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Data Management Plan

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List of Abbreviations

AUSSDA	The Austrian Social Science Data Archive
CA	Consortium Agreement
DIH	Digital Innovation Hub
DI	Digital Innovation
DMP	Data Management Plan
DPO	Data Protection Officer
DSI	Digital Social Innovation
EU	European Union
GDPR	General Data Protection Regulation
H2020	Horizon 2020 program of the European Union
OSH	Open Source Hardware
RRI	Responsible Research and Innovation
SME	Small and Medium-sized Enterprise
WP	Work package



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Executive summary

mAKE is an innovation action that aims to promote cooperation and strategic partnerships between digital innovation hubs (DIHs) in Africa and Europe. Its overall aim is to strengthen the EU–Africa innovation and start-up ecosystem by creating the necessary infrastructure for decentral production and collaboration as well as shared policy frameworks and educational opportunities. mAKE focuses on connecting makerspaces, as they are important actors in the local digital innovation ecosystems in both Europe and Africa, in particular in regard to digital, local manufacturing and innovation in product design and development, therefore complementing more software-oriented digitisation projects in Europe and Africa. Apart from developing common infrastructure and resources, mAKE will organise capacity-building activities to equip makerspaces and their attached local SMEs and digital start-ups with the necessary skills to engage in innovation in hardware manufacturing, and will offer incubation, mentoring and matching activities for makers and makerspaces in Africa and Europe.

Responsible data management is crucial for any innovation action and the Data Management Plan (DMP) provides structured guidelines for this process. The DMP covers the lifecycle of data, including the process of collection to storage, analysis and preservation. In this DMP we provide a basic description of what kind of data will be produced and collected during the course of mAKE, and details about what will happen to the data both during this project and after it has been completed.

mAKE is part of a pilot action on open access to research data and is thus committed to providing access not only to project results and processes, but also to data collected during that process. Although the general policy of the mAKE project is to apply “open by default” to its data, we have to handle privacy issues with special care. Legal rules on anonymity are highly relevant and need to be agreed upon with each of the participants. Most of the data in mAKE will be anonymised data, but in case of a doubt, the data privacy of our participants always prevails over open data policy. When dealing with personal data mAKE is making sure that all GDPR rules are followed, including e.g. data minimisation, which states that data has to be adequate, relevant and limited to what is necessary for the purposes for which they are processed.

Overall, the leading framework for our data management is the GDPR in terms of personal data protection, FAIR data for the handling of non-personal data and Open Access following the European Union’s Open Science Guidelines.



1. Introduction

A Data Management Plan (DMP) is a key element of most research projects that collect or handle original data. This DMP describes the data management life cycle for the data to be collected, processed and/or generated by the mAKE project, following the Guidelines on FAIR Data Management in Horizon 2020 provided by the European Commission. As part of making research data findable, accessible, interoperable and reusable (FAIR), a DMP should include information on:

- the handling of original data during and after the end of the project
- what data will be collected, processed and/or generated
- which methodology and standards will be applied
- whether data will be shared/made open access
- how data will be curated and preserved (including after the end of the project)

This document provides a first version of the DMP and includes all the information we have available at this point in time. As stated in the guidelines, the DMP is intended to be a living document in which information on data managed in the mAKE project can be made available on a finer level of granularity through updates as the implementation of the project progresses and when significant changes occur. Therefore, we will implement this deliverable as a document that can be updated by the partner organisations at any time in the course of the project. In preparation for the mid-term review we will also reflect on the status of the DMP with the whole consortium and address any possible needs for updating the document and the processes described in it.

As described in the project handbook (D8.1) mAKE is committed to the integrative concept of Responsible Research and Innovation (RRI), which clearly goes beyond a pure ethical aspect. The importance of the RRI approach for mAKE is to align the co-creation process, which is an integral part of most activities, in a reflective way that is a transparent, interactive process by which societal actors and innovators become mutually responsive to each other. So as to ensure alignment with RRI, the project will develop several activities around a reflective RRI process for all its stakeholders, as summarized within the Project Handbook.

By involving different stakeholders in our project activities may touch on sensitive ethical issues, respectively the protection of (possibly) sensitive private data. The Project Handbook (D8.1 published in Month 3), the ethics deliverables D9.1 and D9.2, and this document describe in detail how mAKE actors intend to collaborate when collecting, processing and handling data and handle privacy and security issues. All work packages will look specifically into all ethical and legal issues related to the data they are dealing with and a responsible Data Protection Officer (DPO) has been assigned (see Deliverable 9.2). Project partners are aware of these sensitive issues and will build on ongoing European and African work on the management of trust and codes of conduct.

2. Data Summary

What kind of data is handled by this project and what is the purpose of the data collection/generation and its relation to the objectives of the project? In the following we list the main characteristics that describe data and that we have applied to describe our mAKE data in Table 1 (at the end of this document).



Type of data

Following the Data Management Plan of the Time4CS project (Time4CS Consortium, 2021), the following types of data may be collected and documented in research projects:

- **Observational:** data captured through observation of an activity and/or a behavior in real-time (and, therefore, usually irreplaceable). The collection will require human observation, ethnography, and potentially also instruments, including surveys, interviews, focus groups, to record the information.
- **Experimental:** data obtained in controlled situations through the active intervention of researchers, who design an activity (called the experiment) to collect data. Such data can be reproduced if needed, but it may be time-consuming and expensive.
- **Simulational:** data generated through reproduction of a real-world system, usually used to determine what would happen in certain conditions.
- **Derived or Compiled:** data derived upon transformation of existing datasets to create new data. Such data can be reproduced if lost, but it is very time-consuming and it could be expensive.
- **Reference or Canonical:** to data used to categorize and/or classify other data. They could be static or changing over time.
- **Event-related:** data collected during events. As they are derived from real-time events, the data are irreplaceable. If they include personal data of participants, just as in the other types of data, the GDPR will be applied.

While most of the research data can be assigned to one of these categories in some cases there could also be an overlap. Some data can belong to more than one category depending on the specificities of the data itself (e.g. event-related data could also be considered observational data under certain conditions).

Reuse of existing data and origin of data

Next to the collection of genuinely new datasets, research work can also rely on existing data and generate new collections out of existing data sources (= derived or compiled data; sometimes also referred to as secondary data). The reuse of existing data sources will thus also be identified as well as the origin of the data to be used in the research process.

Format of the data and estimated size

Our data can have various formats: text, numeric, multimedia, models, software languages, codes and design, discipline and instrument specific, etc. It is important to describe the format of the data in order to facilitate its accessibility and interoperability. Preference will be given to open and standard formats. Likewise, data management experts advise to give indications about the size of the data collected in a DMP. Similar to the format of the data, size is relevant for future data-sharing and making data accessible. In the course of the time information about the size of the managed data in mAKE should be revised and updated accordingly.



Aim of the data and the process of data collection

Part of the data description will always be the aim of the data produced and how it is linked to the objectives of the project. Similarly, a short description of the process of the data collection will be applied so as to help to characterize the specific data.

In Table 1 at the end of this document we describe the mAKE data in as much detail as we can at this stage of the project. We remain cognizant of all the points outlined above, and we will update Table 1 in case of additional data being handled in any of our research activities.

3. FAIR Data

FAIR data means that the data are findable, accessible, interoperable, and reusable. In this section we elaborate on the measures the project is taking to generate FAIR data during the course of the project and to ensure FAIR use of the data beyond the project timeframe.

3.1. Making data findable, including provisions for metadata

Versioning

The datasets produced in mAKE will follow good research practice by following a set of naming and versioning conventions, which are very useful for collaborative projects. A version control system will be applied to make sure that the data is organized and we can track back among different versions of the datasets. Such a version control system, which is also sometimes referred to as a revision control system, tracks incremental versions (or revisions) of files over time. Nextcloud, which is the main data-sharing system running on a ZSI server, supports a simple, automated version control system for files. Through use of this version control system, mAKE will minimize the risk of losing information after modifications in collaborative processes where many mAKE consortium members are working with the data. All consortium partners have access to the ZSI Nextcloud.

In addition to the automated versioning via Nextcloud, we are also applying version numbers in the file names themselves (see naming convention below).

Naming

For the naming of our shareable data we will use file names that are informative and useful for both humans and machines in order to make the data accessible and findable. Names must be meaningful, on the one hand, in order to make it easy for others to understand what the file contains and how it should be used. On the other hand, the names should use deliberate delimits in order to be machine readable. A common approach is using “_” and “-” to delimit units of metadata in the file names. For this project we will aim to use “-” to separate words we want to glob together, and “_” to separate different information within a file name. What we aim to avoid are blank spaces, punctuation, upper-casing of entire words, or special characters (e.g. characters such as \$, @, %, #, &*, (,), !, etc., which may have meanings in programming languages).



As mentioned above the file-naming should also always include a version number to make sure others who want to make use of any dataset know that they are dealing with which version. An example of an appropriate name for a data file is:

mAkE_BusinessModels_Collection_Codes_v1.xml

Metadata and keywords

Descriptive and substantive (i.e. how the data should be read or interpreted) metadata will be elaborated and described in a readme.txt file complementing each dataset (see Table 1). This detailed documentation should help interested users to clearly understand and reuse the data.

Title	Description
Creator(s)	Main person(s) involved in producing the data.
Title	Name or title by which the dataset is known.
Contributor(s)	Person(s) or organization(s) responsible for making contributions to the dataset.
Publisher	Holder of the data (e.g. in archives), or person or institution who submitted the work.
Data ownership	Indication of primary data controller (person) and indication of additional data ownership, especially in the case of shared ownership.
Year of publication	The year when the data was or will be made publicly available.
Data created	The date when the resource itself was put together (could be a date range or a single date)
Description	Concise description of the contents of the dataset. Describe the research objective, type of research, method of data collection, type of data and storage location of data (especially in the case of data not available on Zenodo).
Subject	Subject, or key phrase describing the resource.
Temporal coverage	The dates to which the data refer (the year or beginning and ending dates).
Spatial coverage	The geographic area to which the data refer (e.g. municipality, town/city, region, country). The geographic coordinates of the area may be included, if desired.
Identifier(s)	Zenodo automatically assigns a DOI to a dataset once the entire deposit procedure has been completed. In some cases, a dataset may be known by one or more (persistent) identifier(s).
Language	The primary language of the resource.
Link to related publication(s)	Include the web addresses or DOIs for any publication, important internal reports or other datasets that are related to your dataset.
Keywords	Keywords that associate with the data resource.



Table 01: Metadata description

As this table shows, each data resource will have a unique identifier, e.g. a Digital Object Identifier (DOI). As we are committed to sharing all our open data on Zenodo, a DOI will be generated automatically and this will serve as our main data identifier. For some data, such as the open educational resources of WP3, we will apply a more detailed metadata schema, based on the DataCite Metadata Schema:

https://schema.datacite.org/meta/kernel-4.4/doc/DataCite-MetadataKernel_v4.4.pdf

3.2. Making data openly accessible

General rules regarding accessibility

mAKE consortium members support the objective of opening up access to research results. Where applicable, the mAKE members are going to use open source licenses for software and non-exclusive licenses for other intellectual property rights such as copyrights, patents or standardization proposals. Also, access to the collected data will be open and free while adhering to privacy and personal data protection. Peer-reviewed scientific publications that result from the project will be provided via open access (“gold” model). We will also consider submitting our publications to Open Research Europe (<https://open-research-europe.ec.europa.eu/>), the open access publishing platform for scientific articles launched by the European Commission as a free service for H2020 beneficiaries.

Issues related to protecting intellectual property are highly important when citizens and volunteers are involved in the work. The Consortium Agreement (CA) (signed by all consortium members before the project start) is the place where the details of management of intellectual property rights, including open licenses, between partners are defined. The CA also includes a list of pre-existing know-how (according to the description of work) and knowledge as well as the major principles on exploitation and dissemination issues. The consortium members have already agreed that access rights on the pre-existing know-how needed for carrying out the project shall be granted on a royalty-free basis.

Research data access

The main part of raw and processed data generated by the project will be accessible to all consortium partners, i.e., all data except where there is sensitive data that requires being kept only by the partner having collected the data. As described in the Project Handbook, the main workflow for data sharing starts at the work package (WP) level, where each team is responsible for respecting ethical procedures at all times during the data gathering and processing steps. The WP/task team members are also responsible for any data anonymisation or pseudonymization, if applicable. The data accessible to the whole consortium will be stored on the shared Nextcloud server provided by ZSI. Only members of the consortium, after validation by the coordinator (Barbara Kieslinger), can access this space. The public data will be accessible via Zenodo.

Confidential data and data collected for internal purposes will be stored in the secure facilities of the organization responsible for collecting the data and will be retained for two years after the end of project. Data containing personal identifiable information of individuals will only be shared, when necessary, based on a confidentiality agreement (see Annex I of the Project Handbook). A data exchange form, signed by the partners exchanging sensitive data, documents the data exchange between these partners. This form is also provided in the Project Handbook.



Details concerning the ownership, transfer and dissemination of project results are defined in section 8 of the Consortium Agreement and shall be followed accordingly. The relevant rules of the Grant Agreement, in specific Article 26(2), Article 29(1) and Article 30, are also relevant and apply accordingly.

Sensitive Social Science Data

In mAKE we are dealing with quantitative and qualitative social science data (see Table 2 below), which is often context-sensitive data that includes personal data. GDPR applies for any such personal data, defined as follows:

‘personal data’ means any information relating to an identified or identifiable natural person (‘data subject’); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person; (Art. 4(1), GDPR)

Thus we have to pay careful attention not only to avoiding direct identifiers in our data, but also indirect identifiers that could make persons identifiable through aggregation of information. For special categories of personal data it may even be necessary to provide for certain suitable and specific measures to safeguard the fundamental rights and the interests of the data subject. Protection of data subjects according to GDPR rules will take clear precedence over our commitment and intention to contribute as much as possible to open research. If necessary, we may also apply data encryption to make sure sensitive personal data is protected.

There are certain measures that can be taken to allow even highly qualitative social scientific data to be made available and shareable, and we will make use of these measures as far as possible. This includes e.g. clear procedures for informed consent (see our Project Handbook for details), anonymisation, pseudonymisation (see deliverable 9.2. For more details), and/or access restrictions.

We will eliminate direct and indirect identifiers through one or more of the following:

- Deleting certain information
- Substituting personal identifiers with pseudonyms (more relevant for qualitative data, e.g. interview transcripts)
- Aggregating the information (more relevant for quantitative data, e.g. numeric dataset)

The Austrian Social Science Data Archive (AUSSDA) offers support for data pseudonymisation via pseudonymisation checks. As the ZSI is a collaboration partner of AUSSDA we can make use of this service for our mAKE research data. Still, if we anonymise the data to make it shareable we have to ask ourselves the question of how far the sharing of this qualitative and often highly context sensitive data makes sense and how far this data could then still be reused by others.

If we allow restricted access to the research data to enable data sharing for scientific purposes we will follow the principle of “as open as possible – as closed as necessary”. Such restricted access could be granted to a predefined group of users or to certain accounts and under certain conditions. Within the consortium we also have a data sharing agreement in order to exchange research data within the consortium. Such restricted access would only be granted to consortium-external researchers with the consent of the research subjects.



In cases where datasets can be made freely available as they do not include any personalised data we will make them available with the corresponding metadata on Zenodo (<https://zenodo.org/>).

3.3. Making data interoperable

The interoperability of the data mostly depends on the metadata that is provided with the data. Table 1 above described the general metadata that we will provide with each of our datasets. In addition, Zenodo requires metadata for the description of any data shared on the portal. This metadata uses a vocabulary that follows the FAIR data principles and that offers export options to international standard formats, such as Dublin Core or the Datacite Metadata Schema, to make the data interoperable.

To allow inter-disciplinary interoperability we plan to use standard vocabularies for all data types present in your datasets. However, there may be uncommon vocabularies being used that stem from the maker-specific context in which we are operating. These context-specific vocabularies may require provision of some additional explanation with the data, in order to make them interoperable across disciplines.

3.4. Increase data re-use (through clarifying licenses)

The main users of data produced in the project will be the consortium partners. Following an open and participatory approach towards data sharing and re-use, we also consider participants in our project activities as potential users of the collected data. All data will be classified as open, sensitive or closed, with the access and re-usability depending on the classification. For re-use of the data the following applies:

- Open data will be freely available, subject to the user acknowledging it through citing the name and creator of the dataset. Permission from the main data creator (main researcher) or contributors is not required.
- Sensitive (or confidential/restricted data) may be made available by the data creator after any identifying information has been removed. Reuse of this anonymised/pseudonymised data may be possible, if cited and if agreed to by the dataset creator and its contributors.
- Closed data are not available for sharing or reuse.

The open data generated in this project will carry the Creative Commons Attribution (CC-BY) license so as to permit its reuse. As previously mentioned, all relevant open data will be preserved and archived in Zenodo. As far as we can say at this point, all data and items on Zenodo will be retained for the lifetime of the repository. There is currently no intention to remove the shared data from the repository at any given time. Zenodo is hosted by CERN which has an experimental programme defined for the next 20+ years, offering long-term accessibility of the data.

4. Allocation of Resources

mAKE is part of the H2020 Open Research Data Pilot (ORDP), a pilot action on open access to research data, which requires projects to define and execute a Data Management Plan (i.e., the plan outlined in this document). mAKE's open data management is part of Task T8.5 of the Management WP, under the lead of the coordinator ZSI. All other consortium partners are committed to contributing to the data management



in their roles as WP leaders. The workflow of how data will be published is depicted in Fig 1 below (as outlined in the Project Handbook).



Fig. 01: Open Access workflow

As outlined in the Project Handbook, this Data Management Plan may have to be revised during the course of project activities. As the co-design approach that mAKE is following is a rather dynamic methodology, it is not possible to clearly specify all data sources and collected outcomes from the beginning.

The costs for making any of our research data FAIR can be covered by the project budget during the official funding period. According to the Grant Agreement, costs related to open access to research data are eligible as part of the Horizon 2020 grant (if compliant with the Grant Agreement conditions).

5. Data Security

All research data from this project will be stored on the collaboration space Nextcloud, which is running on a ZSI server and is fully GDPR compliant. ZSI is running its own IT infrastructure, and it's IT staff takes great care to ensure data security and protection via these measures, among others:

- in-house servers controlled exclusively by ZSI IT staff
- services running in a demilitarized network zone behind a redundant firewall
- resource isolation for services through hardware nodes and/or virtual machines
- regular updates of system and application software
- timely installation of security patches from OSS suppliers
- daily backups, off-site backup on encrypted hard disks, monitoring and logging
- web server hardening
- a password policy
- consultation and awareness-raising with ZSI staff on data protection issues
- precautions for emergency scenarios



- compliance with GDPR

The Nextcloud collaboration space has a versioning service so that data can also be restored in case of any accidental deletion. Consortium partners may also store the data they generate on their own secure servers, making sure that secure storage is guaranteed. The conditions for transfer of any sensitive data are described above and in the Project Handbook.

Under no circumstance will mAkE collect, store or process private information, etc. without the explicit and written permission of the respective persons. mAkE will comply fully with data protection provisions as set out in the currently applicable Data Protection Directive EC 95/46, the General Data Protection Regulation EU/2016/679 (GDPR) and the e-Privacy Directive EC 2002/58 (confidentiality of information, treatment of traffic data, spam and cookies).

7. Responsible Research and Innovation Aspects

Research must respect ethical standards and fundamental rights to respond to societal challenges.

During the lifetime of the project, mAkE will continuously follow an approach that ensures an appropriate level of ethical sensitivity, meaning that any changes and implementations will be viewed from an ethical perspective and (where needed) actions taken accordingly. Those consortium members that are research performing organizations have internal ethical boards and will seek their approval for any data sensitive activities.

The Project Handbook describes in detail the ethical standards we apply for our research, which are aligned with our principles of responsible research.

Gender equality and gender diversity

The mAkE project fully supports the European Union policy on equal opportunities between women, men and gender-diverse persons. To this end, participation of all genders will be continually encouraged and supported. Project staff of all consortium members are composed according to the principle of equal opportunity and all member organizations strongly enforce an equal opportunity policy in their human resources selection processes. In addition, we are aware of inherent gender biases that can be present in makerspaces and will follow a gender-sensitive methodology, following gender-sensitive principles. Any dataset openly shared will as far as possible be controlled for bias, as well as for research ethics and integrity.

Enhancement of current education processes to better equip future makers, entrepreneurs and society as a whole with the necessary competences to participate in collective and responsible processes.

Of specific importance for mAkE is the aspect of learning and knowledge sharing, within the specific makerspaces, among and across them, and beyond the maker community. It is critical that we transfer our findings into useful knowledge resources for the target communities (e.g. makers and innovators), e.g. via open educational resources compiled in WP3. Thus, specific activities in WP3 are dedicated to co-designing and testing measures to support competence building, especially skills that are highly relevant for the future such as critical thinking, sustainable making and digital fabrication skills.



8. Summary and outlook

This document, together with the Project Handbook (D8.1), describes the main aspects of how this project will practice open research and how we will handle our research data. While mAkEis fully committed to open science and openness as defaults, the privacy and data security of personal data coming from our research participants is of the highest priority. Templates and procedures for data collection, including for ethical compliance, are in place and will be reflected in the consortium.

As research data management is a continuous process and we can currently not foresee all eventualities that may arise through following an open co-design methodology, we will reflect on and update this DMP in the course of the project.

9. References

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Data description of mAkE project

Workpackage & activity of data collection	Short data description & aim of the data	Type of data* (observational data, experimental data, ...)	Format of data* (DOCX, ODF, ODT, PDF, CVS, JPEG, ...)	Reuse of any existing data
WP1_D1.1 Open Catalogue of Business Models	Documentation of business models (using Business Model Canvas framework). Will be subject to 'Informed Consent' procedure and the information will not be shared in a way that it can be linked to a particular respondent - the data will be used to build abstracted models which will be shared.	Interview responses	XLS PDF Audio files [mp3 / mp4]	Reuse of survey data collected by WP2



<p>WP 1_Venture Building and Business Modelling</p>	<p>Data collection via application processes especially for sourcing stakeholders and matchmaking purposes (applicants enter information themselves):</p> <ul style="list-style-type: none"> - Contact details - Collection of business related data - Collection of founder related data such as name, experience, expertise etc. - Collection of DIH related data 	<p>Application-related Derived or Compiled</p>	<p>DOC/DOCX/ODT XLS PDF</p>	<p>No reuse of pre-existing data Use of data compiled by the project</p>
<p>WP 1_ Task 1.3 Matchmaking: Hub-to-Hub, Founder-to-Founder & Business-to-Business</p>	<p>Data Collection in the context of WP1_Task 1.3:</p> <ul style="list-style-type: none"> - Collection of Data relating to DIH offering Hub-to-Hub residency programs 	<p>Derived and compiled</p>	<p>DOC/DOCX/ODT XLS PDF</p>	<p>No reuse of pre-existing data Use of data compiled by the project</p>



	<ul style="list-style-type: none"> - Collection of data relating to African DIH looking for Hub-to-Hub makers-in-residency programs - Data collection done through interviews (following introduction) and online research. 			
<p>WP 2_Hub Ecosystem and Policy Frameworks</p>	<ul style="list-style-type: none"> -Collection of data from Collective Associations on how they began operations and the value they offer to their members. -Collection of data from makerspaces on their operations and their involvement with Collective Associations. -The aim of both is to understand current structures supporting makerspaces and 	<p>Quantitative data, qualitative data</p>	<p>DOC</p>	<p>No reuse of pre-existing data</p> <p>Use of data compiled by the project</p>



	come up with policy recommendations that will support makerspaces.			
WP3: Open education, skill development and capacity building T3.1 Open Makerspace Toolkit	Collection of existing content and learning materials, and content created for this project from consortium partners. -collection of relevant data(models, maps, case studies)from other wp's in order to better build, enrich and develop this toolkit.	Qualitative, and experimental	Short Videos, print, translated format, tutorials, PDF	To some extent, there will be re-use of existing contents and learning materials provided by consortium partners.
WP3_T3.2 Training of Trainers	Organise events and identify and set up a group of trainers where they will be trained on how to use the maker toolkit.	Quantitative, Observational	Videos	No re-use of pre-existing data
WP3_T3.3 Shared online platform(MOOC)	Collection of recorded videos of practical training, practical skills, existing and newly created open source	Qualitative	Short tutorials, videos, pedagogic manner, downloadable	Use of T3.2, T3:3.2, 3.1,3.2, 3:3.3 data



	<p>training, open education resources and courses.</p> <p>The aim is to make them available online so that innovators, makers, promoters and the interested public can receive life long education</p>			
<p>WP4 D4.1 Skills – Mutual Recognition Standard</p>	<p>Contact details and interview notes for scoping exercise research to inform the development of the skills standard; contact details of voluntary community of interested parties which acts as the reference group for the skills standard.</p>	<p>Name, contact and affiliation data; written notes; aggregated and interpreted written findings.</p>	<p>XLSX/spreadsheets; interview audio recordings; meeting minutes; written comments on PubPub online platform; email list membership list.</p>	<p>N/A.</p>
<p>WP4 D4.2 Skills – Maker Passports & Prototype</p>	<p>Individuals who have received training and gained experience in makerspaces will be associated with records of their training and experience so that</p>	<p>Unique identifier as assigned, name, address/location, contact details, skills, third-party verifications /</p>	<p>XLSX/spreadsheets; potentially online profiles supported by secured databases; image.</p>	<p>N/A.</p>



	externals can understand their skills profile – enabling mobility and quality assurance.	recommendations, profile picture/avatar,		
WP4 D4.3 Machinery - Map	Geographic location of machines and tools so that they can be represented on a map and users can find types of machines/tools near them.	Detailed data on machines/tools as defined by Open Know-Where standard; contact details of machine/tool owner; address/location data; photographs of machines/tools; unique identifiers.	Database supporting an online map tool; images.	The project will focus on primary data collection through surveys of makerspaces, but the data system may also interface with existing external datasets hosted separately through APIs (such as self-managed data by makerspaces, or existing maps of makerspaces and membership surveys of makerspace communities).
WP4 D4.4 Contracts – Model & Prototype	For the model contract: To inform the design of the model contract, contact details and interview notes for scoping exercise research.	Name, contact details, address/location, machine ownership/access, maker passport profile,	Database supporting software for automated contracting system prototype	N/A



	For the prototype: Data on location of machines/tools and maker passport profiles enables users to determine who can make what product where, and then issue a model contract to them for production to begin.	contract terms data (such as design, quantity, price, terms etc) and payment data (such as bank details, KYC data).		
WP5 KPIs- Communication & Dissemination Outreach	Social media statistics Google analytics for the website	Observational, Event-related, Derived or Compiled	XLSX/spreadsheets, DOC/DOCX/ODT, PDF, JPEG, Audio and Video files [mp3 / mp4]	N/A
WP5_Communication & Dissemination Outreach	Newsletter	Name and contact details of subscribers	Collected in Mailchimp	
WP5_T5. Set of recommendations for global Innovation ecosystem technical	Develop and align strategic material, formats, values, guidelines on how-to for	Observational Derived - Compiled	XLSX/spreadsheets, DOC/DOCX/ODT, PDF, JPEG,	



solution for platform integration	webinars, filming, write blog posts, post and make citations.		Audio and Video files [mp3 / mp4]	
WP5_KPIs - Communication & Dissemination Outreach	Collect data through Events Tracker for Public Events created by/participated by Consortium Partners Interviews with Consortium Partners	Event-related Name and contact details of Consortium Partners	XLSX/spreadsheets DOC/DOCX/ODT PDF JPEG Audio and Video files [mp3 / mp4] videos	
WP6_6.1 Community Activation & Engagement Strategy	Manage the Community Elaborate a community engagement strategy, guidelines and code of conduct Support onboarding, reaching out to new communities	Observational, Event-related, Derived or Compiled	XLSX/spreadsheets, DOC/DOCX/ODT, PDF, JPEG, Audio and Video files [mp3 / mp4]	Member lists of consortium partner communities



	Facilitate and document engagement opportunities and formats			
WP6_6.1.1 Code of Conduct	Prepare and document a code of conduct for the project consortium	Observational, Derived or Compiled	DOC/DOCX/ODT, PDF, JPEG	N/A
WP6_6.2 Co-Creation Report	Organize, facilitate and document offline/online co-creation sprints of deliverables and project results Facilitate the continuous collaboration between sprints	Observational, Event-related, Derived or Compiled	DOC/DOCX/ODT, PDF, JPEG, Audio and Video files [mp3 / mp4]	Use of co-creation formats existing



<p>WP6_Task_6.3 Sharing & Embedding Strategy</p>	<p>Develop a sharing and embedding strategy (in collaboration with WP5)</p> <p>Ensure community engagement in the development of capacity building materials, trainings and other open educational resources (resources developed in WP1, WP2, WP3, WP4)</p> <p>Offer webinars, offline meetups, and peer to peer learning sessions</p> <p>Facilitate knowledge transfer on licensing and open repositories.</p>	<p>Observational, Event-related, Derived or Compiled</p>	<p>XLSX/spreadsheets, DOC/DOCX/ODT, PDF, JPEG, Audio and Video files [mp3 / mp4]</p>	<p>Member contacts, website contacts, newsletter contacts</p>
<p>WP 6: 6.4 Sustainability Report</p>		<p>Observational, Event-related, Derived or Compiled</p>	<p>DOC/DOCX/ODT, PDF, JPEG</p>	<p>N/A</p>



<p>WP7_Interviews with participants at policy events</p>	<p>Collection of statements from policy makers on digital innovation hubs development and public support in specific countries; the data will be subject to the informed consent procedure described in D8.1 “Project Handbook”.)</p>	<p>Observational, Event-related, Derived or Compiled</p>	<p>DOC/DOCX/ODT, PDF, JPEG, Audio files [mp3 / mp4]</p>	<p>No reuse of pre-existing data Use of data compiled by the project</p>
<p>WP7_Interviews with makerspace managers, start-ups and small business and entrepreneurs in maker spaces</p>	<p>Collection of statements from makerspace managers, start-up representatives and small businesses and entrepreneurs about mAKE products, such as company builder programmes, maker passport, educational resources etc; the data will be subject to the informed consent procedure described in D8.1 “Project Handbook”.)</p>	<p>Observational, Event-related, Derived or Compiled</p>	<p>DOC/DOCX/ODT, PDF, JPEG, Audio files [mp3 / mp4]</p>	<p>No reuse of pre-existing data Use of data compiled by the project</p>



<p>WP7_survey data</p>	<p>Collection of online surveys regarding mAKE products, such as maker builder programme and educational offers</p>	<p>Observational</p>	<p>XLS/ HTML, or other Web coding language</p>	<p>The data will be used internally for the project evaluation</p>
<p>WP7_Evaluation workshop data</p>	<p>Project team and selected case participants are invited to give their feedback on mAKE products and services in collaborative evaluation workshops</p>	<p>Event-related</p>	<p>extracts from Miro Board and other collaboration tools (PDF, JPEG), audio recordings</p>	<p>The data will be used internally for the project evaluation and to elaborate the final mAKE products and services</p>

Table 02: mAKE data description

