

# X Modal

# X Cultural

# X Lingual

# X Domain

# X Site

## Global OER Network

**Grant Agreement Number:** 761758

**Project Acronym:** X5GON

**Project title:** X5GON: Cross Modal, Cross Cultural, Cross Lingual, Cross Domain, and Cross Site Global OER Network

**Project Date:** 2017-09-01 to 2020-12-31

**Project Duration:** 36 months

**Document Title:** Ethical Data Management and Data Management Plan Year 3

**Author(s):** Davor Orlic, Bostjan Makarovic, Maja Bogataj Jančič

**Contributing partners:** UCL, K4A

**Date:** December 31 2020

**Approved by:** Colin de la Higuera

**Type:** Report

**Status:** Final Report

**Contact:** [bostjan@aphaia.co.uk](mailto:bostjan@aphaia.co.uk), [maja@ipi.si](mailto:maja@ipi.si), [davor.orlic@ijs.si](mailto:davor.orlic@ijs.si), [cdlh@univ-nantes.fr](mailto:cdlh@univ-nantes.fr)

Dissemination Level		
PU	Public	✓
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	



Revision		
Date	Lead Author(s)	Comments
21.6.2018	Davor Orlic	Initial draft for both ethical management and data management parts
27.7.2018	Erik Novak	Added data types, descriptions and filled in tables for WP2 and WP4 tasks
27.7.2018	Davor Orlic	Second draft
30.7.2018	John Shawe-Taylor	First review and feedback
2.8.2018	Bostjan Makarovic	Ethics chapter added
6.8.2018	Maja Bogataj Jančič	Intellectual property chapter added
10.8.2018	Colin de la Higuera	Added data types, descriptions and filled in tables for WP3 and WP5 tasks
17.8.2018	Nils Oesting	Input on OuS tables
17.8.2018	Bostjan Makarovic	Ethical part update on second draft
20.8.2018	Abe Husan	Ethical part update and review
20.8.2018	Sahan Bulathwela	Added data types, descriptions and filled in tables for WP1 and WP9 tasks
20.8.2018	Stefan Kreitmayer	Added data types, descriptions and filled in tables for WP6 tasks
20.8.2018	Mojca.Ifko-Pinosa	Added data types, descriptions and filled in tables for Task 7.3
21.8.2018	Davor Orlic	Final review and versioning of complete deliverable
19.8.2019	Bostjan Makarovic	Addition of relation to EU Ethics Guidelines for Trustworthy AI (EGTAI) with updates in sections 1.1, 1.2 and add addition of 1.6 privacy action points to be considered
21.8.2019	Bostjan Makarovic	Meeting with John Shawe-Taylor AND Davor Orlic to define privacy scenarios
22.8.2019	Davor Orlic	Acceptation of comments with Section 2 remaining the same
29.9.2019	Maja Bogataj Jančič	IPR part general update and addition of the 2.3.
4.9.2019	Davor Orlic	Section 2 on Data Management plan moved to Appendix 1, Section 4.5 Ethics moved to Appendix 2 with minor edits
6.9.2019	Davor Orlic	Addition of 2.4, Sections 3. And 4. and circulation of draft
9.9.2019	Maja Bogataj	Final comments and edits in 2.4
10.9.2019	Davor Orlic	Final deliverable
11.10.2020	Davor Orlic	Started new draft for 9.3
21.12.2020	Maja Bogataj	Updated section on Intellectual Property
23.12.2020	Bostjan Makarovic	Creation and Addition of the GDPR action plan
27.12.2020	Davor Orlic	Final version
28.12.2020	Colin de la Higuera	Editorial comments
29.12.2020	Davor Orlic	Final version



## TABLE OF CONTENTS

<b>List of Figures</b> .....	<b>4</b>
<b>List of Tables</b> .....	<b>4</b>
<b>List of Abbreviations</b> .....	<b>4</b>
<b>Abstract</b> .....	<b>5</b>
<b>1. Intellectual Property Rights</b> .....	<b>6</b>
2.1 Categories of Protected Subject Matter .....	6
2.2 Rights Clearance and Management .....	6
2.3 Text and data mining .....	8
3.3 Guidelines for the rights clearance .....	9
<b>2. GDPR compliance Action Plan</b> .....	<b>10</b>
4.3 Action points .....	10
5.3 X5GON Services Privacy Notice .....	10
6.3 X5GON Services Privacy Policy .....	10
7.3 General .....	10
8.3 Data controllers.....	10
9.3 Applicable services .....	11
10.3 User data categories and purposes of processing .....	11
11.3 The use of data for machine learning purposes .....	13
12.3 The processing of resource data and metadata .....	13
13.3 Data transfers .....	13
14.3 Your rights .....	14
15.3 Joint Controller Arrangement.....	14
16.3 Legitimate Interest Assessment (LIA).....	15
17.3 Data Protection Impact Assessment (DPIA) .....	16
<b>3. Conclusion</b> .....	<b>16</b>



### *LIST OF FIGURES*

No table of figures entries found.

### *LIST OF TABLES*

No table of figures entries found.

### *LIST OF ABBREVIATIONS*

AI	Artificial Intelligence
CC	Creative Commons
CR	Copy Right
DPA	Data Protection Impact
DSM	Digital Single Market Directive
EU	European Union
TDM	Text and Data Mining
ELT	Ethics and Legal team
EGTAI	High-Level Expert Group on Artificial Intelligence has drafted EU Ethics Guidelines for Trustworthy AI
EU	European Union
GDPR	General Data Protection Regulation
IPR	Intellectual Property Rights
ML	Machine Learning
OER	Open Educational Resources
OERDP	Open Research Data Pilot
RP	Research personnel



## ABSTRACT

This deliverable is an updated and upgraded version of D9.1 and D9.2 which described the thinking of the consortium around the challenge of ethical data management, data management plan, and intellectual property.

This deliverable is comprised of the two sections, the first on Intellectual property and is addressing the relevant intellectual property issues relating to the X5GON project and highlight the potential deliverables where intellectual property issues may arise.

The main focus points are:

- Intellectual property rights with categories of protected subject matter;
- Right clearance and management;
- Text and Data Mining (TDM) exceptions, and
- Guidelines for the rights clearance

The second section of the report is an GDPR Compliance Action Plan which includes action points and the deliverables that need to be implemented in relation to X5GON services and covers in details:

- Implementation of X5GON Services Privacy Notice and Privacy Policy
- Joint Controller Arrangements
- Legitimate Interest Assessment and DPIA
- Implementation of security measures as required by Article 32 GDPR
- Data protection training for personnel
- Standard Data Protection Clauses for any data transfers or storage

This is accompanied by detailed breakdown of the Action Plan in relation to various aspects and services of the project.



## 1. INTELLECTUAL PROPERTY RIGHTS

### 2.1 CATEGORIES OF PROTECTED SUBJECT MATTER

The materials collected and made available in the X5GON project can be subject to copyright or sui generis database rights.

#### A Copyrighted works

The materials are subject to copyright if they fulfil the requirements for copyrighted works according to the governing legislation. Most copyright legislations of EU member states extend copyright protection to works that are an "individual intellectual creation".

With respect to the materials collected and made available in the X5GON project (educational and scientific content, encyclopaedia content, social media posts etc.), it is likely that these works are eligible for copyright protection.

If the materials collected and made available in the X5GON project represent a database or a part thereof, which fulfils the criteria of copyrighted works itself (i.e. if they are "individual intellectual creations"), such databases or their parts will be eligible for copyright protection as well.

#### B Sui generis databases

If the materials collected and made available in the X5GON project represent a database or a part thereof, such materials, even if they do not fulfil the criteria for copyright protection, can be protected by rights, similar to copyright (sui generis rights, some EU member states afford such protection by way of related rights).

The maker of a database has exclusive rights to the database, if the obtaining, verification, or presentation of its contents demands a qualitatively or quantitatively substantial investment. Protection applies to the entire database, every qualitatively or quantitatively substantial part of its contents and even insubstantial parts of its contents, when they are used repeatedly and systematically, which conflicts with a normal exploitation of that database, or which unreasonably prejudices the legitimate interests of the maker of the database.

Due to the nature of the X5GON project, it is worth noting that even the alphabetical listing of words in a dictionary (even without the translation or explanation of the words) can be subject to sui generis rights, depending on the national case law

### 2.2 RIGHTS CLEARANCE AND MANAGEMENT

For the X5GON project it is necessary to address copyright and related rights issues in two phases of the project:

- a) Obtaining and processing the collected materials.
- b) Making materials available for the public.

#### A Rights clearance for obtaining and processing the collected materials



For the collection and processing (that is transformation, arrangement, translation, modification, systematization, etc.) of materials, copyrights and sui generis database rights have to be adequately cleared with rightsholders (authors/originators of educational and non-educational material, such as instructors, professors, educators, teachers; crowdsourcing workers; the X5GON project research personnel; other authors and makers of databases; publishers and other rightsholders). Rightsholders have to be informed in detail about their participation in the project and will have to transfer the relevant copyright and/or related rights in order to allow for specific uses of the materials for the purposes of the X5GON project. It is crucial to obtain, above all, the right of reproduction and the rights of making available to the public, as well as transformation rights that allow for modification, translation, adaptation and other changes of the material, necessary for the execution of the project.

Some of the X5GON project deliverables<sup>1</sup> where rights clearance issues appear to be the most relevant are the following:

- D2.3 Visual Interface (M24): one aspect of the planned software platform is also its visual interface, which will presumably include an array of visual elements. Such elements can be subject to copyright, and any potential rights in these visual elements and/or in the visual interface as a whole should be appropriately cleared with the rightsholder (i.e. the interface designer);
- D3.1 – D3.6 (all part of WP3: Learning Analytic Engine): a part of X5GON project is the development of a Learning Analytic Engine (LAE), which will be used for the analysis of learning and testing aspects, links with educational theories, affective computing etc., including cross-modal cross-lingual and cross-cultural aspects. Such a tool is capable of analyzing, as well as producing, large scale datasets or data bases, which is why the *sui generis* rights on databases should be addressed properly, in order to ensure uninterrupted project operation.
- D4.1 – D4.6 (all part of WP4: Recommendation Engine): in the course of the X5GON project, a recommender system will be developed to recommend material from multiple OER repositories allowing the users to gain relevant knowledge from multiple resources. This architecture is designed to allow users manually input their interests as well as dynamically extract their interests. Such engine will presumably operate with, and create, databases. In order to ensure proper functioning of such engine, the *sui generis* rights on databases should be considered as well.
- D6.1 Report of the OER network model and interface design evaluation (M12): as a part of WP6, the D6.1 deliverable involves the design, development, and evaluation of novel interfaces that can lead to engaging, satisfying, and enjoyable learning experiences. Any design elements are likely to be copyright protected, which is why copyright should be cleared where necessary to avoid any interface or design-related issues later on.

Copyright will be observed even in cases, where materials have been made available under open access and similar terms (like under specific terms of Creative Commons or similar licenses), to avoid rights infringement in cases, where certain uses of the

<sup>1</sup> According to the project deliverables available at:

<https://www.x5gon.org/science/deliverables/>, last accessed on 18 December 2020.





materials made available are restricted (for instance prohibiting the making of derivative works, non-commercial uses only, further sharing materials under original restrictions, etc.). Special attention in this respect should be paid to the following deliverable:

- D2.1 Requirements & Architecture Report (M6): the X5GON software platform will be based on the platform architecture which will connect all of the services developed within the project. Technology needed for the X5GON project is expected to be provided under different licenses (e.g. GNU, GPL, Apache 2.0, proprietary licenses etc.). Therefore, such license terms have to be analyzed and it should be determined whether they allow for the uses that are necessary within the X5GON project.

## **B Making available the collected materials**

For the purposes of the X5GON project, the collected materials will be made available to the public. It is advisable that Terms & Conditions are drafted, which must be abided by all entities who will make the materials available (through their platforms, apps, etc.), as well as by all users. Appropriate Rights Transfer Agreements will be concluded with platform providers, allowing them the making available of any copyrighted content as well as all uses (including modifications) by the users of the platforms.

### **2.3 TEXT AND DATA MINING**

The new 2019/790 of the European Parliament and the Council of 17 April 2019 on copyright and related rights in the Digital Single Market (hereinafter: DSM Directive)<sup>2</sup> to be adopted by all EU Member States by June 2021 will have an important effect on the functioning of participants on the internet as it will reshape the rules relating to copyright to which these participants have to abide.

The most important DSM Directive provisions for the X5GON project are Articles 3 and 4 which introduce new mandatory Text and Data Mining (TDM) exceptions. DSM Directive defines TDM as the automated analysis of a large amount of information in digital form, such as text, sounds, images and data, in order to generate information which includes but is not limited to patterns, trends and correlations. TDM can involve acts protected by copyright, by the *sui generis* database right, or by both.

The new exceptions will allow TDM to be performed on legally accessible content and data. Article 3 of the DSM Directive allows research organizations and cultural heritage institutions to perform TDM for the purposes of scientific research without having to obtain rightsholders' permission first. Article 4 of the DSM Directive permits TDM to be performed to all and any other subjects and for all and any purposes as well, as long as the rightsholders have not expressly reserved the use of the work or other subject matter beforehand. Apart from allowing TDM as such, the exceptions also permit the data to be stored for the time needed to provide the verifiability of the researches.

In the X5GON project, different actions that can be classified as TDM (e.g. machine learning) are performed in relation to copyrighted content and databases. Such actions will, most notably, be undertaken in the following deliverables:

---

<sup>2</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0790&from=EN>





- D1.1 – D1.3 (all part of WP1: Learning rich content representations);
- D3.1 – D3.6 (all part of WP3: Learning Analytics Engine);
- D4.1 – D4.6 (all part of WP4: Recommendation Engine).

Before the adoption of the DSM Directive it was not clear which of the actions would require the authorisation of the rightsholders in order to be performed. While reading published content and data was always permitted, reproductions and extractions might have been considered an infringement. With the introduction of the mandatory TDM exceptions in the DSM Directive, and their transposal into national legislations, TDM will be permitted for research organisations involved in the X5GON project that are performing TDM for scientific research purposes. Implementation of Article 4 of the DSM Directive will determine conditions for TDM for all the rest (non-researchers). Implementation of Article 4 may be different in different member states.

### 3.3 GUIDELINES FOR THE RIGHTS CLEARANCE

In rights clearance processes of the X5GON project's elements in the concrete cases the following issues need to be observed or questions answered:

1. *It is necessary to determine the various key players in the X5GON project and the relations between them, to be able to transparently determine their obligations relating to the clearance of rights and rights transfer chains: Who is harvesting, processing, storing and making available of the material?*
2. *What sources is the material harvested from? Harvested material can be available online under different conditions – some of the material can be in public domain, other material can be used for specific purposes only (like non-commercial, research purposes, teaching, etc.), some of the material could have restrictions, that enable read-only and prevent further use, etc.*
3. *It must be made clear, that IP rights clearance refers only to material (content), which is the subject of copyright or sui generis rights (it does not refer for example to the harvesting, processing and making available of "personal data", within the meaning of the GDPR).*
4. *To what extent can the project be considered a research and what parts or results of the X5GON project will be exploited commercially? This is important as some material could be free to use for non-commercial research purposes but restricted for commercial exploitation. Also, the application of the new TDM exception will depend whether the TDM is done for the research purposes or not.*
5. *Under which conditions will the material be made available to users? The material can either be made available by concluding transfer agreements with platforms (if the material will be made available by a third-party platform and not the data harvester himself) and by imposing binding terms and conditions on the users of the platforms. Such rights clearance is carried out more or less on a case by case basis for each individual entity, that makes the material available to the public. The other option is for the harvester to make the material available under a Creative Commons or similar license, which allows everyone the use of works under conditions, as applied by the harvester. In this case the*



*rights to the material must be previously cleared with rightsholders to allow the further sharing of the material under a chosen open license.*

## 2. GDPR COMPLIANCE ACTION PLAN

### 4.3 ACTION POINTS

1. Implement X5GON Services Privacy Notice and Privacy Policy as included below.
2. Consortium members should adopt Joint Controller Arrangement in relation to X5GON as included below.
3. Observe the findings of Legitimate Interest Assessment and DPIA included below in relation to the running of the X5GON services.
4. Implement security measures as required by Article 32 GDPR.
5. Ensure that all persons who handle X5GON personal data receive a data protection training and are bound by their employment or subcontractor agreement to protect personal data.
6. Ensure that Standard Data Protection Clauses are used for any data transfers or storage that may be outside the UK, EU, EEA.

### 5.3 X5GON SERVICES PRIVACY NOTICE

[Text to be used next to any of the X5GON services user registration (e.g. on X5Learn) or first use where no registration is required:]

*Your use of X5GON services is governed by [Terms of Use]. To learn how University College London, Jozef Stefan Institute, and [list other joint controllers] process your data, including how you can opt-out of contributing to our scientific research, please consult our [Privacy Policy].*

### 6.3 X5GON SERVICES PRIVACY POLICY

[Note: We recommend that this Policy is made accessible through a visible link at least on the homepages of all X5GON services websites.]

### 7.3 GENERAL

X5GON consortium is committed to developing open and fair policies for the use of learning materials and Open Educational Resources (OER) provided by their partners and other providers around the world for teaching and learning. We are equally committed to protecting the privacy of our users online. Please note that any users under the age of 16 shall only use the system under the supervision of their parent or their guardian. [NOTE: additional methods to verify the age upon signup are recommended]

### 8.3 DATA CONTROLLERS

Joint data controllers are Jožef Stefan Institute, Center for Knowledge Transfer, Jamova 39, 1000 Ljubljana, Slovenia, and University College of London, Gower Street, London, WC1E 6BT, contact email: erik.novak@ijs.si

[NOTE: considering the EDPB Guidelines 07/2020, all the consortium members involved in jointly determining the purpose of X5GON project and the means (software



and hardware) used for data processing are likely to be considered joint controllers, so we recommend listing all of them]

### 9.3 APPLICABLE SERVICES

This Privacy Policy applies to the following X5GON services:

1. X5GON Connect Service: Connecting OER repositories across the world into a single network. Within the network, the Connect Service is able to identify how a user is navigating between OERs on the same or across other repositories, thus enabling user pattern analysis.
2. X5GON Discovery: AI-powered search engine that enables learners to discover learning materials. It enables finding OERs by type, license, and language. In addition, the X5GON team partnered with Creative Commons and integrated their Creative Commons Catalog API, thus supporting searching through CC licensed images.
3. X5GON Recommend: Aligning learning materials with learner context by finding other OERs they are likely to be interested in. The recommendation plugin is a component that allows users to find materials that are related to the OER they are currently observing.
4. X5GON Translate: Providing high quality automatically generated translations of learning materials beyond borders. This is achieved through the use of the Media Transcriptions and Translation Platform, supporting several languages and focusing the development of high-quality translation models for minority languages.
5. X5Learn: An intelligent learning platform that bridges the right educational resource to the right user at the right time within a futuristic user interface.
6. X5GON TrueLearn: A scalable, transparent educational recommender for lifelong learners.
7. X5GON Moodle: A Moodle plug-in to use X5GON technologies to build learning activities.
8. X5GON Blind: A prototype learning environment for the blind and visually-impaired. The environment leverages existing technologies adapted for the visually-impaired and integrates X5GON TrueLearn to provide recommendations.
9. X5GON Feed: Providing quality data to further research in open education. The public X5GON API enables accessing OER metadata, transcriptions and translations, as well as the models and services described above.
10. X5GON datasets: X5GON has released several datasets that can be used to approach some of the previously mentioned technical challenges.

### 10.3 USER DATA CATEGORIES AND PURPOSES OF PROCESSING

Our processing of user personal data is generally based on the provision of service to you based on your acceptance of our Terms of Use. Our processing includes machine learning based on your activities using our service, your search preferences and other user characteristics you tell us about in order to deliver the most relevant content to you and other users of X5GON services. Please see below various categories of data that is gathered, plus related purposes:

**PROFILE INFORMATION:** A user may be required to or allowed to submit some personal information as part of his or her Member Profile, such as username, and

preferred language, highest educational level, user interests, learning goals and other personal information as part of membership and participation in an online community based on open educational resource consumption. This data helps identify the right OER for the user and other users based on machine learning. We note that the use of X5GON Blind may inevitably imply a health-related condition, however, we do not explicitly ask for this information.

**USER ACTIVITY INFORMATION:** this may include:

- Login form (email and password)
- User profile form (first and last name)
- URL changes within the site
- Text entry in the search field
- Searching for Wikipedia topics via cascading menus
- Entering notes manually
- Entering notes via buttons
- Hovering and clicking on an OER card, including the fragments bar and interactive topic visualizations
- Starting, stopping and skipping in embedded video players
- Free text feedback on OER resources
- Changing tabs in the resource sidebar (full-page view)
- Toggling between compact and detailed preview mode
- Browser screen/window size and scroll position

X5Learn platform is part of a research project X5GON. This includes the collaboration to enable and conduct research about how learners' access and master educational materials online, with the goal of improving learning outcomes. Within this project, we collect user activity data that is acquired by the X5GON connect service integrated in our system. The user data we acquire through the connect service consists of the following values:

- User ID. This value is the identifier of the user accessing the learning material. It is created using the X5GON connect service and stored as a cookie in the user's browser. The value is randomly generated.
- Material URL. This value is the material identifier and the link that the user visited.
- Referrer URL. This URL is the link from which the user arrived to the material.
- Access Date. The date at which the material was accessed.
- User Agents. This attribute contains information about the technology the user used to access the material.
- Language. The language configuration used in users technology.
- User Location. The geographical location from which the user accessed the material, e.g. city, country, and continent. This value will be calculated using the user's IP, however, the user's IP address will not be stored in the XGON databases.

**ADDITIONAL INFORMATION:** X5GON consortium may also seek your consent for additional disclosures of information, including Personal Information, and will share it only as described to you. In addition, X5Learn or a Member may share with the public and with third parties, including but not limited to researchers and business partners, information and Personal Information that is de-identified or aggregated in a manner that does not personally identify you.



**USER GENERATED CONTENT:** X5Learn provides its registered users with the privilege of adding user-created data to the site. It is the right of X5Learn to grant and revoke this right to any user of the X5Learn web site. Self-notes, personal annotations, comments, ratings, reviews, and tags created by the user are by definition part of the X5Learn knowledge base and are created under the Creative Commons Attribution-Noncommercial-No Derivative Works 3.0. Accordingly, such data is processed based on the license given by the user subject to Terms of Use.

### 11.3 THE USE OF DATA FOR MACHINE LEARNING PURPOSES

Your data may be used to improve our machine learning algorithms for other users, but this would not enable them to see your data. As a member of the X5GON learning community, we encourage everyone to participate in the scientific research to improve our understanding of how people learn online. X5Learn platform enables conducting scientific research about how learners' access and master educational materials online, with the primary goal of improving learning outcomes of the learners.

This entails carrying out research related to cognitive science, education, technology enhanced learning, human computer interaction, artificial intelligence and various other domains. **In order to make our goal a success, we may use your usage data for scientific research.** Choosing not to take part will not disadvantage you in any way. When you use our learning interface, it will record some of your actions, such as login times, notes and other user interface interactions. We will use the usage data of the community to build offline datasets that are used for scientific research. These datasets are sometimes made publicly available to the general research community after ensuring that the users cannot be identified by third parties not holding the original datasets.

**The data collected from the devices, learning materials and user interactions will be pseudonymised or anonymised for research purposes.** We believe it is our legitimate interest of scientific research to process the data accordingly, however, you may opt-out from contributing your data anytime by de-selecting the option provided in the user profile panel. **If opted-out at the time, your usage data will no longer be used when generating pseudonymised datasets** but this might not affect previously generated datasets in case of compelling legitimate grounds, for example where the data has been merged with other data to produce certain scientific research results. See the Your rights section below to see how you can opt-out.

### 12.3 THE PROCESSING OF RESOURCE DATA AND METADATA

We also gather information about you that is embedded in any format as part of OERs available online, including but not limited to voice, video, and resource metadata. This data is processed based on our legitimate interest to provide access to open educational resources. We believe our right to process such data is not overridden by your privacy interests because the information has already been made public and our activities are limited to making the use of- and providing easier access to such resources. However, should you believe the information we have included is not part of an OER or you have other reasons to object to our processing, please get in touch with us. See Your rights section below.

### 13.3 DATA TRANSFERS





Your data may be transferred to third parties providing services such as storage or analytics, including in a country outside the EU/EEA/UK based on an adequacy decision or adequate safeguards such as Standard Data Protection Clauses.

## 14.3 YOUR RIGHTS

Your below rights can be exercised by sending us an email to [erik.novak@ijs.si](mailto:erik.novak@ijs.si)

**Right to access the data we process about you:** upon your request, we will send you the data we are processing about you in electronic format.

**Right to erasure:** you may request the erasure of your personal information. We would keep your activities data used for our machine learning purposes but this data will no longer be in a personally identifiable form. Similarly, enrichments to the material such as bookmarks, self-notes, comments, annotations or recommendations would be kept in non-personal form.

**Right to object:** You have the right to object to the processing of your data where it is processed in line with our legitimate interests. We may still continue to process the data where compelling legitimate grounds exist.

**Right to portability:** You have a right to get a copy of the personal data we hold about you. We'll provide your data in a standard portable format.

**Right to rectification:** You can request the rectification of any inaccuracies in the data that we process about you.

**Right to restriction:** You have a right to restrict the processing of your personal data in certain circumstances foreseen by Article 18 of the GDPR. This means you can limit the way we use your data.

**Right to port your data:** You have a right to receive your personal data in a structured, commonly used and machine-readable format and have the right to transmit those data to another controller without hindrance.

**Right to complain** to the competent data protection authority, which is most likely going to be: Informacijski pooblaščenec, <https://www.ip-rs.si/> or Information Commissioner, <https://ico.org.uk>

## 15.3 JOINT CONTROLLER ARRANGEMENT

[NOTE: This arrangement shall apply between all the X5GON consortium members who are joint controllers for X5GON data.]

**Response to data subjects' requests exercised pursuant to the rights granted by the GDPR:** the joint controller that receives a rights' request from a data subject shall immediately inform and coordinate the response with other joint controllers.

**Transparency duties to provide the data subjects with the relevant information referred in Articles 13 and 14 GDPR:** all joint controllers are committed to maintaining the X5GON Services Privacy Policy visible on all X5GON services websites, apps, and download points.



**Implementation of general data protection principles:** all joint controllers are committed to lawfulness of processing, transparency, purpose and storage of processing, data protection by design and by default, including personal data minimisation to achieve the desired purpose, and other GDPR principles.

**Legal basis of the processing:** all joint controllers will process the data strictly based on contract according to Terms of Use, and based on legitimate interest subject to legitimate interest assessment.

**Security measures:** all joint controllers shall take the necessary security measures in their domain as required per Article 32 GDPR.

**Notification of a personal data breach:** joint controllers shall promptly inform each other about any data breaches and coordinate any necessary notifications to the data protection authorities and the data subjects.

**Data Protection Impact Assessments:** joint controllers shall collaborate in any necessary data protection impact assessments and implementation of the necessary measures.

**The use of a processor:** joint controllers shall coordinate any use of external processors.

**Transfers of data to third countries:** data shall not be transferred outside the UK, the EU and the EEA, unless agreed otherwise by joint controllers.

**Organisation of contact with supervisory authorities:** joint controllers shall coordinate with other joint controllers any responses or other communication with data protection authorities.

### 16.3 LEGITIMATE INTEREST ASSESSMENT (LIA)

Legitimate interest assessment in relation to the processing of the data has been performed through ongoing ethical assessment in relation to data protection throughout the project. At this point, we summarize the findings for future reference:

- In relation to **OER-contained data and metadata**, it is indispensable to process the data that is part of the openly available resource in order to fulfil the aim of the project to make such OERs more easily accessible and findable. In terms of balancing rights and freedoms, one needs to consider that no special categories of data are involved, plus the data has already been made public. Moreover, offering to remove individual resources subject to an erasure request or the exercise of the right to object can be used as an additional balancing element.
- In relation to the **use of user data for machine learning purposes**, we note that the core value of the project is based on such machine learning. Accordingly, relying on consent might prevent X5GON from obtaining sufficient data for machine learning purposes, whereas it is questionable whether the use of data for broader machine learning is strictly necessary for the performance of contract subject to Terms of Use. Accordingly, relying on





legitimate interest subject to the right to object, plus explaining this legitimate interest and the effects of the exercise of this right in the Privacy Policy, in our view meets the legitimate interest balancing test.

### 17.3 DATA PROTECTION IMPACT ASSESSMENT (DPIA)

DPIA in relation to the processing of the data has been performed through ongoing ethical assessment in relation to data protection throughout the project. At this point, we summarize the findings for future reference.

We note that the DPIA should be performed for X5GON because it is meant to “carry out profiling on a large scale”. However, we note that the project does not involve health-related data processing, except where implied in the use of X5 Blind. Furthermore, the processing does not involve

The following information is processed:

- User information, notably profile and activity information, user generated content, and other information potentially submitted by the user. This data is processed to establish individual and general user preferences using machine learning.
- Content data and metadata contained in OERs, which include lectures, documents and presentations. OERs openly available online are listed and made available via X5GON services, plus may be translated.

#### **Necessity and proportionality**

Whereas OER-related data has already been made available to the public, user-related information is limited to what is necessary to establish preferences and suggest the most suitable OER for a particular user. In that regard, we consider the risk to be low, despite the use of profiling to establish the most adequate resources based on the user area and level of knowledge.

#### **Risk for rights and freedoms**

Based on the type of information gathered and their use as part of X5GON, we therefore consider the risk for rights and freedoms to be low. We note though that commercial exploitation may require the risks to be reviewed, notably in terms of potential access to user profile and activity data by the business sector.

#### **Safeguards envisaged to address the risks**

X5GON joint controllers should at all times ensure that the measures listed in Article 32 GDPR are applied to X5GON databases for both user data and OER data. In addition, the right to object to processing should be implemented as foreseen in the Privacy Policy.

## 3. CONCLUSION

For the purpose of this final deliverable we again engaged with the ELT (Ethics and Legal) team, comprised of project personnel and three lawyers with expertise in data protection and privacy, IP and copyright and licensing. The team members have



helped the X5GON consortium partners to understand the optimal ways in which to engage with ethics, data protection and IP and copyright issues in the currently changing legal landscape in the EU.

This deliverable is comprised of two parts and is an updated and upgraded version of D9.1 and D9.2 which described the thinking of the consortium around the challenge of ethical data management, data management plan, and intellectual property.

The first part is on Intellectual property and is addressing the relevant intellectual property issues relating to the X5GON project and highlight the potential deliverables where intellectual property issues may arise. The second section of the report is an GDPR Compliance Action Plan which includes action points and the deliverables that need to be implemented in relation to X5GON services. This part is accompanied by a detailed breakdown of the Action Plan in relation to various aspects and services of the project.

The Ethical procedures around data, the Data Management Plan described in D9.2 remain unchanged and are not included, however they provide an elaborate and general overview of the partner's policy for data management.

In terms of future plans, the ELT team plans to release a set of reports within Jozef Stefan Institute's new IRCAI centre, the International Research Centre on Artificial Intelligence (IRCAI), under the auspices of UNESCO Category 2 centre in Ljubljana, Slovenia.

The Centre role is to maximize the benefits of AI to achieve the Sustainable Development Goals, with SD4 as "Education 4 All" as a key component, and to expedite a multi-stakeholder mechanism to put AI under the litmus test of ethical, legal, openness and policy challenges.

The Centre is a direct exploitation result of X5GON and will be a conduit for IPR and data protection research with a unique focus and further expertise on UNESCO's AI programmes. In particular, it will leverage the power and capability of AI groups such as the X5GON's ELT group across various areas of competence of UNESCO by generating relevant statistics on AI, AI-related applications and associated technological innovations.