DATA MANAGEMENT PLAN.
SECOND RELEASE.

D9.7.

Deliverable administrative information

Deliverable number	D9.7.
Deliverable title	Data Management Plan. Second release.
Dissemination level	Public
Submission deadline	28/02/2023
Version number	1.0
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Document approval	Not applicable

D9.7. Data Management Plan. Second release.

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Executive summary

This report updates the Data Management Plan (D9.2) that was submitted in M6 of the project. For this, D9.7. reviews the methodology applied for the appropriate creation, management and storage of datasets defined in D9.2.

D9.7. identifies the research data generated, modified and used in the project up to month 18. In the report the type of data and format is indicated. Also, a list of the data used for developing TANGENT tool is provided, the reports generated and other type of data handled in the project are shown.

The content of the Data Management Plan will be updated in M36, in the scope of "D9.8. Data Management Plan. Third release.".

Key words

Data Management Plan, personal data, artificial intelligence, data processing technologies, secure data sharing.

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List of abbreviations and acronyms

Acronym	Meaning
M	Month
WP	Work Package
EU	European Union
UK	United Kingdom
GDPR	General Data Protection Regulation
MB	Megabyte
kB	Kilobyte
N.A.	Not applicable
AWS	Amazon Web Services
IP	Intellectual Property

1   Introduction

This deliverable aims to update the Data Management Plan (D9.2) that was submitted in M6 of the project. This deliverable reviews the methodology applied for the appropriate creation, management and storage of datasets established in deliverable D9.2. This methodology will be followed until the end of the project in case any change needs to be done.

This report identifies the research data that has been generated, modified and used during the project lifetime in the different WPs up to M18.

2   Data summary

In this section the data that has been managed so far in TANGENT is detailed. First, a review on the data type and formats will be presented, and secondly a list of the data managed in the different WPs will be detailled.

2.1   Types and formats of data

Type of data	Data format used
Text files	*.txt, papyrus (.di, .notation, .uml)
Images	*.jpg, *png
Video	.*mp4
Report	*.doc, *.docx, *.pdf
Datasheets	*xlsx, *xml
Presentation	*.pdf, *.ppt, *.pptx
Models, algorithms	*.py, *.h5, *.C++
Executable	*.exe
Datasets	*.csv, *.json, geojson, *.xlsx, kml, ESRI shapefile
Transport models	*.ang
Website	*.html

Table 1: Type of data and format in TANGENT

According to the nature, type and format of the data an initial classification has been done: data for developing the TANGENT tool, documents and code developed in TANGENT.

For all the data the following basic information is included: Identifier, description, type, format, size, provider/ origin, receiver, accessibility: public (Yes/No) and link.

2.2   Data inventory for delivering and testing the TANGENT tools

The following tables show the current list of TANGENT datasets available from the different case studies for developing and testing the services planned in TANGENT.

The size of each dataset is indicative since, in several cases, it will depend on the project's technical requirements still under finalization. The list of data sources will grow in the coming months; the 4 case

studies, in cooperation with the technical partners, are still managing to grant access to additional data sources which are relevant for developing the TANGENT tools.

A model for managing data-sharing among the partners of the TANGENT consortium has been defined and described in the deliverable D2.2 "Data-sharing governance model". The model identifies key processes to be managed together with the involved actors' roles and the rules to be applied.

IDENTIFIER	DATA SOURCE DESCRIPTION	TYPE	FORMAT	SIZE	PROVIDER	ACCESSIBILITY	DATA SOURCE URL	LICENSE	LANGUAGE
REN_BUST_01	Station topological map. List of bus stops in the STAR network, including their name, municipality and geolocation.	STATIC	csv, json, excel, geo-json, shapefile, kml	784 kB	Rennes Metropole	direct download, API	https://data.rennesmetropole.fr/explore/dataset/topologie-des-points-darret-de-bus-du-reseau-star/information/?location=16,48.13963,-1.68327&basemap=0a029a	Open Database Licence	French
REN_BUST_02	Bus routes of the STAR network	STATIC	csv, json, excel, geo-json, shapefile, kml	5,5 MB	Rennes Metropole	direct download, API	https://data.rennesmetropole.fr/explore/dataset/parcours-des-lignes-de-bus-du-reseau-star/information/?disjunctive.nomcourtligne&sort=idligne&location=9,47.94152,-1.24036&basemap=0a029a	Open Database Licence	French
REN_BUST_03	Position of buses in circulation on the STAR network in real time	REAL-TIME	csv, json, excel, geo-json, shapefile, kml	187 kB	STAR DATA EXPLORE - Rennes Métropole et Keolis Rennes???	direct download, API or KEOLIS?	https://data.explore.star.fr/explore/dataset/vehicules-des-lignes-de-bus-du-reseau-star-position/information/?disjunctive.numerobus&disjunctive.nomcourtligne	Open Database Licence	French
REN_BUST_05	List of services on the bus routes of the STAR network, including the order of the service.	STATIC	csv, json, excel	2,8 MB	Rennes Metropole	direct download, API	https://data.rennesmetropole.fr/explore/dataset/topo-bus-topologie-dessertes-td/information/?sort=idparcours	Open Database Licence	French
REN_BUST_06	Geographical data of the STAR network : Physical stops	STATIC	csv, json, excel, geo-json, shapefile, kml	802 kB	Rennes Metropole	direct download, API	https://data.rennesmetropole.fr/explore/dataset/equipement-accessibilite-arrets-bus/information/?location=16,48.11238,-1.71072&basemap=0a029a	Open Database Licence	French
REN_BUST_07	Real-time traffic alerts on STAR network lines	REAL-TIME	csv, json, excel, iCalendar	53 kB	Rennes Metropole/KEOLIS	direct download, API	https://data.rennesmetropole.fr/explore/dataset/alertes-trafic-en-temps-reel-sur-les-lignes-du-reseau-star/information/?dataChart=eyJxdWVyaWVzIjpbeyJjb25maWciOnsiZGF0YXNldCI6ImFsZXJ0ZXMtdHJhZmljLWVuLXRlbXBzLXJlZWwtc3VyLWxlcy1saWduZXMtZHUtcmVzZWF1LXN0YXIiLCJvcHRpb25zIjp7fX0sImNoYXJ0cyI6W3siYWxpZ25Nb250aCI6dHJ1ZSwidHlwZSI6ImNvbHVtbiIsImZ1bmMiOiJDT1VOVCIsInNjaWVudGlmaWNEaXNwbGF5Ijp0cnVlLCJjb2xvciI6IiMyNmMyYTUifV0sInhBeGlzIjoiZGF0ZXB1YmxpY2F0aW9uIiwibWF4cG9pbnRzIjoiIiwic29ydCI6IiJ9XSwidGltZXNjYWxlIjoiIiwiZGlzcGxheUxlZ2VuZCI6dHJ1ZSwiYWxpZ25Nb250aCI6dHJ1ZX0%3D&calendarview=month	Open Database Licence	French
REN_BUST_08	Maximum ridership level per STAR line	HISTORICAL	csv, json, excel, geo-json, shapefile, kml	2,5 MB	Rennes Metropole/KEOLIS	direct download, API	https://data.rennesmetropole.fr/explore/dataset/niveau-frequentation-lignes/information/?disjunctive.materiel&disjunctive.jour_semaine&disjunctive.ligne&disjunctive.tranche_horaire&disjunctive.jour_creation&disjunctive.niveau_frequentation	Open Database Licence	French
REN_BUST_09	Monthly agregated Bus and metro occupancy data	HISTORICAL	FTP, csv, excel	10 MB	Rennes Metropole/KEOLIS	direct download, FTP	https://data.rennesmetropole.fr/explore/dataset/tco-billettique-frequentation-agregee/information/	Open Database Licence	French
REN_METR_01	Status of the STAR metro lines network in real time	REAL-TIME	csv, json, excel, geo-json, shapefile, kml	563 kB	KEOLIS	direct download, API	https://data.rennesmetropole.fr/explore/dataset/etat-des-lignes-de-metro-du-reseau-star-en-temps-reel/information/	Open Database Licence	French
REN_METR_02	STAR metro lines	STATIC	csv, json, excel, geo-json, shapefile, kml	234 kB	KEOLIS	direct download, API	https://data.rennesmetropole.fr/explore/dataset/metro-du-reseau-star-traces-de-laxe-des-lignes/information/	Open Database Licence	French
REN_AIRQ_01	Sensors both fixed and mobile, mounted on vehicles	REAL-TIME/ HISTORICAL	JSON	3 kB	Inesa	direct download, API	http://data.inesa.it/	Open Licence - Etalab	English
REN_AIRQ_02	Fixed scientific instruments around Rennes Métropole	REAL-TIME/ HISTORICAL	CSV	10 kB	Airbreizh	direct download	http://data.airbreizh.asso.fr/contenu/services_didon.html?service=mes	Open Database Licence	French
REN_TRAF_02	Gnss FCD data on the intra-Metropolitan perimeter (V, TdP)	REAL-TIME	csv, json, excel, geojson, shapefile, kml	2,1 MB	Autoroute trafic	Direct download, API	https://data.rennesmetropole.fr/explore/dataset/etat-du-trafic-en-temps-reel/information/	Open Database Licence	English
REN_TRAF_07	traffic data from counting stations in PC control	REAL-TIME/ HISTORICAL	csv, json	10,7 MB	Rennes Metropole (DVGTS)	Direct download, API	https://data.rennesmetropole.fr/explore/dataset/comptages-routiers-station/information	Open Database Licence	French

Table 2: Datasets available from the Rennes case study

IDENTIFIER	DATA SOURCE DESCRIPTION	TYPE	FORMAT	SIZE	PROVIDER	ACCESSIBILITY	DATA SOURCE URL	LICENSE	LANGUAGE
TFGM_BUST_01	Scheduled bus timetable	STATIC	json	178 kB	Department for Transport (DfT)	API	https://data.bus-data.dft.gov.uk/api/v1/dataset	Open Government Licence v3.0	English
TFGM_BUST_02	Fixed bus stop locations	STATIC	json	500 kB	Department for Transport (DfT)	API	https://data.bus-data.dft.gov.uk/api/v1/dataset	Open Government Licence v3.0	English
TFGM_BUST_03	real time bus location	REAL-TIME	xml gtfs-realtime	750 kB	Department for Transport (DfT)	API	https://data.bus-data.dft.gov.uk/api/v1/datafeed/ https://data.bus-data.dft.gov.uk/api/v1/gtfsrtdatafeed/	Open Government Licence v3.0	English
TFGM_TRAM_01	real time departure data and network status	REAL-TIME	json	750 kB	Transport for Greater Manchester (TfGM)	API	https://api.tfgm.com/odata/Metrolinks	Open Government Licence v3.0	English
TFGM_BIKE_01	Cycle trips, availability of bike lane, dock locations, via Beryl app who manage TfGM's cycle lane scheme	STATIC	json	500 kB	Beryl	API	https://gitlab.com/team-blaze/gbfs/blob/beryl-gbfs-docs/gbfs.md	Creative Commons Attribution 3.0 License	English
TFGM_PEDE_01	Videoanalytics sensor	STATIC	json	500 kB	Vivacity	API		License under CA	English
TFGM_AIRQ_01	Sensors for hourly ambient air quality concentration	REAL-TIME	json	750 kB	University of Manchester	API	https://moo-backend.cs.man.ac.uk/	Urban Observatory Data License	English
TFGM_CARS_02	Location of assets	STATIC	kmz	168 kB	Transport for Greater Manchester (TfGM)	Download		License under CA	English
TFGM_CARS_03	location of assets	STATIC	json	2 kB	Transport for Greater Manchester (TfGM)	API	https://api.tfgm.com/odata/TrafficSignals	Open Government Licence v3.0	English
TFGM_CARS_04	Real time journey time data from bluetooth sensors, sensor locations are mapped on the platform	REAL-TIME	json	774 kB	Drakewell	API		License under CA	English
TFGM_CARS_05	Traffic flow and vehicle classification on Highway network includes mapped locations of sensors	STATIC	json	967 kB	Drakewell	API		License under CA	English
TFGM_CARS_06	Highway count/classification, turning movement, speed, journey time. Sensor location are mapped on the platform	REAL-TIME	json	1 MB	Vivacity	API	https://api.vivacitylabs.com/docs/#/mobility/getArrivingJourneyTimes	Urban Observatory Data License	English
TFGM_CARS_12	Future planned roadworks, sporting events, concerts road closures, diversions	REAL-TIME/ HISTORICAL	json	1 MB	Transport for Greater Manchester (TfGM)	API	https://api.tfgm.com/odata/Venue Events	Open Government Licence v3.0	English
TFGM_CARS_13	Incident location, duration, impact	HISTORICAL	json	9 kB	Transport for Greater Manchester (TfGM)	API	https://api.tfgm.com/odata/Incidents	Open Government Licence v3.0	English
TFGM_CARS_14	Carriageway loops	REAL-TIME/ STATIC	json	8 kB	National Highways https://nationalhighways.co.uk/	API	https://api.tfgm.com/odata/Scootloops	Open Government Licence v3.0	English
TFGM_CARS_16	Crowd sourced journey time data obtained by Waze tracking its app users	STATIC	json	338 kB	Waze for Cities	API		License under CA	English
TFGM_CARS_17	Crowd sourced info from app users on incidents they log about the network	REAL-TIME	json	360 kB	Waze for Cities	API		License under CA	English
TFGM_OTHD_01	Collision Data each year in three tables "Collision, Casualty and Vehicle".	HISTORICAL	csv	14 MB	Department for Transport	Download	https://www.data.gov.uk/dataset/cb7ae6f0-4be6-4935-9277-47e5ce24a11f/road-safety-data	Open Government Licence	English
TFGM_OTHD_02	Hourly, three hourly and daily weather forecast information given Latitude-Longitude coordinates	REAL-TIME	GeoJSON	500 kB	Met Office (national UK meteorological service)	API	Weather Data Hub - Site Specific API	Open Government Licence v3.0	English

Table 3: Datasets available from the Manchester case study

IDENTIFIER	DATA SOURCE DESCRIPTION	TYPE	FORMAT	SIZE	PROVIDER	ACCESSIBILITY	DATA SOURCE URL	LICENSE	LANGUAGE
LIS_BUST_02	Bus lines, stop locations and real-time position of the Bus vehicles from CARRIS	STATIC		< 1 MB	CARRIS	Download, Api	https://www.transporlis.pt/Default.aspx?tab id=3148&language=en-GB&coxOp=1	Creative Commons CC Zero	English
LIS_TRAM_03	Tram lines, stop locations and real-time position of the Tram vehicles from CARRIS	STATIC		< 1 MB	CARRIS		https://lisboaaberta.cm-lisboa.pt/index.php/pt/	Creative Commons CC Zero	English
LIS_CARS_06	Intersection control information: Polygon location (shapefile) of intersections regulated by traffic light controls	STATIC	GeoJSON, KML, Shapefile, CSV	< 1 MB	CML/EMEL	download link	https://geodados-cml.hub.arcgis.com/datasets/cruzamentos-semaforizados/	Creative Commons CC Zero	English
LIS_CARS_06	Intersection control information: Polygon location (shapefile) of intersections regulated by traffic light controls	STATIC	Esri Shapefile	< 1 MB	CML/EMEL	download link	https://dados.cm-lisboa.pt/dataset/c22a0d70-6c9c-4634-a840-1f6303065551/resource/d4e1d2cb-f125-408c-a857-7dfc38229148/download/sinalizacao-vertical.zip	Creative Commons CC Zero	English

Table 4: Datasets available from the Lisbon case study

IDENTIFIER	DATA SOURCE DESCRIPTION	TYPE	FORMAT	SIZE	PROVIDER	ACCESSIBILITY	DATA SOURCE URL	LICENSE	LANGUAGE
ATH_BUST_01	bus lines timetables	STATIC	n/a	< 1 MB	OASA (authority-operator)	API?	oasa.gr/en/telematics/	OASA Telematics Application Terms of Use	English
ATH_BUST_02	bus stations map	STATIC	csv	784 kB	O2Hub	Download	https://catalog.hcapdata.gr/dataset/956ed989-1e5a-4766-8289-a27373071f0f/resource/56634236-37b3-4c20-bda9-98838b2d6f93/download/stops.txt	O2Hub Terms of Use	English
ATH_BUST_03	bus line routes	STATIC	csv	1,9 MB	O2Hub	Download	https://catalog.hcapdata.gr/dataset/956ed989-1e5a-4766-8289-a27373071f0f/resource/0482a4f0-a3b4-491b-a7fc-bc78056608fa/download/shapes.zip	O2Hub Terms of Use	English
ATH_METR_03	metro demand (passengers per station)	STATIC	csv	7,5 MB	Greek Open Data Portal	Download, API	https://www.data.gov.gr/datasets/casa_ridership/	Open Definition v2.1	English
ATH_CARS_01	Athens road network	STATIC	various (online map, csv)	< 1 MB	Openstreet Map	API	https://www.openstreetmap.org/#map=14/37.9737/23.7044	Open Data Commons Open Database License	English
ATH_CARS_02	Athens road network	STATIC	gis	154 kB	NTUA	Offline		License under CA	English
ATH_CARS_03	traffic data from detectors (flow, speed, loop loc)	REAL-TIME	csv	63,7 MB	Greek Open Data Portal	Download, API	https://www.data.gov.gr/datasets/road_traffic_athens/	Open Definition v2.1	English
ATH_CARS_05	Positions of Loop detectors	STATIC	csv	139 kB	TBD	Offline		License under CA	English

Table 5: Datasets available from the Athens case study

2.3 Documents and other data generated in TANGENT

In the first 18 months, several documents and data have been generated in the project with reporting purposes, project progress and results dissemination.

In Table 6, the deliverables generated in TANGENT from M1 to M18 are detailed.

Identifier	Description	Type	Format	Size	Receiver	Provider/ origin	Language	Accessibility: public (Yes/No)	Link
D1.1 Multi-actor co-creation strategies for each Case study.	This deliverable defines clear strategies and time plans for the co-creation activities advanced for each case study, identifying key actors involved, suitable timeframe for the events, objectives and potential risks within each stage of co-creation, and other relevant factors to be considered.	Report	.doc, .pdf	<3,4 MB	All consortium partners, European Commission, all the general public.	RUPPRECHT	English	Yes	https://tangent-h2020.eu/deliverables/
D1.2 NTM needs assessment and system requirements.	This deliverable reports on the evaluation of stakeholder and user needs, and the analysis of the system architecture and its technical and operational requirements, for each case study.	Report	.doc, .pdf	<6,9 MB	All consortium partners, European Commission, all the general public.	RUPPRECHT	English	Yes	https://tangent-h2020.eu/deliverables/
D1.3 Multi-actor cooperation models for NTM. First release	D1.3a reports on the analysis of multi-actor cooperation models for innovative NTM, studying the system's architecture and operation, to develop optimal cooperation models and provide recommendations towards effective governance structures for NTM. M12	Report	.doc, .pdf	<4,4 MB	All consortium partners, European Commission, all the general public.	RUPPRECHT	English	Yes	https://tangent-h2020.eu/deliverables/
D1.4 Policy, regulatory and planning framework for TNM. First release	This deliverable provides guidance to local authorities on the effective integration of the developed NTM capabilities, models and tools, into their planning and decision-making processes. It builds upon SUMP methodology, and the developed guidance to handle innovative mobility solutions (e.g., CoEXist's Automation-ready framework & SUMP Topic Guide) to support and maximise take-up of TANGENT's outputs and outcomes.	Report	.doc, .pdf	<4,1 MB	All consortium partners, European Commission, all the general public.	RUPPRECHT	English	Yes	https://tangent-h2020.eu/deliverables/
D2.1 Data requirements and available data sources	This deliverable provides a clear map of data requirements for the TANGENT solution, available data sources, and data interoperability issues to be addressed by TASK 2.3.	Report	.doc, .pdf	< 2,3 MB	All consortium partners, European Commission, all the general public.	CEFRIEL	English	Yes	https://tangent-h2020.eu/deliverables/
D2.2 Data-sharing governance model.	This deliverable provides the governance model (including the necessary structures and processes) for the strategic and operational management of the data layer of the TANGENT solution. Moreover, this deliverable provides the metadata profile for the description of TANGENT datasets and guidelines on how to apply the FAIR data principles to the transportation domain.	Report	.doc, .pdf	<1,6MB	All consortium partners, European Commission, all the general public.	CEFRIEL	English	Yes	https://tangent-h2020.eu/deliverables/
D3.1 Travel behaviour: State-of-the-art, current and future mobility patterns	This deliverable will include an extensive list of factors affecting travel related decisions, including users' specific needs, feelings and perceptions. It would also provide critical insights regarding mobility patterns' modifications in the era of multi-modal and automated transport services.	Report	.doc, .pdf	<2,2 MB	All consortium partners, European Commission, all the general public.	NTUA	English	Yes	https://tangent-h2020.eu/deliverables/
D4.1 Report on the relevant state-of-the-art approaches for traffic predictions and simulations.	Analysis of the requirements and limitations for the future network flows predictions and simulations, both from network demand and supply side.	Report	.doc, .pdf	< 600 kB	All consortium partners, European Commission, all the general public.	IMEC	English	Yes	https://tangent-h2020.eu/deliverables/
D5.1 Analysis of current approaches in optimization of transport network management	Catalogue of the different techniques for transport network-optimization in a multi-actor setting (including the calibration of arbitration models)	Report	.doc, .pdf	< 1MB	All consortium partners, European Commission, all the general public.	DEUSTO	English	Yes	https://tangent-h2020.eu/deliverables/

Identifier	Description	Type	Format	Size	Receiver	Provider/ origin	Language	Accessibility: public (Yes/No)	Link
D5.2 Optimization models for transport network management.	Set of definitions and implementations of customizable mathematical models for transport network optimization	Report	.doc, .pdf	< 600 kB	All consortium partners, European Commission.	DEUSTO	English	No	Not applicable
D6.1 Technical architecture and resource specification. First release	Report stating the inputs, interconnections and outputs for all the components that will be part of the integrated solution. The report will include: Resource description; Endpoints, methods and parameters specification; Data model and entity relationship diagram; Identity and Access Management (IAM) sequence diagram.	Report	.doc, .pdf	< 20 MB	All consortium partners, European Commission.	A-to-Be	English	No	Not applicable
D7.1 Definition of the Case Studies, testing methodology and stakeholders' & users' engagement campaign.	Report including the complete and efficient testing method and programme for each test site both for virtual and on-site testing, and the involvement of key stakeholders with defined roles and benefits	Report	.doc, .pdf	<2 MB	All consortium partners, European Commission.	ID4CAR	English	No	Not applicable
D7.2 System deployment and testing specifications	Document with the set of specifications and needs for the testing protocols in the different Case Studies and the system deployment	Report	.doc, .pdf	<2,5 MB	All consortium partners, European Commission.	ID4CAR	English	No	Not applicable
D8.1 Dissemination and communication plan.	Guide for the dissemination activities within TANGENT that will identify and describe the target groups for dissemination activities and explain how and through which dissemination channels they will be reached as well as the tools used and events where publish the results of the project.	Report	.doc, .pdf	<2,5 MB	All consortium partners, European Commission, all the general public.	POLIS	English	Yes	https://tangent-h2020.eu/deliverables/
D8.2 Website and social networks profiles.	Online channels where all the relevant information and accomplishments from the project will be published and promoted.	Report, webiste	.doc, .pdf, .html	< 5,5 MB	All consortium partners, European Commission, all the general public.	POLIS	English	Yes	https://tangent-h2020.eu/deliverables/
D8.3 Report on dissemination activities (including cooperation with other projects). First release	Document summarizing the liaisons and synergies generated with other R&D projects and European initiatives.	Report	.doc, .pdf	<1,5 MB	All consortium partners, European Commission, all the general public.	DEUSTO	English	Yes	https://tangent-h2020.eu/deliverables/
D9.1 Project management handbook. First release	This report will set up the baseline on organisation structure of the consortium. Also, the quality procedures for achieving top quality results will be covered.	Report	.doc, .pdf	<1,2 MB	All consortium partners, European Commission, all the general public.	DEUSTO	English	Yes	https://tangent-h2020.eu/deliverables/
D9.2 Data Management Plan. First release	The DMP will specify the data sets and procedures to consider in the management of all the data collected during the project, ensuring the correctness and regulatory compliance in the treatment of information.	Report	.doc, .pdf	< 400kB	All consortium partners, European Commission, all the general public.	DEUSTO	English	Yes	https://tangent-h2020.eu/deliverables/

Identifier	Description	Type	Format	Size	Receiver	Provider/ origin	Language	Accessibility: public (Yes/No)	Link
D9.3 IPR management and Data Protection. First release.	This deliverable will include the IPR management and data protection rules agreed upon the project.	Report	.doc, .pdf	< 310kB	All consortium partners, European Commission, all the general public.	DEUSTO	English	Yes	https://tangent-h2020.eu/deliverables/
D9.4 Ethics monitoring. First release	The document will contain all the ethical requirements and issues arise in this project and the processes carried out to solve them.	Report	.doc, .pdf	<230 kB	All consortium partners, European Commission, all the general public.	DEUSTO	English	Yes	https://tangent-h2020.eu/deliverables/
D9.5 Project management handbook. Second release	This report will set up the baseline on organisation structure of the consortium. Also, the quality procedures for achieving top quality results will be covered.	Report	.doc, .pdf	< 600 kB	All consortium partners, European Commission, all the general public.	DEUSTO	English	Yes	https://tangent-h2020.eu/deliverables/
D9.7 Data Management Plan. Second release	The DMP will specify the data sets and procedures to consider in the management of all the data collected during the project, ensuring the correctness and regulatory compliance in the treatment of information.	Report	.doc, .pdf	< 500 kB	All consortium partners, European Commission, all the general public.	DEUSTO	English	Yes	https://tangent-h2020.eu/deliverables/
D10.1 H - Requirement No. 1	The confirmation that the templates of the informed consent/assent forms and information sheets (in language and terms intelligible to the participants) are kept on file must be provided. The confirmation that the copies of opinions/approvals by ethics committees and/or competent authorities for the research with humans have been obtained and are kept on file must be provided.	Report	.doc, .pdf	<2,3 MB	All consortium partners, European Commission.	DEUSTO	English	No	Not applicable
D10.2 POPD - Requirement No. 2	The report contains: a description of the technical and organisational measures that will be implemented to safeguard the rights and freedoms of the data subjects/research participants, security measures to prevent unauthorised, anonymysation/pseudonymisation techniques, informed consent procedures, explanation how the data subjects will be informed of the existence of tracking, its possible consequences and how their fundamental rights will be safeguarded. This must be submitted as a deliverable.	Report	.doc, .pdf	<400 kB	All consortium partners, European Commission.	DEUSTO	English	No	Not applicable
D10.3 EPQ - Requirement No. 3	The applicant must demonstrate that appropriate health and safety procedures conforming to relevant local/national guidelines/legislation are followed for staff and participating citizens involved in this project. This must be confirmed in a deliverable.	Report	.doc, .pdf	<350 kB	All consortium partners, European Commission.	DEUSTO	English	No	Not applicable

Table 6: Deliverables generated M1-M18

In Table 7 other documents and data generated in TANGENT from M1 to M18 are detailed, such as surveys, and communication materials, among others.

Identifier	Description	Type	Format	Size	Language	Provider/ origin	Receiver	Accessibility: public (Yes/No)	Link
TANGENT project communication materials	Set of logos, templates, website, social network profiles, roll-up, banner, project leaflet, PowerPoint presentation with general overview.	Images, reports, website	*.jpg, .pdf, .doc, .ppt, .html	300MB	English	POLIS	All consortium partners, European Commission, available for general public.	Yes	https://tangent-h2020.eu/deliverables/
Surveys for travel behaviour modelling (Athens case study)	Filled surveys administered through the Coney tool collected for the Athens case study	Datasheet	.csv	5MB	English, Greek	Transport and Mobility users.	Managed by NTUA, CEFRIEL.	No	N.A.
Surveys for travel behaviour modelling (Lisbon case study)	Filled surveys administered through the Coney tool collected for the Lisbon case study	Datasheet	.csv	9.6MB	English, Portuguese.	Transport and Mobility users.	Managed by NTUA, CEFRIEL.	No	N.A.
Surveys for travel behaviour modelling (Manchester case study)	Filled surveys administered through the Coney tool collected for the Manchester case study	Datasheet	.csv	2.4MB	English	Transport and Mobility users.	Managed by NTUA, CEFRIEL.	No	N.A.
Surveys for travel behaviour modelling (Rennes case study)	Filled surveys administered through the Coney tool collected for the Rennes case study	Datasheet	.csv	4MB	English, French	Transport and Mobility users.	Managed by NTUA, CEFRIEL.	No	N.A.
Interviews to stakeholders in the workshops	Interviews for gathering feedback on transport and traffic management aspects.	Report	*.doc, *.pdf	<1MB	English, French, Portuguese.	Transport and Mobility stakeholders.	All the partners have access to the inputs. The personal data can only be accessed by Rupprecht.	No	N.A.

Identifier	Description	Type	Format	Size	Language	Provider/ origin	Receiver	Accessibility: public (Yes/No)	Link
Contact list of stakeholders	Contact list of the members of the TANGENT Forum.	Datasheet	*xlsx	<1MB	English	Transport and Mobility stakeholders.	Rupprecht, POLIS, ID4CAR, Deusto, CEFRIEL.	No	N.A.
Instructions on how to get Historical tracking information from Google Timeline	Historical tracking information of transport users. This information will be gathered through Google Timeline.	Document	*.pdf	33kB	English	Transport and Mobility users. Managed by NTUA.	NTUA	No	N.A.

Table 7: Other documents and data generated in TANGENT from M1-M18

Datasets with personal data

In TANGENT personal data is managed for certain activities, in the Table 8 the datasets with personal data are identified, including a description, the users accessing the data and the protection measures.

Identifier	Description	Personal data	Users	Protection measure
Surveys for travel behaviour modelling	Filled surveys administered through the Coney tool	Yes	CEFRIEL, NTUA	Controlled access, informed consent for participants in TANGENT survey.
Interviews to stakeholders in the workshops	Interviews for gathering feedback on transport and traffic management aspects.	Yes	Access to personal data only Rupprecht.	Controlled access, informed consent for participants in the interviews.
Contact list of stakeholders	Contact list of the members of the TANGENT Forum.	Yes	Rupprecht, POLIS, ID4CAR, Deusto.	Controlled access, informed consent for the members of the TANGENT Forum.
Historical tracking information	Historical tracking information of transport users. This information will be gathered through Google Timeline.	Yes	NTUA	Controlled access, informed consent of the participants.

Table 8: Data with personal data

2.4   Code developed in TANGENT

Deusto

In order to host and control versions of the developed modules, Deusto uploads their code repositories to a GitLab repository deployed in its facilities. GitLab allows to the developers to collaborate and keep track of the changes made in the code of the uploaded repositories, as well as serve as a backup of different versions of the developments. Regarding the privacy of the repositories, they are configured to be private and only accessible forr selected users or groups of users.

Cefriel

To host and control versions of the software components enabling the TANGENT solution for data harmonisation and fusion, Cefriel uploads the code respositories in a dedicated GitLab instance (deployed in its facilities) or to GitHub under the Cefriel organisation (https://github.com/cefriel). Respositories on GitLab are configured to be private and only accessible for selected users or groups of users, while repositories on GitHub will be used to share code released publicly under a specific license.

A-to-Be

A-to-Be has an active DevOps team responsible for the operation of A-to-Be's development environments, including tools like Git, Gerrit, Jenkins, SonarQube, JIRA, Xray and Confluence. These services will be used for the development of the TANGENT tool. The DevOps team is also responsible for an onboarding procedure that includes a Development environment setup process which guarantees a uniform developement environment spaning different technologies such as Java, C++ and Python. This onboarding procedure will be followed for all developers of the TANGENT Tool from A-to-Be. Development guidelines, processes and design patterns are also defined by DevOps team and will be followed by the team working on the TANGENT Tool. The development tools are all operated with strict privacy rules so only the development team can access code and media related with the TANGENT project.

Deployment will be automated to the AWS cloud. For integration and testing with the other partners both a Development and a Production AWS instance will be used.

NTUA

The NTUA team utilizes both Python and R programming languages to create scripts that execute various tasks and modules within the project. Depending on the specific requirements of each task, the team employs Pycharm and Anaconda software for scripting. The team maintains a shared drive to upload different script versions and keeps local copies for security purposes. Access to the shared folder, where all the script versions are stored, is restricted to the project's working team members only.

Aimsun

Aimsun will keep an internal Gitlab repository in its facilities with the developed modules. Aimsun Next scripts may be shared upon request for specific tasks and data exchanges among user partners to facilitate development and progress of data-driven methodologies at the same time that privacy and IP of models is kept by their owners.

imec

imec hosts and controls versions of the developed modules in a similar way as Deusto. It also uploads their code repositories to a GitLab repository deployed in its facilities, which are only accessible for selected users as well.

3 Update on the data management procedures

Data generation and management is a complex process that requires multi-stakeholder bodies to work together in an interdisciplinary manner. As detailed in D9.2. all the partners appointed a *Data Manager* who is responsible for the management and control of the data sets retrieved and handled by the partner. During the first 18 months of the project POLIS has appointed a new Data Manager replacing the former one:

Appointed Data Managers
POLIS Data manager: Juliette Thijs (jthijs@polisnetwork.eu), replacing Emiliya Kamenova.

Furthermore, following the procedure identitified in D9.2., the appointed data managers have completed the following information for the data detailled in section "2. Data Summary":

- Name of the dataset
- Dataset provider
- Dataset owner
- Description
- Format (Media type)
- License
- Language
- Ethics and legal aspects
- Technical aspects
- Other

4 Ethical aspects

All the data collected during the TANGENT lifetime will be treated according to the WP10 "Ethics requirements" following the procedures detailed in the deliverable D10.1., D10.2 and D10.3., where various aspects related to ethics are covered, such as: the informed consent procedures for the people participating in TANGENT research activities, relevance of the data gathered and used for the research, and limited to the purpose of the project, and lastly health and safety procedures to be considered for the execution of TANGENT.

Additionally, there are various deliverables that follow-up the progress of ethical aspects in TANGENT, these are: "D9.4. Ethics monitoring. First release.", due M12 and "D9.10. Ethics monitoring. Second release" due M36.

In the case of personnel data management, the consortium will comply with the requirements of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (General Data Protection Regulation - GDPR) and "UK - Data Protection Act 2018" on the protection of individuals with regard to the processing of personal data and on the free movement of such data.

5 Conclusions

This deliverable has updated the "D9.2. Data Management Plan. First release.", reviewing the data generated, modified or used up to M18 in TANGENT and how the data management procedures defined in D9.2. have been applied.

In the present report, licenses and language of the identified datasets have been added. A data summary is shown for the data that will be used for developing and testing TANGENT tool, documents, code and other data.

The data management procedures that were defined in the D9.2. Data Management in M6 has proved good enough to satisfy the objectives of the project in the management of all the data that is being generated. Hence, it will be followed in the next months.

This document has been aligned with the Horizon 2020 open data requirements and the FAIR guidelines.

The content of the Data Management Plan will be updated in M36, in the scope of "D9.8. Data Management Plan. Third release".

6   References

Serrano, L., Comerio, M., Azzini, A. (2022). TANGENT: D9.2. Data Management Plan. First release.

European Commission (2016). Open access data management - H2020 online manual. Retrieved from Data management - H2020 Online Manual.

European Commission (2018), Turning FAIR into reality.