Plan Overview

A Data Management Plan created using DMPonline

Title: 3D Printing Our Imagination? Leveraging Research Insights And Organising Knowledge Translation For Impact-Cocreation With Digital Innovations To Address Grand Challenges

Creator: Stavros Polykarpou

Principal Investigator: Stavros Polykarpou

Affiliation: University of Exeter

Funder: Engineering and Physical Sciences Research Council (EPSRC)

Template: EPSRC Data Management Plan Customised By: University of Exeter

ORCID iD: 0000-0002-5344-5666

Project abstract:

The project aims to explore and develop eight years of research findings into knowledge translation through impact co-creation. It will utilise, build upon and explore how significant previous domain-specific research findings developed over eight years of longitudinal research can be implemented in practice. To do so, the project will implement knowledge exchange and translation workshops into practice by designing, coordinating and implementing change activities with a leading 3D printing organisation, LIMBER prosthetics & Orthotics, uniquely positioned to benefit from my research insights to date. In doing so, significant impact co-creation activities will lead to societal, economic, and health-related objectives.

ID: 120426

Start date: 04-09-2023

End date: 04-09-2024

Last modified: 22-06-2023

3D Printing Our Imagination? Leveraging Research Insights And Organising Knowledge Translation For Impact-Cocreation With Digital Innovations To Address Grand Challenges

Data Collection

What data will you collect or create?

The project will generate impact co-creation through knowledge translation in collaboration with our non-academic, leading 3D-printing partner, LIMBER Prosthetics & Orthotics. It will utilise, build upon and explore how significant previous domain-specific research findings, developed over eight years of longitudinal research, can be implemented in practice. To do so, the project is structured into three webinar/workshop series to design, coordinate, and implement evidence-based best practices with the organisation. They are uniquely positioned to benefit from the longitudinal research insights of implementing 3D printing in healthcare to provide patients with personalised medicine and custom-made prosthetics. The project will provide significant societal, economic, and health-related benefits, addressing grand challenges.

The knowledge translation activities are structured as webinar series to maximise participation, impact, and inclusivity to achieve these aims. Each of the webinar series corresponds to, and aligns with, the primary objectives for substantial implications outlined in the EPSRC Translational Funding Guidelines (IAA): societal impact (webinar 1), economic impact (webinar 2), and cross/transdisciplinary impact co-creation (webinar 3). For more information on each webinar's impact-related aims and objectives, please see the application form in the attached documents section.

The data collected through this process will be qualitative, through best practice methodologies such as personal and focus group interviews, generating personal and organisational data. The data collection process will also include audio and video recordings of the webinar series. This data is essential for transcribing verbatim and analysing audio-visual interactions, ensuring best practice standards for analysing qualitative data are met. All the data will be in digital format and stored safely in password-encrypted, anonymised databases on the UoE Sharepoint server. It is estimated that, overall, the project will produce data volume of <20GB.

Further information can be found in the Data Management Plan uploaded to this application.

How will the data be collected or created?

The data will be collected through carefully planned and coordinated webinar workshops and personal & group interviews (via teams). The data collection procedures meet the principles of the EPSRC research data policy framework and standards. I will ensure the appropriate use of the provisions available in current legislation to guard against the inappropriate release of research data is always met to protect the collaborative research/impact co-creation process. For example, the project requests funds for research and administrative assistants, in line with expectations set out by the EPSRC research data policy framework, I will promote internal awareness of EPSRC principles and expectations and ensure that the assistants are aware of the regulatory environment, and any exemptions justifying the withholding of research data. This will ensure that appropriately structured metadata is produced, describing the research data stored in archives on the university's Sharepoint server within 12 months of the data being generated. It will enable others to understand what research data exists, why, when, and how it was developed, as well as how to access it.

Documentation and Metadata

What documentation and metadata will accompany the data?

The documentation and metadata accompanying the data will be stored in a secure, password-encrypted folder on UoE's Sharepoint server. Consequently, any impact related executive report impact outcomes will be securely deposited on ORE. The project will utilise Atlats. ti to conduct a preliminary content analysis for executive report generation. The Atlas.ti metadata file will be password-encrypted and contained within a password-encrypted folder.

Ethics and Legal Compliance

How will you manage any ethical issues?

I have commenced the process of establishing a formal strategic partnership between UoE and Limber Prosthetics. Once formalised, all research activities and associated collaborative data and metadata will be further protected through the signing of NDA agreements. I am collaborating with another long-standing strategic partner of UoE, BMT Global, and I am aware of risk management procedures to ensure all legal, ethical and commercial constraints are mitigated through careful planning.

How will you manage copyright and Intellectual Property Rights (IPR) issues?

There are no direct IPR issues related to this impact-related knowledge translation. However, as part of risk management

Storage and Backup

How will the data be stored and backed up during the research?

The data will be collected through carefully planned and coordinated webinar workshops and personal & group interviews (via teams). The data collection procedures meet the principles of the EPSRC research data policy framework and standards. I will ensure the appropriate use of the provisions available in current legislation to guard against the inappropriate release of research data is always met to protect the collaborative research/impact co-creation process. For example, the project requests funds for research and administrative assistants, in line with expectations set out by the EPSRC research data policy framework, I will promote internal awareness of EPSRC principles and expectations and ensure that the assistants are aware of the regulatory environment, and any exemptions justifying the withholding of research data. This will ensure that appropriately structured metadata is produced, describing the research data stored in archives in Sharepoint and ORE within 12 months of the data being generated. It will enable others to understand what research data exists, why, when, and how it was generated, and how to access it.

How will you manage access and security?

Through strict and appropriate security controls outlined in detail above. The data will be stored on the UoE Sharepoint server, backed up in real-time, and password protected. SharePoint has been chosen as it is designed for collaboration and can be used to work collaboratively on files in real-time.

Selection and Preservation

Which data are of long-term value and should be retained, shared, and/or preserved?

The data collected will be of long-term value in terms of providing opportunities for collaborative work. First, I am in the process of applying for a separate research-related grant for collaboration with LIMBER. This impact-related long-term value data will enable the writing of executive reports and, consequently, research outputs. Hence the data will be securely preserved for a minimum of 10 years from the date the researcher's ‘privileged access’ period expires (following EPSRC data preservation policy). For example, the data will be stored in the appropriate archival data repository, the UoE institutional repository, ORE, to ensure that data can still be used long into the future and provide the basis for data publication and sharing.

What is the long-term preservation plan for the dataset?

As per the strategy above, the research data will be made openly available, where possible, promptly by depositing it into UoE's institutional data repository, ORE. Although a general data repository, ORE can securely preserve the data for the long term. Data deposited in ORE is assigned a Digital Object Identifier (DOI) that can be used to cite the dataset, and relevant metadata will be recorded to ensure that the data is discoverable. In addition, this data preservation plan will ensure that the research team has access to and use appropriate research data storage facilities, which may be directly owned and managed by the research organisation.

Data Sharing

How will you share the data?

All data about this project will be generated in digital format and stored appropriately following best practice standards to facilitate sharing if a valid request for access to the data is received. Additional caution will be applied when sharing data - the standard policy would be only to share data for which the researcher or the University own the rights to do so and if I have obtained consent for data sharing.

Are any restrictions on data sharing required?

No

Responsibilities and Resources

Who will be responsible for data management?

As the principal investigator, I will be responsible for data management. As part of the application, the project requests funds for research and administrative assistants, in line with expectations set out by the EPSRC research data policy framework. I will promote internal awareness of EPSRC principles and expectations and ensure that the assistants are aware of the regulatory environment, and of any exemptions justifying the withholding of research data. This will ensure that appropriately structured metadata is produced throughout the full data lifecycle. Furthermore, I will clearly explain how to curate data and store it safely on password encrypted folders, as well as how to anonymise the data during transcription.

What resources will you require to deliver your plan?

The provision of funds to hire two members of staff from the university's temporary work database to facilitate the smooth operation of the webinar series.

Data Protection Impact Assessment

What do you require this personal data for? What is the purpose of using the personal data?

I have attended training sessions on GDPR regulations and hence I am very familiar with the guidelines. I have avoided using very useful transcriptiom services (e.g. such as Otter.ti-algorithmic transcribing), , as the personal data would fall outside the EU and regulations.

How are you making people aware of how their personal data is being used? Do you need to update your privacy notice?

The participant information form has extensive details about what data will be gathered and how it it will be used. The principal investigator has attended training and continues to keep updated regarding data protection principles under the GDPR. In addition, as an ethnographer, having conducted extensive longitudinal qualitative research for nearly a decade now, I do know that sometimes using quotes from specific people in a sensitive context (e.g. my phd in 3d printing in healthcare) might be tricky. Hence, when such data will be used for journal publication purposes, I will be reaching out to the participants to regain their informed consent about the research/impact co-creation process.

Which conditions for processing apply for your project? For Special Categories please ensure you select at least one from Section 1 and one from Section 2 below. Please select all that apply and provide any additional details.

Section 1: Conditions for Personal Data

- **The data subject has given consent to the processing (please provide the consent wording and where it is stored)**
- **Contractual necessity (please confirm which contract this relates to)**
- **Compliance with any legal obligation (please document which legal obligation)**
- **To protect the vital interests of the data subject (please provide details)**
- **Functions of a public nature or task in the public interest (please provide details)**
- **Legitimate interest of the Data Controller (please provide details of legitimate interest)**

Section 2: Conditions for Special Categories Data

- **The data subject has given explicit consent to the processing**
- **Necessary so that you can comply with employment law**
- **To protect the vital interests of the data subject or other person**
- **The processing is carried out as part of the legitimate activities of a not-for-profit organisation**
- **The individual has deliberately made the information public**
- **The processing is necessary in relation to legal rights**
- **The processing is necessary for administering justice or for exercising statutory or governmental functions**
- **The processing is necessary for medical purposes**
- **The processing is necessary for monitoring equality of opportunity**

SECTION 1. I am in touch with the Legal Services team to establish and ensure that all relevant data sharing procedures are followed dutifully. All appropriate data sharing agreements or contracts are in place when sharing personal data with third parties such as collaborators, other research teams or transcription services.

Is all the personal data you are using necessary? Are you collecting enough to carry out the work, is there any you could do without to limit the risks to the individuals?

All personal data collected will be data necessary to the extent of achieving the aims and objectives of the project in a timely manner (1-year timeline).

How are you ensuring that personal data obtained from individuals or other organisations is accurate? How will you keep it updated?

As the principal investigator, I am familiar with the data protection principles under the GDPR. I will ensure that the administrative and research assistants employed to support the team in this project will be made aware of data protection. For example, I ensure that all members of my team have completed Information Governance training before collecting any personal data for research purposes. In addition, I will ensure the completion of the University’s online Information Governance mandatory training.

How long will you keep the data and how will you dispose of it? Are the retention periods on the University Retention Schedule?

All the data will be in digital format and stored safely in password-encrypted, anonymised databases on the University of Exeter (UoE) SharePoint server. Once the project is finished, the relevant impact co-creation executive reports, research papers and policy outputs will be deposited and archived in the UoE ORE data depository and assigned a DOI. This will ensure that data can still be used long into the future, provide the basis for data publication and sharing, and can be retained for as long as needed for sharing and publication purposes.

Where will the data be stored? If storage is in the cloud, where is the physical server? Will you need to transfer the data outside the EEA? If yes, how will you ensure adequate protection?

The data (digital format) will be stored in UoE's SharePoint server to facilitate real-time collaboration and back up. The data will not be transferred outside the EEA.

Will you be able to meet all the Data Subject Rights? Can you provide copies of data if requested? Are you able to fully delete the data (not just archive)?

Yes

Please briefly document below any risks with the use of personal data and how you will control such risks. Include technical controls (IT security, encryption etc), physical controls (location, locked room etc), personnel controls (training, access control etc), and procedural controls (contract, polices etc).

Technical controls are a priority for the security of personal data. The appropriate encryption standards will be used to protect the data. In terms of personnel controls, I will provide my team of 2 assistants with all the necessary training and access control. I will also familiriase them with the required procedural controls.