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Executive Summary

This document presents the policies adopted by the project consortium to ensure that rules on Open Access to Publications and Open Research Data are met. Moreover it sets the principles used by the consortium in managing the data produced during the project and the policies and technical measure taken to protect people privacy and data security in case personal data is collected during the research. In particular this Deliverable details the procedures that the consortium adopts to make all scientific publications, both peer-reviewed and non peer-reviewed, fully available according to Open Access best practices, guaranteeing that they are correctly archived in multiple repositories, available through the project web site and properly indexed through metadata. Regarding Data Management, the document details the types of data that netCommons will handle and the procedures undertaken to guarantee that no personal or sensitive data are discovered beyond the boundary clearly defined during the data collection procedure, and that this boundary, as well as the person responsible for the data collection and protection, are clearly understood by the people involved in the data collection. This is the first version of the Data Management Plan that will be updated at M24 with Deliverable 7.3. Given the topic and matter of Open Access, but most of all of Open Research Data, are evolving extremely fast, amended versions of this Deliverable will be produced if changes in the norms and regulations, management, or best practices of data management occur before M24.

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List of Acronyms

ACM	Association for Computing Machinery
CA	Consortium Agreement
CAPS	Cooperative Awareness Platforms for Sustainability
CN	Community Network
DL	Digital Library
DOI	Digital Object Identifier
EC	European Commission
FAQ	Frequently Asked Question
GA	Grant Agreement
IEEE	Institute of Electrical and Electronics Engineers
IFIP	International Federation for Information Processing
NIH	National Institutes of Health
NPR	non peer-reviewed
OA	Open Access
OAI-PMH	Open Archives Initiative Protocol for Metadata Harvesting
ORD	Open Research Data
PDF	Portable Document Format
PR	peer-reviewed

1. Introduction

netCommons operates only marginally with personal data, while in most cases the data produced by the project refer to technical measures or experiments not involving human beings. Nonetheless netCommons seeks the adoption of proper security and confidentiality standards for the data collected as well as proper Open Access (OA) policies to maximize the impact of the research carried out, as we are well aware that at the heart of modern research is an extensive scientific dialogue, with a timely sharing of data and experiences.

Proper data sharing accelerates innovation, allows researchers to build on previous work improving the quality of the results, fosters collaboration and avoids duplication of work. The necessity of Open Access and Open Research Data (ORD) adoption has gained momentum and it is influencing the political choices of all the main public agencies funding and sponsoring research. The European Commission (EC) is no exception to this general international trend, which has been first spawned in the U.S. by the National Institutes of Health (NIH). The commitment of the EC toward Open Access of the research results is reflected in official guidelines [1] and in the wording of Grant Agreements (GAs) (e.g., art. 29.2). In addition, from the specific nature of netCommons and from its being part of the “societal challenges” programme, we derive a particular emphasis on the involvement of citizens, economic stakeholders, governmental agencies and charities. All these considerations require the adoption of liberal standards for the scientific dissemination of information, in accordance with the mandate in Art. 29.2 of the netCommons grant agreement.

In order to avoid problems and misunderstandings and to streamline the whole process of data collection and of dissemination of results, this document seek to define clear guidelines on how to treat data and on how to disseminate the results. This document is extended following the EC Guidelines [2]

2. netCommons Open Access Policy

netCommons is part of the H2020 Open Data Pilot [3], thus the access policy to the project result must deal both with the publications produced by the project and with the data upon which these publications are based. Moreover, given the interdisciplinary approach of the project and its societal importance, we foresee additional data to support general findings and to build a base for dissemination of the project outcomes, as well as setting the ground to build the advocacy capabilities and support the impact-oriented actions of netCommons.

One of the key challenges for a Cooperative Awareness Platforms for Sustainability (CAPS) research project like netCommons is to produce scientific knowledge that is persistent, that goes beyond the restricted scientific communities and that fosters the benefit of the individuals, of the communities and of the European society at large. Furthermore, having its roots in Internet Science [4, 5] netCommons findings are conceived to foster and benefit the development of Community Networks (CNs) also beyond the European Union.

These ambitious goals require a thorough dissemination activity of the research results, and a careful management of general data, including the information collected, to maximize the impact of the project efforts. For this reason, netCommons has opted for, and included in the Consortium Agreement, a fully open model of results and documents dissemination, including deliverables that are all public.

The remaining part of this Chapter deals separately with the two topics of:

1. Open Access to scientific publications,
2. Open Access to research data.

2.1. Open Access to scientific publications

One of the cornerstones of our dissemination strategy is to secure a timely and regular publication of the scientific findings in peer-reviewed, high impact journal and conferences. This will ensure a proper consideration of netCommons results in the scientific communities of interest. All scientific publications will be available in Open Access, providing archival Portable Document Format (PDF) versions of the published document. As specified in the H2020 Guidelines on Open Access publishing [1], by this term we mean the practice of providing free and unrestricted access to scientific publications to read and download.

According to the contractual obligations specified in the GA Art. 29.2, “*Each beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results.*” We will obviously comply with this obligation and we are implementing a specific policy and best practice based on OpenAIRE 2.2 to ensure and almost automatic propagation of the Open Access version of the publication to repositories compliant with the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) standard [6] and to the web site of the project.

2.1.1. Documents Subject to Open Access

The Open Access policy for scientific publications *applies whenever a partner of the project or a group of partners decides to produce a scientific publication* containing the results of a research activity. This decision is taken on the following grounds:

- the publication is scientifically relevant and brings forth significant advances in the state of the art of the interested discipline;
- (if applicable) the data contained in the publications fulfill the requirements specified by the Ethical Committees of the partner/partners that collected the data.

It must be noted that, due to the societal and open nature of netCommons research, as provided by the Consortium Agreement (CA) in Sect. 8 and in particular in Sect. 8.3.1, netCommons Parties are not subject to prior notice to the Consortium or any other legal body.

The Open Access policy does not apply to partial results which are produced at intermediate steps of the project and are not deemed scientifically relevant.

2.1.2. Green and Gold Open Access

The H2020 guidelines [1] refer to the two main procedures to enforce Open Access to scientific literature.

The Green Open Access: this procedure is based on re-publishing (often indicated as self-archiving) of the published article or the final peer-reviewed manuscript without the graphical imprints of the commercial publisher. Some journals also allow the deposit of the published version with the publisher imprinting. The manuscript is archived into an OAI-PMH-compliant repository 2.1.3 by the authors; some publishers could require an *embargo* period of time before the paper is made concretely available to the public: netCommons will try to minimize both the use of publishers that require an embargo and the duration of the embargo, that will in any case abide to the requirements of the Commission [1] as stated in Art. 29.2 of the GA.

The Gold Open Access: the article is provided in Open Access directly by the publisher, which normally (but not always) enables also re-publishing with the same means of the 'green' method. We note that while some publishers (most notably the International Federation for Information Processing (IFIP)) maintain a fully open Digital Library (DL) without any fees, many others require a fairly expensive fee to publish in Open Access. Many scientific communities regret and discourage 'pay-to-publish' procedures, specially in mixed publication venues (i.e., journals that allow both traditional and OA publications) where authors must declare their desire to publish in Open Access before the peer-review.

2.1.3. Open Access Repositories

A repository for scientific publications is generally defined as an online archive, but this condition is not enough to make a repository Open Access. The most known Open Access repository is probably arXiv (<http://arxiv.org>), maintained by the Cornell University. The H2020 guidelines give full freedom on the choice of the repository: it can be an Institutional Repository or a subject-based centralized repository. If the Institution the authors belong to does not have a specific infrastructure of this kind, the EU is funding the OpenAIRE effort (<http://www.openaire.eu>), which provides APIs to a comprehensive list of public repositories and in general means to foster Open Access policies. OpenAIRE plays a central role in netCommons best practices for Open Access,



since it provides means to automatically link the repositories of most institutions, and it can thus be used to provide suitable visibility and linking to all the published material. In particular the Zenodo (<http://www.zenodo.org/>) repository is strictly related to OpenAIRE and is maintained by CERN, thus providing a suitable means for archival for all European institutions that cannot (or have not yet) set up an institutional repository. Other lists of repositories and further information on Open Access are available at <http://roar.eprints.org> and <http://www.openoar.org/>.

2.1.4. Accepted version and published version

An *accepted paper* is a version which has been revised by the author to incorporate review suggestions, and which has been accepted by the publisher for publication.

The final, *published version* is the reviewed and accepted article, with copy-editing, proofreading and formatting added by the publisher.

2.2. Implementation of the Open Access Policy to Publications

The Open Access policy will be applied both to peer-reviewed publications (i.e., publications that are evaluated by “peers”) and to other types of publications such as books, white papers, and all other documents that the consortium deems valuable of dissemination. In the following we refer to the first type of publications as “peer-reviewed (PR)” and to the second as “non peer-reviewed (NPR)”. Deliverables will be initially available through the project web site with the very appealing format described in detail and available on the specific area [7]. After review it will be decided if they deserve dissemination through OAI-PMH compliant repositories (Sect. 2.1.3).

2.2.1. Procedures for PR publications

The authors of netCommons publication have the freedom to opt for either a Green or for a Gold policy. In case of a *Green Open Access policy* the procedure is as follows:

1. As soon as the paper is accepted, the draft of the accepted paper is stored in one or more repositories of the authors’ choice among those supported by OpenAIRE along with bibliographic metadata;
2. The paper publication is notified to the project coordinator and to the exploitation and dissemination list (netcommons.wp6@list.disi.unitn.it);
3. Within a few days the manuscript becomes visible automatically through OpenAIRE reporting the proper reference to netCommons;
4. A script parses OpenAIRE daily (or weekly) to retrieve novel manuscripts and upload them automatically on the netCommons web site in the proper section;
5. If requested by the publisher, the paper is left unpublished for the duration of the embargo period; such period cannot exceed 6 months or 1 year in exceptional cases;
6. After the embargo period expires, the Open Access is granted to every one via the repository;

This procedure guarantees the highest visibility and dissemination as well as consistent and coordinated referencing, linking and availability.

In case of a *Gold Open Access policy* the procedure is:



1. As soon as the paper is accepted, and according to the publisher's Open Access policy, the draft of the accepted paper is stored in a repository of the authors' choice among those supported by OpenAIRE along with bibliographic metadata;
2. The paper publication is notified to the project coordinator and to the exploitation and dissemination list (netcommons.wp6@list.disi.unitn.it);
3. Within a few days the manuscript becomes visible automatically through OpenAIRE reporting the proper reference to netCommons;
4. A script parses OpenAIRE daily (or weekly) to retrieve novel manuscripts and upload them automatically on the netCommons web site in the proper section;
5. After the final publication the authors also add the publisher digital library information to ensure that the gold access policy is correctly advertised and accomplished, the publisher may request a different version to be uploaded.

The costs incurred for publication are eligible for reimbursement as long they are incurred before the end of the project; however netCommons will try to avoid all venues that apply publication fees that can rise suspicions that the publication does not follow an ethically consistent peer-review process. If the publication of a work supported by netCommons with a publisher that does not comply with EU rules is deemed by the Management Board of the utmost importance for its dissemination, the netCommons Coordinator will write a formal request to the publisher to comply with EU regulations.

2.2.2. Procedures for NPR Publications

The researchers in netCommons will publish all NPR under one of the Creative Commons licenses and they will adopt an Open Access policy also for NPR publications such as technical reports and white papers.

The procedure in this case is simple and similar to the Gold Open Access case:

1. When a technical report is published (e.g., on an institutional website), the authors store a version of the paper, along with the available metadata, in one or more repositories of her/his choice among those supported by OpenAIRE;
2. The paper publication is notified to the project coordinator and to the exploitation and dissemination list (netcommons.wp6@list.disi.unitn.it);
3. Within a few days the manuscript becomes visible automatically through OpenAIRE reporting the proper reference to netCommons;
4. A script embedded in the netcommons web-site and compliant with OpenAire APIs, parses OpenAIRE daily (or weekly) to retrieve novel manuscripts and upload them automatically on the netCommons web site in the proper section.

Exception may apply to these rules and procedure for contributions to newspapers and dissemination magazines.

2.2.3. Current Policies by some of the Major Scientific Publishers

Clearly, the choice of whether to take a Green or a Gold Open Access policy is also determined by the specific publisher and by the scientific field. Self archiving is today compatible with the most important publishers, as far as it is limited to the *accepted version* of the paper, but publishers as IFIP and Association for Computing Machinery (ACM) go definitely beyond, as described below. With other publishers, the evaluation should be made on a case by case basis. Details on most publishers



and journal policies can be found on the Sherpa Romeo portal (<http://www.sherpa.ac.uk/romeo/index.php>). In the extreme case in which self archiving is prohibited and commercial open access options are not available, the authors should avoid the journal.

For the authors' convenience and for general reference, we report here the current policy contained in the copyright agreement or on web-pages of some of the most relevant publishers at the moment of writing, though it is strongly recommended to check the single journal OA policy on the Sherpa Romeo database and/or on the journal website. The information in the following sub-sections is mostly taken verbatim from publishers web pages, thus may contain advertisement-like information and in general the publisher visions, which are not necessarily reflected or agreed-upon by netCommons consortium.

2.2.3.1. Elsevier

The Elsevier policy on authors right can be found in the website <http://www.elsevier.com/about/company-information/policies/sharing>. Elsevier supports Green Open Access, but maintains a number of journals (<http://www.elsevier.com/embargoperiodlist>) with an embargo policy. Though these journals can be used for netCommons publications, we suggest to avoid those that have an embargo period longer than 12 months. In any case also journals subject to embargo allows pre-prints to be shared in private repositories. Citing from Elsevier's Frequently Asked Questions (FAQs) page:

Q. Have you removed an author's right to self-archive in their institutional repository?

A. No. We have removed the need for an institution to have an agreement with us before any systematic posting can take place in its institutional repository. Authors may share accepted manuscripts immediately on their personal websites and blogs, and they can all immediately self-archive in their institutional repository too. We have added a new permission for repositories to use these accepted manuscripts immediately for internal use and to support private sharing, and after an embargo period passes then manuscripts can be shared publicly as well.

Regarding the author rights on the *accepted versions* of the manuscripts of journals not subject to embargo, we find the following wording:

Authors can share their accepted manuscript:

Immediately

- via their non-commercial personal homepage or blog by updating a preprint in arXiv or RePEc with the accepted manuscript
- via their research institute or institutional repository for internal institutional uses or as part of an invitation-only research collaboration work-group ...

After the embargo period

- via non-commercial hosting platforms such as their institutional repository
- via commercial sites with which Elsevier has an agreement

In all cases accepted manuscripts should:



- link to the formal publication via its DOI bear a CC-BY-NC-ND license ...
- ...

The CC-BY-NC-ND license can easily be obtained through the website <http://creativecommons.org/licenses/> and is explicitly recommended by the EC to *enable open access in its broadest sense*.

2.2.3.2. ACM

The ACM policy can be found in the website https://www.acm.org/publications/policies/copyright_policy. ACM today adopts a very flexible scheme that ACM itself summarizes as follows:

“Authors have the option to choose the level of rights management they prefer. ACM offers three different options for authors to manage the publication rights to their work.

- *Authors who want ACM to manage the rights and permissions associated with their work, which includes defending against improper use by third parties, can use ACM’s traditional copyright transfer agreement.*
- *Authors who prefer to retain copyright of their work can sign an exclusive licensing agreement, which gives ACM the right but not the obligation to defend the work against improper use by third parties.*
- *Authors who wish to retain all rights to their work can choose ACM’s author-pays option, which allows for perpetual Open Access through the ACM Digital Library. Authors choosing the author-pays option can give ACM non-exclusive permission to publish, sign ACM’s exclusive licensing agreement or sign ACM’s traditional copyright transfer agreement. Those choosing to grant ACM a non-exclusive permission to publish may also choose to display a Creative Commons License on their works.”*

We notice that also in case of the traditional copyright transfer all ACM publications allow Green Open Access without any embargo. Generally, the publisher’s version/PDF cannot be used, but the author’s refereed post-print can be uploaded for non commercial use on author’s personal website, institutional repository, open access repository, the employer’s website or the funder’s mandated repository. Publisher copyright and source must always be acknowledged, and there must be a link to the publisher version with a statement that this is the definitive version and Digital Object Identifier (DOI). A set statement must be added on the website/in the repository:

©ACM, YYYY. This is the author’s version of the work. It is posted here by permission of ACM for your personal use. Not for redistribution. The definitive version was published in PUBLICATION, {VOL#, ISS#, (DATE)} <http://doi.acm.org/10.1145/nnnnnn.nnnnnn>

Statement reported on the Sherpa Romeo web site (<http://www.sherpa.ac.uk/romeo/pub/21/>) as of June 30th 2016.

2.2.3.3. IEEE

The Institute of Electrical and Electronics Engineers (IEEE) specifies its policy in a document that can be found in the association website [8]. In summary:



Generally, authors have the right to post the accepted version of IEEE-copyrighted articles on their own personal servers or the servers of their institutions without permission from IEEE, provided that the posted version includes a prominently displayed IEEE copyright notice (see below) and, when published, a full citation to the original IEEE publication, including a Digital Object Identifier (DOI) and a full citation to the original IEEE publication, including a link to the article abstract in IEEE Xplore. Authors shall not post the final, published versions of their articles.

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(see: http://www.ieee.org/publications_standards/publications/rights/rights_policies.html; <http://www.ieee.org/documents/ieeecopyrightform.pdf>)

IEEE also has an open access program for *Gold Access Policy*, which at the moment is limited to the societies journals. In any case IEEE always allows its authors to follow mandates of funding agencies and post the accepted version into publicly available repositories limiting the embargo to what admitted by the funding agency.

2.2.3.4. Springer

Generally, authors can archive post-print (i.e., final draft post-refereeing) on author's personal website immediately and on any open access repository after 12 months after publication. Publisher's version/PDF cannot be used; published source must be acknowledged and there must be a link to the publisher version, with a set phrase to accompany link to published version. Articles in some journals can be made Open Access on payment of additional charge. (see: <http://www.sherpa.ac.uk/romeo/pub/74/> as seen on June 30th 2016).

As far as Springer LNCS is concerned (see <http://www.sherpa.ac.uk/romeo/pub/2765/> as of June 30th 2016), authors can archive post-print (i.e., final draft post-refereeing) on author's personal website, institutional repository or funder's designated repository. Publisher's version/PDF cannot be used; published source must be acknowledged and there must be a link to the publisher version with DOI and a set phrase to accompany link to published version.

If Springer Open is chosen (see <http://www.sherpa.ac.uk/romeo/pub/948/> as of June 30th 2016), authors can archive post-print (i.e., final draft post-refereeing) and publisher's version/PDF. The published source must be acknowledged; authors retain copyright and a Creative Commons Attribution License must be attributed.



2.2.3.5. IFIP

All information in the IFIP Digital Library (<http://dl.ifip.org>) is available in Gold Open Access, free-to-read basis. However, the full text of print publications from the IFIP publisher may be available only for a fee for a period of time after publication (see http://www.ifip.org/index.php?option=com_content&task=view&id=143&Itemid=460 as of June 30th 2016).

Some IFIP journals published by Springer and Elsevier have a paid Open Access option , such as:

Journal: Computers and Security (ISSN: 0167-4048)

Journal: International Journal of Critical Infrastructure Protection (ISSN: 1874-5482)

Journal: Entertainment Computing (ISSN: 1875-9521, ESSN: 1875-953X)

- Authors can archive post-print (i.e., final draft post-refereeing) on author's personal website immediately and on open access repository after an embargo period of between 12 months and 48 months; it must link to publisher version with DOI and must be released with a Creative Commons Attribution Non-Commercial No Derivatives License
- Authors cannot archive publisher's version/PDF;
- Permitted deposit due to Funding Body, Institutional and Governmental policy or mandate, may be required to comply with embargo periods of 12 months to 48 months.

Journal: Education and Information Technologies (ISSN: 1360-2357, ESSN: 1573-7608)

- Authors can archive post-print (i.e., final draft post-refereeing) on author's personal website immediately and on any open access repository after 12 months after publication. It must link to publisher version; the published source must be acknowledged with a set phrase to accompany link to published version;
- Authors cannot archive publisher's version/PDF.

2.2.3.6. SAGE

Journals published by "SAGE-Hindawi Access to Research" have a paid Open Access option. Authors retain the copyright of their article, which is freely distributed under the Creative Commons Attribution License, permitting the unrestricted use, distribution, and reproduction of the article in any medium, provided the original work is properly cited. In order to cover the costs of publication, Article Processing Charges are required for accepted manuscripts. (<http://www.hindawi.com/memberships/> as of June 30th 2016).

In subscription journals published by "SAGE Publications (UK and US)", authors can deposit the version of the article accepted for publication (version 2) in their own institution's repository. Authors may not post the accepted version (version 2) of the article in any repository other than those listed above (i.e., you may not deposit in the repository of another institution or a subject repository) until 12 months after first publication of the article in the journal. Authors may not post the published article (version 3) on any website or in any repository without permission from SAGE. When posting or re-using the article authors must provide a link to the appropriate DOI for the published version of the article on SAGE Journals (<http://online.sagepub.com>). (see <https://uk.sagepub.com/en-gb/eur/the-green-route-%E2%80%93-open-access-archiving-policy> as of June 30th 2016).

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Some journals (8 titles: <http://www.sherpa.ac.uk/romeo/journals.php?id=1581&fIDnum=|&mode=simple&letter=ALL&la=en>) published by SAGE Publications (UK and US) with the 12 month Embargo option let authors post on any non-commercial repository or website the version of their article that was accepted for publication – ‘version 2’. The article may not be made available earlier than 12 months after publication in the Journal issue and may not incorporate the changes made by SAGE after acceptance. When posting or re-using the article, authors should provide a link/URL from the article posted to the SAGE Journals Online site where the article is published: <http://online.sagepub.com>, and make the following acknowledgment:

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See https://mc.manuscriptcentral.com/societyimages/wes/WES_ExclusiveLicense.pdf as of June 30th 2016.

2.3. Open Research Data

An interesting novelty of H2020 is the platform known as Open Research Data Pilot for the dissemination of the data that could be used by different researchers to replicate the experiments or the analysis presented in the scientific publications. Given its scope netCommons obviously participates in this pilot.

The topic of Open Research Data publication is much less debated, understood and agreed upon compared to scientific publication Open Access. In particular, the license of Data (open or not) is far more difficult, as Data are not subject to standard Intellectual Property rules. For instance, most of Creative Commons licenses (<https://creativecommons.org/share-your-work/>) may not apply to data as “derivative work” on Data is not clearly defined and manipulating a data set with purposes different from rendering may be inappropriate; sometimes even rendering and statistical analysis may change the actual meaning of the Data published. Similarly, licences like Open Database License (ODbL) v1.0 (<http://opendatacommons.org/licenses/odbl/>) may not apply in many cases for both technical inconsistency (e.g., the wording “intermixing with other datasets” is a technically inconsistent definition) and it contains also semantic ambiguities. Furthermore, it is not clear at the time of writing, if for netCommons it is acceptable that all produced Data can be released also for commercial purposes.

Another additional issue with Open Research Data, is that very few Institutions support an Institutional Repository for Data. Also in this case the Zenodo repository can be used as for scientific publications; however, we deem that it is still not possible to detail general procedures for the publication of Open Research Data.

Given this situation, in the first part of the project, netCommons will carefully select on a case-by-case basis the most appropriate license and the most appropriate level of aggregation and detail, as well as the most appropriate set of repositories where the Data produced during the research can be archived



and made public. We are confident that at M24, in D7.3, which is the revised version of the Data Management Plan, we will be able to set a more standardized procedure for Open Research Data publication within netCommons. Chapter 3 in any case details all the procedures that netCommons will follow to ensure the protection of personal data and individuals that may be involved in netCommons research.



3. Data Security and Privacy Provisions in netCommons

3.1. Scope of the privacy/security model

The activities of netCommons involve only marginally the direct interaction with people and do not require to collect directly any personal or sensitive information. People involved in Community Networks follow the usual policy of these associations, and netCommons in general does not require CNs to transfer any personal or sensitive data. Nonetheless, UoW will run some surveys and some interviews or video recording may be useful during the project.

In such cases the netCommons practice will always abide to the principle of informed consent and to the ethical annex reported as Sect. 5 of the project Document of Work (Annex 1 to the Grant Agreement), furthermore the actions and operations of the researchers will always comply with the national legislation and with the internal regulations of the partners involved in the project. In particular, Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) will be strictly followed by the project security model. In the Spanish case, the Data Protection Act number 15/1999 (December 13th) adapted to the European directives by the Royal Decree 1720/2007 promulgated on 21st December 2007 will be applicable to the project. The specific goal of this document is to present and discuss the issues related to the treatment of the collected data in electronic form, their storage on different media (Hard Disks, Storage Units, CD/DVD/SD/USB peripherals), and their distribution using network connections.

3.2. General Principles

The privacy protection and operational model of netCommons rests on three pillars:

- Data anonymity,
- Informed consent;
- Circulation of the information limited to the minimum required for processing and preparing the anonymous open data sets.

Data anonymity will be guaranteed whenever possible. The only exemption to anonymity can be in some cases for the researcher directly interacting with the participants in surveys. When data must be presented in non-aggregate ways for research purposes, the data will be anonymized following the best practices of non-invertible hashing functions applied to all personal information. Furthermore, provisions will be taken to avoid the possibility of information linkage.

The *informed consent* policy requires that each participant will provide his/her informed consent prior to the start of any activity involving him/her. Appendix A reports a template of the informed consent form that will be completed by participants in surveys and interviews. Public distribution of elements of information that can reveal the identity of the users (e.g., videos or pictures) for scientific dissemination purposes will be explicitly authorized by the participant as part of this process.

To achieve a *limited circulation* of the information, the database containing in anonymous form the data collected from the users (e.g., the results of questionnaires and of laboratory experiments) will be distributed to the partners, if needed at all, through protected and encrypted Internet connections; the raw data will only be shared if it is required for the development. The researchers will never pass on or publish the data without first protecting participants' identities. No irrelevant information will be collected; at all times, the gathering of private information will follow the principle of proportionality by which only the information strictly required to achieve the project objectives will be collected. In all cases, the right of data cancellation will allow all users to request the removal of their data from the project repository at any time.

The final datasets fully anonymized will be published as Open Data as described in Sect. 2.3.

3.3. Security Framework

In order to accomplish the creation of a security framework it is essential to focus on the issues of access and identity authentication, authorization and auditing (AAA). Therefore, our main objective is to develop a base security system that standardizes the processes of Authentication, Authorisation and Auditing of the various information sources involved.

3.3.1. Authentication

The Data Protection Act requires that any operator who is granted access to sensitive data must be authenticated. Authentication technology should be strict when dealing with sensitive and confidential data available to the users of the platform. To do this, a username and a password will be used so that the person who wants to access the raw data of surveys and interviews confirms that he has authorized access to the system. If deemed necessary by sensitive collected data, which is not foresees now in netCommons, we will use an RSA encryption mechanism, with each operator receiving a personal private key.

3.3.2. Authorization

The objective of the authorization is to determine the rights of a user of an information system. For each researcher, we will specify which content can be accessed based on functionality, security and confidentiality criteria.

3.3.3. Accounting and Auditing

netCommons should not deal with sensitive data, in any case logging of the personal data will be enforced to prevent abuses, and in case of necessity proper auditing measures as provided by the Data Protection Act shall be put in action.

3.4. Summary of Technological solutions

We report below a table of the main technological solutions used for the different security issues mentioned in the Sect. 3.2.



GOAL	Technological Solution
Guaranteeing complete anonymity where required	The collected data will be labeled with participant codes. Participant consent forms will be held separately and will not reference the participant code. These will be paper based and held in a locked filing cabinet on the researchers site
Safe keeping of the documentation on informed consent	The informed consent will be provided by the interested subject by filling an appropriate form as reported in Appendix A. The authorized personnel must keep this physical document under lock and key. Information on the interested person can also be stored in electronic form in a database or in a spreadsheet. The spreadsheet or the database will be encrypted and its access will be password-protected and granted only to authorized operators
Remote access	In the general case, the “raw” data related to the participant to the project, will be handled only by the researchers interacting with the participant and made available to the rest of the consortium only in anonymous form. In particular any personal data contained in the collected data will be handled only by the researchers interacting with the participant. If, for special cases, some other researchers should need to access to the “raw” data, the interested participants will be informed. Only after their consent is extended to the requiring researcher, can he/she have access to the data. In this case, if the access is remote, the system has to have the following Researchers in the consortium can have access through an internet SSL connection



4. Conclusions

The topics of Open Access and Open Research Data is one of the key debates open in the scientific world, specially in case of research project that are funded with public money. netCommons is not only a research project funded by the EC, but it is also a project that deals with societal challenges, socio-economic sustainability, the construction of a commons, and techno-legal provisions. As such its effort to disseminate and propagate results and findings must be, and it is indeed maximal.

This deliverable described the policy that netCommons as so far discussed, approved and set for its own best practices in scientific Open Access dissemination and in data collection and management to achieve Open Research Data.

Regarding Open Access to publications, on the one hand, we have clearly identified that most leading scientific publishers provide appropriate licenses and means to achieve Open Access, either through Green Open Access (i.e., re-publication on OAI-PMH compliant repositories) or through Golden Open Access. On the other hand Golden Open Access is still very often ambiguous on the peer-review process, and the publication fees required to authors are hardly justifiable by the cost of electronic publishing, specially in light of modern editing technologies that hardly require any intervention of the publisher on the material provided by the authors. In conclusion, netCommons does not see any obstacle to achieve a complete Open Access dissemination for all its scientific publications.

Regarding Open Research Data accessibility and licensing, we have found that the situation is far less clear, and that most Institutions are still most unaware of the problem and they do not provide appropriate repositories. At the same time, also the concept of license and of derivative for Open Data is not as mature as it is for publications, where the concept of copyright and the notion of intellectual property as well as creative work are well understood both at the technical and the legal level. Indeed, in many cases Data cannot be classified as a creative work, and the intellectual property of Data does not yet have a commonly accepted technical and legal definition. Furthermore the publication of data must comply with legal provisions on privacy and individual protection. All the same, netCommons deems that data collected and used for scientific research (specially if receiving public funding), must be made available to the scientific community for validation and falsification of results and theories and to the public community at large for transparency and control. In the initial part of the project netCommons will decide on where to publish Open Research Data, and under which license on a case-by-case basis, guaranteeing in any case that published data is correctly indexed by the OpenAIRE platform.

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A. Appendix: Template of the Informed Consent Form

Informed Consent Form

This survey/interview is part of the EU Horizon 2020 research project “netCommons: network infrastructure as commons”: <http://www.netcommons.eu>. Scholars from the five EU-based institutions involved in the netCommons project carry out the survey research. The study does not have any commercial purposes, the involved researchers do not have any monetary benefits by conducting the study and the results will be published in the form of a report and research papers based on the survey. Furthermore, the collected data will be published in anonymous form as open data. The open data will not contain any personal identifiers, which is data that we are not interested to collect, do not ask for and do not publish. We will not ask you to provide personally sensitive data in this survey and all the answers provided will be used only in aggregate and anonymous form.

By signing this form, you confirm the following:

- I agree to the digital recording of the interview/survey
- I agree that the answers you give are stored in digital form in a database in such a way that I am not personally identifiable (anonymous or pseudonymous form)
- I have been given the opportunity to ask questions about the project
- I understand that my taking part is voluntary. I can withdraw from the study at any time during the interview/survey and I do not have to give any reasons for why I no longer want to take part.
- I understand my personal details such as my name, email, phone number and address will only be used by the researcher to contact me if necessary and will not be revealed to people outside the project. In any case such information will be completely deleted at the end of the project.
- I understand that my words may be quoted in publications, reports, web pages, and other research outputs in anonymous or pseudonymous form only (no name or other personal identifiable data will be mentioned).

The person responsible for the treatment of the data used in this survey/interview is:

Prof.

University of

E-mail

Phone

If you you have any questions, don't hesitate to contact him/her. I agree to these terms and want to participate in the interview/survey.

Yes

No



The netCommons project

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Horizon 2020

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