



EDISON

Education for Data Intensive Science to Open New science frontiers

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Deliverable D1.2

Register of IPR licenses

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Change history

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0.2	02/08/2016	ENG	Review of draft text by A. Manieri
0.3	28/07/2016	EGL.eu	Review of draft text by S. Holsinger
0.4	22/08/2016	UvA	Final text

Executive summary

This document presents the approach to licensing Intellectual Property Rights (IPR) arrangements as provided by the EDISON project, or granted to the project by third parties. Several categories of IPR arrangements are identified, and applicable principles for assigning IPR licenses defined. These principles provide guidance for the project partners when developing IPR licenses.

Three kinds of licenses are being discussed.

First, the EDISON project Consortium internal licenses as already established in the EDISON Consortium Agreement describing the project partners' ownership of results and access rights to each one's background (pre-existing IPR).

Second, the licenses provided by EDISON to third parties in order to assist them with the developing EDISON framework and ICT environment for skilling and certifying data scientists.

Third, licenses provided by third parties to EDISON and its partners. These latter include universities providing information for the EDISON project partners, content from third parties to be shared through EDISON mechanisms, and functionalities offered by third parties for operating EDISON services.

In this document, the second and third category of IPR arrangements are analysed, specifically where defined licenses are required to establish ownership with license conditions and restrictions on use. Attention is for assigning IPR after the end of the current project for the services that need to be continued and sustained.

As for licenses provided by **EDISON to third parties**, the following aspects are discussed.

- Acknowledging contributed community efforts to EDISON. These include the development of the EDISON Competences Framework, Body of Knowledge, the Model Curriculum, and the establishment of the Training Marketplace.
- Licenses to outsource EDISON value-added services with respect to the EDISON Community Portal (named DataSciencePro), and the Certification scheme .

As for licenses provided by **third parties to EDISON**, the discussed issues are the following.

- External universities providing information to assist the EDISON project partners in their work.
- Content from third parties to be shared through EDISON services for users
- Functionalities offered by third parties for operating EDISON services

This ends up in a draft Register of Licenses. Since most of these licenses are still being discussed and developed, the current draft Register of Licenses is limited and will expand in the second half of the project. Finally, an outlook to sustaining IPR licenses after the project provides an overview of options. These will be reported in more detail in the Deliverable 1.3 "Report about the mechanisms to sustain the IPR management" (due by the end of the project on 31 August 2017).

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1 Introduction

This deliverable presents an initial overview (Register) of Intellectual Property Rights (IPR) licenses as provided by the EDISON project, or granted to the project by third parties. IPR management is recognised by the consortium to be very important for the success of EDISON, and a specific task was foreseen in order to establish the principles for IPR management in the project, for facilities and content provided by third parties, and to facilitate IPR arrangements and agreements with and among third parties.

The project is developing various reports with information, analysis, and recommended plans for data science curricula, as well as facilities for sharing educational material and methods of universities and appropriate expert organisations. These reports and facilities will become available in the public domain under an appropriate Creative Common license from EDISON (partners). Information from third parties, as for materials and educational methods of universities that they want to share amongst them, are not owned by the project and require targeted IPR management when shared through the project facilities (i.e. registries). In more detail, the task includes the following activities:

- Preparation of a report with IPR principles to be applied for both project materials and third party materials, and to be approved by the project management committee. The report also covers the applicable processes to establish the license schemes and individual IPR licenses.
- Information delivery to IPR owners on how the project will run its IPR policy, or assist third parties when they want to share materials. Establish IPR licenses and promote legal interoperability.
- Maintenance of a registry of the IPR licenses owned by the project or third party licenses to be enforced by the project.
- Monitoring of the use of licensed materials and act when required if the principles would be jeopardised.

The deliverable is organized as follows.

Section 2 describes the categories of relevant IPR licenses in the project, and the principles to be applied in each of these categories.

Section 3 defines how IPR arrangements have developed to date and how third parties have been informed as appropriate.

Section 4 is the current Register of IPR licences.

Section 5 presents a preliminary outlook to D1.3: Report about the mechanisms to sustain the IPR management (Due by the end of the project in Month 24).

2 Categories of licenses and associated principles

This section describes the categories of relevant IPR licenses in the project, and the principles to be applied in each of these categories. Following this, the next section 3 describes how IPR arrangements have developed to date and how third parties have been informed as appropriate.

2.1 Definitions¹

IP (Intellectual Property) is any form of original creation that can be bought, sold or otherwise exploited. The four main types of IP are patents, trademarks, designs and copyright. In EDISON the types of trademarks and of copyright apply, and primarily to secure that developed work (content) is open and accessible, and is used in correct ways while attributing ownership and authorship.

IPR (Intellectual Property Rights) is a legal framework for managing IP, although legal arrangements are not similar for different countries. Nevertheless, there are some common minimal requirements to assign IPR and licenses to exploit IPR. In most jurisdictions a valid IP assignment must at a minimum include the following:

- *Identification of the Parties* - identifies the contract as an intellectual property assignment agreement and identifies the Assignor and Assignee. The Assignor is the party that is transferring (“assigning”) its ownership interest and the Assignee is the party receiving it.
- *Recitals* - defines the context of the assignment and provide key background information about the parties and includes a statement of the intent to transfer rights in intellectual property.
- *Definitions* - contains relevant general and technical terms used throughout the contract in order to guarantee that these terms will have the same meaning to the parties of the agreement.
- *Assignment of intellectual property* - contains a complete and clear description of the property being transferred; details exactly the intellectual property, including any relevant applications or registrations for intellectual property protection and “goodwill” (business reputation) sold with the property; “goodwill” is the intangible value of an asset that reflects the commercial value of this asset (e.g. trade mark reputation and distinctiveness among customers). In the case of complex assignment agreements, this clause may also refer to a description of the assets being transferred, which will be annexed to the agreement.
- *Obligations of the Parties* - it is important to clearly define the obligations of the parties in order to avoid any subsequent conflict with regards to the extent of these obligations; the exact definition and extent of the parties’ obligations depend on the type of intellectual property transferred; however the main obligation of the Assignor is to transfer the ownership of the intellectual property assets and the main obligation of the Assignee is to pay the a lump sum (royalties) agreed; other obligations are those related to the Assignor’s rights to the intellectual property transferred - the guarantee that he owns the IP.
- *Liability and warranties provisions* - relates to the assignor’s right and authority to enter into such an agreement; for example the guarantee that he is the exclusive owner of all rights, title and interest in the IP and that the IP is valid and subsisting; that the IP transferred does not infringe the rights of third parties.
- *Indemnification* - a description of each party’s future obligations, if the intellectual property is found to infringe on a third party’s rights.
- *Payment provisions* – any applicable price and other commercial terms.
- *Term of the agreement* - identifies the effective date of the assignment.
- *Applicable law and jurisdiction* - which national law will apply in the event that a conflict arises; identification of a competent court or an arbitration/mediation body to which a dispute could be referred is also important.
- *Other Common Clauses* -
Annex - Description of the Intellectual Property

¹ The definitions and explanations follow the faq pages of the EU IPR helpdesk <https://www.iprhelpdesk.eu/faq>

Register of IP rights

Proving the validity of the IP rights involves the identification of creators and the establishment of ownership rights. For this purpose, EDISON is keeping all records. Where appropriate, if IP titles are not automatic and have to be granted by competent authorities, it will be considered to register intangible assets as intellectual IPR with these authorities.

License is a permission or a set of permissions regarding whatever is licensed. When an organisation is given a license to do something, it receives the permission to do it. In general, the scheme of a licence agreement is simple: the licensor (owner of IP rights) allows the licensee to use its IP rights. The licensee may use the licensor's IP rights to the extent established in the licence agreement; however, the formal IP rights remain with the licensor. Licenses can be exclusive or non-exclusive

Creative Commons License is a copyright licence that allows the user, who is not the copyright owner of a work, to distribute freely an otherwise copyrighted work. In this context, a CCL works mutually for both the copyright owner and the end-user, since it gives the author the freedom to allow people to share, use, and build upon a work that he/she has created and protects the users from a possible copyright infringement claim. There are several types of CCLs and the users have to comply with the terms of distribution posed by the copyright owner and indicated by the respective CCL, otherwise they could be held liable for copyright infringement.

The EDISON project is following the principles of Creative Commons for its work on the Competence Framework, the Body of Knowledge, and Model Curricula. Likely, the model of CC BY-SA 4.0 will be the basis of licenses (<https://creativecommons.org/licenses/by-sa/4.0/>).

2.2 EDISON project Consortium internal licenses

The EDISON Consortium Agreement (APPENDIX A) describes the project partners' ownership of results and access rights to each one's background (pre-existing IPR). In order to carry out the EDISON workplan, consortium partners are developing and sharing know-how and technologies, including, but not limited to algorithms, tools, experiences and methodologies. Know-how exchanged between the partners may include, in certain cases, background knowledge. The partners are in agreement on the principles for the management of IPR, as summarized below (from the project description):

- **Access Rights to IP during the project:** Access rights to Project results and Background needed for the execution of the Project shall be deemed granted, on a royalty free basis, as of the date of the EU Contract entering into force. Methodology, documents, benchmarks and studies will be available to all; while tools and algorithms developed by the partners may be available at the discretion and terms of their respective owners. In spite of the latter restriction, the partners intend to pursue publications of the underlying principles of the technologies embodied in their tools in the appropriate academic conferences. These Access Rights to Project results and Background shall be used only for the purposes for which they have been granted and only for as long as it is necessary for those purposes. Reports about scientific results that are part of the project deliverables to the EU will be available openly on the project Web site.
- **IP Ownership:** Project results IP shall be owned by the project partner carrying out the work leading to such Project results IP. As multiple EDISON results (See sections 1.1 and 3.1) will be actually created jointly by two or more project partners and the resulting IP shall be of such nature that the contribution of each project partner cannot distinguished from that other, such work will be jointly owned by the contributing project partners. The same shall apply if, in the course of carrying out work on the project, an invention is made having two or more contributing parties contributing to it, and if the features of such joint invention are such that it is not possible to separate them for the purpose of applying for, obtaining and/or

maintaining the relevant patent protection or any other intellectual property right on an individual project partner basis.

- **Confidentiality:** During the term of the Project and for a thereafter period to be fixed in the CA, the Partners shall treat as confidential any information which is designated as proprietary and/or confidential by the disclosing Partner by an appropriate stamp, legend or any other notice in writing, or when disclosed orally, has been identified as confidential at the time of disclosure and has been promptly confirmed and designated in writing as confidential information by the disclosing Party.
- **Publications:** In order to make public information owned by one partner, its prior explicit consent (in written, being e-mail valid if so agreed) will always be necessary. For the avoidance of doubt it is stated that no Partner shall have the right to publish or allow the publishing of data, which constitute Project results, Background or confidential information of another Party even where such data is amalgamated with such first Party's Project results, Background or other information, document or material.

2.3 Licenses provided by EDISON to third parties

The key EDISON objectives are providing a framework and an ICT environment for skilling and certifying data scientists' expertise for graduates, practitioners and researchers throughout their careers. This is supported by a sustainable education model for Data Science and Data Intensive technologies offered by a dedicated on-line tool. Clearly, it is imperative that outreach and support for users is essential to realize these objectives. A set of appropriate licenses is the mechanism to promote open access in an effective and controlled way, while securing quality by engaging capable third parties. The following two categories of licenses are concluded and partly still considered.

2.3.1 Licenses to acknowledge community efforts

The above-mentioned framework for skilling and certifying data scientists' expertise for graduates, practitioners and researchers is building on current expertise and experience of a growing number of universities and educators. Apart from the partner organisations in the EDISON project consortium, this group of experts is growing with other organisations from the educational community, and they are involved in the development of EDISON services for new initiatives in universities and other organisations throughout Europe. It is in each one's interest that the content of EDISON services is directly accessible without restrictions while recognizing the input of EDISON partners as well the external community. Currently, two licenses based on Creative Commons are identified for implementation.

2.3.1.1 EDISON Competences Framework; Body of Knowledge; Model Curriculum

These are the core of EDISON services providing educational organisations an advanced and common reference for developing their specialized training offerings to students and practitioners. This includes details about curricula, course structures, and educational materials shared by universities and other educational organisations.

2.3.1.2 Training Marketplace

The above services must be complemented by training material, for example big data, software tools, and computational capacity. The developing Training Marketplace is a catalogue of available courses. These may include Virtual Labs – hands-on labs), also linked to one or more courses. Each of these courses and Virtual Labs have their own ownership and associate license, and will be included in a CC-BY-SA umbrella (user generated content, as in <https://creativecommons.org/licenses/by-sa/2.0/>)

2.3.2 Licenses to outsource EDISON value-added services

The above (2.3.1) mentioned information and services depending on community efforts will reach users through different mechanisms and where possible as on-line environments. Two categories of mechanisms are in study and in development with related licences:

- The EDISON promoted Community Portal “DataSciencePro”, with services such as the Training Marketplace
- The Certification scheme

The maintenance and updating of these mechanisms, as well as help and support desks, will require continued efforts and thus costs after the end of the current EDISON project. This implies that the mechanisms and services will be outsourced to the professional organisations capable to provide these and with sustained quality. Such organisations can be current EDISON partners or other ones. Following the EDISON Consortium Agreement this implies timely decisions of the General Assembly on rights and conditions (outsourcing licenses). These licenses will affect the organisations taking up outsourced responsibilities, as well the supply companies offering support functions.

Currently, this is being explored leading to negotiations with selected organisations.

2.4 Licenses provided by third parties to EDISON and its partners

2.4.1 Universities providing information for only the current project partners

The EDISON developments with respect to the CF, the BoK, and Model Curricula are benefitting from the expertise and experience of a range of organizational sectors, such as universities, companies, standard-setting bodies, and professional networks (such as the RDA, CODATA, etc.). Relevant information is primarily drawn from publicly open resources, such as webpages and downloadable documents. Not all expertise and information is accessible as open source such as individual expertise or educational materials such as readers. Specific Memorandums of Understanding with relevant organisations will give the EDISON partner(s) rights to use the information for only development work in EDISON.

2.4.2 Content from third parties to be shared through EDISON mechanisms

EDISON is promoting that universities interact and share their materials (course information, readers, practical exercises) and educational methods. Bringing together the European “Champion” universities who are already running data science bachelors/masters programmes, provides a platform for their trainers and educators who extol the virtues and benefits of the EDISON Framework in terms of helping them deliver data science education and contribute to the evolution of the EDISON framework. On-line environments will facilitate this, offering universities’ facilities to upload and download relevant information. It should be noted that such information is not owned by the EDISON project and the IPR management requires establishing standard IP license texts for the owners (the universities), as well a common license (reflecting the standard university licenses) for users who want to access the on-line environment. The EDISON IPR register keeps track of each license signed by a university.

2.4.3 Functionalities offered by third parties for operating EDISON services

Outsourcing EDISON value-added services (2.3.2) will depend on functionalities offered by third parties for operating EDISON services. These can be software and other delivering organisations, such as companies. The selection of third parties with appropriate offered functionalities is a normal business routine that will include considerations with respect to their licenses. These should not jeopardize the EDISON service provision based on open access and Creative Commons IPR arrangements.

3 Development of IPR arrangements

The previous section 2 described the categories of relevant IPR licenses in the project, and the principles to be applied in each of these categories. This section describes how IPR arrangements have developed to date and how third parties have been involved as appropriate. More specifically, the section is focusing on the IPR issues requiring defined licenses in order to establish ownership and any specific license conditions and restrictions on use. In addition, attention is for assigning IPR after the end of the current project for the services that need to be continued and sustained.

3.1 Which IPR arrangements require licensing in EDISON?

The Register of Licenses in Section 4 serves as a reference for the project's Management Committee in order to propose the General Assembly of the Consortium in time about due decisions on assigning IPR after the current project lifetime. License details are the responsibility of the IPR owner. Since the EDISON project is developing quite a number of documents and processes that will continue to be used after the current project lifetime, it is important that the involved project partners – the IPR owners – are identified to establish IPR. This is not only important for attribution of intellectual ownership, but also to organise any licenses to third parties as with respect to terms of use and required updating. Since, as a general rule, IP rights are subject to national regulations, particularly insofar as their enforcement is concerned, IPR owners in the EDISON project partnership may end up with slightly different license schemes if applicable.

3.2 EDISON project Consortium internal licenses

No special issues with respect to IPR licenses within the project consortium have yet to be reported in this deliverable document. This will change in the second half of the project when the consortium partnership has to decide on sustaining a number of developed services after the end of the project, either by a few of the partners or by third parties.

Similarly, a decision will follow on branding EDISON with respect to the name EDISON, the logo, and results. Most likely the legal branding of name and logo as a trademark will not be effectuated since both are not unique and also used in (very different) existing entities. This is different for using the combination of name, logo and developed service (e.g. the Competence Framework). Licenses will follow the principles of Creative Commons and developments are discussed in the next paragraph.

3.3 Licenses provided by EDISON to third parties

3.3.1 Licenses to acknowledge community efforts

3.3.1.1 EDISON Competences Framework; Body of Knowledge; Model Curriculum

The EDISON Competences Framework, Body of Knowledge, and Model Curriculum are being validated and improved by engaging wider expert community and "Champion" universities. Draft versions are published on the EDISON website and available under Creative Commons CC-BY licenses (Attribution). More sophisticated and interactive presentations will come available in the

so-called community portal allowing users to test and assess their personal or organisational data science skills with advice on missing competences and about training opportunities (see paragraph 3.4.2). The input for these services is also based on contributions from the expert community. The Creative Commons license will acknowledge these contributions.

3.3.1.2 Training Marketplace

Following the example of the EGI Foundation and its network of competence centres to make knowledge and skills more easily accessible, on-line educational and training material provided by third parties will be federated through a training marketplace. In addition, the EGI Federated Cloud will be provided to EDISON to support the education sector with an infrastructure that can offer both datasets of public relevance and a co-located distributed cloud infrastructure for their manipulation and exploitation. This service is considered to be provided through principles of "Open Science Commons" (<http://go.egi.eu/osc>), according to which "Researchers from all disciplines have easy, integrated and open access to the advanced digital services, scientific instruments, data, knowledge and expertise they need to collaborate to achieve excellence in science, research and innovation".

3.3.2 Licenses to outsource EDISON value-added services

Although the content information about the EDISON educational framework and about educational materials from third parties (i.e. universities) is open, this is not necessarily true for on-line platforms and other services offering functionality to exploit such content in different applications. An example of such an application is the tool being developed for the self-assessment of data science competences by individuals or organisations. These kinds of advanced tools or services require maintenance and regularly updating, as well as helpdesks and support services. It is not self-evident that the consortium partners of the current EDISON project will support this from their own resources after the end of the project. Neither is it expected that a funding agency will provide financial support for maintenance and updating. In this respect, it is reasonable to ask a modest financial contribution from the third parties interested in offering open content. Financial contributions are considered for different levels varying from a basic free waiver, up to fees related to, for example, advertised training services by universities and others. The license for organisations running an open EDISON service has to include the conditions to exploit the relevant IPR developed by the current EDISON consortium or by others offering content (universities, etc.).

Two categories of services are in study and in development with related licences:

- EDISON Community Portal (3.3.2.1)
- Certification scheme (3.3.2.2)

3.3.2.1 EDISON Community Portal

The services provided by EDISON and collectively referred as EOEE (Edison Online Education Environment), as well as from interested third parties, are organised in a portal in support of the Data Science Community. The content provided through this portal is divided in different types, and for each of these a specific agreement/license will be established in the second year of the project.

- **User generated content:** any user (for example a student) is enabled to upload his/her personal content. The agreement and required legal statements will be included in the legal terms that the user will electronically sign at the registration phase. The agreements will foresee a perpetual license to the organization running the Portal (after the current project's lifetime) to store and use the user uploaded content for non-commercial use. Such personal content cannot be sold and will not be accessible by others. However, the organization

operating the portal may benefit from such content to develop or improve added value services. The agreements will take into account the forthcoming EU directive on privacy.

- **Third party generated content:** specific bilateral agreements will be set up with each entity (project, community, other web site owners, university, research infrastructure) to enable sharing of their offered content. As an example, but not limited to these, content may include events, information about training courses (ranging from the single short-term module to the more wide University programs or PhD), papers and manuscripts, echo of web articles, open positions, and any other educational experiences (such as internships, bids or grants, fellowships). See further under 3.4.2.
- **Third party services** (See also 3.4.3): specific bilateral agreements with external parties offering functionality (for example software) for running the portal.
 - A party offering the Virtual Lab service to Community Portal users. An agreement will be established in order to support both commercial and non-commercial use of the Virtual Lab service. Potential parties considered are *D4Science.org* or *the EGI Foundation*.
 - *Globit gmbH*, for offering users access the eLearning platform service of the Community Portal. The agreement will be established in order to support both commercial and non-commercial use of the eLearning platform and the content creation course tools.
 - *Engineering Ingegneria Informatica SpA*, in order to grant access to the competence benchmark services, developed in cooperation with the Goethe University.

3.3.2.2 Certification scheme

The EDISON project is developing exemplary tracks allowing interested individuals (such as 'self-made' data scientists in their PhD project, etc.) to expand their skills to be demonstrated with a formal, recognized certification. The certification programme has to comply with (ISO) standards for certification and different forms of formal certifications are explored through the involvement of formal certification authorities. The definition of the overall certification schema such as the number of levels of certification, the target groups according to the EDISON MC-DS and profiles according to the DS-BoK and CF-DS, will end up in the definition of IPR management in the planned certification schema. The related license to organisations willing to implement EDISON training and certification schemas is still in development by investigating what is needed to transfer the EDISON certification scheme license after the end of the project to one or more organisations. This may include conditions for such organisations with respect to quality assurance and international certificate transferability. Obviously, only professional organisations with a proven track record will be considered for granting a license.

More information about the certification scheme and related business model can be found in EDISON Deliverable 4.2.

3.4 Licenses provided by third parties to EDISON and its partners

3.4.1 Universities providing information for only the current project partners

The EDISON development work benefits from use cases in universities with advanced data science training programmes. In order to secure the right for EDISON to access their relevant intellectual property, it is sometimes required to establish a joint Memorandum to define what is accessible and how the university will in turn benefit from cooperating with EDISON. This is especially relevant for the EDISON workpackage 3 with respect to the development of model curricula and to guide processes of curricula creation at interested universities and further on other institutions providing education and training. Up to now, a MoC was signed with two relevant universities following the

MoC model text in APPENDIX B. When signing individual MoCs, it is important that the involved EDISON partner makes sure that the counter signatory at the university has ownership of the relevant IPR. The jurisdiction of some countries or universities assigns IPR to the individual or school who has created the intellectual work, rather than to the formal employer. In addition, rather than course material being owned solely by the faculty member or by the organisation (university), there can be a large number of complicating factors, ranging from what constitutes a course to unbundling ownership. The organisational philosophy in this respect can result in different IP policies. Apart from making sure who is the right owner of the relevant IPR, this owner is also expected to take responsibility when the ownership would be challenged by any contesteer.

3.4.2 Content from third parties to be shared through EDISON mechanisms

The EDISON Community Portal (see 3.3.2.1) will - amongst others – promote the sharing of educational materials and methods by offering universities facilities to upload and download relevant information. It should be noted that such information is not owned by the EDISON project and the IPR management requires establishing standard IP license texts for the owners (the universities), as well as a common license (reflecting the standard university licenses) for users who want to access the on-line environment. The EDISON IPR register keeps track of each license signed by a university. The remark above under 3.4.1 with respect to affirming who is the right owner of course materials is also applicable here. This will be implemented with a standard license text requiring digital approval by universities (in practice their eligible staff) before entering the full facilities in the EDISON on-line environment.

3.4.3 Functionalities offered by third parties for operating EDISON services

The selection of third parties with appropriate offered functionalities is still running and will come into effect in the second year of the EDISON project.

4 Current (draft) Register of Licenses (August 2016)

Licenses provided by EDISON (partners)				
IPR subject	Licensor/owner	License given to	Terms of License / URL	End date
CF / BoK / Model Curr.	Involved EDISON partners	Mass users	Creative Commons (CC-BY)	Open ended
Training Marketplace	Involved EDISON partners	Mass users	Based on Open Science Commons principles	Open ended
Community Portal	Involved EDISON partners	Mass users	Creative Commons (CC-BY)	Open ended
Certification mechanism	Involved EDISON partners	Selected certification bodies	To be decided	To be decided

Licenses provided by third parties				
IPR subject	Licensor/owner	License given to	Terms of License / URL	End date
Learning experience, content and teaching material	University of Luzern	FTK	CC-BY-NC-SA	2 years
Learning experience, content and teaching material	Univ. of Bedfordshire	FTK	CC-BY-NC-SA	2 years
Software etc.	Various providers under negotiation	Engineering SpA	To be decided	To be decided

5 Outlook to sustaining the IPR management

A few organisations, probably partly also from the EDISON Consortium, will continue to provide sustained services to users after the end of the EDISON project. Currently, in the middle of the project's lifetime, some options are becoming clear to consider. Preferably, the engaged university community takes up the EDISON heritage and takes responsibility for sustaining services. It is not likely that such a community with defined governance and management will be in place and functioning by the end of the running EDISON project (within a year). Likewise, it is not clear if these universities would like to take up such a role, or would prefer to act in an advisory body supporting an existing organization(s) that will continue offering and maintaining the developed EDISON services. Organisations to be considered in different roles are the following:

- One or more of the current EDISON partners. Some of these have opted to continue services, at least temporarily, under conditions to agree. This is an attractive option for securing continuity, at least for a bridging period.
- An involved network organization with legal entity such as CODATA, RDA and similar. Operating EDISON services may be beyond the mission of these networks and their interest for an exclusive European undertaking may not be justified. In addition, the continuation of these networks, such as RDA, is in discussion.
- Public or private organization (outside the EDISON partnership) interested to operate one or more services such as ITEMO for the certification scheme. The growing publicity about EDISON leads to expressions of interest.

A combination of the above organisations and cooperating in complementary tasks is possible. In addition, other business or research organisations can be vital to deliver the technical, financial and human resources lacking in the above organisations. The EDISON partners will agree in the last project year which of them will offer continued cooperation after the current EDISON project, on what terms of operation, and on the provisions for transferring of services (and IPR) in the future. Interactions with other appropriate organisations will result in timely decisions about transferring any other services to these organisations. To this end, the project consortium will negotiate and conclude the necessary contracts before entering in such collaborations. Rules on IP will be included in these agreements to avoid potential pitfalls.

The final report about the agreed IPR arrangements will be presented in D1.3 "Report about the mechanisms to sustain the IPR management" (due by the end of the project in Month 24).

Appendix A

CONSORTIUM AGREEMENT

Section 8: Results

8.0 Ownership of Results

Results are owned by the Party that generates them.

8.1 Joint ownership

In case of joint ownership of Results, ownership of each of the joint owners shall be determined in good faith, taking into account each owner's relative intellectual contribution to the jointly owned Results. Joint owners will conclude a joint ownership agreement as soon as possible, and no later than six (6) months from the date of the generation of such Results, regarding the allocation and terms of exercise of such ownership, protection of the Results, the division of related costs and the exploitation of such jointly owned Results on a case by case basis.

Unless otherwise agreed:

- each of the joint owners shall be entitled to use their jointly owned Results for non-commercial research activities 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.

8.2 Transfer of Results

8.2.1 Each Party may transfer ownership of its own Results following the procedures of the Grant Agreement Article 30.

8.2.2 It may identify specific third parties it intends to transfer the ownership of its Results to in Attachment (3) to this Consortium Agreement. The other Parties hereby waive their right to prior notice and their right to object to a transfer to listed third parties according to the Grant Agreement Article 30.1.

8.2.3 The transferring Party shall, however, at the time of the transfer, inform the other Parties of such transfer and shall ensure that the rights of the other Parties will not be affected by such transfer.

Any addition to Attachment (3) after signature of this Agreement requires a decision of the General Assembly.

8.2.4 The Parties recognize that in the framework of a merger or an acquisition of an important part of its assets, it may be impossible under applicable EU and national laws on mergers and acquisitions for a Party to give the full 45 calendar days prior notice for the transfer as foreseen in the Grant Agreement.

8.2.5 The obligations above apply only for as long as other Parties still have - or still may request - Access Rights to the Results.

8.3 Dissemination

8.3.1 Dissemination of own Results

8.3.1.1 During the Project and for a period of 1 year after the end of the Project, the dissemination of own Results by one or several Parties including but not restricted to publications and presentations, shall be governed by the procedure of Article 29.1 of the Grant Agreement subject to the following provisions.

Prior notice of any planned publication shall be given to the other Parties at least 45 calendar days before the publication. Any objection to the planned publication shall be made in accordance with the Grant Agreement in writing to the Coordinator and to the Party or Parties proposing the dissemination within 30 calendar days after receipt of the notice. If no objection is made within the time limit stated above, the publication is permitted.

8.3.1.2 An objection is justified if

- (a) the protection of the objecting Party's Results or Background would be adversely affected
- (b) the objecting Party's legitimate academic or commercial interests in relation to the Results or Background would be significantly harmed.

The objection has to include a precise request for necessary modifications.

8.3.1.3 If an objection has been raised the involved Parties shall discuss how to overcome the justified grounds for the objection on a timely basis (for example by amendment to the planned publication and/or by protecting information before publication) and the objecting Party shall not unreasonably continue the opposition if appropriate measures are taken following the discussion.

The objecting Party can request a publication delay of not more than 90 calendar days from the time it raises such an objection. After 90 calendar days the publication is permitted, provided that Confidential Information of the objecting Party has been removed from the Publication as indicated by the objecting Party.

8.3.2 Dissemination of another Party's unpublished Results or Background

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

8.3.3 Cooperation obligations

The Parties undertake to cooperate to allow the timely submission, examination, publication and defence of any dissertation or thesis for a degree, which includes their Results or Background subject to the confidentiality and publication provisions agreed in this Consortium Agreement.

8.3.4 Use of names, logos or trademarks

Nothing in this Consortium Agreement shall be construed as conferring rights to use in advertising, publicity or otherwise the name of the Parties or any of their logos or trademarks without their prior written approval.

Section 9: Access Rights

9.1 Background included

9.1.1 In Attachment 1, the Parties have identified and agreed on the Background for the Project and have also, where relevant, informed each other that Access to specific Background is subject to legal restrictions or limits.

9.1.2 Anything not identified in Attachment 1 shall not be the object of Access Right obligations regarding Background.

9.1.2 Any Party can propose to the General Assembly to modify its Background in Attachment 1.

9.2 General Principles

9.2.1 Each Party shall implement its tasks in accordance with the Consortium Plan and shall bear sole responsibility for ensuring that its acts within the Project do not knowingly infringe third party property rights.

9.2.2 Any Access Rights granted expressly exclude any rights to sublicense unless expressly stated otherwise.

9.2.3 Access Rights shall be free of any administrative transfer costs.

9.2.4 Access Rights are granted on a non-exclusive basis.

9.2.5 Results and Background shall be used only for the purposes for which Access Rights to it have been granted.

9.2.6 All requests for Access Rights shall be made in writing.

The granting of Access Rights may be made conditional on the acceptance of specific conditions aimed at ensuring that these rights will be used only for the intended purpose and that appropriate confidentiality obligations are in place.

9.2.7 The requesting Party must show that the Access Rights are Needed.

9.3 Access Rights for implementation

Access Rights to Results and Background Needed for the performance of the own work of a Party under the Project shall be granted on a royalty-free basis, unless otherwise agreed for Background in Attachment 1.

9.4 Access Rights for Exploitation

9.4.1 Access Rights to Results if Needed for Exploitation of a Party's own Results shall be granted on Fair and Reasonable conditions.

Access rights to Results for internal research activities shall be granted on a royalty-free basis.

9.4.2 Access Rights to Background if Needed for Exploitation of a Party's own Results, including for research on behalf of a third party, shall be granted on Fair and Reasonable conditions.

9.4.3 A request for Access Rights may be made up to twelve months after the end of the Project or, in the case of Section 9.7.2.1.2, after the termination of the requesting Party's participation in the Project.

9.5 Access Rights for Affiliated Entities

9.5.1 Affiliated Entities have Access Rights under the conditions of the Grant Agreement Articles 25.4 and 31.4, if they are identified in Attachment 4 (Identified Affiliated Entities) to this Consortium Agreement.

9.5.2 Such Access Rights must be requested by the Affiliated Entity from the Party that holds the Background or Results. Alternatively, the Party granting the Access Rights may individually agree with the Party requesting the Access Rights to have the Access Rights include the right to sublicense to the latter's Affiliated Entities listed in Attachment 4. Access Rights to Affiliated Entities shall be granted on Fair and Reasonable conditions and upon written bilateral agreement.

9.5.3 Affiliated Entities which obtain Access Rights shall fulfil all confidentiality and other obligations accepted by the Parties under the Grant Agreement or this Consortium Agreement as if such Affiliated Entities were Parties.

9.5.4 Access Rights may be refused to Affiliated Entities if such granting is contrary to the legitimate interests of the Party which owns the Background or the Results.

9.5.5 Access Rights granted to any Affiliated Entity are subject to the continuation of the Access Rights of the Party to which it is affiliated, and shall automatically terminate upon termination of the Access Rights granted to such Party.

9.5.6 Upon cessation of the status as an Affiliated Entity, any Access Rights granted to such former Affiliated Entity shall lapse.

Further arrangements with Affiliated Entities may be negotiated in separate agreements.

9.6 Additional Access Rights

For the avoidance of doubt any grant of Access Rights not covered by the Grant Agreement or this Consortium Agreement shall be at the absolute discretion of the owning Party and subject to such terms and conditions as may be agreed between the owning and receiving Parties.

9.7 Access Rights for Parties entering or leaving the consortium

9.7.1 New Parties entering the consortium

As regards Results developed before the accession of the new Party, the new Party will be granted Access Rights on the conditions applying for Access Rights to Background.

9.7.2 Parties leaving the consortium

9.7.2.1 Access Rights granted to a leaving Party

9.7.2.1.1 Defaulting Party

Access Rights granted to a Defaulting Party and such Party's right to request Access Rights shall cease immediately upon receipt by the Defaulting Party of the formal notice of the decision of the General Assembly to terminate its participation in the consortium.

9.7.2.1.2 Non-defaulting Party

A non-defaulting Party leaving voluntarily and with the other Parties' consent shall have Access Rights to the Results developed until the date of the termination of its participation. It may request Access Rights within the period of time specified in Section 9.4.3.

9.7.2.2 Access Rights to be granted by any leaving Party

Any Party leaving the Project shall continue to grant Access Rights pursuant to the Grant Agreement and this Consortium Agreement as if it had remained a Party for the whole duration of the Project.

9.8 Specific provisions for Access Rights to Software

9.8.1 Definitions relating to Software

"Application Programming Interface" means the application programming interface materials and related documentation containing all data and information to allow skilled Software developers to create Software interfaces that interface or interact with other specified Software.

"Controlled Licence Terms" means terms in any licence that require that the use, copying, modification and/or distribution of Software or another work ("Work") and/or of any work that is a modified version of or is a derivative work of such Work (in each case, "Derivative Work") be subject, in whole or in part, to one or more of the following:

- preferred for modification be made available as of right to any third party on request, whether royalty-free or not;
- ii. that permission to create modified versions or derivative works of the Work or Derivative Work be granted to any third party;
 - iii. that a royalty-free licence relating to the Work or Derivative Work be granted to any third party.

For the avoidance of doubt, any Software licence that merely permits (but does not require any of) the things mentioned in (i.) to (iii.) is not a Controlled Licence (and so is an Uncontrolled Licence).

“Object Code” means software in machine-readable, compiled and/or executable form including, but not limited to, byte code form and in form of machine-readable libraries used for linking procedures and functions to other software.

“Software Documentation” means software information, being technical information used, or useful in, or relating to the design, development, use or maintenance of any version of a software programme.

“Source Code” means software in human readable form normally used to make modifications to it including, but not limited to, comments and procedural code such as job control language and scripts to control compilation and installation.

9.8.2. General principles

For the avoidance of doubt, the general provisions for Access Rights provided for in this Section 9 are applicable also to Software as far as not modified by this Section 9.8.

Parties' Access Rights to Software do not include any right to receive Source Code or Object Code ported to a certain hardware platform or any right to receive Source Code, Object Code or respective Software Documentation in any particular form or detail, but only as available from the Party granting the Access Rights.

The intended introduction of Intellectual Property (including, but not limited to Software) under Controlled Licence Terms in the Project requires the approval of the General Assembly to implement such introduction into the Consortium Plan.

9.8.3. Access to Software

Access Rights to Software which is Results shall comprise:

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

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

9.8.4. Software licence and sublicensing rights

9.8.4.1 Object Code

9.8.4.1.1 Results - Rights of a Party

Where a Party has Access Rights to Object Code and/or API which is Results for Exploitation, such Access shall, in addition to the Access for Exploitation foreseen in Section 9.4, as far as Needed for the Exploitation of the Party's own Results, comprise the right:

- i. to make an unlimited number of copies of Object Code and API; and
- ii. to distribute, make available, market, sell and offer for sale such Object Code and API alone or as part of or in connection with products or services of the Party having the Access Rights;
- iii. provided however that any product, process or service has been developed by the Party having the Access Rights in accordance with its rights to exploit Object Code and API for its own Results.

If it is intended to use the services of a third party for the purposes of this Section 9.8.4.1.1, the Parties concerned shall agree on the terms thereof with due observance of the interests of the Party granting the Access Rights as set out in Section 9.2 of this Consortium Agreement.

9.8.4.1.2 Results - Rights to grant sublicenses to end-users

In addition, Access Rights to Object Code shall, as far as Needed for the Exploitation of the Party's own Results, comprise the right to grant in the normal course of the relevant trade to end-user customers buying/using the product/services, a sublicense to the extent as necessary for the normal use of the relevant product or service to use the Object Code alone or as part of or in connection with or integrated into products and services of the Party having the Access Rights and, as far as technically essential:

- i. to maintain such product/service;
- ii. to create for its own end-use interacting interoperable software in accordance with the Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the legal protection of computer programs

9.8.4.1.3 Background

For the avoidance of doubt, where a Party has Access Rights to Object Code and/or API which is Background for Exploitation, Access Rights exclude the right to sublicense. Such sublicensing rights may, however, be negotiated between the Parties.

9.8.4.2 Source Code

9.8.4.2.1 Results - Rights of a Party

Where, in accordance with Section 9.8.3, a Party has Access Rights to Source Code which is Results for Exploitation, Access Rights to such Source Code, as far as Needed for the Exploitation of the Party's own Results, shall comprise a worldwide right to use, to make copies, to modify, to develop, to adapt Source Code for research, to create/market a product/process and to create/provide a service.

If it is intended to use the services of a third party for the purposes of this Section 9.8.4.2.1, the Parties shall agree on the terms thereof, with due observance of the interests of the Party granting the Access Rights as set out in Section 9.2 of this Consortium Agreement.

9.8.4.2.2 Results – Rights to grant sublicenses to end-users

In addition, Access Rights, as far as Needed for the Exploitation of the Party's own Results, shall comprise the right to sublicense such Source Code, but solely for purpose of adaptation, error correction, maintenance and/or support of the Software. Further sublicensing of Source Code is explicitly excluded.

9.8.4.2.3 Background

For the avoidance of doubt, where a Party has Access Rights to Source Code which is Background for Exploitation, Access Rights exclude the right to sublicense. Such sublicensing rights may, however, be negotiated between the Parties.

9.8.5 Specific formalities

Each sublicense granted according to the provisions of Section 9.8.4 shall be made by a traceable agreement specifying and protecting the proprietary rights of the Party or Parties concerned.

Appendix B

MEMORANDUM OF COOPERATION

Between

EDISON Partner

And

University of - - -

Introduction

This Memorandum of Cooperation (MoC) provides the basis for the **EDISON Partner** and **University of - - -** (hereinafter ‘the Parties’) to collaborate within the context of the so-called EDISON project, to develop and share relevant information and other resources needed for the Project, and to share results of such endeavour which contribute to better fulfil their respective institutional mandates.

The Parties

EDISON partner

University of - - -

The Department of Computer Science at the **University of - - -** is offering a full 3 year Bachelor degree BSc and/or x years Masters degree Data Science programme. The programme is offered in the academic years - - -. [details of programme to be entered].

Objective of this Memorandum of Cooperation

The objective of this MoC is to formalise a framework for cooperative and collaborative work between the Parties while recognising their respective independent yet complementary missions as summarized under article 2 above.

The **University - - -** will act as an “**EDISON Champion**”, its role being characterized by the following activities:

- To provide feedback to CF-DS reports (Documents D.2.1 due in Month 6 and D.2.3 due in Month 22 according to the EDISON workplan);
- To contribute to the preparation of the DS-BoK from Month 6 to Month 22;
- To support the adoption of a MC-DS within the institution (informative part) from Month 12 to Month 24;
- To endorse EDISON legacy by being presenter of “How his/her institution benefitted from EDISON” in at least one EDISON promoted event – an “EDISON-do-it-Better” statement;
- To share learning experience, content and teaching material under a CC-BY-NC-SA license.

From its participation in EDISON works, the **University of - - -** will benefit from:

- Improved support in adjusting existing courses content and access to shared material;
- Better justification for the changes they want to do on the educational programme, based on the results of demand analysis;
- Get a closer look and deeper understanding of the labour market place for graduates of Data Science programme and related courses;

- Increased visibility of own training offering and expanded branding opportunities for its Data Science programme and related courses;
- Experts' support in completing the accreditation schema (content and reference numbers from the market analysis);
- Privileged exploitation of the Online Educational Environment (for both promoting Champions courses programs – a sort of “sponsor” link made in evidence – and using it in Labs/Exercises);
- Having costs (Conference Fee – if any, travel and accommodation) covered for promotional activities in which EDISON collaboration and Use Case experience are presented in EDISON selected events (pending prior approval);
- Priority in being invited to EDISON follow-up actions/project/grants.

Conditions of Use

Both Parties agree that they will clearly label the source of all content and require users to indicate those sources in any subsequent re-use. Each Party agrees to fully acknowledge the other (verbally and by including logos) when citing or promoting jointly developed products under this Cooperation scheme.

Amendments and Modifications

Either Party may recommend amendments to this Memorandum of Cooperation by notifying the other Party in writing and, with the subsequent agreement of the other Party, then implementing those amendments.

Notwithstanding the foregoing, both Parties undertake to jointly review and revise (as necessary) this Memorandum of Cooperation 2 years after it comes into force.

Non-exclusive Agreement

This Memorandum of Cooperation is non-exclusive, and in no way restricts each Party from participating in similar activities or arrangements with other public or private initiatives, organizations, or individuals.