets, initial set of prediction algorithms, interactive visual algorithms, single/collaborative prediction scenarios and requirements specifications.	M07[4]	09.01.2017	Physical/Piraeus
Review Meeting		M12	19.06.2017	Physical/Brussels
3rd Working Meeting/Workshop	Technical and Scientific progress review and alignment meeting: Overview of scientific and technical progress, review of datasets, single and collaborative trajectory prediction algorithms, results achieved, relevance to application oriented research.	M15	19.09.2017	Physical/St Augustin or TelCo [5]
4th Working Meeting/Workshop	Technical and Scientific progress review and alignment meeting: Overview of scientific and technical progress, review of datasets, single and collaborative trajectory prediction algorithms, results achieved, relevance to application oriented research.	M18	20.11.2017	Physical/Piraeus or TelCo[3]
5th Working Meeting/Workshop	Overview of scientific and technical progress, review of datasets, single and collaborative trajectory prediction algorithms, results achieved, detailed specification of relevance to application oriented research.	M22	19.04.2018	Physical/ Madrid
Final project Review and Close-Out Meeting		M24	19.06.2018	Physical/Brussels

The Project Final Review and Close-Out Meeting will be organized at the SJU following the submission and approval of all contractual deliverables, including the Final Project Results Report.

[4] It was scheduled on M09 but, given the project start date and partners commitments it seems more appropriate to be held on M07.

[5] One of M15 and M18 will be a Physical meeting and the other will be held via TelCo depending on project progress and needs.

The delivery of the Final Project Results Report triggers the project closure process. The objective of the Project Closure Meeting is to determine if the Project indeed achieved its objectives.

Other meetings (e.g. related to specific WPs) may also be scheduled as the project progresses and according to needs.

4.5 Periodic Reports

Periodic report	Description	Due Date (month)	Due Date (calendar date)
1st Periodic Report	This is the first reporting milestone regarding the reporting period M01-M06	7	19.01.2017
2nd Periodic Report	This is the second reporting milestone regarding the reporting period M07-M12	13	19.07.2017
3rd Periodic Report	This is the third reporting milestone regarding the reporting period M13-M18	19	19.01.2018
4th Periodic Report	This is the fourth reporting milestone regarding the reporting period M19-M24	24	19.06.2018

5 Management Plan

5.1 Legal, financial and administrative management

The beneficiaries must implement the action as described in Annex 1 of the GA, in compliance with all the provisions of the GA, and all legal obligations under applicable EU, international and national law (GA Article 7).

According to the GA, the internal roles and responsibilities of the beneficiaries are divided as follows:

Each beneficiary must:

- keep information stored in the 'Beneficiary Register' (via the electronic exchange system; see also GA Article 52) up to date, in particular, its name, address, legal representatives, legal form and organisation type (GA article 17) .
- immediately inform the coordinator — which must immediately inform the JU and the other beneficiaries — of any of the following:
- events which are likely to affect significantly or delay the implementation of the action or the EU's or JU's financial interests, in particular:
  - changes in its legal, financial, technical, organisational or ownership situation
  - circumstances affecting: the decision to award the grant or compliance with requirements under the Agreement significantly or delay the implementation of the action (GA Article 17);
- submit to the coordinator in good time:
  - individual financial statements for itself and, if required, certificates on the financial statements (see GA Article 20, and subsection 5.6 below);
  - the data needed to draw up the technical reports (see GA Article 20 and subsection 5.6 below);
  - any other documents or information required by the JU under the GA, unless the GA requires the beneficiary to submit this information directly to the JU;
  - maintain accurate records of costs, resources, and time.

The coordinator must:

- monitor that the action is implemented properly (see GA Article 7);
- act as the intermediary for all communications between the beneficiaries and the JU (in particular, providing the JU with the information described in GA Article 17), unless the Agreement specifies otherwise;
- request and review any documents or information required by the JU and verify their completeness and correctness before passing them on to the JU;

- submit the deliverables and reports to the JU (GA Articles 19 and 20);
- ensure that all payments are made to the other beneficiaries without unjustified delay (see GA Article 21);
- inform the JU of the amounts paid to each beneficiary, when required under the Agreement (see Articles 44 and 50) or requested by the JU;
- preparing and submitting to the JU periodic technical and financial reports, including cost statements of all (according to subsection 5.6 below);
- Communicating with other projects and coordinating presentations.

The coordinator may not delegate the above-mentioned tasks to any other beneficiary or subcontract them to any third party.

The beneficiaries have already internal arrangements regarding their operation and co-ordination to ensure that the action is implemented properly. These internal arrangements are set out in a written 'Consortium Agreement' [2] between the beneficiaries, which covers:

- internal organisation of the consortium;
- distribution of JU funding;
- additional rules on rights and obligations related to background and results (including whether access rights remain or not, if a beneficiary is in breach of its obligations) ;
- settlement of internal disputes;
- liability and confidentiality arrangements between the beneficiaries.

5.2 Production review and approval of deliverables

Deliverables and milestones should be completed on time, allowing also ample time for review according to the quality procedures defined below.

Progress on deliverables or milestones should be reported in the quarterly partner reports and WP reports for the period in which they are due.

If any deliverables or milestones due in the period are late, an explanation for this **must** be given, as well as any mitigation actions and the anticipated completion date.

For deliverables which are not written reports (e.g. prototypes), a brief written summary should nevertheless be produced to accompany the deliverable.

5.3 Quality Management

WP leaders are responsible for administrative quality control procedures regarding their WPs and respective tasks. These procedures address both the execution of the project WP and tasks and the actual deliverables of each WP.

The internal quality control process ensures compliance with project standards and aims to ensure proper feedback channels. The quality control procedures refer to the aspects stated in subsequent paragraphs:

Quality standards and templates:

SESAR 2020 word template and SESAR 2020 power point template are the standard templates for all project deliverables and official project presentations involving SJU or external audience. The templates are in the "templates" folder in the DART filestore.

Quality sensitive parameters and acceptance criteria:

The Executive Board and the Project Coordinator review the project deliverables and official presentations (see section 5.3 below) according to

- Their compliance to the SESAR 2020 standard templates and naming conventions (see section 5.12.1);
- Obligations to the inclusion of information (copyright, funding, disclaimer excluding JU responsibility, JU and EU emblems);
- Obligations to the non-disclosure of confidential information according to the document dissemination level;
- Sufficiency, consistency and validity of the content;
- Completeness of the information provided according to the document objectives;
- Overall presentation quality (use of language, figures quality, clarity of statements);
- Contribution and compliance to the project scientific and/or technical objectives and contractual obligations.

Thus, the quality parameters include: **Compliance to standards**, **obligations to include (and non-disclose) information**, overall **presentation quality**, **sufficiency**, **consistency**, **completeness** and **validity** of content, **contribution and compliance to project objectives and contractual obligations**.

Failure to address **any** of these quality sensitive parameter implies corrective actions, which are detailed below.

Definition of the monitoring procedure:

All deliverables will be reviewed to ensure that the deliverables are complete and of an appropriate standard.

The lead participant will submit the deliverable to the WP leader for a first review **at least 3 weeks before final submission**; once the WP leader accepts, he/she will forward it to the Executive Board, **at least 2 weeks before submission**, or return it to the lead participant with a justified decision (see bellow).

Once the Executive Board agrees, it will ask the Project Coordinator for formal submission to the SJU. According to SJU quality assessment the deliverables should gain final approval.

In case the Executive Board does not agree to formally submit the deliverable, they will return it to the WP leader with a justified decision (see bellow) at least **1 week before submission**.

The review process is part of the preparation of the deliverable and WP leaders should take appropriate steps to ensure that the review is completed and the deliverable is submitted in due date.

The due date is the last day of the month that is specified for the deliverable in the GA.

Failure to address any quality sensitive parameters may be recognized either by the WP leader, the Executive Board, the Project Coordinator, or the SJU, at any stage of the monitoring procedure. The multi-level management structure will ensure a high degree of quality control from inception through to final completion of the DART project.

Corrective mechanisms:

Depending on the stage of the monitoring procedure, the evaluation of any deliverable may result to:

Acceptance: Unconditional acceptance of the deliverable;

Revisions: These may be minor or major, according to clear requests and constructive comments concerning the presentation and/or the content, in writting.

Internal revision decisions imply providing in writing certain clarifications and additional information, as appropriate, either to the WP leader (if the decision is from the Executive Board), or to the deliverable lead participant (if the decision is from the WP leader).

The lead participant must address all concerns and comments in due time. Failure to deliver the deliverable in due time according to contractual provisions is the sole responsibility of the lead participant and WP leader, given that the Executive Board and the Project Coordinator has provided comments in due time.

The SJU aims to evaluate a deliverable within **60 days** from the delivery, and may:

- **Accept** it in writing, in whole or in part, or make acceptance of the deliverable subject to certain conditions;
- **Request** in writing certain clarifications or additional information, as appropriate. The Consortium shall answer the SJU's request within **15 days** from receipt of the SJU's request for clarifications or additional information. If, upon receipt of the clarification or additional information, the SJU does not respond within **30 days**, this clarification or additional information shall be deemed accepted.
- **Reject** it by giving the appropriate justification in writing.

In case the SJU comments require an update and resubmission of a deliverable, DART will apply a new cycle of review and evaluation: The lead participant will submit the deliverable to the WP leader for a first review **at least 8 working days before final submission**; once the WP leader accepts, he/she will forward it to the Executive Board, **at least 7 working days before submission**, or return it to the lead participant with a justified decision as above. In case the Executive Board does not agree

to formally submit the deliverable, they will return it to the WP leader with a justified decision (see bellow) at least **5 working days before submission**.

5.4 Schedule management

While the Project Coordinator is responsible for the overall management of the project schedule, WP leaders are responsible for the management of the schedule for the tasks and activities of their WPs.

Schedule management at all levels must ensure that:

- The project remains focused on achieving and delivering its objectives;
- All activities are properly coordinated and measures/procedures for quality control are applied;
- Technical, scientific, administrative or contractual issues are properly resolved;
- The project work is been developed with respect to ethical concerns, if such arise;
- Non-technical reports are properly prepared and distributed;
- Final versions of technical progress reports prepared by the partners are approved and accepted;
- Implementation strategies and agreements for the project results are ensured and prepared.

5.5 Minutes and meetings management

The Project Coordinator is responsible for preparing the Executive Board meetings, proposing decisions and preparing the agenda meetings, chairing the meetings, preparing the minutes of the meetings and monitoring the implementation of decisions taken at meetings. Given that other meetings may be held between DART members (e.g. between WP participants, or technical/scientific meetings), the chairperson may be any of the persons with a particular role in the DART organizational structure, as identified in section 3 of this document.

More specifically,

- The chairperson shall convene ordinary meetings of the Executive Board at least once every six months and shall also convene extraordinary meetings at any time upon written request of any Member.
- Notice of a meeting:
    - The chairperson shall give notice in writing of a meeting to each Member as soon as possible and **no later than 14 days** preceding an ordinary meeting and **7 days** preceding an extraordinary meeting.
- Sending the agenda:
    - The chairperson shall send each Member a written original agenda no later than **14 days** preceding the meeting, or **7 days** before an extraordinary meeting.
- Adding agenda items:
    - Any agenda item requiring a decision by the Members must be identified as such on the agenda. Any Member may add an item to the original agenda by written notification to all of the other Members no later than **7 days** preceding the meeting.

- During a meeting of the Executive Board the Members present or represented can unanimously agree to add a new item to the original agenda.
- Any decision may also be taken without a meeting if the chairperson circulates to all Members a written document, which is then signed by the defined majority of Members. Such document shall include the deadline for responses.
- Decisions will only be binding once the relevant part of the minutes has been accepted.
- Meetings may also be held by teleconference or other telecommunication means.

- Minutes:
  - The chairperson shall produce written minutes of each meeting, which shall be the formal record of all decisions taken. He/she shall send draft minutes to all Members within **10 days** of the meeting by email. The author should set a deadline for response, e.g. **5 days**. After this period the minutes can be circulated to other relevant partners and uploaded to the filestore as a permanent record of the meeting.
  - The minutes shall be considered as accepted if, within **15 days** from sending, no Member has sent an objection in writing to the chairperson with respect to the accuracy of the draft of the minutes.
  - Each time the SJU is participating to a meeting, the SJU will receive an explicit request by email to review the minutes. The above-mentioned deadlines for sending, amending and objecting to minutes hold for this task as well.
  - The chairperson shall send the accepted minutes to all the Members of the Executive Board, and to the Coordinator, who shall safeguard them.
  - The keeping of minutes for all project related meetings is extremely important as they are a record of decisions taken and actions required by partners in the project. It is the responsibility of the chair of the meeting to organize the taking of minutes.
  - A template for minutes is located on the project filestore under “templates”. The template has space for attendees, minutes, actions from the meeting and for the meeting agenda to be attached.

  - Minutes of all meetings should also be sent to the Project Coordinator.

Agendas, as well minutes of meetings shall be stored in the DART filestore and should be accessible by any consortium member.

5.6 Project reporting and actions management

All partners are required to complete a three-months partner report detailing progress against each task. Reports should be sent to the relevant WP leaders for approval and will be forwarded to the Project Coordinator **by the 15th of the month following the end of each three-months period**.

The template to be filled per beneficiary is in the Appendix of this document. Concerning the resources to be used, beneficiaries are asked to complete an excel sheet, part of which is shown below in Figure 3 (this sheet actually includes all the tables shown in Annex).

Copies of the relevant templates are available on the project filestore under “Templates”. The templates have been designed to provide the information that is required for the Periodic Report for the Commission. This will simplify the reporting at the end of each period.

Project Number		699299
Acronym		DART
Period Number		[1st] [2nd] [3rd] [4th] [5th] [6th]
Period Coverred		From [dd/mm/yyy] to [dd/mm/yyy]

WP/TASK No	DURATION	TITLE	ESTIMATED PMs	PMs (ACTUAL COSTS)	PMs (UNIT COSTS)
WP 1	M0-M24	Data Management	0	0	0
Task 1.1	M0-M20	Data Gathering	0	0	0
Task 1.2	M0-M20	Data Set Definition, Assembly and Publishing	0	0	0
Task 1.3	M0-M20	Synthetic Data Generation	0	0	0
Task 1.4	M0-M24	Visual Exploration for Data Validation and Hypothesis Formulation	0	0	0
			0	0	0
WP 2	M0-M24	Dingle Trajectory Prediction	0	0	0
Task 2.1	M0-M10	Datasets Features Extraction	0	0	0
Task 2.2	M0-M20	Data-driven Algorithms: Selection & Training	0	0	0
Task 2.3	M0-M24	Data-Driven Algorithm: Test, Validation and Visualization	0	0	0
			0	0	0
WP 3	M0-M24	Collective Trajectory Predictions	0	0	0
Task 3.1	M0-M06	Scenarios setup and specification of requirements	0	0	0
Task 3.2	M4-M20	Collaborative reinforcement learning for trajectory predictions	0	0	0
Task 3.4	M13-M24	Model Test, Validation and Visualization	0	0	0
			0	0	0
WP 4	M0-M24	Project and Impact Management	0	0	0
Task 4.1	M0-M24	Project Management and Quality Control	0	0	0
Task 4.2	M0-M24	Coordination and Reporting	0	0	0
Task 4.3	M0-M24	Dissemination, Communication and Exploitation Activities	0	0	0

Figure 3 Excerpt from the excel sheet for declaring costs

The Project Coordinator will compile the six-months partner reports into an overall six-months project report. This will also include information on actual effort expended vs predicted.

The consortium will submit Technical and Financial Periodic Reports to the SJU (within **60 days** after the end of each reporting period) according to Article 20.3 of the GA and using the templates provided by the SJU.

5.6.1 Reporting Periods

The project has four formal reporting periods, as follows:

1) 20th June 2016 (Month 0) – 19th December 2016 (Month 06)

2) 20th December 2016 (Month 07) – 19th June 2017 (Month 12)

3) 20th June 2017 (Month 13) – 19th December 2017 (Month 18)

4) 20th December 2017 (Month 19) – 19th June 2018 (Month 24)

5.6.2 Financial Periodic Reports

The periodic financial report consists of:

- an 'individual financial statement' (GA Annex 4) from each beneficiary, for the reporting period concerned.
- an explanation of the use of resources and the information on subcontracting (GA Article 13) and in-kind contributions provided by third parties (GA Articles 11 and 12) from each beneficiary, for the reporting period concerned;
- a 'periodic summary financial statement' (Annex 4), created automatically by the electronic exchange system, consolidating the individual financial statements for the reporting period concerned, and including — except for the last reporting period — the request for interim payment.

The individual financial statement must detail the eligible costs (actual costs, unit costs and flat-rate costs) for each budget category according to the GA Annex 2: The beneficiaries must declare all eligible costs, even if — for actual costs, unit costs and flat-rate costs — they exceed the amounts indicated in the estimated budget.

Amounts which are not declared in the individual financial statement will not be taken into account by the JU.

If an individual financial statement is not submitted for a reporting period, it may be included in the periodic financial report for the next reporting period.

The individual financial statements of the last reporting period must also detail the receipts of the action (see Article 5.3.3).

Each beneficiary must certify that:

- the information provided is full, reliable and true;
- the costs declared are eligible (see GA Article 6);
- the costs can be substantiated by adequate records and supporting documentation (see GA Article 18) that will be produced upon request (see Article 17) or in the context of checks, reviews, audits and investigations (see GA Article 22), and
- for the last reporting period: that all the receipts have been declared (see GA Article 5.3.3);

5.6.3 Technical Periodic Reports

Technical periodic reports comprise Part A and Part B.

Part A contains:

• The cover page

• A publishable summary including

• An executive statement on the progress made and key issues;

• Achievements made in the last reporting period, i.e. milestones, meetings, and tasks key data;

• Main targets and events over the next reporting period.

• Tables covering issues related to the project implementation (e.g. WPs, Deliverables, Milestones, etc.) which includes:

• Deliverables (indicating the % completion of deliverables)

• Milestones

• Ethical Issues (if applicable)

• Critical implementation risks and mitigation measures

• Dissemination & exploitation of results

• Impact on SMEs (if applicable)

• Open Research Data (if applicable)

• Gender issues

The answers to the questionnaire covering issues related to the project implementation and the economic and social impact, notably in the context of the Horizon 2020, key performance indicators and the Horizon 2020 monitoring requirements.

Part B of the periodic technical report provides the narrative part that includes explanations of the work carried out by the beneficiaries during the reporting period. It will include:

• Explanations of the work carried out by all beneficiaries and linked third parties during the reporting period;

• An overview of the progress towards the project objectives, justifying the differences between work expected under DoA and work actually performed, if any;

• An update on Risks and Issues.

5.7 Final Financial, Technical Periodic and Final Project Results Reports

In addition to the periodic report for the last reporting period, the coordinator must submit the final report within **60 days** following the end of the last reporting period. The Final Report covers the whole project and is composed of a Final Technical and a Final Financial part.

The Final Periodic Technical Report is a publishable summary of the entire project, it provides:

• An overview of the project scope and objectives

• The achieved results and main conclusions, including a self-assessment of the TRL (Technology Readiness Level) achieved at the end of the project based on specific criteria defined Section 6 of the Project Execution Guidelines, supporting the claimed project readiness to transfer its results to the next R&I phase

• The performed communication and dissemination actions

• The exploitation and follow-up activities proposed for the next stage of the R&I lifecycle.

• The socio-economic impact of the project

• An up-to-date link to the project website

• Project logos, diagrams, photographs and –maybe- videos illustrating its work.

• The final summary written in a style understandable for a non-specialist audience.

The coordinator must ensure that none of the material submitted for publication includes confidential or 'EU classified' information.

The Final Periodic Financial Report includes:

• The final summary financial statement that is automatically created by the system and that constitutes the request for payment of the balance.

• In some cases (and for some beneficiaries/linked third parties) it must be accompanied by a certificate on the financial statements - CFS (one certificate per beneficiary/linked third party).

The project will deliver a publishable Final Project Results Report covering all the research activities performed by the project.

This report (not to be confused with the H2020 Technical/Financial six-monthly reports) will be used at the Project Closeout meeting to discuss the transition to subsequent development stages including a self-assessment of the TRL (Technology Readiness Level) achieved at the end of the project.

In case not all deliverables have been delivered in time before the completion of the Action, the Project may ask for an extension, as an exception, using the Amendment procedure.

5.8 Risks and Issues Management

Risks range from scientific, technical to dissemination and organizational/communicational.

Managing risks, issues and opportunities is a continuous process, which focuses on:

- Identifying, describing and assessing risks, issues and opportunities;
- Maintaining risk, issue and opportunity information regularly;
- Defining actions to mitigate the risks and issues, or to promote the opportunities;
- Implementing these actions;
- Controlling their effectiveness.

Risks are potential events that may affect a Project or the Programme negatively, while issues are actual events. Thus, risks must be managed in order to avoid that they become issues (prevention) or that their initially expected effect becomes actual (protection). Issues must be treated as soon as possible and, where necessary, escalated to the appropriate level in the shortest timeframe. A risk may remain open, while an issue must be solved.

Transparency on risks, shared information and regular reporting on risks, issues and opportunities and the related actions (as part of the regular Projects progress reporting) are essential parts of the project management and must be given special attention by partners.

As with conflicts, there should be a settlement of any issue whenever possible at the lowest decision making body. If there is an issue within a WP, the WP leader should in the first instance try and resolve the issue, with the aid of the Coordinator, if necessary. Only if a resolution is not possible, or affects/it is affected by other WPs and tasks should the matter be raised with the Executive Board. Thus, when necessary, i.e. in function of its criticality or scope, a risk, an issue or an opportunity can be escalated or cascaded to the most appropriate level of responsibility, in mutual agreement, meaning that the responsibility to manage it is moved. The treatment actions as well can be defined for the owner or the risk, issue or opportunity itself and/or for other stakeholders.

The DART GA specifies an initial list of risk descriptions with their probability (low, medium, high), the involved WPs and the impact (low, medium, high) to them, and a mitigation strategy for each risk, which summarizes corrective and/or preventive actions. These are as follows:

Type	Description of risk	Work package(s) involved / Impact	Proposed risk-mitigation strategy
Coordination and Consortium Risks	(Low Probability) Shortage of resources and/or change of personnel.	(High Impact) All WPs/ Decrease in the project Quality.	Make binding agreements on the availability of resources, keep close contact with all partners, early communication of budget and personnel problems, redefine goals and responsibilities (if necessary).
	(Low Probability) Lack of communication among the partners.	(Medium Impact) All WPs/ Project lose focus. Decrease in the project quality. May prevent reaching	Keep close contact with all partners by regular teleconferences and virtual meetings, organise regular plenary and technical meetings at different partners' sites,

	(Low Probability) Lack of communication among the partners.	(Medium Impact) All WPs/ Project lose focus. Decrease in the project quality. May prevent reaching milestones.	Keep close contact with all partners by regular teleconferences and virtual meetings, organise regular plenary and technical meetings at different partners' sites, consider reworking the exploitation plans, detailed project plan that clearly states goals and responsibilities of the partners.
	(Low Probability) Poor quality of deliverables and/or delayed submission.	(High Impact) All WPs/ Obstruction of the project progress. Decrease in the project quality. May prevent reaching milestones.	Executing Board monitors deliverable stages (drafting, reviewing, and revision); status reports by WP and Task leaders highlight problems at early stage.
Dissemination and Exploitation Risks	(Low Probability) Part of the research results not exploitable.	(Medium Impact) All WPs/Decrease exploitability of the project results.	Executing Board reviews research points at project meetings to prevent divergence of research activities.
	(Medium Probability) Scientific papers get rejected at targeted	(High Impact) All WPs/Decrease dissemination of the project results.	Senior researchers guide pre-publication activities. Venues will be selected well upfront. Alternative (equally significant) venues will be identified

Other risks identified at this early stage of the project are as follows:

Type	Description of risk	Work package(s) involved / Impact	Proposed risk-mitigation strategy
RTD Risks	(Low Probability) Incomplete Data sources.	(High Impact) WP1 and progress of the rest of WP's	For all data sources an alternative source will be identified in the Data Management Plan.
	(Low Probability) Transaction Pipeline non functional	(High Impact) WP1 and progress of the rest of WP's	Alternative access methods will be identified, ensuring access (even at lower speed rates)
	(Low Probability) Lack of understanding of data sources	WP2, WP3	Referencing the fields properly, as associated documentation per dataset. Additional dataset deliveries can be put in place if necessary
	(Low Probability) Data preparation takes too	WP2	Discard algorithms after some time preparation limit reached.

	(Low Probability) Data preparation takes too much time.	WP2	Discard algorithms after some time preparation limit reached. Document it as algorithms pending of evaluation.
	(Low Probability) Recent advances on ML not used in the project (fast changing environment).	WP2	Review of recent developments (one year) prior to select the algorithms to use.
	(Low Probability) Too complex trajectory elements to predict .	WP2, WP3	Increasing complexity of predictions till reach limits, step by step approach.
	(Low Probability) Lack of understanding of scenarios and use cases	WP2 and WP3	These should be iterated and thoroughly discussed among partners, so partners to be acquainted with the terminology used, all requirements and implications, also regarding necessary data.
	(Low Probability) Scenarios and use cases too specific for exploratory research or too generic to adequately demonstrate	WP2 and WP3	These should be iterated and thoroughly discussed among partners, so as implications to be thoroughly studied and indentified, also with respect to

The WP leaders, the Scientific Manager and the Project Coordinator are responsible for identifying risks, issues and opportunities that are within the scope of their responsibilities and also identify mitigation strategies and immediate actions.

All these risks must be communicated in a timely manner to the Project Coordinator and must be reported in the three-months and six-months periodic reports, for coordinating on the several issues, risks, threats and opportunities that arise.

Risks and issues will be reported by the Project Coordinator via the H2020 Portal through:

- the Continuous Reporting module
- the Periodic Technical Reports
- the Final Periodic Technical Report

5.9 Cost management

The beneficiaries must keep the records and documentation supporting the costs declared, in particular the following:

(a) for actual costs: adequate records and other supporting documentation to prove the costs declared, such as contracts, subcontracts, invoices and accounting records. In addition, the beneficiaries' usual cost accounting practices and internal control procedures must enable direct reconciliation between the amounts declared, the amounts recorded in their accounts and the amounts stated in the supporting documentation;

(b) for unit costs: adequate records and other supporting documentation to prove the number of units declared. Beneficiaries do not need to identify the actual eligible costs covered or to keep or provide supporting documentation (such as accounting statements) to prove the amount per unit.

In addition, for direct personnel costs declared as unit costs calculated in accordance with the beneficiary's usual cost accounting practices, the beneficiaries must keep adequate records and documentation to prove that the cost accounting practices used comply with the conditions set out in GA Article 6.2, Point A.

The beneficiaries may submit to the JU, for approval by the Commission, a certificate (drawn up in accordance with GA Annex 6) stating that their usual cost accounting practices comply with these conditions ('certificate on the methodology'). If the certificate is approved, costs declared in line with this methodology will not be challenged subsequently, unless the beneficiaries have concealed information for the purpose of the approval.

(c) for flat-rate costs: adequate records and other supporting documentation to prove the eligibility of the costs to which the flat-rate is applied. The beneficiaries do not need to identify the costs covered or provide supporting documentation (such as accounting statements) to prove the amount declared at a flat-rate.

In addition, **for personnel costs (declared as actual costs or on the basis of 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. In the absence of reliable time records of the hours worked on the action, the JU or the Commission may accept alternative evidence supporting the number of hours declared, if it considers that it offers an adequate level of assurance.

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.

5.10 Software management

Access Rights to Software which is Results shall comprise:

- Access to the Object Code; and only,
- where normal use of such an Object Code requires an Application Programming Interface (hereafter API), Access to the Object Code and such an API; and only,
- if a Party can show that the execution of its tasks under the Project or the Exploitation of its own Results is technically or legally impossible without Access to the Source Code, Access to the Source Code to the extent necessary.

Background shall only be provided in Object Code unless otherwise agreed between the Parties concerned.

5.11 Communication management

5.11.1 Email messages

When sending e-mails, it should be remembered that many people may be working on a number of different projects and are likely to receive numerous e-mails every day. This can make it difficult to quickly recognize the significance of an e-mail and also to find and segregate related e-mails. In order to ease this problem, DART related e-mails should **always** include in the subject title the name of the project (i.e. "DART") followed by a more specific description of the subject.

When sending e-mails with file attachments, please consider the size of the attachment. Very large attachments may not be accepted by the recipient server and even modest size attachments (around several MB) might rapidly cause e-mail quotas to be exceeded, particularly where recipients are away from the office for an extended period. Therefore, consideration should be given to uploading the relevant file to the project filestore instead of attaching it to the e-mail. When replying to an e-mail with a file attachment, please ensure that you delete the attachment unless the attachment is still required (e.g. if the reply is copied to a new group of people).

Finally, as a courtesy, please include your contact details on every e-mail that you initiate.

5.11.2 Email lists

To facilitate rapid e-mailing within the consortium, the following e-mail reflector (list) has been created:

Table 2: Email lists

List name	Members	Address
DART	All project participants	DART@unipi.gr

In addition to these, an e-mail reflector for each WP WP1 – WP4 will be set up, in the form of DART-wp*x*@unipi.gr (where *x* is the number of the WP)

Further e-mail reflectors may be set up on request. Any queries related to these lists, requests for additions or for new lists should be addressed to the Project Coordinator.

A current list of the members of each list is maintained on the project filestore under "Consortium Members & Mailbases". Note that, if you send an e-mail to a list that you are a member of, you will not receive a copy.

5.11.3 Conference Calls

It is recommended that all individuals who are able to do so should install an internet-based voice, video and chat facility for conference calls, e.g. Skype, so that all members of the consortium are able to communicate freely and directly with each other. Skype provides a facility for limited conference calls (up to 25 users) with video and screen-sharing facilities. Skype can be downloaded from www.skype.com.

Alternatively, teleconferencing facilities may be used, or simple audio conference facilities.

UPRC uses the teleconferencing facilities provided by the Greek Research and Technology Network (GRNET: https://www.grnet.gr/). The teleconferencing service provided by GRNET is e:Presence (http://epresence.grnet.gr/). The user manual for participating in a teleconference is provided in http://epresence.grnet.gr/docs/usermanual1.3_en.pdf, and a short version of this in http://epresence.grnet.gr/docs/usermanual1.3_short_en.pdf.

The invitation to participate in a teleconference will be initiated by UPRC well in advance, and will be sent through an e-mail to each participant by no-reply@grnet.gr with the subject "[epresence] Πρόσκληση σε τηλεδιάσκεψη (Invitation to teleconference)", where all the necessary information regarding the teleconference is included (subject, starting/ending date and time, moderator name, participation and confirmation hyperlinks).

In addition to this, BR&T-E uses webex teleconferencing facilities and we will mainly reside to these facilities.

Audio conferences may be scheduled. UPRC cannot provide such services. But other DART partners (e.g. BR&T-E) do.

5.12 Handling of sensitive/confidential data

- Each partner shall implement its tasks in accordance with the GA and shall bear sole responsibility for ensuring that its acts within the Project do not knowingly infringe third party property rights.
- Any Access Rights granted expressly exclude any rights to sublicense unless expressly stated otherwise.
- Access Rights shall be free of any administrative transfer costs.
- Access Rights are granted on a non-exclusive basis.
- Results and Background shall be used only for the purposes for which Access Rights to it have been granted.
- All requests for Access Rights shall be made in writing.
- The granting of Access Rights may be made conditional on the acceptance of specific conditions aimed at ensuring that these rights will be used only for the intended purpose and that appropriate confidentiality obligations are in place.
- The requesting Party must show that the Access Rights are Needed (necessary for the implementation of the action/tasks).

Specific background data (i.e. "data, know-how or information (…) that is needed to implement the action or exploit the results") is specified in the Background part of the Consortium Agreement [2]. Access Rights have been granted in principle, and parties have identified and agreed amongst them on the Background for the project.

Background data providers are BR&T-E and CRIDA.

Data stored in CRIDA premises is currently accessed from the outside by using a VPN access with authentication. Retrieval of data is done via DB which requires additional LDAP authentication, and

permissions are granted according to each profile allowing several levels of access to data. Data is also replicated by a factor of 2, ensuring no data loss happens. Additionally NDAs are signed by all the users with granted access.

Data stored in BR&TE premises is protected using a VPN access with two-factor authentication. The data is stored with 3 factor replication. A secondary backup is in place. All access to servers require LDAP login. NDAs are signed by all users accessing to the lab.

It must be clarified that the Data Transaction Pipeline (D1.2), which will also partially cover this issue, is currently under design, so everything written concerning data stored in CRIDA and BR&T-E premises and their provision may be updated.

5.13 Documentation management

5.13.1 DART Filestore

We opted to install a filestore on a dedicated server to further support collaboration, documents and file sharing between partners in the project.

It is crucial that partners can share large files, in a fast and secure way, without losing data ownership. The requirement for privacy and data ownership opted out cloud third-party solutions, and lead us to the setup of a dedicated file store server.

Users can have access using their own credentials, upload or edit files in the store, either through Server Message Block (SMB) protocol (mostly for MS-Windows clients), or SSH File Transfer Protocol (SFTP). Detailes are provided in the Annex.

The filestore includes a folder structure and most project related files will fit within this. This structure reflects the WBS and includes agreements, templates, and guidelines. The WPs WP1-4 are organized into subfolders of DART folder, and each WP folder can be updated with documents regarding data, deliverables and meeting minutes shared to the project partners. The DART folder structure also contains the project agreements i.e. the Grant and Consortium Agreement, members' contact information and EC and JU guidelines, standard templates and relevant documents for the convenience of the partners.

Partners must keep the filestore updated with all DART documents produced (draft and final deliverables, data samples to be used, technical reports, publications and presentations, etc), and should not delete any of the existing folders and or documents uploaded by others. However, partners are encouraged to add further sub-folders where relevant, e.g. for each additional meetings or for technical WP information. Folders may also be created for storing temporary files where, for example, these are too large to circulate by e-mail.

As said, access to the filestore is controlled via a username and password. These are notified to users separately and are not included here. Users must not disclose their credential or the contents of the filestore to third parties.

All project participants have already access to the filestore. In order for any additional member to access the filestore, a nominated representative of the corresponding beneficiary will need to send an email to the Project Coordinator specifying

Name, Surname
email address
role in the project

The new member will receive a personal notification with her/his credentials to access the filestore. These are personal and must be kept securely.

5.13.2 Obligation to keep records and other supporting documentation

The beneficiaries must — for a period of five years after the payment of the balance — keep records and other supporting documentation in order to prove the proper implementation of the action and the costs they declare as eligible. The beneficiaries must also keep records and other supporting documentation on scientific and technical implementation of the action in line with the accepted standards in the respective field. It is the sole responsibility of each beneficiary to archive these records.

If there are on-going checks, reviews, audits, investigations, litigation or other pursuits of claims under the Agreement (including the extension of findings; see GA Articles 22), the beneficiaries must keep the records and other supporting documentation until the end of these procedures.

The beneficiaries must keep the original documents. Digital and digitalised documents are considered originals if they are authorised by the applicable national law. The JU or the Commission may accept non-original documents if it considers that they offer a comparable level of assurance.

All documents and files in the DART filestore, under the responsibility of UPRC, will be archived in a server (which may be the filestore server).

All records and documents will be made available upon request to any DART beneficiary and JU (see GA Article 17) or in the context of checks, reviews, audits or investigations (see Article 22).

5.13.3 File Naming and Version Control

It is essential that every document circulated to other partners in the consortium includes a version number and date. This will help to avoid the situation where partners are working with old or obsolete versions of documents. This information may not be included in the name of any file when documents are communicated externally to DART.

In terms of file names, it is difficult to have a fixed file naming convention which can cover every situation. However, the guidelines below should be followed as much as possible:

- The filename should be descriptive of the contents and should include the project name e.g. “DART_UPRC_EDBT_2015.pptx” for a presentation by UPRC at an EDBT conference in 2015.

- Where a document is specific to a particular date, this date should be included in the filename in the form 'yyyy-mm-dd'. For example, minutes of a WP4 meeting on 1st October 2015 will be called "DART_WP4 Minutes_20150110.docx".

- Where a document is likely to be produced in a similar format by various partners, the partner short name should be included in the filename e.g. "DART_Q1 Report_UPRC" for UPRC's first quarterly partner report.

- Where different versions of a document are used, e.g. for deliverables and reports, the version number should be included at the end of the filename. For draft documents, the version number should start at v0.1, and increment in 0.1 steps. Once the document is formally issued, the version should change to v1.0 and then increment in 0.1 steps for minor changes. For a major change, the version will change to v2.0.

- All documents must have a history of changes with detailed indications and remarks on changes made between subsequent versions, while the use of the track changes feature in Word is recommended to assist the document author/owner.

- When commenting on a document provided by another partner, the filename should be changed to include the initials of the person or short name of the partner making the changes e.g. "DART_D4.1_v1.0_gv.docx" if changes to v1.0 of D4.1 have been made by gv (e.g George Vouros).

Only the originating author or owner of a document should increment the version number.

6 Dissemination, Exploitation and Communication Activities

Dissemination, exploitation and communication planned activities will be detailed in D4.2 "Dissemination Plan" where DART will shape an exploitation and dissemination plan around the exploitation goals of the project, also according to the project execution guidelines and the H2020 Communication Guidelines [8].

The most relevant dissemination means that will be adopted are,

- **Technical reports** to be shared among all the members from the SESAR 2020 ER (Exploratory Research) Research Networks;
- **Papers** concerning the work done and the results obtained throughout the Project: Produced and submitted to a variety of different journals and conferences (both national and international, domain specific and generic, industrial and academic, etc.) in order to guarantee a full visibility to the project;
- **Presentations** of the project outcomes specially focused on the benefits of the use of the data-driven methods for the ATM community

6.1 Dissemination and Communication Plan

Name of project communications contact point: **Mr. David Scarlatti**

Communication Objectives:

The key objectives of the DART Communication are, as in other RIA projects:

- Creating awareness and reasoning behind the project objectives, concepts and relevant results.
- Understanding our targets groups and how they stand to benefit from the project results. The consortium will develop an acute understanding of the relevant stakeholders in both a commercial and research setting through outreach activities, as well as through the expertise of the project consortium and knowledge transfer within the relevant communities.
- Actions to receive feedback on the project in the form of validation of results, alternative approaches and industrial advice from within the project expertise or the wider project community.
- Promote understanding of project visions and innovative methods and actions to pave the way to knowledge transfer of project results and foresight.

Key messages about DART:

Message 1: *DART will deliver understanding on the suitability of applying data-driven models for enhancing our abilities to compute predictions of aircraft trajectories, accounting also for ATM network complexity effects concerning multiple correlated aircraft trajectories.*

Message 2: *DART will explore the applicability of a collection of data mining, machine learning and agent-based models and algorithms to derive a data-driven trajectory prediction capability, accounting also for ATM network complexity effects.*

Message 3: *DART aims at high-fidelity aircraft trajectory prediction capabilities, supporting the trajectory life-cycle at all stages efficiently.*

About DART:

DART aims to present to the ATM community an understanding on what can be achieved today in trajectory prediction by using data-driven models, also accounting for network complexity effects. It is expected that data-driven techniques help to improve the performance and accuracy of predictions by complementing classical model-based prediction approaches. These improved predictions will enable advanced collaborative decision making processes, which finally will lead to a more efficient ATM procedures.

Target groups identified for DART:

Three Target Groups have been identified for the communications activities:

- General Public: This group can benefit from general understanding of project objectives and results without going into too complex details.
- Research Community: This group can benefit from project objectives and results due to possible application to similar problems, being relevant the techniques and methods used and the technical details of them.
- ATM Research community: This group can benefit from project objectives and results focusing specifically into ATM problems, being relevant the techniques and methods used and the technical details of them.

Provisional list of key communication and dissemination activities:

"Dissemination Activities" referred to GA has been updated as follows. The list will be further refined in D4.2.

Dissemination Goal	Target Quantity	Target Group	Activity
Publications (scientific Target Group)	Open access will be granted to all scientific publications resulting from DART, targeting not only	Research Community	DART Vision paper. Big Data event TBD.

	ATM group but Big-Data Analytics, Interactive Visual Analytics, Machine Learning, Data and Information management groups.	Research Community	Project Goals and Objectives presentation. Opportunistic.
Papers at scientific conferences appearing in proceedings	At least 3. Potential conferences include: ATACCS, ATM SEMINAR (U.S.A. Europe), SESAR Innovation Days, DEBS, VLDB, ACMSIG Spatial, SSTD, EDBT, VAST, EuroVis, AAMAS	Research Community	Participation in Multiagent conference, target: Intl. Conf. of Agents and Multiagent Systems (AAMAS) May, 2018
		Research Community	Participation in Visual analytics conference. Target TBD by FRFH.
		ATM Research Community	Target: Submission to 8th ICRAT
Papers in Journals	At least 1 submission to journals of high impact. Potential journal titles include: (AIAA), IEEE National Aerospace & Electronics Conference, IEEE TKDE, ACM ToCL, International Journal of Geographical Information Science, ,International Journal of Location-based Services, Computers Environment and Urban Systems, IEEE Transaction on Visualization and computer Graphics, Information Visualization, Computer Graphics Forum,	Research Community	Journals initially identified: • AIAA Guidance, Control & Dynamics • IEEE Transactions on Intelligent Transportation Systems • Journal of Air Transport Management
Workshop organized at a scientific event	At least 1 concerning one of the following topics: Management of spatio-temporal big data in ATM Detection and forecasting of aircraft trajectories Recognition and forecasting of events concerning aircrafts	ATM Research community	Workshop with other ER project on going (i.e. COPTRA if the application selected match)

Publications (technically interested community as large)	At least 1: Management of spatio-temporal big data in ATM Detection and forecasting of aircraft trajectories Recognition and forecasting of events concerning aircrafts	Research Community	Target journal identified: Data and Knowledge Engineering (Elsevier) IEEE Trans. of Knowledge and data Engineering (TKDE) Big Data Research (Elsevier) IEEE Trans. of Big Data Machine Learning (Springer)
DART white papers	At least 1: A "DART data-driven trajectory predictions" white paper	ATM Research community	A "DART data-driven trajectory predictions" white paper
Press releases	At least 1: For the technological developments and their impact in ATM.	ATM Research community	SJU dedicated webpage
Web Site visits	600 p.a. with 1/3 spending more than 2 minutes on the site	General Public	Project Website Launch and periodic update
Social Media Presence	Established groups in at least 2 networks (e.g. LinkedIn, Twitter) with regular updates. Evidence of engagement with target audience – demonstrated via comments, sharing of relevant content, RTs etc.	General Public	Linkedin Group Launch (Social Network 1) and periodic updates
		Research Community	Researchgate Project Launch (Social Network 2) and periodic updates
Stakeholders interest groups	At least 1 presentation at WP-E networks events	ATM Research community	Workshop on data-driven trajectory prediction.
Demonstrations of prototypes at ATM-dominated events	At least 1. (i.e. SESAR innovation days... ATM world congress...)	ATM Research community	Workshop on data-driven trajectory prediction.

Any communication activity that is expected to have a 'major media impact', i.e. media coverage (online and printed press, broadcast media, social media, etc.), that will go beyond a local impact and which could have the potential for national and international outreach must be first notified to the SJU.

On top of "public available" channels, DART will leverage also the SJU and the partners communication channels.

6.2 Exploitation Strategy

As stated in the GA, the three natural ways for exploitation of the results of the project, due to the low TRL's expected are:

- Further internal research: All partners have internal R&D programs in which the results of DART could be moved forward.
- Collaborative Research: DART results could be the starting point for further SESAR LTE projects.
- Internal product development: DART outcomes may form part of future products (i.e. Flight Planners for Boeing)

DART role in the Research & Innovation pipeline is to introduce data-driven methods from the scientific arena to the TRL1 level. DART papers expect to setup the clear Basic Principles that demonstrate the applicability of these methods to the trajectory prediction problem and will evaluate how promising the results are in order to promote (or not) further research. In order to prepare an easier transition event to higher levels (TRL2) and following the recommendation of the SJU during DART KOM, a specific ATM application will be down selected from the early stages of the project (M3). The intention is DART not only show the methods can work for trajectory prediction but are useful to enhance the ATM capabilities in a specific scenario showing a current pain point of the system.

If the results are promising, the proposal will be to further research on data-driven methods, for the application selected in DART (and/or other similar), aiming to build prototypes for early validation, ideally under the SESAR LTE program. If results are interesting enough for the selected application the partners will seek patent protection, independently of further research investment, to ensure early protection of the development and of the future products derived.

7 Grievance and Conflict Resolution Procedures

7.1 Conflict resolution

In the case of a technical, financial or procedural conflict arising among partners, there is a principle of amicable settlement whenever possible at the lowest decision making body. If there is a dispute within a WP, the WP leader should in the first instance try and resolve the issue, with the aid of the Coordinator if necessary. Only if a resolution is not possible should the matter be raised with the Executive Board. The Coordinator should help in the conflict resolution as necessary. Failing such a resolution, the Executive Board will discuss the issues and vote on a resolution to achieve a binding solution. If necessary, individual partners can seek to convene an extraordinary meeting of the Executive Board, and all partners are able to put resolutions to that board.

7.2 Grievance Procedure

Should a partner wish to complain about any member of the Consortium, the first action should be to document, in detail, the grievance, communicating this in private to the Coordinator. The individual concerned will then be given a right to reply to the complaint, again, in private. The Coordinator will then work to resolve the complaint to the satisfaction of both parties. Partners should refrain from making personal attacks or remarks against any individual.

8 Publications Clearance Procedure

During the course of the project many partners will disseminate information about the project through (not an inclusive list):

- presentations at public events;
- posters at public events ;
- submission of articles for publication in professional and other journals;
- other means.

There is a duty within the consortium to ensure that information is not disclosed that partners would regard as proprietary, or that they may be using to prepare patent applications. If this type of information inadvertently becomes public, then any subsequent patent applications relying on this information would be invalid. Any information prepared for public dissemination must be made available for review by any partner whose interests may be affected in advance of its submission for publication, i.e. in good time to review it and make comments and changes if necessary. The partner wishing to publish, present or disclose information about the project must follow the correct procedure below.

The partner wishing to publish shall forward an abstract and/or draft presentation to the whole consortium.

As a general rule, the time-limit for prior notice of any such dissemination activity to be given to the other partners shall be **30 days**.

Following receipt of the aforementioned notification, any of the partners may object to such dissemination activity within **10 days** from the date on which they received such notification.

Should any partner fail to reply within the said period, it shall be deemed that such partner does not object to the relevant publication.

An objection is justified if:

- The objecting partner's legitimate academic or commercial interests would be significantly harmed by the publication; or
- The protection of the objecting partner's Foreground or Background is adversely affected.

The objection has to include a precise request for necessary modifications. If an objection has been raised, the involved partners shall discuss how to overcome the justified grounds for the objection on

a timely basis (for example by amendment to the planned publication and/or by protecting information before publication).

A partner shall not include in any dissemination activity another partner's Results or Background without obtaining the owning partner's prior written approval, unless they are already published.

Please note that all publications MUST acknowledge the funding from the EU. A suitable form of words is "**This project has received funding from the SESAR Joint Undertaking under grant agreement No 699299 under European Union's Horizon 2020 research and innovation programme**".

Also, any dissemination of results must indicate that it reflects only the author's view and that the funding body is not responsible for any use that may be made of the information it contains.

A suitable form of words is "**The opinions expressed herein reflect the author's view only. Under no circumstances shall the SESAR Joint Undertaking be responsible for any use that may be made of the information contained herein**".

9 Procedure for IP Protection and Exploitation

Any partner within the consortium has the right to protect knowledge it has generated within the project. Partners should however declare their intention of seeking protection for IP generated within the DART project to the consortium. Partners must also take into account the contributions of other partners in the generation of such knowledge and come to an amicable and reasonable decision on it sole or joint ownership.

The partner wishing to seek protection should address the concerns of the objecting partner and, if the claim is legitimate, negotiate a reasonable solution.

Intellectual Property protection and access rights are detailed in the Grant Agreement, the Consortium Agreement and Guide to IP in Horizon 2020 [7], all of which can be found on the project filestore.

Partners wishing to seek IP protection should follow this procedure:

- Partners should initially discuss their intention to seek protection with partners that have been involved with the generation of that knowledge.
- After this, the partner must inform the consortium by e-mail of the intention to seek protection, giving as much detail as possible without compromising the application.

It must be noted that partners may address any of their enquiries and concerns to the European IPR Helpdesk, which is available free of charge for EC projects: https://www.iprhelpdesk.eu/.

A minimum of **30 days** prior notice of application shall be given by the party wishing to seek protection.

Any partner may object within **10 days** of receipt of the notice on the grounds that it has a legitimate claim to be included in the application or for some other good reason.

10 Beneficiaries Contacts / Team Members

University of Piraeus Research Center (UPRC)		
Contact 1	George Vouros georgev@unipi.gr	Project Coordinator, WP 4 Leader, UPRC Group Leader
Contact 2	Yannis Theodoridis ytheod@unipi.gr	WP2 PoC Team Member
	Emmanouil Orfanoudakis manos.orfanoudakis@gmail.com	WP3 Team member
	Nikos Pelekis npelekis@unipi.gr	WP2 Team Member
	Georgios Chalkiadakis gehalk@intelligence.tuc.gr	WP3 team Member
	Konstantinos Blekas kblekas@cs.uoi.gr	WP3 Team Member
	Despina Kopanaki dkopanaki@gmail.com	Administration Officer
Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung E.V (FRAUNHOFER)		
Contact 1	Georg Fuchs Georg.Fuchs@iais.fraunhofer.de	FRAUNHOFER Group Leader WP1, WP2, WP3 PoC
Contact 2	Gennady Andrienko	Team Member

	gennady.andrienko@iais.fraunhofer.de	
	Natalia Andrienko natalia.andrienko@iais.fraunhofer.de	Team Member
	David Knodt David.Knodt@iais.fraunhofer.de	Team Member
Boeing Research and Technology Europe (BR&T-E)		
Contact 1	Vilaplana, Miguel miguel.vilaplana@boeing.com	BRTE Group Leader
Contact 2	David Scarlatti David.Scarlatti@boeing.com	WP2 Leader WP1, WP2 PoC DART PoC
	Pablo Costas pablo.costas@boeing.com	Team Member
Centro De Referentia Investigation, Desarrollo E Innovation ATM (CRIDA)		
Contact 1	Jose Manuel Cordero Garcia jmcordero@e-crida.enaire.es	CRIDA Group Leader WP1 co-leader, WP2,3,4 PoC,
Contact 2	Miguel Garcia Martinez mgmartinez@e-crida.enaire.es	WP1 Learder
	Esther Calvo ecalvof@e-crida.enaire.es	WP 2,3 PoC
	Laura Fresno lfresno@e-crida.enaire.es	Team Member
	Sebastian Rossello srooliver@e-crida.enaire.es	Team Member

References

[1] SJU, Project Execution Guidelines for SESAR 2020 Exploratory Research, Edition 01.00.00, 08/02/2016

[2] DART, DART 699299 Consortium Agreement, v1.0, 18/02/2016.

[3] DART, DART 699299 Grant Agreement, 14/06/2016.

[4] Participant Portal H2020, Online Manual http://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/grant-management/communication_en.htm

[5] DART, Kick-off Meeting Minutes, Edition 01.00.00, 04/07/2016.

[6] SESAR 2020 Exploratory Research: First Call for Research Projects, V 1.2, 03/06/2015. http://ec.europa.eu/research/participants/data/ref/h2020/other/call_fiches/jtis/h2020-call-doc-er-sesar-ju_en.pdf

[7] Your Guide to IPR in Horizon 2020, The European IPR Help Desk, www.iprhelpdesk.eu

[8] H2020 Communication Guidelines: http://ec.europa.eu/research/participants/data/ref/h2020/other/gm/h2020-guide-comm_en.pdf

ANNEX (access to the filestore)

This page is intentionally left blank

Connecting to the Filestore

You can access, update and share files within the project folder at the Filestore **pincloud6.ted.unipi.gr**. Please be cautious on file updates and do not delete any contents.

Windows users

Windows users can access datAcron folder either using SMB or SFTP. Specifically,

a) using SMB protocol:

- Go to the Start menu and choose "Run" or hit Control+R from the Windows desktop
- Enter \\pincloud6.ted.unipi.gr and choose "OK"
- Enter your credentials and click on "OK"
- You may see all folders that you have access to. Start from the root folder which is named "DART".

b) using SFTP: You may download and use any SFTP client. It is recommended to use portable clients (i.e. no need for installation third party software and/or administration rights for connecting to the server), e.g. `http://lifehacker.com/5039956/five-best-ftp-clients`.

For example, you can download from `https://winscp.net/eng/download.php` the portable version of WinSCP as shown in Figure 1.

For any client you may use, make sure that the selected protocol is SFTP (port 22) and the host address is pincloud6.ted.unipi.gr.

Figure 1: WinSCP portable application

- Unzip the downloaded file and run the executable file WinSCP.exe
- Select SFTP protocol and port 22,
- type the server's address pincloud6.ted.unipi.gr as shown in Figure 2,
- fill in the user credentials.

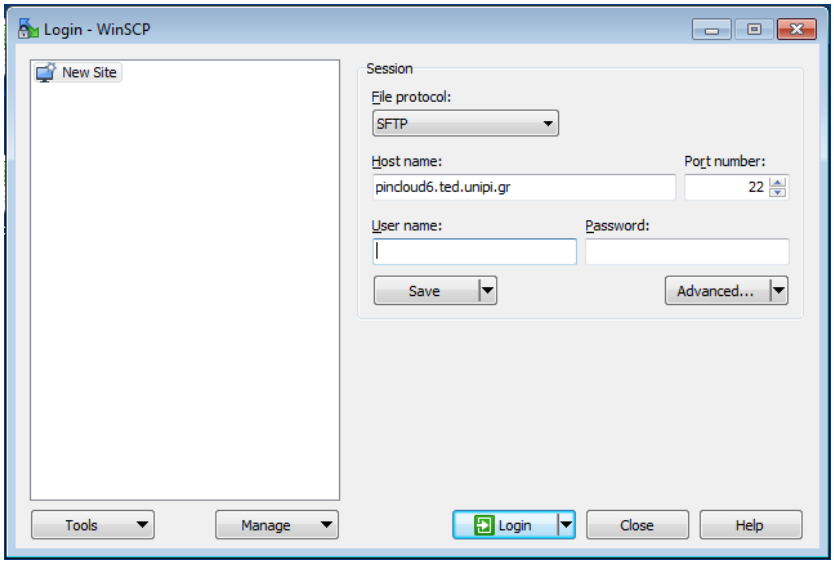


Figure 2: Connect to server using WinSCP

Mac OS/X users

Mac OS/X users can access datAcron folder either using SMB/AFP or SFTP. Specifically,

a) using SMB or AFP protocol:

- From the OS X Finder, hit Command+K to summon "Connect To Server"
- Choose the "Browse" button to browse the available network shares, double-clicking on the share to enter a login
  OR: In the "Server Address" field, simply enter afp://pincloud6.ted.unipi.gr (or smb://pincloud6.ted.unipi.gr) and enter your credentials.

b) using SFTP:

- Using command line utility for SFTP file transfer:
  * Type
    `$ sftp user@pincloud6.ted.unipi.gr`
    where `user` should be replaced with your username.
  * Press enter and type your password when prompted.

– Alternatively, you can use any GUI-based SFTP client, like `http://cyberduck.ch/`, `http://rsug.itd.umich.edu/software/fugu/`, `https://filezilla-project.org/`, or any of your convenience.

  For any client you may use, make sure that the selected protocol is SFTP (port 22) and the host address is pincloud6.ted.unipi.gr.

Linux users

a) using SMB protocol: Open file manager and type in the address bar:
`smb://pincloud6.ted.unipi.gr`
When prompted, enter your user credentials to establish the connection with the server.

b) using SFTP: You can use the command line utility for SFTP file transfer, typing at the terminal:
`$ sftp user@pincloud6.ted.unipi.gr`
where `user` should be replaced with the username.

Press enter and type your password when prompted.

Alternatively, you can have access using any GUI-based SFTP client, like `https://filezilla-project.org/`, or any of your convenience.

For any client you may use, make sure that the selected protocol is SFTP (port 22) and the host address is pincloud6.ted.unipi.gr.

ANNEX (Internal Periodic Report Template)

This page is intentionally left blank

PERIODIC REPORT

Project Number	699299
Acronym	DART
Period Number	[1st] [2nd] [3rd] [4th] [5th] [6th]
Period Covered	From [dd/mm/yyy] to [dd/mm/yyy]

Beneficiary Number	[beneficiary number]
Beneficiary Short Name	[beneficiary short name]

PLEASE FILL THE APPROPRIATE PARTS DEPENDING ON YOUR ROLES AS

PC: PROJECT COORDINATOR
WPL: WORKPACKAGE LEADER
SME: SMALL MEDIUM ENTERPRISE
GROUP LEADER: BENEFICIARY GROUP LEADER

PART A

1. Summary for publication

1.1 Summary of the context and overall objectives of the project [PC]

1.2 Work performed from the beginning of the project to the end of the period covered by the report and main results achieved so far [PC]

1.3 Progress beyond the state of the art and expected potential impact (including the socio-economic impact and the wider societal implications of the project so far) [WPL]

2. Deliverables [PC]

Del No	Del Name	WP No	Lead Beneficiary	Type	Dissemination Level	Delivery Date from Annex I	Actual Delivery Date	Forecasted Delivery Date	Status	Comments
									[Not submitted] [Request for revision] [Not assessed yet] [Not valid] [Accepted]	

3. Milestones [PC]

MS No	MS Title	Related WP(s) No	Lead Beneficiary	Delivery Date from Annex I	Means of Verification	Achieved	Forecasted Achievement Date	Achieved	Comments

4. Ethical Issues [PC]

Ethic Requirement (annex I)	Due date of the compliance of ethic requirement	Report of the independent ethics advisor/ advisory board if applicable	Comments

5. Critical implementation risks and mitigation actions [WPL]

At the end of each period beneficiaries should give the state of play of every risk identified in Annex 1 and if necessary give new mitigation measures.

5.1 Foreseen Risks [WPL]

The following table lists the Risks identified in Annex 1. The table is read-only and it is provided as a reference for the State of Play table below.

Risk Number	Description of Risk	WPs concerned	Proposed Mitigation Measures

5.2 Unforeseen Risks [WPL]

Risk Number	Description of Risk	WPs concerned	Proposed Mitigation Measures

5.3 States of the Play for Risk Mitigation [WPL]

Risk Number	Period	Did you apply risk mitigation measures?	Did you risk materialize?	Comments

6. Dissemination and exploitation of results [WPL]

6.1 Scientific publications

Publications accessible via OpenAIRE will be displayed automatically. Beneficiaries will only need to check if the publications are linked to the project.

In case of publications not registered via OpenAIRE, the beneficiary encodes the Digital Object Identifier (DOI) and all the rest of information is complete automatically.

Type of Scientific Publication	**Title of Scientific Publication**	**DOI**	**ISSN or eSSN**	**Authors**	**Title of the Journal or equivalent**	**Number, Date**	**Publisher**	**Place of publication**	**Year of publication**	**Relevant pages**	**Public and Private participation**	**Peer review**	**Is/Will open access provided to this publication**
[Article in journal] [Publication in conference proceeding/workshop] [Books/Monographs] [Chapters in books] [Thesis/dissertation]						[insert number of the journal] [insert month of the publication] [insert year of the publication]							[Yes - Green OA [insert the length of embargo if any]] [Yes - Gold OA [insert the amount of processing charges in EUR if any]] [NO]

6.2 Dissemination and communication activities [Dissemination and Communication WP Leader]

List only activities directly linked to the project.

Type of Dissemination and Communication Activities	Number of activities
[Organisation of a Conference]	
[Organisation of a workshop]	
[Press release]	
[Non-scientific and non-peer reviewed publications (popularised publications)]	
[Exhibition]	
[Flyers training]	
[Social media]	
[Web-site]	
[Communication campaign (e.g radio, TV)]	
[Participation to a conference]	
[Participation to a workshop]	
[Participation to an event other than a conference or workshop]	
[Video/film]	
[Brokerage event]	
[Pitch event]	
[Trade fair]	

[Participation in activities organised jointly with other H2020 project(s)] [Other]	
Total funding amount	**Amount**

Type of audience reached In the context of all dissemination & communication activities ('multiple choices' is possible)	**Number of persons reached**
[Scientific Community (higher education, Research)] [Industry] [Civil Society] [General Public] [Policy makers] [Medias] [Investors] [Customers]	

6.3 Intellectual property rights resulting from the project [WPL]

Type of IP rights	Application reference	Date of Application	Official Title of the application	Applicants	Has the IPR protection been awarded?	If available, official publication number of award of protection
[Patent] [Trademark] [Registered design] [Utility model] [Other]	[Option for international applications of patents [insert IP international organisation code] [insert serial number]] [Option for national applications of patents [insert country code (two letters)] [insert serial number]] [Option for other registered IPR [insert application reference country code (two letters) or organisation code)] [insert alfa numeric identifier]]					[Option for patents [insert code (two letters referring to a country or organisation)] [insert serial number]] Option for rest [insert official publication number]]

6.4 Innovation [WPL]

Explanation on the terminology used can be found in the Online Manual.

[Option for societal challenges, SME Instrument Does the project include the following activities and if so how many of each?

Activities Developed	Number

Prototypes	
Testing Activities	

Will the project lead to launching one of the following into the market (several possible):

New Product	Number
New Process	
New Method	

7. Impact on SMEs [SMEs]

SME Name	Turnover of the company at the beginning of the project/most recent accountability period from the beginning of the project	Number of employees at the beginning of the project/ most recent accountability period from the beginning of the project	Turnover of the company at the most recent accountability period	Number of employees at the most recent accountability period
	[insert amount from database (pre-filled if information is available, otherwise the user will need to enter the information manually]	[insert amount from database (pre-filled if information is available, otherwise the user will need to enter the information manually]	Amount	Number

8. Open Research Data [WPL]

More information on Data Management Plans (DMPs) in the Online Manual.

Digital Object Identifier, DOI (if available)	Title/Identifier (if no DOI available)	Is this dataset Openly accessible ?	Is this dataset reusable	If the dataset is linked to a publication, specify the DOI of the publication
				[insert DOI reference of the publication]

Accessible means Open Access defined as free of charge access for anyone via Internet. Answer "yes" if the open access to the data is already established or if it will be established after an embargo period.
Re-usability has 2 aspects: 1) technical: the technical standards used are compatible 2) legal: the necessary rights are in place for other users to use the dataset.

9. Gender Gender of R&D participants involved in the project [GROUP LEADERS]

Beneficiary name	Number F including third parties (if appropriate)	Number M including third parties (if appropriate)	Total including third parties (if appropriate)

PART B

1. Explanation of the work carried out by the beneficiaries and Overview of the progress

Explain the work carried out during the reporting period in line with the Annex 1 to the Grant Agreement. Include an overview of the project results towards the objective of the action in line with the structure of the Annex 1 to the Grant Agreement including summary of deliverables and milestones, and a summary of exploitable results and an explanation about how they can/will be exploited.
(No page limit per workpackage but report shall be concise and readable. Any duplication should be avoided).

1.1 Objectives

List the specific objectives for the project as described in section 1.1 of the DoA and described the work carried out during the reporting period towards the achievement of each listed objective. Provide clear and measurable details.

1.2 Explanation of the work carried per WP

1.2.1 Work Package 1

Explain the work carried out in WP1 during the reporting period giving details of te work carried out by each beneficiary involved.

1.2.2 Work package 2 Etc.

1.3 Impact

Include in this section whether the information on section 2.1 of the DoA (how your project will contribute to the expected impacts) is still relevant or needs to be updated. Include further details in the latter case.

2. Update of the plan for exploitation and dissemination of result (if applicable)

Include in this section whether the plan for exploitation and dissemination of results as described in the DoA needs to be updated and give details.

3. Update of the data management plan (if applicable)

Include in this section whether the data management plan as described in the DoA needs to be updated and give details.

4. Follow-up of recommendations and comments from previous review(s) (if applicable)

Include in this section the list of recommendations and comments from previous reviews and give information on how they have been followed up.

5. Deviations from Annex 1 (if applicable)

Explain the reasons for deviations from the DoA, the consequences and the proposed corrective actions.

5.1 Tasks

Include explanations for tasks not fully implemented, critical objectives not fully achieved and/or not being on schedule. Explain also the impact on other tasks on the available resources and the planning.

5.2 Use of resources

Include explanations on deviations of the use of resources between actual and planned use of resources in Annex 1, especially related to person-months per work package.

5.2.1 Unforeseen subcontracting (if applicable)

Specify in this section: a) the work (the tasks) performed by a subcontractor which may cover only a limited part of the project; b) explanation of the circumstances which caused the need for a subcontract, taking into account the specific characteristics of the project; c) the confirmation that the subcontractor has been selected ensuring the best value for money or, if appropriate, the lowest price and avoiding any conflict of interests.

5.2.2 Unforeseen use of in kind contribution from third party against payment or free of charges (if applicable)

Specify in this section: d) the identity of the third party; e) the resources made available by the third party respectively against payment or free of charges f) explanation of the circumstances which caused the need for using these resources for carrying out the work.

Report on Explanations on the use of resources

A report on explanations on the use of resources per beneficiary. The report is generated automatically with the information inserted by the beneficiary at the time the financial statements are completed in the IT tool.

Project Number	699299
Acronym	DART
Period Number	[1st] [2nd] [3rd] [4th] [5th] [6th]
Period Covered	From [dd/mm/yyy] to [dd/mm/yyy]

Beneficiary Number	[beneficiary number]
Beneficiary Short Name	[beneficiary short name]

1. Direct personnel costs declared as actual costs

(When direct personnel costs are reported in the financial statement, information of the amount on person months per WP must be given).

Person Months	Associated WP
[insert number pm]	WP1
[insert number pm]	WP2
[insert number pm]	WP3
[insert number pm]	WP4

2. Direct personnel costs declared as unit costs

(When direct personnel costs are reported as unit costs in the financial statement, information on the amount of person months per WP must be provided).

Person Months	Associated WP
[insert number pm]	WP1
[insert number pm]	WP2
[insert number pm]	WP3
[insert number pm]	WP4

3. Use of in kind contribution from third party

(When direct personnel costs are reported – as actual or unit costs - in the financial statement, details about the use of in kind contribution from third party should be provided (if any): the costs, the name and type of the third party and whether the costs were foreseen in Annex 1 or not. Further explanations are mandatory if costs were not foreseen in Annex 1).

Third Party name	Type	Foreseen in Annex 1	Explanations (if not foreseen in Annex 1)	Costs
[insert name]	*[Free of charge] [Against payment]*	*[YES] [NO}*	[insert comment]	[insert amount in EUR]
One row per third party				
TOTAL				[insert amount in EUR]

Direct costs of subcontracting

(When subcontracting costs are reported in the financial statement, information on the costs, description of the subcontract and if the subcontract was foreseen in Annex 1 or not should be provided. Further explanations are mandatory if subcontract not foreseen in Annex 1).

Description	Foreseen in Annex 1	Explanations (if not foreseen in Annex 1)	Costs
[insert comment]	*[YES] [NO}*	[insert comment]	[insert amount in EUR]
One row per subcontract			
TOTAL			[insert amount in EUR]

Direct costs of providing financial support to third parties

(When direct costs of financial support to third parties (cascade funding) are reported in the financial statement, information on the costs and their description should be provided).

Description	Costs
[insert comment]	[insert amount in EUR]
One row per item	
TOTAL	[insert amount in EUR]

Other direct costs: explanation of major cost items if the amount exceeds 15% of personnel costs

If costs declared under "other direct costs" are equal or less than 15% of claimed personnel costs for the beneficiary in each reporting period, no need to give any detail.

If costs declared under "other direct costs" are higher than 15% of claimed personnel costs for the beneficiary in each reporting period, major direct costs items need to be recorded . The record of items must be up to the level that the remaining costs are below 15% of personnel costs, starting from the cost items of highest value in terms of cost amount. If costs were foreseen in the Annex 1 no further explanation is needed. If costs were not foreseen in Annex 1, further explanations are needed.

Short description	Category	Associated WP	Foreseen in Annex 1	Explanations (if not foreseen in Annex 1)	Costs
[insert comment]	*[Travel] [Equipment] [Other goods & services]*	[insert WP number]	*[YES] [NO}*	[insert comment]	[insert amount in EUR]
One row per item					
TOTAL					[insert amount in EUR]

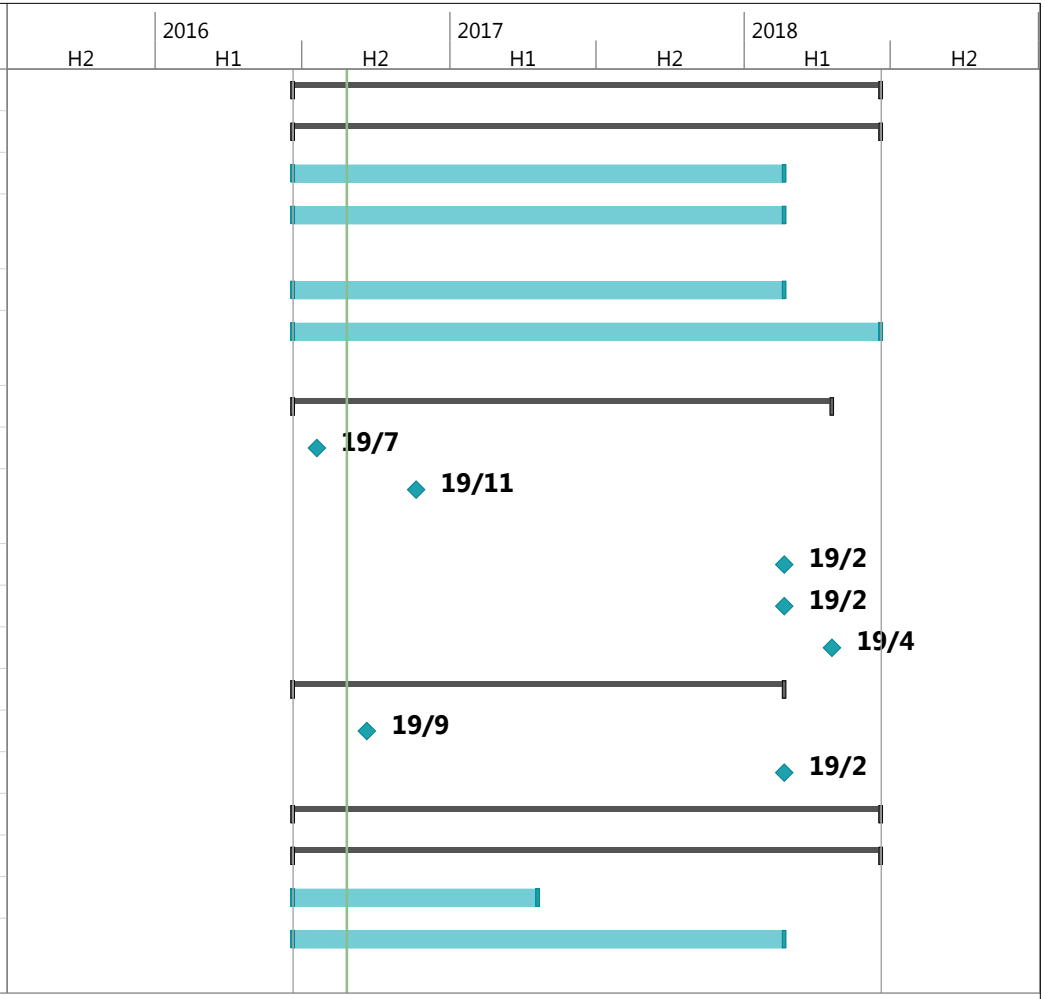
Other direct costs reported as use of in kind contribution from third party

Third Party Name	Type	Category	Associated WP	Foreseen in Annex 1	Explanations (if not foreseen in Annex 1)	Costs
[insert comment]	*[Free of charge] [Against payment]*	*[Travel] [Equipment] [Other goods & services]*	[insert WP number]	*[YES] [NO}*	[insert comment]	[insert amount in EUR]
One row per item						
TOTAL						[insert amount in EUR]

ANNEX (Gantt Chart)

This page is intentionally left blank

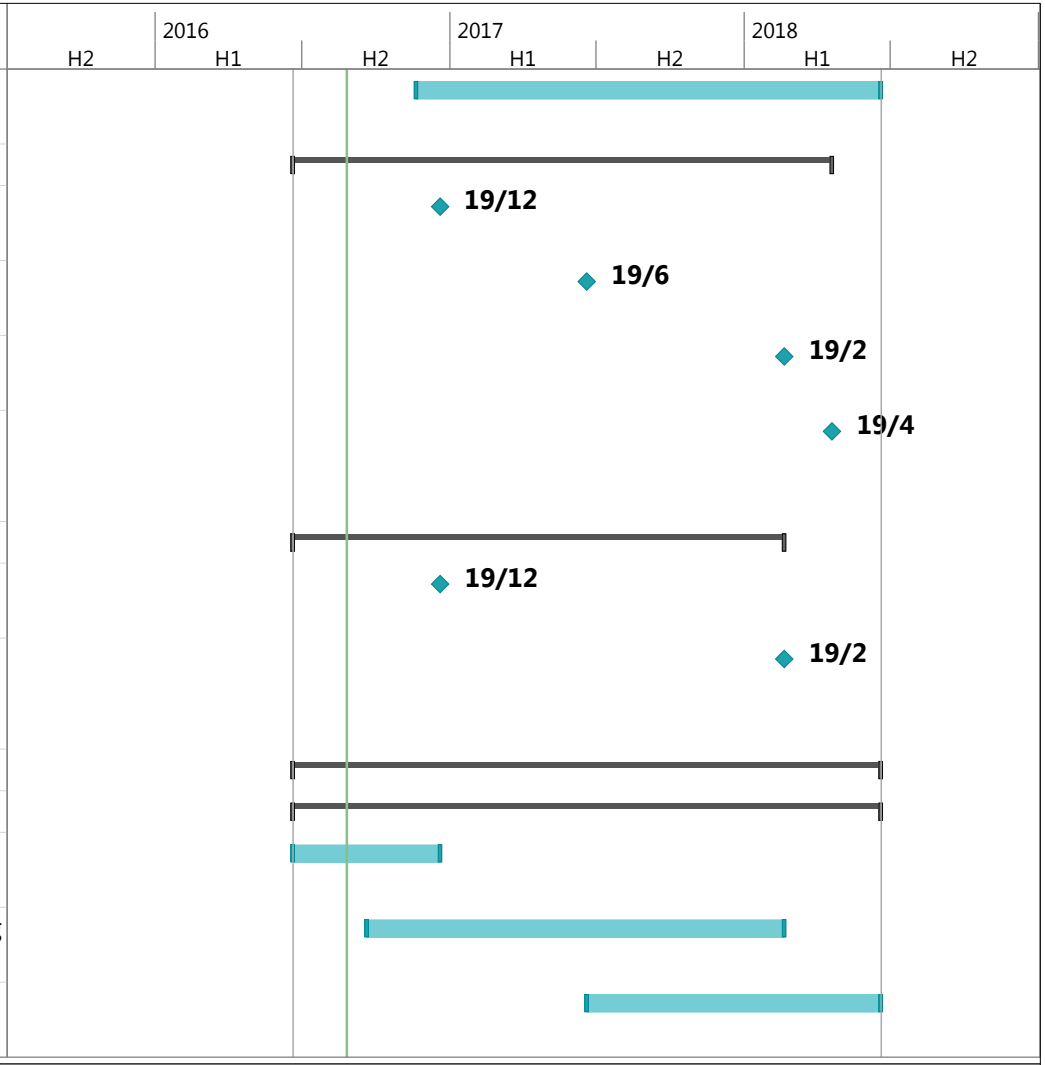
ID	Task Mode	Task Name
1		**WP1: Data Management**
2		**Tasks**
3		Task 1.1: Data Gathering
4		Task 1.2:Data: Set Definition, Assembly and Publishing
5		Task 1.3: Synthetic Data Generation
6		Task 1.4: Visual Exploration for Data Validation and Hypothesis Formulation
7		**Deliverables**
8		D1.1: Data Management Plan
9		D1.2: Data Transaction Pipeline description
10		D1.3: DART Data Pool
11		D1.4 Synthetic Data package
12		D1.5: Visualization Exploration Report
13		**Milestones**
14		MS1: First high Quality Dataset
15		MS4: Full Dataset repository completed
16		**WP2: Single Trajectory Prediction**
17		**Tasks**
18		Task 2.1: Dataset Features Extraction
19		Task 2.2: Data-Driven Algorithms: Selection & Training



Project: Project1
Date: Fri 26/8/16

Task		Inactive Summary		External Tasks	
Split		Manual Task		External Milestone	
Milestone		Duration-only		Deadline	
Summary		Manual Summary Rollup		Progress	
Project Summary		Manual Summary		Manual Progress	
Inactive Task		Start-only			
Inactive Milestone		Finish-only			

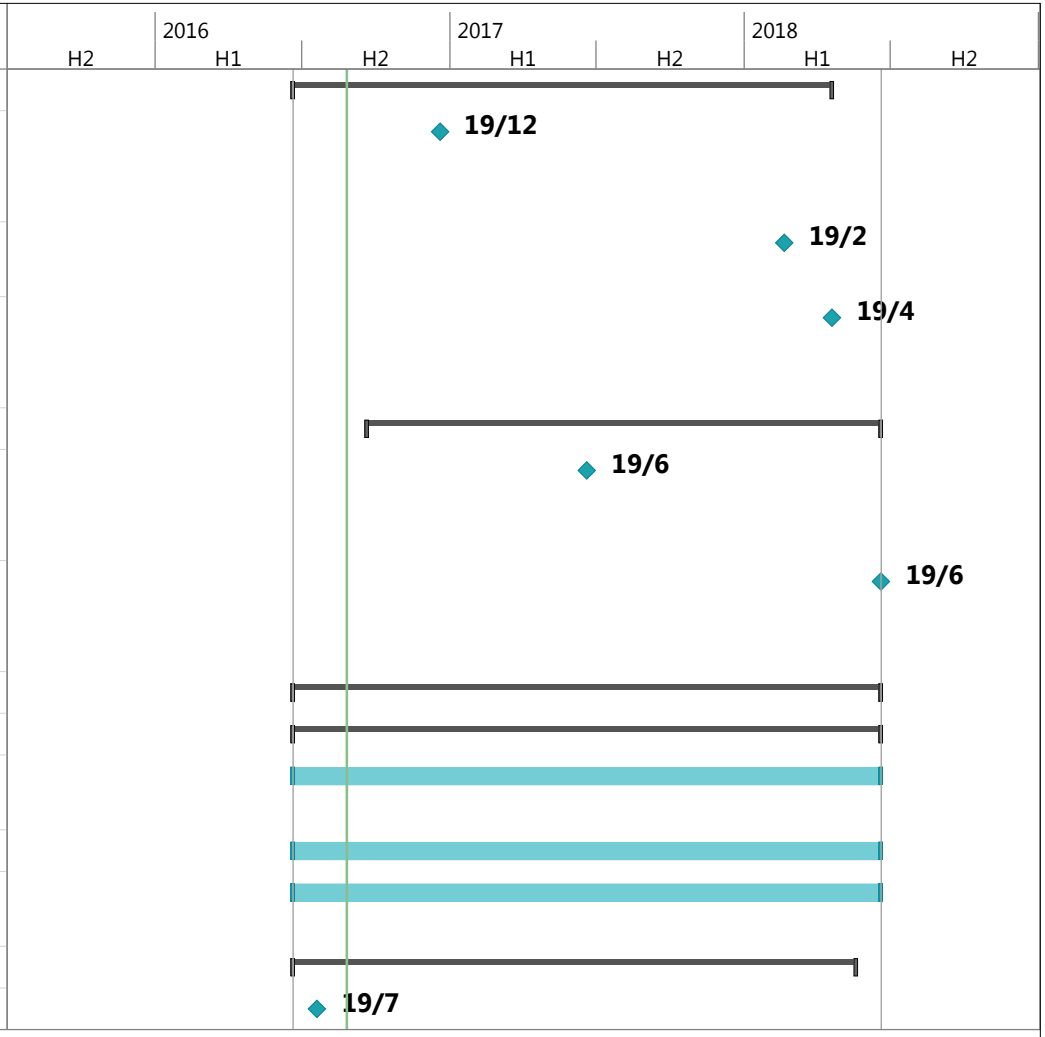
ID	Task Mode	Task Name
20		Task 2.3: Data-Driven Algorithms: Test, Validation & Visualization
21		**Deliverables**
22		D2.1: Initial set of Data-driven Trajectory Prediction algorithms
23		D2.2: Visual Interface for Algorithms Analysis
24		D2.3: Enhanced set of Data-driven Trajectory Prediction algorithms
25		D2.4: Evaluation and Validation of Algorithms for Single Trajectory Prediction
26		**Milestones**
27		MS2: First Data-Driven algorithms working for single-trajectory prediction
28		MS5: Full Data-Driven algorithms validation for single trajectory prediction completed.
29		**WP3: Collaborative Trajectory Predictions**
30		**Tasks**
31		Task 3.1: Scenarios setup and specification of requirements
32		Task 3.2: Collaborative reinforcement learning for trajectory predictions
33		Task 3.4: Model Test, Validation & Visualization



Project: Project1
Date: Fri 26/8/16

Task		Inactive Summary		External Tasks	
Split		Manual Task		External Milestone	
Milestone		Duration-only		Deadline	
Summary		Manual Summary Rollup		Progress	
Project Summary		Manual Summary		Manual Progress	
Inactive Task		Start-only			
Inactive Milestone		Finish-only			

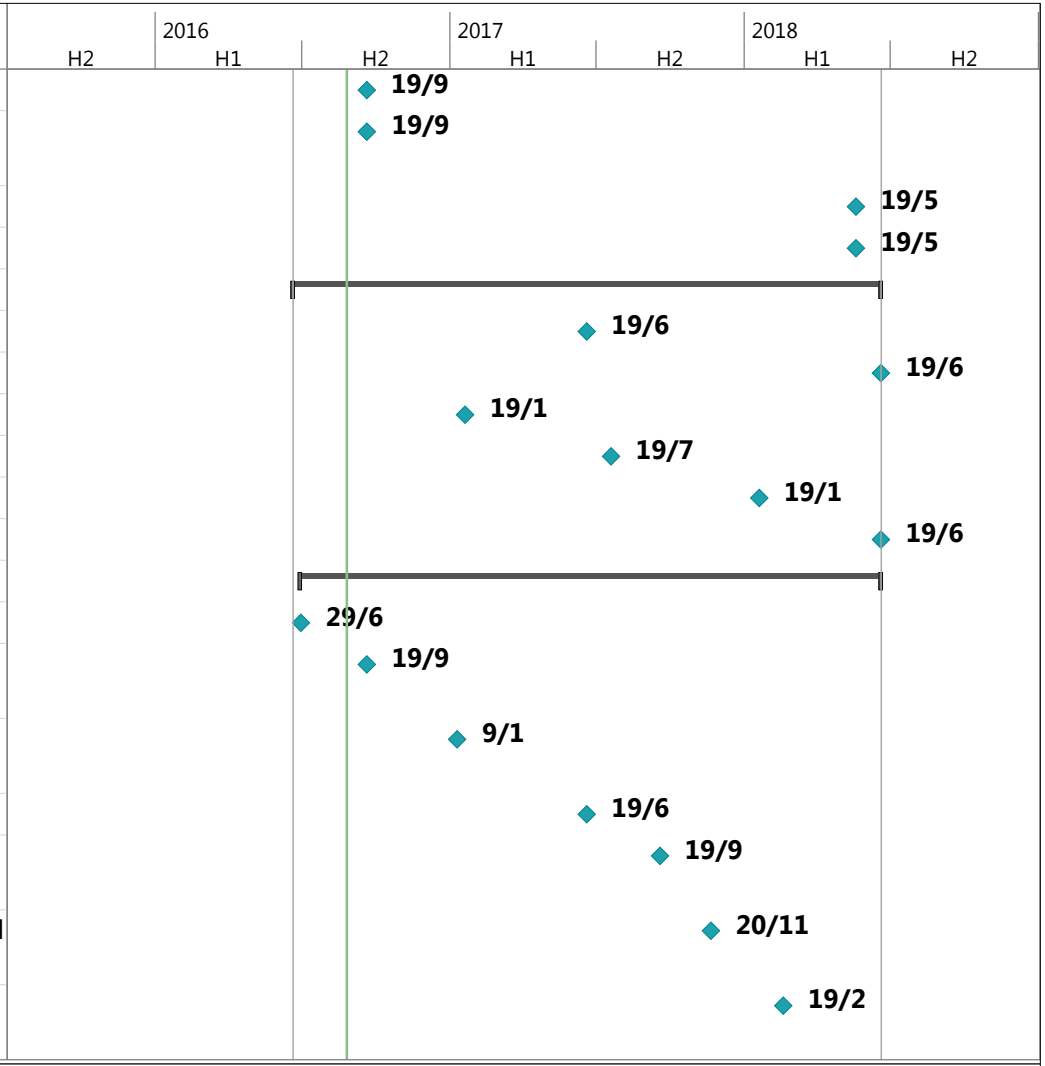
ID	Task Mode	Task Name
34		**Deliverables**
35		D3.1: Collaborative Trajectory Predictions Scenarios and Requirements Specification
36		D3.2: Collaborative Trajectory Prediction Algorithm
37		D3.3: Evaluation and Validation of the Collaborative Trajectory Prediction Algorithm
38		**Milestones**
39		MS3: First version of the agent-based modeling algorithm for collaborative trajectory predictions
40		MS6: Agent-based modeling algorithms validation for collaborative trajectory prediction completed
41		**WP4: Project and Impact Management**
42		**Tasks**
43		Task 4.1: Project Management & Quality Control
44		Task 4.2: Coordination and Reporting
45		Task 4.3: Dissemination, Communication and Exploitation Activities
46		**Deliverables**
47		D4.1: Project Management Plan



Project: Project1
Date: Fri 26/8/16

Task		Inactive Summary		External Tasks	
Split		Manual Task		External Milestone	
Milestone		Duration-only		Deadline	
Summary		Manual Summary Rollup		Progress	
Project Summary		Manual Summary		Manual Progress	
Inactive Task		Start-only			
Inactive Milestone		Finish-only			

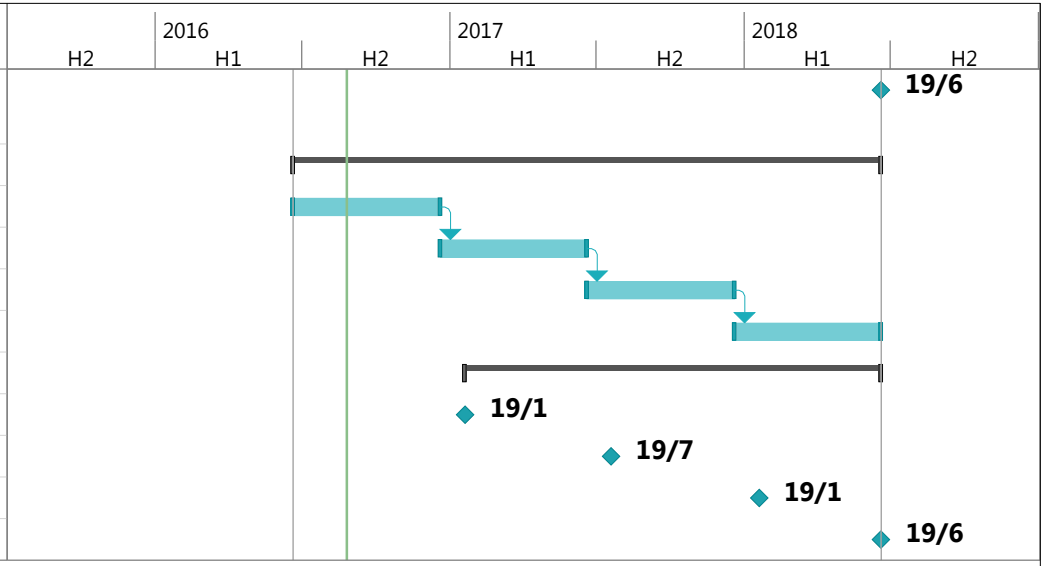
ID	Task Mode	Task Name
48		D4.2: Dissemination Plan
49		D4.3: Project website, wiki, social media channels
50		D4.4: Dissemination Report
51		D4.5: Project results final report
52		**Milestones**
53		MS7: Intermediate Review
54		MS8: Final Review and Project Close-out
55		MS9: 1st Reporting Milestone
56		MS10: 2nd Reporting Milestone
57		MS11: 3rd Reporting Milestone
58		MS11: 3rd Reporting Milestone
59		**Meetings and Missions**
60		KOM: Project Kick-off meeting
61		1st Working Meeting/Workshop: Project plan and technical roadmap deep dive
62		2nd Working Meeting/Workshop: First Technical Review and alignment meeting
63		Intermediate Review meeting
64		3rd Working Meeting/Workshop: Second Technical Review and alignment
65		4th Working Meeting/Workshop: Third Technical Review and alignment
66		5th Working Meeting/Workshop: Fourth Technical Review and alignment



Project: Project1
Date: Fri 26/8/16

Task	Inactive Summary	External Tasks
Split	Manual Task	External Milestone
Milestone	Duration-only	Deadline
Summary	Manual Summary Rollup	Progress
Project Summary	Manual Summary	Manual Progress
Inactive Task	Start-only	
Inactive Milestone	Finish-only	

ID	Task Mode	Task Name
67		Final Project Review and Project Close-out meeting
68		**Reporting Periods**
69		RP1
70		RP2
71		RP3
72		RP4
73		**Periodic Reports**
74		1st Periodic Report
75		2nd Periodic Report
76		3rd Periodic Report
77		4th Periodic Report



Project: Project1
Date: Fri 26/8/16

Task		Inactive Summary		External Tasks	
Split		Manual Task		External Milestone	
Milestone		Duration-only		Deadline	
Summary		Manual Summary Rollup		Progress	
Project Summary		Manual Summary		Manual Progress	
Inactive Task		Start-only			
Inactive Milestone		Finish-only			