

IPR MANAGEMENT AND DATA PROTECTION. FIRST RELEASE.

D9.3



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Executive summary

This document provides an overview of the IPR management in TANGENT project, specifically reviewing the approach of background and foreground management in the project. Thus, it needs to be detailed the Background of each partner and the IPR used in their previous developments used in TANGENT. Furthermore, different aspects related to data protection and its legal aspects are covered.

Key words

#IPR management, #background management, #foreground management, #data management, #data protection, #GDPR, #personal data, #artificial intelligence, #data processing technologies, #secure data sharing



Table of contents

DE	ELIVERABLE ADMINISTRATIVE INFORMATION	1
E)	(ECUTIVE SUMMARY	3
T/	ABLE OF CONTENTS	4
LI	ST OF ABBREVIATIONS AND ACRONYMS	6
1	INTRODUCTION	7
2	IPR MANAGEMENT IN TANGENT	8
3	DATA PROTECTION IN TANGENT	15
4	CONCLUSIONS	19
5	REFERENCES	20



List of tables

Table 1 Identified background by Aimsun	9
Table 2 Identified background by IMEC	10
Table 3 Identified background by Rupprecht	10
Table 4 Identified background by Rennes	11
Table 5 Identified background by A-to-Be	12
Table 6 Identified background by TFGM	13
Table 7 Datasets with personal data	16



List of abbreviations and acronyms

Acronym	Meaning
GA	Grant Agreement
WP	Work Package
IPR	Intellectual Property Rights
e.g.	For example
GA	Grant Agreement
TFGM	Transport for Greater Manchester
GDPR	General Data Protection Regulation
UK	United Kingdom
EU	European Union
EC	European Commissions
DPO	Data Protection Officer



1 Introduction

This deliverable aims to provide an overview on the management of Intellectual Property Rights (IPR) in the project, focusing on the background information that partners brought to the project, and the foreground information, with special focus on the results of the project. In this regard, the IPR management of the key exploitable results is described, with especial emphasis on the protection measures.

On addition, the data protection measures carried out along the project are described, providing an overview of the deliverables devoted to legal aspects, regulation, ethics and data management.



2 IPR management in TANGENT

2.1 Introduction

From the beginning of the project, TANGENT project has carried out a range of activities to have optimal visibility of the project and its results, increasing the likelihood of market uptake of the knowledge it produces, and ensuring smooth handling of the individual intellectual property rights of the involved partners in view of paving the way to knowledge transfer. For greater consistency, IPR management activities has been managed under WP9. The overall IPR strategy of the project aims to ensure that partners are free to benefit from their complementarities and to fully exploit their market position.

2.2 Background management

In TANGENT background information is managed, and defined as:

- Information and knowledge held by the Parties prior to their accession to the Project, as well as any IPRs necessary for implementing the project or for using Foreground.
- Where application is necessary, only those IPRs for which the application was filed before the accession of the Party to the Project are included in the Background.
- Relate only to information needed to carry out the project or to use the foreground generated.
- The Background of a Party is not limited to the information and knowledge it owns, but also extends to any information, knowledge or IPRs it holds (e.g. licensing agreements).

Next, the background information identified in the project is detailed at the time of signature of this Consortium Agreement.

2.2.1 DEUSTO

As to DEUSTO, it is agreed between the Parties that, to the best of their knowledge, no data, know-how or information of DEUSTO shall be Needed by another Party for implementation of the Project (Article 25.2 Grant Agreement) or Exploitation of that other Party's Results (Article 25.3 Grant Agreement).

2.2.2 AIMSUN

	Specific limitations and/or conditions for:	
Describe Background	Implementation (Article 25.2 of GA)	Exploitation (Article 25.3 of GA)
Aimsun Next Advanced Edition	Use of Aimsun Next subject to Aimsun End-user License Agreement and limited to evaluation or testing tasks during the project.	After the end of the project, Aimsun Next licenses can be purchased under standard commercial conditions



	Specific limitations and/or conditions for:	
Describe Background	Implementation (Article 25.2 of GA)	Exploitation (Article 25.3 of GA)
Aimsun Live	Excluded	Excluded

Table 1 Identified background by Aimsun

2.2.3 NTUA

As to NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), it is agreed between the Parties that, no data, know-how or information of NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA) shall be Needed by another Party for implementation of the Project (Article 25.2 Grant Agreement) or Exploitation of that other Party's Results (Article 25.3 Grant Agreement).

2.2.4 IMEC

	Specific limitations and/or conditions for:
Describe Background	Implementation (Article 25.2 of GA) and Exploitation (Article 25.3 of GA) (Article 25.3 of GA)
Acsim simulator: The Acsim simulator is an agent-based traffic simulation framework developed by imec mainly used for research purposes to	Acsim simulator consists below open source components which access rights for Implementation and Exploitation are subject to listed related open source licenses: -Boost: https://www.boost.org/LICENSE_1_0.txt
simulation performance. The framework is characterized by its dynamic multi-level and	-nlohmann/json: https://opensource.org/licenses/MIT
load balancing capabilities. It allows to optimize the distribution of abstraction formalisms and agent load	-gtest: https://github.com/google/googletest/blob/master/LICENSE (BSD3)
balancing based on simulation context information	-tinyxml2: https://opensource.org/licenses/Zlib
gathered during simulation execution. As a result, it can balance computational cost and simulation accuracy at	-concurrentqueue: https://github.com/cameron314/concurrentqueue/blob/master/L ICENSE.md (BSD)
run-time. The techniques presented in the Acsim framework are particularly	-sfml: https://www.sfml-dev.org/license.php (Zlib)



	Specific limitations and/or conditions for:
Describe Background	Implementation (Article 25.2 of GA) and Exploitation (Article 25.3 of GA) (Article 25.3 of GA)
interesting in traffic optimization scenarios and non-deterministic simulations of traffic events.	-Imgui: https://github.com/ocornut/imgui/blob/master/LICE NSE.txt (MIT)
"Traffic prediction", number: 202115790.5 – 1222, filling: 18-12-20	Traffic prediction patent application consists Tensorflow open source components which access rights for Implementation and Exploitation are subject to the related open source license: https://github.com/tensorflow/tensorflow/blob/master/LICENSE

Table 2 Identified background by IMEC

2.2.5 CEFRIEL

No data, know-how or information of Cefriel shall be Needed by another Party for implementation of the Project (Article 25.2 Grant Agreement) or Exploitation of that other Party's Results (Article 25.3 Grant Agreement).

2.2.6 RUPPRECHT

	Specific limitations and/or conditions for:	
Describe Background	Implementation (Article 25.2 of GA)	Exploitation (Article 25.3 of GA)
CoEXist Automation-Ready Framework: conceptual and methodological framework for CCAM planning and implementation.	Utilisation under attribution of authorship.	
SUMP Self-Assessment tool: questionnaire and analysis of a SUMP's development process and its content, structured along the SUMP Guidelines. It corresponds to the SUMP requirements as set out in the European Commission's Urban Mobility Package.	Utilisation under attribution of authorship.	

Table 3 Identified background by Rupprecht



2.2.7 ID4CAR

No data, know-how or information of ID4CAR shall be Needed by another Party for implementation of the Project (Article 25.2 Grant Agreement) or Exploitation of that other Party's Results (Article 25.3 Grant Agreement).

2.2.8 RENNES

The following background is hereby identified and agreed upon for the Project. Specific limitations and/or conditions, shall be as mentioned hereunder:

	Specific limitations and/or conditions for:	
Describe Background	Implementation (Article 25.2 of GA)	Exploitation (Article 25.3 of GA)
Any open data publicly available on https://data.rennesmetropole.fr/explore/?sort=modified (public transport data, public parking areas, vehicle power stations, etc.)	Written Open License or written ODbL (Open Database License) from the Open Knowledge Foundation	Written Open License or written ODbL (Open Database License) from the Open Knowledge Foundation
Other restricted data held by Rennes Metropole or linked partners (e.g. private/personal transportation, specific mobility surveys, air quality, etc.)	Written agreement for data access and/or use	Subject to further agreement/contract

Table 4 Identified background by Rennes

2.2.9 A-to-Be

	Specific limitations and/or conditions for:	
Describe Background	Implementation (Article 25.2 of GA)	Exploitation (Article 25.3 of GA)
Restricted data held by A-to- Be and its Linked Third Party Via Verde, namely	Written agreement for data access and/or use, with specific conditions	Subject to further agreement/contract



	Specific limitations and/or conditions for:	
Describe Background	Implementation (Article 25.2 of GA)	Exploitation (Article 25.3 of GA)
anonymized data from: c-its vehicles; highway volumes and Via Verde users in parks, ferries, trains and buses.		
A-to-Be will provide knowledge and expertise in the fields of Traffic Management Platforms Architecting and Intelligent Transport Systems.1	Utilisation under attribution of authorship.	

Table 5 Identified background by A-to-Be

2.2.10 CARRIS

No data, know-how or information of CARRIS shall be Needed by another Party for implementation of the Project (Article 25.2 Grant Agreement) or Exploitation of that other Party's Results (Article 25.3 Grant Agreement).

2.2.11 TFGM

	Specific limitations and/or conditions for:	
Describe Background	Implementation (Article 25.2 of GA)	Exploitation (Article 25.3 of GA)
TfGM will supply non confidential highhways traffic related data, including but not limited to journey time, traffic signal timings, automated traffic count, variable message sign, roadworks and events data	Access Rights to Background are limited to the project implementation based on specific information needed by other Parties in the context of work plan as defined in the Annex I of the Grant Agreement. The information shall be	

¹ This background information has been identified after the signature of the Consortium Agreement, it will be included in future addendum.



	Specific limitations and/or conditions for:	
Describe Background	Implementation (Article 25.2 of GA)	Exploitation (Article 25.3 of GA)
	requested previously by each Party.	
TfGM will provide knowledge and expertise in the fields of Intelligent Transport Systems, Urban Traffic Control and control centre operations. Sharing knowledge of transport challenges and solutions to these challenges from a transport authority perspective	No limitations	

Table 6 Identified background by TFGM

2.2.12 PANTEIA

No data, know-how or information of PANTEIA shall be Needed by another Party for implementation of the Project (Article 25.2 Grant Agreement) or Exploitation of that other Party's Results (Article 25.3 Grant Agreement).

2.2.13 POLIS

No data, know-how or information of POLIS - PROMOTION OF OPERATIONAL LINKS WITH INTEGRATED SERVICES, ASSOCIATION INTERNATIONALE shall be Needed by another Party for implementation of the Project (Article 25.2 Grant Agreement) or Exploitation of that other Party's Results (Article 25.3 Grant Agreement).

2.3 Foreground management

In TANGENT foreground information is managed, and defined as:

- Results, including information, materials and knowledge, generated in the Project, whether or not they can be protected.
- Includes IPR (rights resulting from copyright protection, related rights, design rights, patent rights, etc.), similar forms of protections (e.g. sui generis right for databases) and unprotected knowhow (e.g. Confidential material).
- Include tangible (e.g. prototypes, microorganisms, source code, and processed earth observation images) and intangible (IP) results of the Project.
- Results generated outside the Project do not constitute Foreground.

Regarding the foreground information, each party is the owner of the results generated by them.

According to Article 26.2 of the Grant Agreement, where Results are generated from work carried out jointly by two or more Parties and it is not possible to separate such joint invention, design or work for



the purpose of applying for, obtaining and/or maintaining the relevant patent protection or any other intellectual property right, the Parties shall have joint ownership of this work.

The joint owners shall, within a six (6) month period as from the date of the generation of such Results, establish a written separate joint ownership management agreement regarding the allocation of ownership and terms of exercising, protecting, the division of related costs and exploiting such jointly owned Results on a case by case basis.

However, until the time a joint ownership agreement has been concluded and as long as such rights are in force, such Results shall be jointly owned in shares according to their share of contribution (such share to be determined by taking into account the contribution of a joint owner to an inventive step) to the Results by the joint owners concerned.

Unless otherwise agreed between the joint owners:

- Each of the joint owners shall be entitled to use its jointly owned Results for non-economic activities
 as defined in the Communication from the Commission Framework for State aid for research and
 development and innovation (2014/C 198/01 on a royalty-free basis, and without requiring the prior
 consent of the other joint owner(s), and
- Each of the joint owners shall be entitled to otherwise Exploit the jointly owned Results and to grant non-exclusive licenses to third parties (without any right to sub-license), if the other joint owners are given:
 - (a) at least 45 calendar days advance notice; and
 - (b) Fair and Reasonable compensation;

If IMEC is one of the joint owners, each of the joint owners shall be entitled to use its jointly owned Results for any and all purposes on a royalty-free basis, and without requiring the prior consent of the other joint owner(s).

TANGENT project is its in initial stages, in the subsequent deliverables related to exploitation aspects and IPR management (D8.6; D9.9) will be detailed the obtained exploitable results, ownership, its characteristics and protection measures.



3 Data protection in TANGENT

3.1 Introduction

TANGENT consortium is aware of the importance of data protection and the related legislation from the beginning of the project. So far, TANGENT project has delivered the first version of the data management plan (D9.2), where the data that will be managed and processed in the project is identified, including personal data, and D10.1 and D10.2, where ethical requirements have been identified in relation to the participation of individuals in the project activities.

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. The procedures that will be implemented for data collection, storage, and access, sharing policies, protection, retention and destruction will comply with the requirements of the national legislation of each partner and in line with the EU standards. So that, in case of personal data collection and processing, only anonymous user data will be collected and securely stored. Anonymous identification of user-provided information will be leveraged only to confirm the authenticity of users interacting with the system and to prevent malicious behaviour. No need to personally identify users through their information or to include sensitive data is envisaged. The collected data will be treated anonymously and additionally a various set of measures will be put in place in order to protect user privacy and its data security, by embedding privacy by design principles from the early stage of the project technical start, which is detailed in the Data Management Plan (D9.2)

3.2 Datasets with personal data in TANGENT

All the activities executed within TANGENT project will comply with the EC regulation at EU and national level on privacy and data protection transparency. The project will manage several sources of personal data. In general, personal data will be kept at the source and only pseudo anonymized data will be shared among the partners ensuring full compliance with GDPR. Access to the personal data will be minimized and controlled using the methods already in place. Consent forms, when needed, have been distributed and collected (Further detail in D10.1).

Finally, before publishing any data fulfilling the obligations of the partners with respect to the Article 29 of the Grant Agreement, a screening will be carried out by all the involved parties in order to not disclose any personal or confidential information. Special care will be put in ensuring that no de-anonymization could be performed on the published data. If such a case were detected (or suspected), several actions like the deletion of the relevant data or aggregation at an upper level will be discussed and agreed before publishing the dataset.

The following table contains the data sources already identified:

Datasets	Source	Personal data	Users	Protection measure
Interviews	Microsoft office format (Word, excel, power point) or Google	Yes	Access to personal data only Rupprecht.	Controlled access



Datasets	Source	Personal data	Users	Protection measure
	documents, excel, presentations, forms			
Surveys	Coney tool	Yes	CEFRIEL, NTUA	Controlled access
Contact lists of stakeholders forum	Parties that showed interest on the project by signing the Letter of Support	Yes	Rupprecht, POLIS, ID4CAR, Deusto, CEFRIEL	Controlled access
Historical tracking information	Google timeline	Yes	NTUA	Controlled access

Table 7 Datasets with personal data

3.3 Data processing principles

TANGENT data protection policy builds on the six basic data processing principles defined by GDPR, as detailed in D10.2. This being:

- 1) <u>Lawfulness, fairness and transparency:</u> personal data shall be processed lawfully, fairly and in a transparent manner in relation to the data subject;
- 2) <u>Purpose limitation:</u> personal data shall be collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes; further processing for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes shall, in accordance with Article 89(1), not be considered to be incompatible with the initial purposes;
- 3) <u>Data minimisation:</u> personal data shall be adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed;
- 4) <u>Accuracy:</u> personal data shall be accurate and, when necessary, kept up to date; every reasonable step must be taken to ensure that personal data that are inaccurate, having regard to the purposes for which they are processed, are erased or rectified without delay;
- 5) Storage limitation: personal data shall be kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the personal data are processed; personal data may be stored for longer periods insofar as the personal data will be processed solely for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes in accordance with Article 89(1) subject to implementation of the appropriate technical and organisational measures required by this Regulation in order to safeguard the rights and freedoms of the data subject;
- 6) <u>Integrity and confidentiality:</u> personal data shall be processed in a manner that ensures appropriate security of the personal data, including protection against unauthorised or unlawful processing and against accidental loss, destruction or damage, using appropriate technical or organisational measures.



3.4 Data anonymization and pseudonymisation techniques

According to GDPR, the principles of data protection should apply to any information concerning an identified or identifiable natural person. To determine whether a natural person is identifiable, account should be taken of all the means reasonably likely to be used, such as singling out, either by the controller or by another person to identify the natural person directly or indirectly. To ascertain whether means are reasonably likely to be used to identify the natural person, account should be taken of all objective factors, such as the costs of and the amount of time required for identification, taking into consideration the available technology at the time of the processing and technological developments. The principles of data protection should therefore not apply to anonymous information, namely information which does not relate to an identified or identifiable natural person or to personal data rendered anonymous in such a manner that the data subject is not or no longer identifiable. EU Regulation does not therefore concern the processing of such anonymous information, including for statistical or research purposes. The legal aspects in this respect are adequately addressed by TANGENT, since the data shared with the project will be previously pseudonymised and processed in the framework of private agreements to generate aggregated anonymised information, ensuring that the data subjects are no longer identifiable.

3.5 Informed consents

Informed consent is regarded as mandatory within TANGENT to recruit participants. Participants will be recruited for the following activities: (i) TANGENT Forum activities, (ii) participation in surveys and (iii) participation in travel behaviour modelling (providing tracking information).

Volunteers participating in these actions will need to sign or digitally accept an informed consent form. Participants will be informed in detail, in language and terms intelligible to them, via an information sheet about the objectives and methods of the research and that they participate on a voluntary basis. It is the participants' right to change their mind and to withdraw themselves and their data from the research, also after having given informed consent, at any time of the research process, without bearing any consequences whatsoever.

Three informed consents forms have been prepared following the different nature of the actions, being these:

- stakeholders' participating in the TANGENT Forum activities
- volunteers participating in the TANGENT Survey
- volunteers participating in providing their tracking information

The three types of informed consents templates have been submitted as deliverable D10.1 H – Requirement No 1.

3.6 Rights of data subjects

According to the GDPR, the data subjects have the right of access, the right to rectify incomplete or inaccurate data, the right of cancellation, the right to consult the General Data Protection Registry, the right to claim the protection of their rights from the corresponding Data Protection Agency, and the right to be indemnified for damages caused by infringement. Each TANGENT partner guarantees the exercise of these rights free of charge, being required for security purposes that the data subject provides a copy of his or her official identity document. To do so, the project has put in place the following technical and organisational measures:



- Appointment of a Data Protection Officer. DPO is required to ensure compliance with GDPR. In "D10.2 POPD – Requirement No.2" is detailed the appointment of Data Protection Officers.
- A comprehensive informed consent process, through which data subjects are provided with clear and detailed information about the personal information being collected, its intended use within the project, the applicable retention period, the organisation responsible for the treatment and the channels to exercise their access, rectification, erasure, objection, portability and restriction rights;



4 Conclusions

TANGENT partners have identified the IPR management principles, identifying the background information that partners will bring to the project and the conditions for it. The baseline of the IPR management of the future exploitable results has been detailed, also covering the joint ownership of results.

In addition, an overview of the data protection management along the project is provided, detailing the datasets with personal data that will be handled in the project, the data processing principles that TANGENT will comply with, data anonymisation/pseudo-anonymisation techniques, informed consent procedure and rights of data subjects.



5 References

TANGENT- Grant Agreement (Description of the Action)

TANGENT deliverable: D9.2 - Data Management Plan. First release

TANGENT deliverable: D10.1 - H - Requirement No. 1

TANGENT deliverable: D10.2- POPD - Requirement No. 2

TANGENT deliverable: D10.3- EPQ - Requirement No. 3