



 **TRIPLE Open Science  
Training Series**

***The Importance of  
User-Centred Design  
for Open Science***

***Dr Paula Forbes***

February 16th 2022



*Moderated by Francesca Di Donato, francesca.didonato@ilc.cnr.it, CNR*





# TRIPLE Open Science Training Series

## Some info on today's webinar

The session will be recorded and made available afterwards.

Keep an eye on the Training Events page of the TRIPLE web site:  
[gotriple.eu/training/](http://gotriple.eu/training/)

Q&A session at the end. Questions are very welcome:  
please send them in the chat during the webinar

I'll take care of collecting and presenting them to our speakers.



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# TRIPLE Open Science Training Series

## Speaker

**Dr Paula  
Forbes**  
Researcher at  
Abertay University



**GoTriple Promotional Video:**  
<https://youtu.be/4HCNt1nZ2I0>

<https://orcid.org/0000-0003-1737-9929>  
<https://www.linkedin.com/in/paula-forbes-a7b31025/>  
<https://scholar.google.co.uk/citations?user=c2pWSskAAAAI&hl=en>

*moderated by Francesca Di Donato (CNR)*

<https://orcid.org/0000-0003-0144-8934>



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Transforming Research Through Innovative  
Practices for Linked Interdisciplinary Exploration

**TRIPLE was launched in October 2019.**

**It will be one of the dedicated services  
of OPERAS, the Research Infrastructure  
supporting open scholarly  
communication**

**in the social sciences and humanities (SSH)**

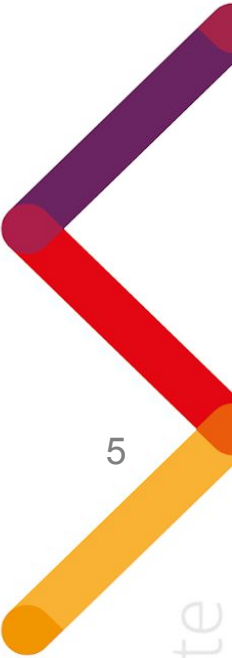
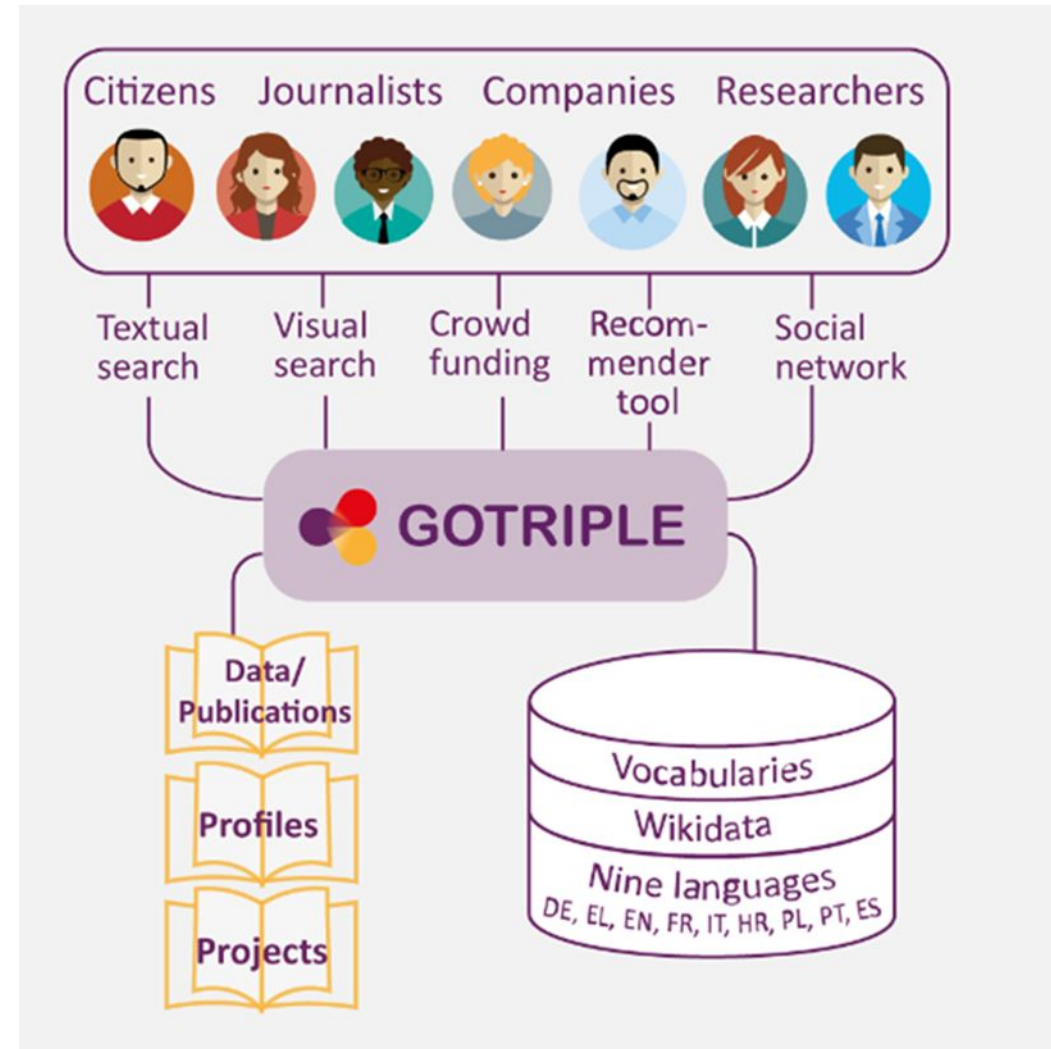
**in the European Research Area.**

**<https://www.project.gotriple.eu/>**

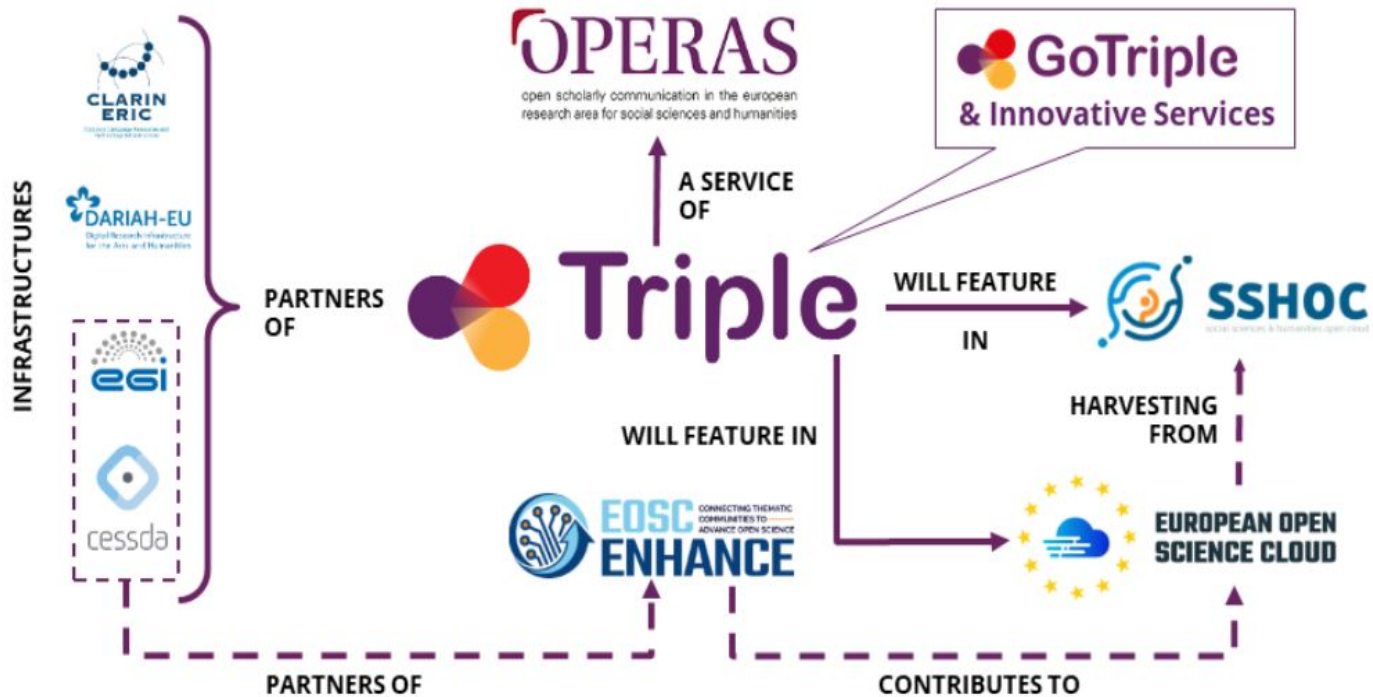


# Overview of this Session

- What is a User Centred Design Approach and why is it important?
- How has the Triple project included end Users in it's research activities?
- What have been the key areas that have been important to focus on?
- What insights has this work given and how is it relevant?



# Aims of the GoTriple Platform



- Help social sciences and humanities (SSH) research in Europe to gain visibility
- Support researchers to be more efficient and effective
- Improve reuse within the SSH community and beyond
- Increase societal impact of research

# What do you think are the main aims of User Centred Design?

slido.com with #501743



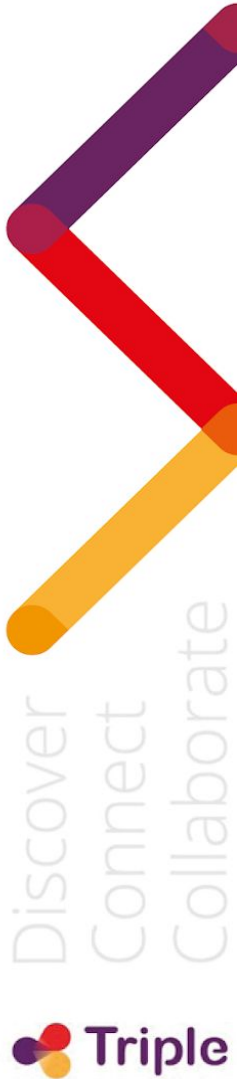
# What happens when you don't consider the User..



Credit:  
arkydon

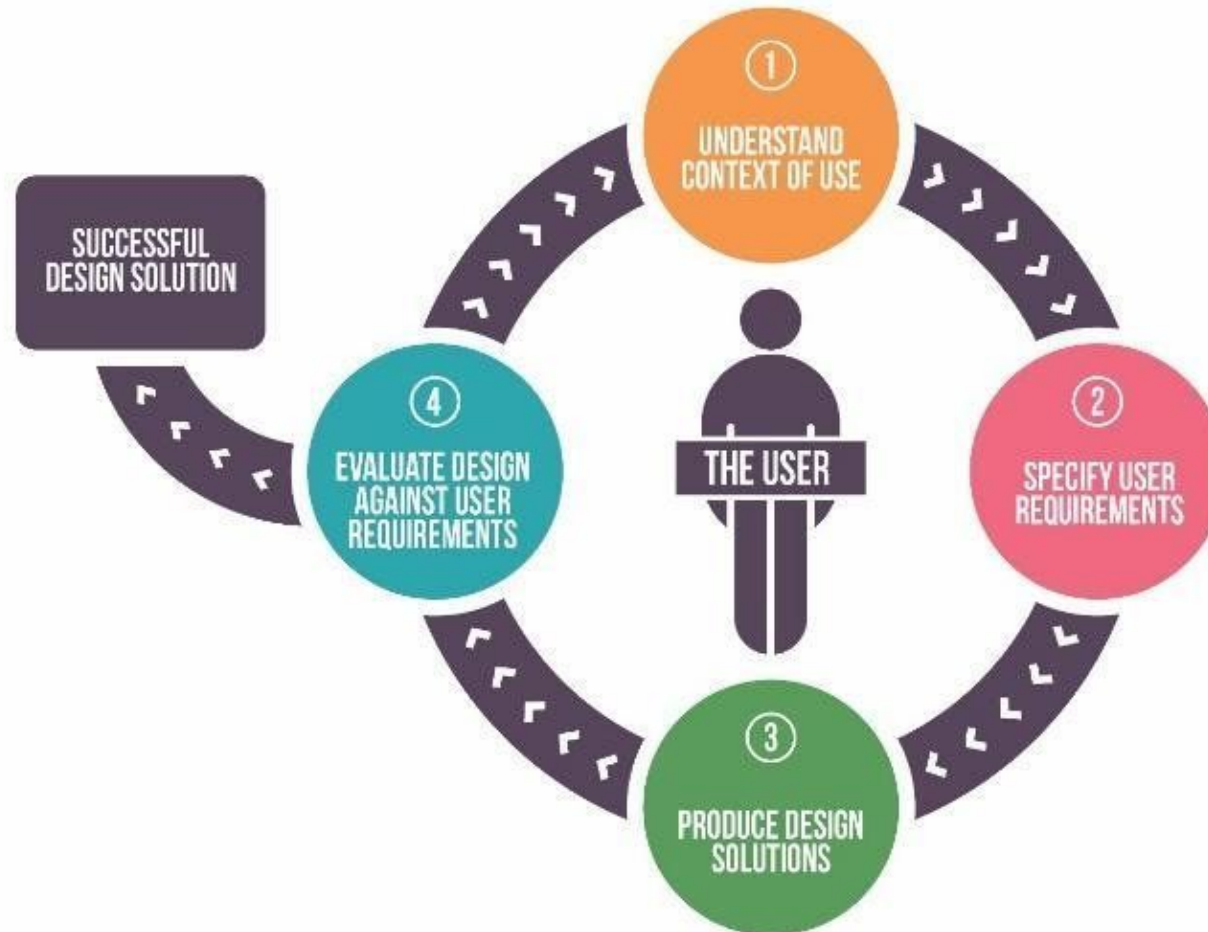


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# Why is User Centred Design Important



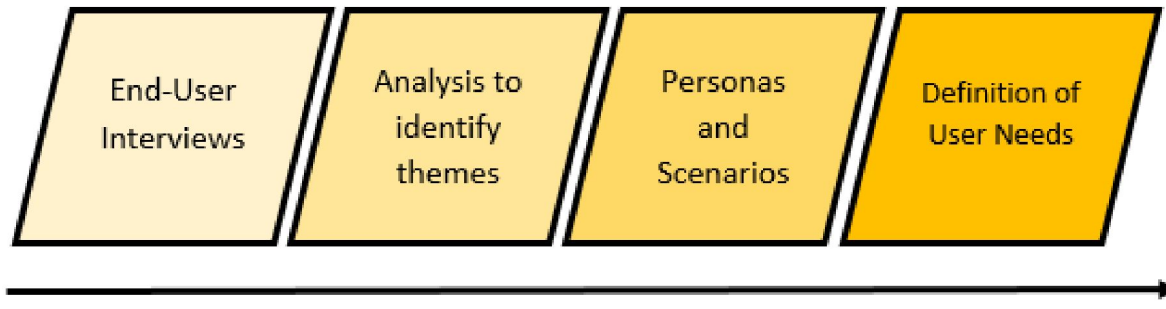
Paramount to the success of most ICT projects (not only research platforms and infrastructures) is to obtain a deep and qualitative understanding of the end users and to involve them in taking relevant decisions about how an ICT platform and the associated services can support the users' goals

# Understanding User Needs



- Main Target User: SSH researchers
- Secondary Users: citizens, journalists, companies
  - Conducted around 30 interviews with researchers and other stakeholders
  - Analysed using Nvivo
  - Complemented with a large-scale survey (925 responses in 26 EU countries)

# Defining User Needs



Defining User Needs means "*figuring out what to make before you make it*".

Thus the definition of user needs becomes the moment where designers can evaluate a number of concrete options, decide which should be prioritised and which should be discarded and base their work on empirical evidence and analysis coming from an investigation of end-users, rather than just on guessing, without proper evidence, what the end users would need.

Persona 6: Dr Christos Sideris

**Dr Christos Sideris**

AGE: 36  
ACADEMIC POSITION: Lecturer  
DISCIPLINE: Computational Linguistics  
NATIONALITY: Greek  
WORKING IN: University of Thessaloniki

**USER STORY:** As an expert in my field I would like easy access to open data in order to work remotely with others to create annotated corpora, increasing the capacity for data re-use within humanities.

**NARRATIVE:** For discovery, in addition to the usual Google Scholar search, Christos tends to use a specific platform called L'Année Philologique (The Philological Year), which is an index to scholarly work in fields related to the language, literature, history and culture of ancient Greece and Rome. LinguistList.org is also useful as it sends him daily emails about jobs, books, calls for papers, questions, dissertations etc. It is a very good portal that keeps him updated for all the current trends in his field. He often checks to see what kind of projects are ongoing which helps to focus his interests. He is often frustrated by being unable to access relevant information due to paywalls. He also finds it frustrating that there is a lack of compatibility with file formats and associated metadata. To organise relevant articles Christos uses Zotero and creates folders to store them, he also uses keywords & hashtags to tag and retrieve objects. He finds working with people from other disciplines quite a challenge due to the lack of understanding of each others complexities. He would really like to have an online file system (like repositories work) on his computer, that he is able to add metadata for every object that is in there, and then automatically share this with the university repository.

**PAIN POINTS:**

- Unannotated Corpora (requiring manual intervention to make them useable)
- Lack of compatibility between formats, mapping from one metadata schema to another is often problematic
- Paywalls preventing access to relevant documents

**GOALS:**

- To create a super registry of annotated Corpora
- To select export formats for data (eg. Python or R).
- To work with colleagues from other disciplines and have a shared understanding of the project requirements

**QUOTE:** "Traditional theologians call everything a 'database', they don't have any idea of the time needed to make something that, for them, is very simple, but for us it's very difficult to do. The biggest problem is that it is very difficult for them to formalise the problem, to make it computational. On the contrary, the engineers want to oversimplify the problems of the theologians."

**TECH EXPERTISE:** ██████████

**INTERDISCIPLINARITY:** ██████████

**COLLABORATION:** ██████████

**Tools Used:** ResearchGate; Academia; Zotero; Google Drive; One Drive; Python; ACM DL; Discord

The TRIPLE project is funded by the European Commission, under Grant Agreement No. 863420

Triple



# Creating Personas & Scenarios

From the initial user research analysis:

- 6 SSH researcher Personas were created along with their associated User Stories & Scenarios
- 2 Secondary User Personas and Scenarios also created.
- From the scenarios, we were then able to list the User Requirements



**Mr David Green**  
AGE: 48  
POSITION: CEO of a small business  
NATIONALITY: British

**USER STORY:** As the CEO of a small business I want to find accessible information and collaborate with academics to ensure that our interventions reflect the latest research evidence.

**NARRATIVE:** David is the CEO of a small business working to provide activities supporting positive mental health. He has a specific interest in working with young people and addressing their needs, which are currently not met sufficiently well. He is keen to get an up to date picture of current research recommendations in order to provide direction for his efforts at a practical level. David is very pro-active and would like to collaborate with researchers on a new project. He saw a recent funding call and would very much like to join forces with academics and submit a bid. David is both time and money pressured, and cannot afford to pay to access research publications. As he isn't affiliated with a University, many of the publications that he finds when he does a Google search are not available for free. He would prefer to be shown only open-source material, but isn't sure how to go about this. He often looks for information on populations, such as data on poverty across geographical regions. He is usually looking at deficits, where things aren't going well, trends in education, health, social mobility, the many things that have an impact on mental health. He feels that searching for information can be a real scattergun approach unless he knows the exact key words to use, but often the data he needs is quite hidden. Sometimes he's looking for narratives, sometimes for quantitative information. David finds that some academic work is just not accessible, he feels as though it should be useful, but he just don't understand it, it's not written in terms that a lay person might find it very useful, he questions who the audience is for this work. David tends to use Twitter a lot to see what new initiatives that are coming through, what recent reports have been written and for new deadlines that are coming through. He thinks Twitter is a brilliant source of fresh information, but is a bit frustrated that you have to be on it a lot or you lose the information in the feed.

**PAIN POINTS:**

- Lack of access to academic research (that is not open source) due to lack of University affiliation and a tight budget
- Inaccessible research publications
- Finding datasets with up-to-date statistics around mental health

**GOALS:**

- Finding who key researchers and players are in the field
- Getting accessible summaries of the research quickly
- Making contact with academics to investigate collaboration for a research proposal

**QUOTE:** "As an organisation we've made it part of our distinctiveness that we really care about research, we want people to know that what we do is founded in good quality research and good quality knowledge and understanding. As what we do is so practice based, we're taking all of that theory and stuff that's gone before and saying 'this is how it applies here'"

**TECH EXPERTISE:** ■■■■■■■■■■  
**ENGAGEMENT RESEARCH:** ■■■■■■■■■■  
**COLLABORATION:** ■■■■■■■■■■

Tools Used: Twitter; MS Office; Google; YouTube

The TRIPLE project is funded by the European Commission, under Grant Agreement No. 863420

Triple

# Defining User Needs

- **Personas** are “user archetypes” that help make decisions about design solutions that are informed by a user driven perspective.
- **Scenarios** are narratives of the personas interacting with the future product or service
- **User Requirements** can then be extracted from the User Stories/Scenarios



**Carolina Weber**

AGE: 23

ACADEMIC POSITION: PhD student

DISCIPLINE: Social Science/Politics

NATIONALITY: German

WORKING IN: University of Hamburg

**SCENARIO:**  
Carolina is in her final year of her PhD, and is writing up her thesis. For the last few months she has been using the Triple platform to find information as it gives her more flexibility than other search platforms. She has enjoyed the artificial intelligence utilized to provide her with more tailored search results. She has provided feedback on the search results, and, over time these have become even better and now include results for research papers that do not include the specific keyword, but are related to them. This has meant a lot less time putting in different terms (as the different disciplines tend to use different terminology for very similar research. She finds that the 'silo effect' is much less now and she is shown papers from different disciplines rather than individual ones. As her research is at the intersection of different disciplines she found that many different terms were used by different researchers even though they were discussing very similar research. Carolina has made good use of the article 'overview' feature, where a 5 point summary is made, highlighting the main points of the research paper without having to download it or read it all. She had previously seen this as a feature in Academia.edu, but it was a premium feature. Carolina often chooses to view her resources in the 'cluster' view where they are grouped with relevant articles together. She can also see which are the most important articles (icons displaying contextual information can be seen or hidden using the settings option). She finds the 'influential citations' or 'citation velocity' (as found in Semantic Scholar) are often more useful metrics than the overall number of citations. She often saves this 'cluster overview' and makes annotations and notes to help her gain an understanding of the 'state of the art' of the current research, enabling her to get a visual representation and an overview of the research topic. Carolina has been able to share her Twitter feed dataset with her PhD supervisor so that they could discuss how to process it together, she also made a visual plan for each chapter of her PhD, uploading this to her Triple private space. She has the option to share individual files or folders easily from the space without having to separately email the links. Having the option to 'tag' datasets and other non-textual files has made retrieval much easier and she also uses colour codes to ensure it's very easy to quickly identify documents relating to the different themes she is studying. She had previously used exclamation marks as a prefix to the file name to highlight the most important files in her collection, but Triple allows this 'importance rating' to be done without having to rename the file. She finds it much easier to find the files she needs having all the visual cues that Triple allows, she downloads and saves a new article, choosing to add a 'tag' of 'digital behavior prompts' and the colour 'yellow' to the file (which she reserves for technology related articles) she also chooses to add the 'star' option to highlight it as important. Open Access datasets are important for Carolina's work, she finds that Triple provides a much better way to find and store the datasets than her old way which took much longer, with Triple she can select the datasets to download and choose the best format to save it to her own space. Carolina feels that she is much more organized now, and that completing her thesis will be easier thanks to the Triple platform.

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 Triple

# Outcomes: User Requirements

## Scenario 5: Carolina Weber

- 5.1 The user shall be able to Obtain tailored, (AI enhanced) search results
- 5.2 The user shall be able to View 'Article Overview' for a publication
- 5.3 The user shall be able to Share an individual file
- 5.4 The user shall be able to Share a folder
- 5.5 The user shall be able to Tag a dataset
- 5.6 The user shall be able to Colour-code a file/dataset
- 5.7 The user shall be able to Download a single publication
- 5.8 The user shall be able to get an overview of a research topic



# Outcomes: User Requirements

## Requirements by Feature (Datasets)

8.1 The user shall be able to Search for a dataset

8.2 The user shall be able to Save the dataset

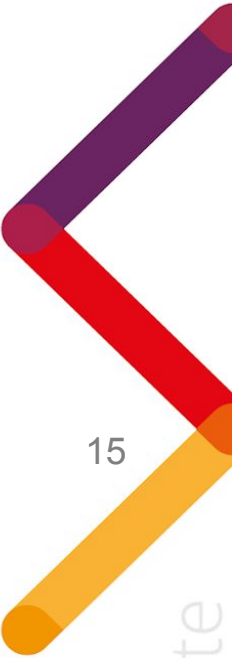
4.5 The user shall be able to Export a dataset (choosing file format)

5.5 The user shall be able to Tag a dataset

5.6 The user shall be able to Colour-code a file/dataset

6.5 The user shall be able to Upload a dataset

6.6 The user shall be able to Make a dataset public



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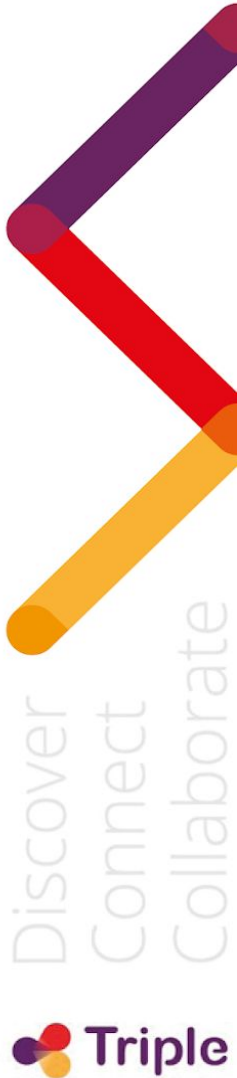
# Prioritisation

Do it now	Do it next	Do it if/when time	Don't do it	Partner	
					Feature: Create Account/Profile
					Feature: Discovery of Data
					<i>User Story: As a user I would like to use TRIPLE to discover datasets so that I can reuse the data for my own research</i>
				as above	8.1 The user shall be able to Search for a dataset
			X		8.2 The user shall be able to Save the dataset
			X		4.5 The user shall be able to Export a dataset (choosing file format)
X				Huma-num	5.5 The user shall be able to Tag a dataset (personal bookmark of resources)
	X			Huma-num	5.6 The user shall be able to Colour-code a file/dataset
			X		6.5 The user shall be able to Upload a dataset (private)
X				Partner guidelines (t2.2) OE	6.6 The user shall be able to Make a dataset public (tell the users about the archives NB requirement for guidelines for user as to how to use FAQs etc)
					Feature: Discovery of People
					<i>User Story: As a user I would like to discover other people in TRIPLE and what they are working on so that I can start my collaboration with them</i>
X				Huma-Num	4.7 The user shall be able to Search for a person by name
		X			4.8 The user shall be able to Search for a Native English (or other language) speaker in his academic area
X				Huma-num	7.5 The user shall be able to View academic Profile
X				Huma-num	7.6 The user shall be able to View contact details of an academic (if contacts are published)
		X			4.9 The user shall be able to Request proof-reading by an academic low priority
X				Huma-num/OkMaps	1.5 The user shall be able to Find academics within an area of expertise
	X			Huma-num/OkMaps	1.6 The user shall be able to Restrict the search to a geographical area
		X		Meoh?	1.8 The user shall be able to View mutual acquaintances NB relates to the TBS
					Feature: Advanced Discovery/Cluster view
					<i>User Story: As a user I would like to use advanced discovery tools on TRIPLE so that I can increase my capacity to produce high quality research</i>
X				OKMaps	2.6 The user shall be able to Create a 'clustered' view of publications linked by themes
	X			OKMaps	2.7 The user shall be able to Save the cluster view

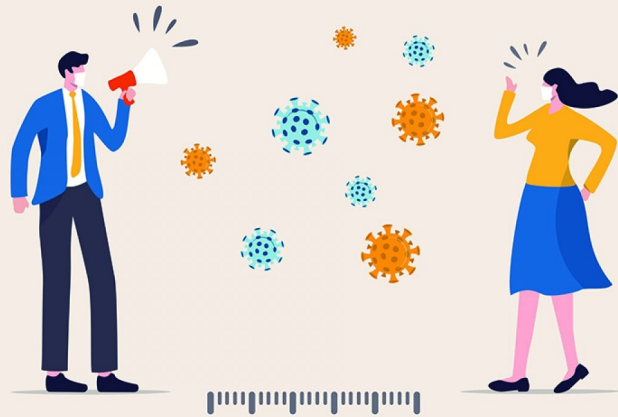


# Understanding SSH Discovery

- The following section describes our research to understand SSH researchers current workflows and the tools they use to make discoveries.
- As the Discovery Process uses many different tools, we wanted to know more about how GoTriple would fit into this ecosystem
- Why? To ensure the platform meets the needs of the end-user and finds a niche in the ecosystem.



# Challenge:



## Adapting Methods to work remotely during the Covid-19 pandemic.

The initial user research highlighted how complex the discovery process was, and the myriad of different tools used. I needed to gain a deeper understanding of how tools were used and in what context.

I had planned to do some face-to-face contextual enquiry and ethnographic work and also Co-design workshops with researchers.

I needed to find a new way to continue to work with researchers and to be able to carry out this work with them.

# Understanding the Bigger Picture..... But Remotely

- As I couldn't be physically present, I needed a way to understand the researchers' journey and to gain more knowledge about the overall process.
- I investigated online tools and the best options I found were Miro and Mural. I tried out both and decided I would use Miro.
- Cognitive Walkthrough of the user journey
- Artifact Ecology Mapping - I adapted a method from a paper-based technique to map the ecology of artifacts used across a volunteer community (Bodker et al, 2017).

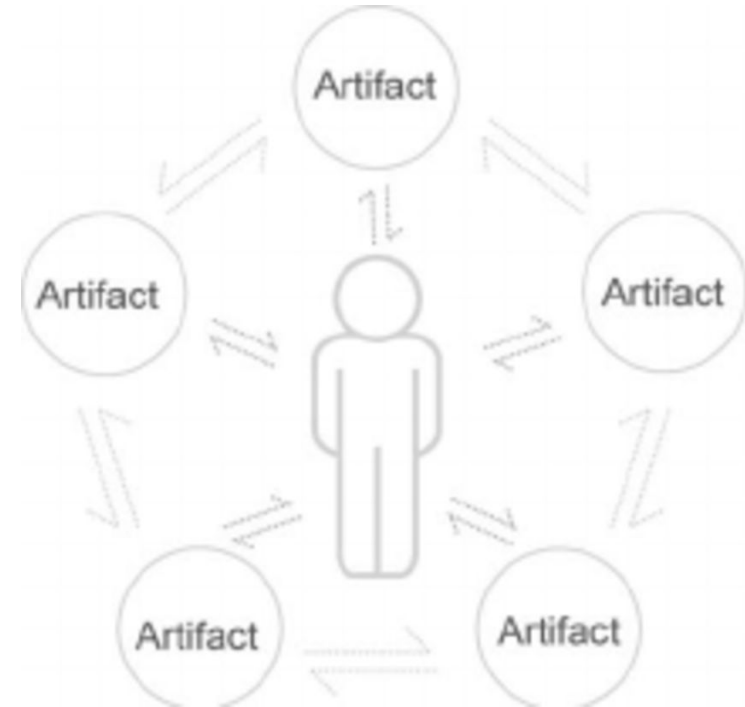


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# Artifact Ecology Mapping

- As the process of Discovery involves working with multiple tools and often across different devices, then the use of an interactive artifact cannot be understood in isolation, we must understand how it's use fits into the whole ecology of artifacts.
- In the living world an organism will only survive if it has a niche and is fit for purpose. It's the same for digital tools.
- I wanted to map these artifacts and their context of use by researchers



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# Cognitive Walkthrough Method

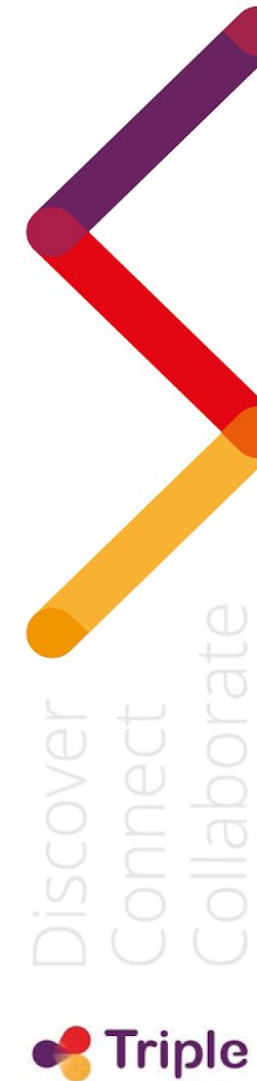
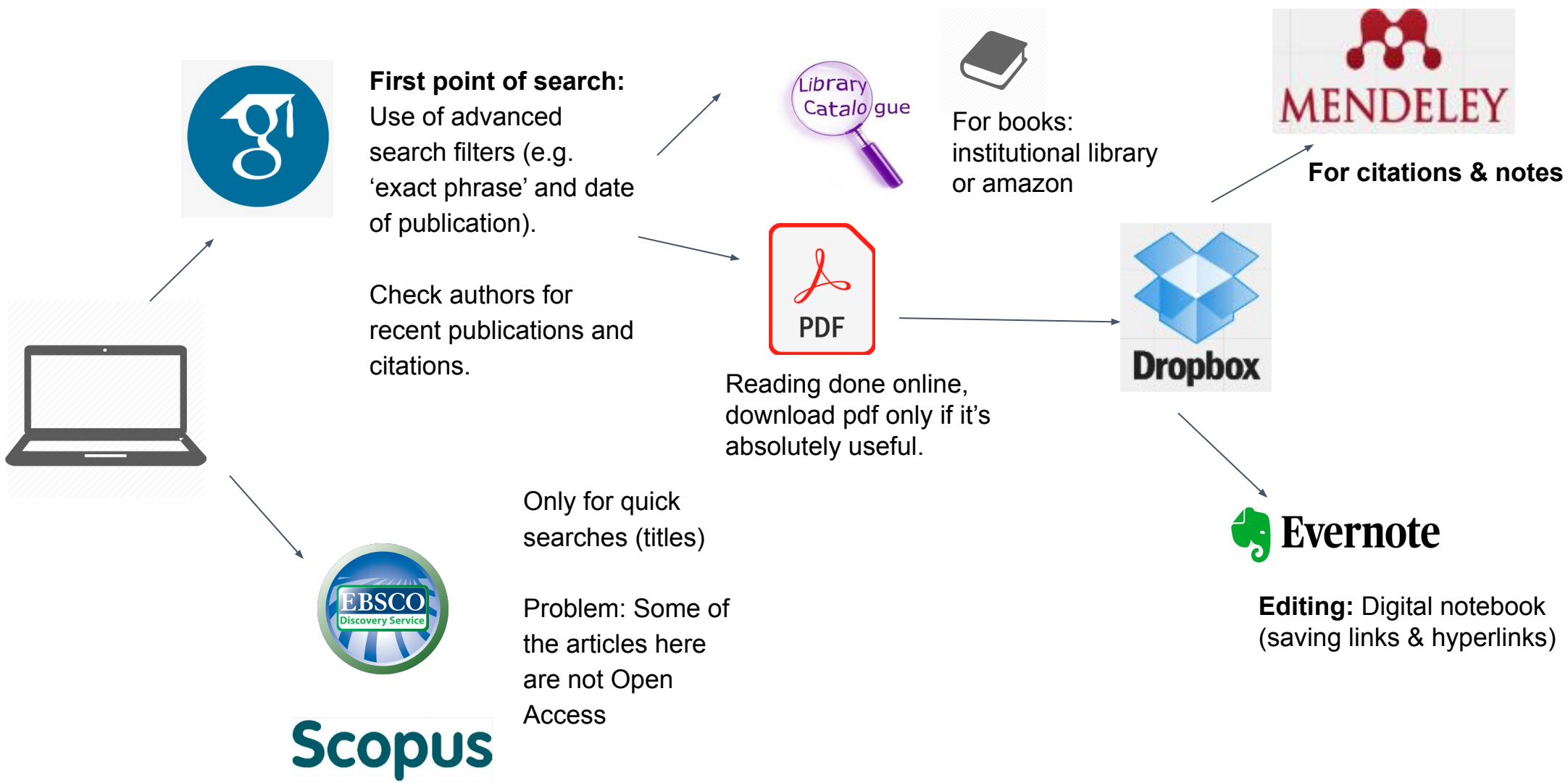
**Aim:** To better understand the current discovery processes of end-users (e.g. what tools they are using, what practices they use, aspects of tacit knowledge in the discovery process) and to pinpoint specific 'pain points' to see how the GoTriple platform could provide a better User Experience for discovery.

**Time taken:** Approx 30-45 minutes per session.

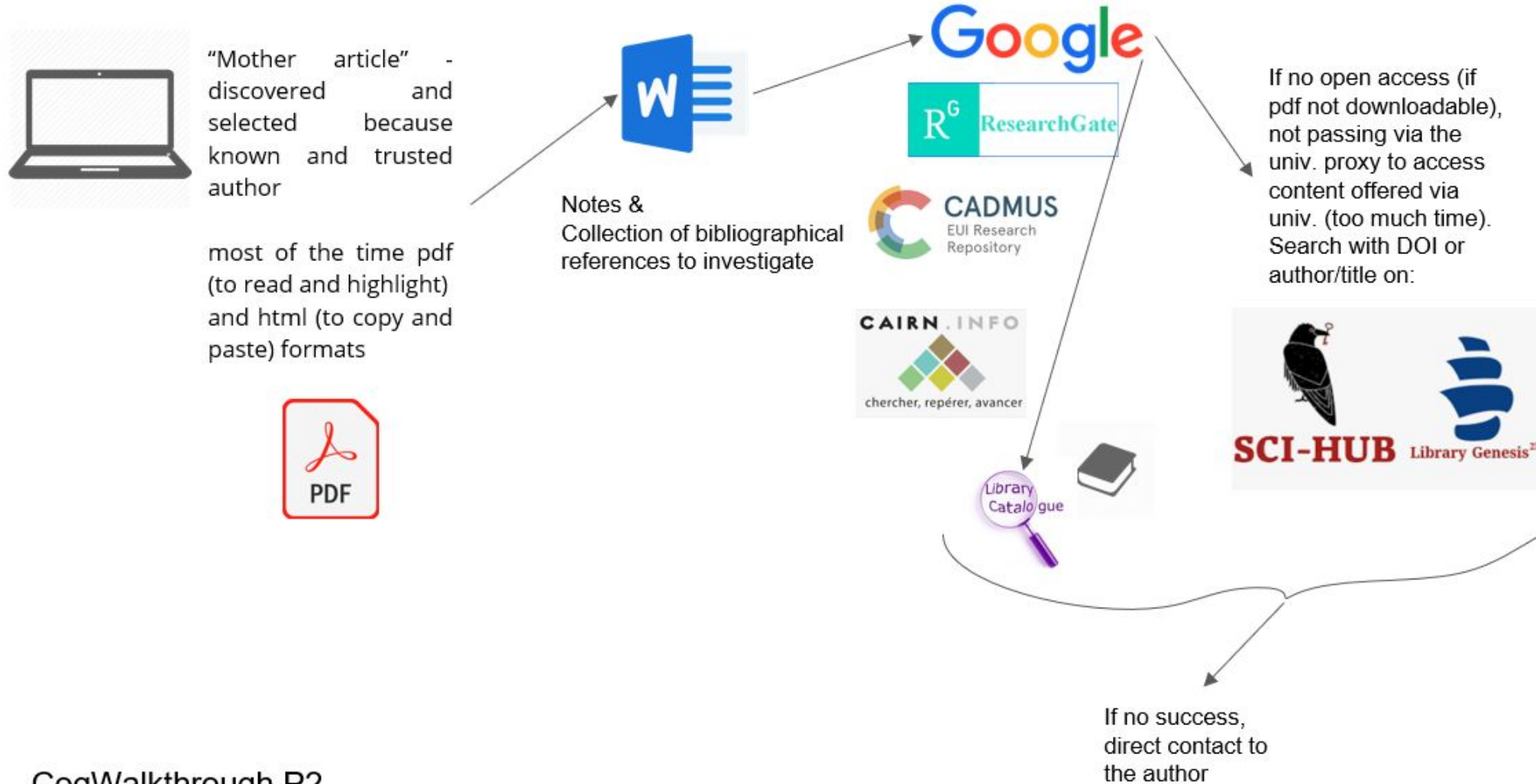
**Technology used:** Online conferencing software (Teams/Zoom). Screen Recording software

**Preparation required:** A script for talking the user through an activity (e.g. searching for publications)– **but** they should follow their usual process, we are not prompting them to use a specific tool, just to carry out a search and save/retrieve/annotate in their usual way. After the session, a 'map' of the tools used for the activity was created.

# Cognitive walkthrough map 1



# Cognitive walkthrough map 2



# Artifact Ecology Mapping



miro

**Aim:** To better understand the discovery process and to pinpoint specific 'pain points' to see how the GoTriple platform could provide a better User Experience. We want to understand the interaction of different technologies and artefacts used along the process of discovery and to see how individuals differ in their approach, what are the commonalities and how can GoTriple streamline and support the process.

**Time taken:** About 45- 60 minutes per session.

**Technology used:** **Miro** + Online conferencing software (eg. **Teams**/Zoom). Screen Recording software (we used Teams and the Recording feature within it, but ensured that the screen was shared to enable the recording of the activities happening on the Miro Board)

**Preparation required:** A Miro Board per participant with a practice board, a sticker board and an example Map.

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# Artifact Ecology Mapping Boundaries/Constraints

Figure 11.10: A user's digital ecology with their boundaries determined by an activity.

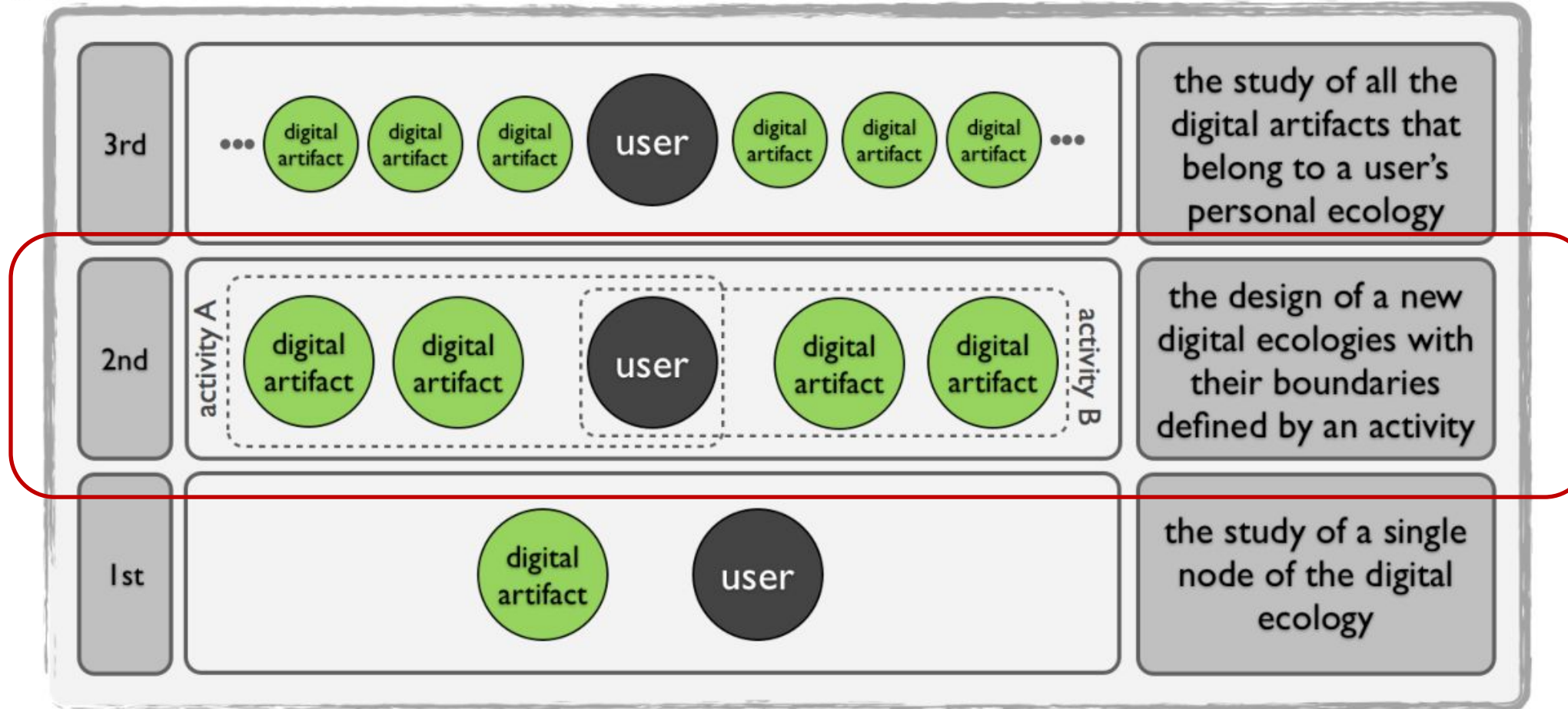


Figure 11.10: A user's digital ecology with their boundaries determined by an activity.

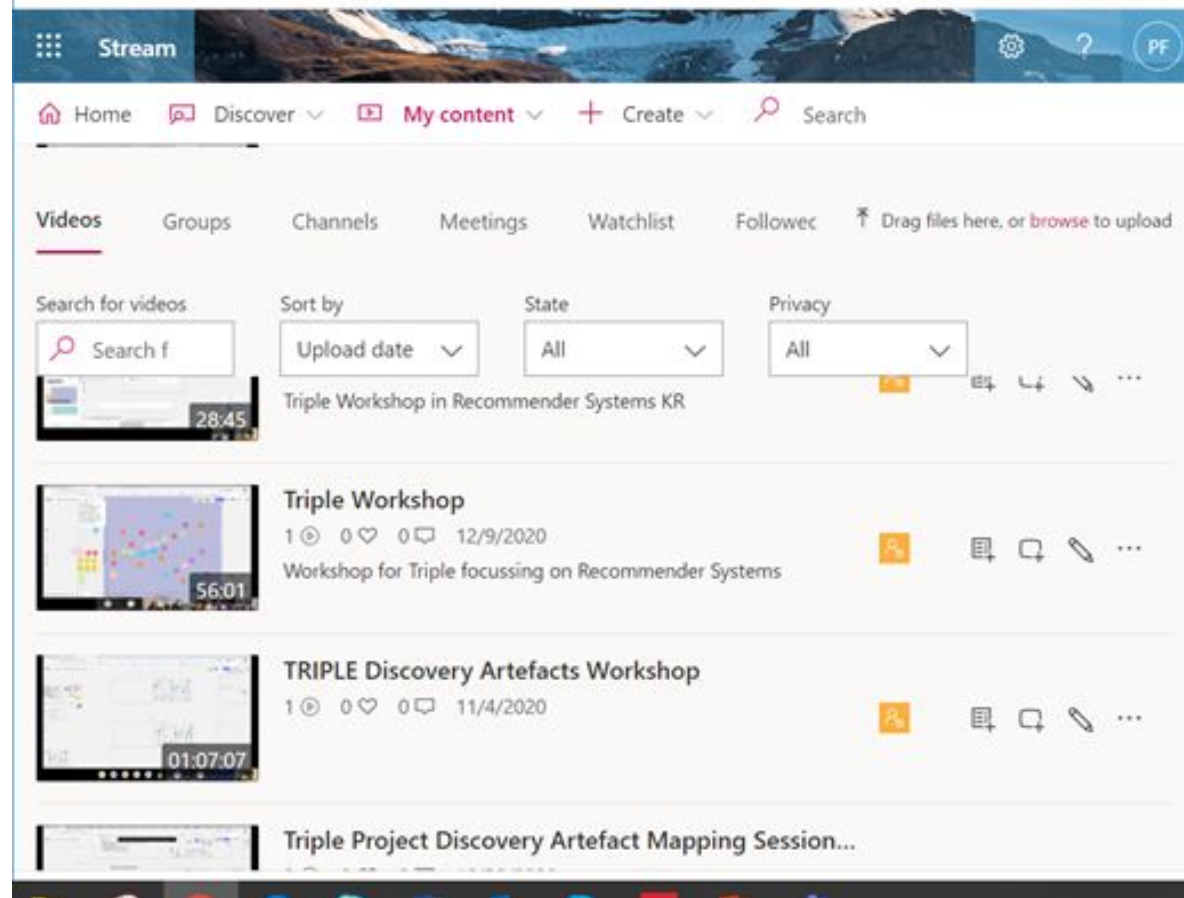
Diagram from Raptis et al. 2014.



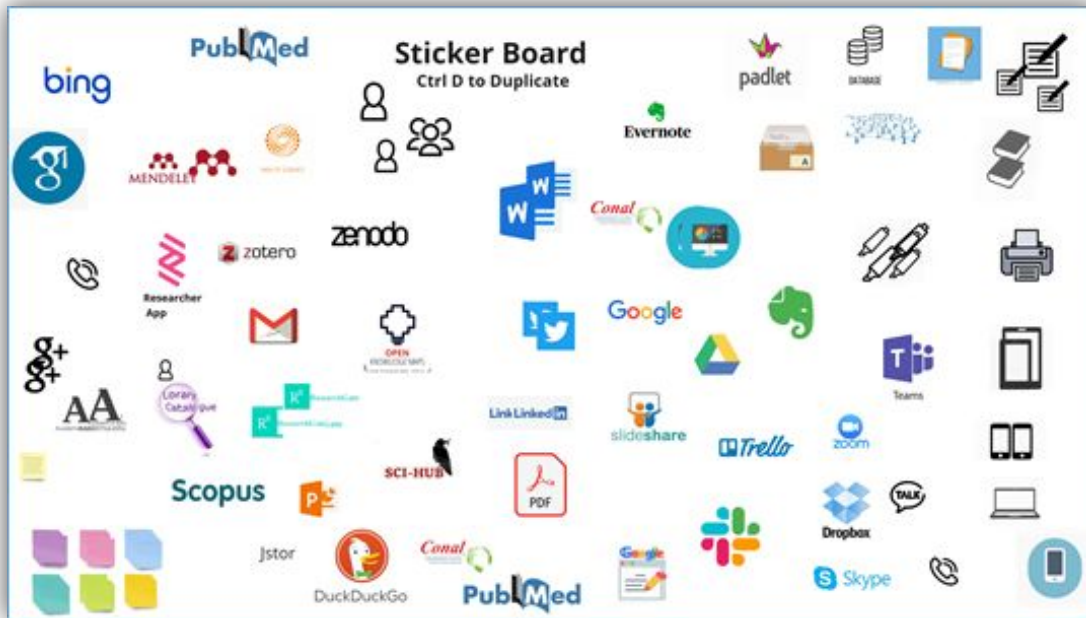
# Artifact Ecology Mapping - Method

## Instructions:

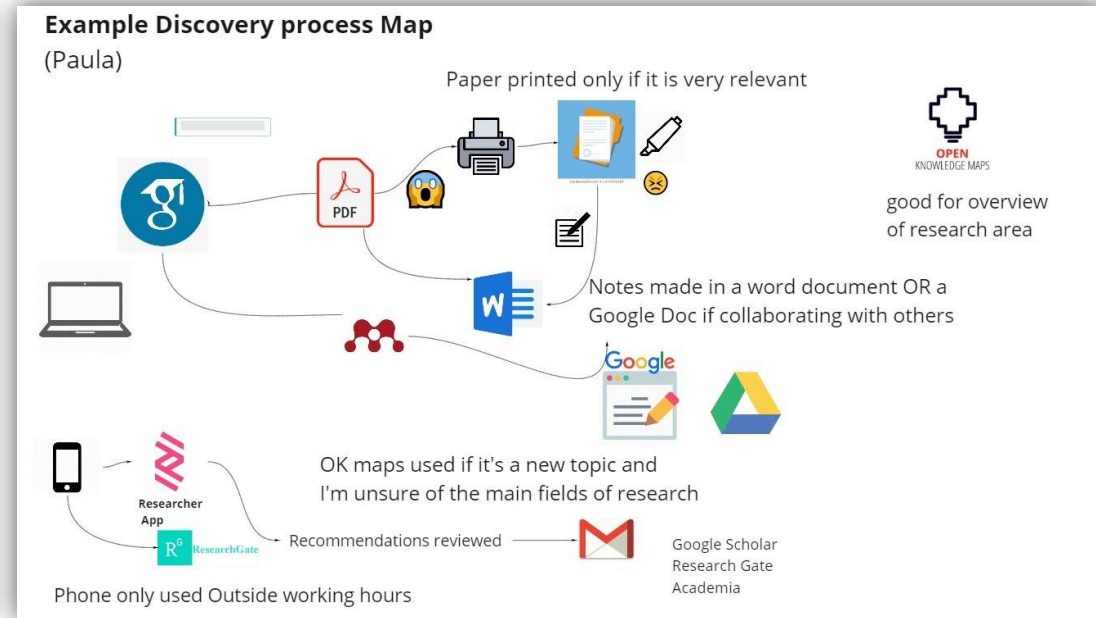
1. Set up Miro Board (N.B. set edit access!)
2. Send participant link to Teams meeting (+ Informed Consent forms)
3. Join Teams meeting & share link to Miro board
4. Start Recording via Teams
5. Share Screen to enable recording of actions on Miro board
6. At the end of the session generate captions via Stream for transcription



# Artifact Ecology Mapping – Tools Used



STICKER BOARD & INSTRUCTIONS CREATED FOR DISCOVERY MAPPING WORKSHOP



EXAMPLE MAP FOR THE ARTIFACTS ECOLOGY JOURNEY MAPPING ACTIVITY



# Miro Board for Artifact Ecology Mapping

miro | Test 7 Triple Media Ecology Mapping

### What is Triple?

Triple will be a dedicated service of

### Practice

**Miro Practice**

- To quickly toggle between actions and scroll - use the 'v' key on your keyboard
- Try zooming in and out of this board
- Try Adding your name using the text feature
- Add an emoji (found using the 3 dots at the bottom of the toolbar)
- Duplicate the emoji (select and 'Ctrl'D' or right click Duplicate)
- Add a text box with your research field

### Instructions

**Media Mapping for Discovery Process**

In the space below please use the icons from the 'sticker board' to 'Map' the tools you use for discovery. You can annotate the map with text to explain anything that you would like to clarify. If there is no icon for the tool you use, please add a sticky-note with the name of the tool. An example is shown on the right.

**Please include:**

- How you search for research papers and any other items that you would use eg. data, tables, videos, etc
- How you take notes or annotate your relevant data
- How you would save it
- How you view recommendations (if received)
- Any strategy for retrieving saved items again

### Paula's Example

**Example Discovery process Map (Paula)**

Paper printed only if it is very relevant

good for overview of research area

OK mess used if it's a new topic and not sure of the main fields of research

Recommendations received

Please only used Outside working hours

### Copy of Discovery Map

Discipline: Sociology

#### Discovery Process for MB T7 - remapped

**Human input**

- Coming up with a topic
- more popular topics - less academic
- LinkedIn
- Google
- Human input
- Discussions

**Searching / Discovery**

- great for overview of unfamiliar topics
- search - easy - no account
- check bibliography & footnotes
- if can't find enough info on a topic - re-phrase
- if not available
- if no open access or unavailable via library
- Habit from UK

**Organising/ Archiving**

- Personal use
- Organised by topic eg chapters of dissertation could be sub-folders
- email to myself to organise later on
- Annotation / Writing
- if at home
- if in office - use cloud
- Annotation tools - anything hasn't worked very well

**Organising/ Archiving For teamwork**

- Team more organised work flow
- shared with Team
- one with who's read what with columns for diff topics & notes
- citation tools not working well in google Docs, Zotero

### Discovery Map

#### Discovery Process for P7

Organised by topic eg chapter of dissertation could be sub-folders

Personal use

- Coming up with a topic
- Google
- check bibliography
- Habit from UK & footnotes
- if not available
- if no open access or unavailable via library
- if I can't find enough info on a topic - re-phrase
- search - easy - no account
- Annotation tools - anything hasn't worked very well
- if I can't find enough info on a topic - re-phrase

Team more organised work flow

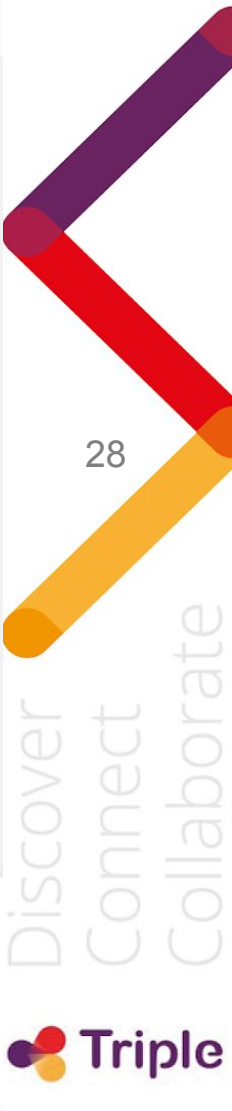
- shared with Team
- one with who's read what with columns for diff topics & notes
- citation tools not working well in google Docs, Zotero

### Sticker Board

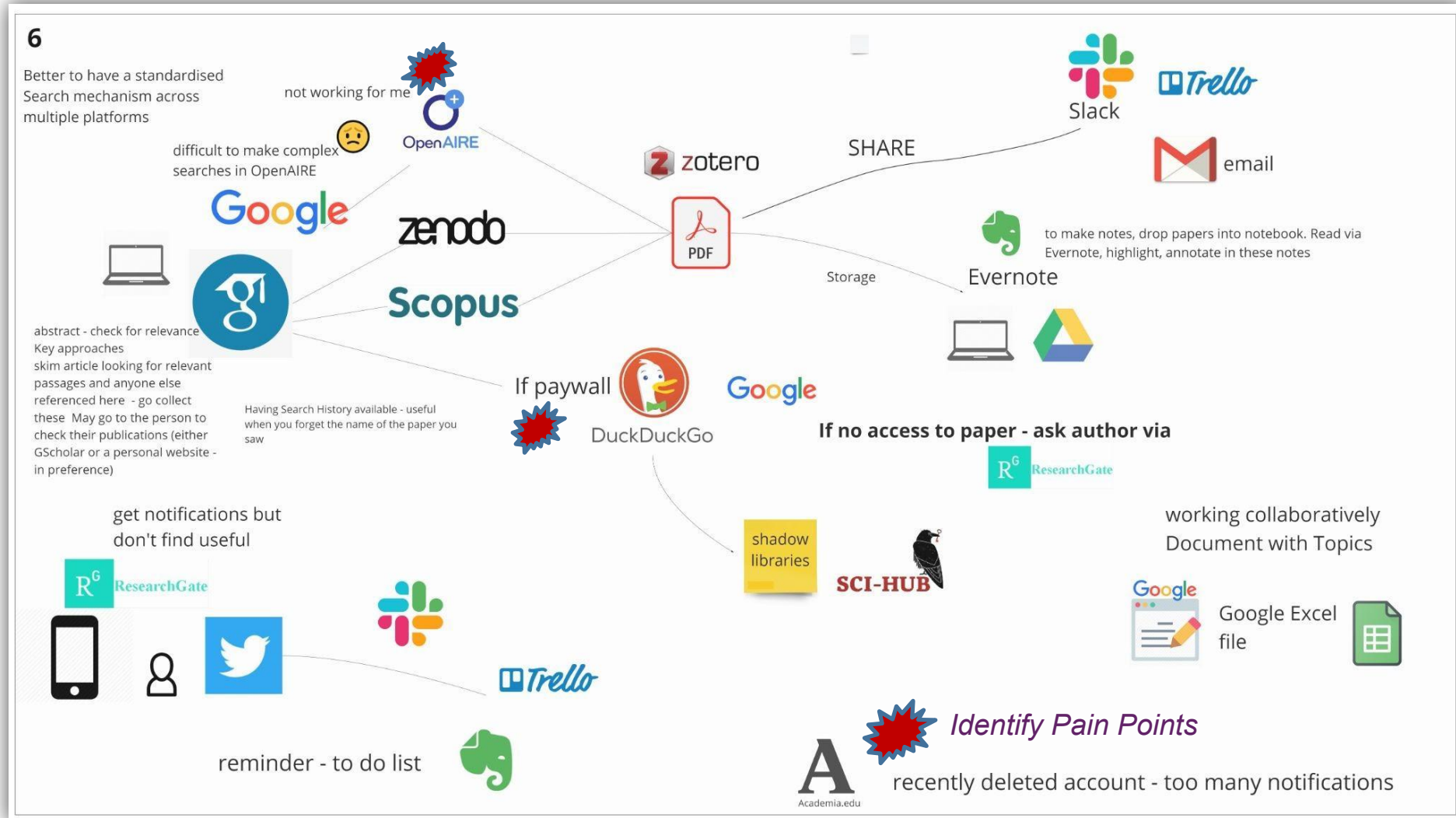
bing, PubMed, Scopus, JSTOR, etc.

Sticker Board

Ctrl D to Duplicate

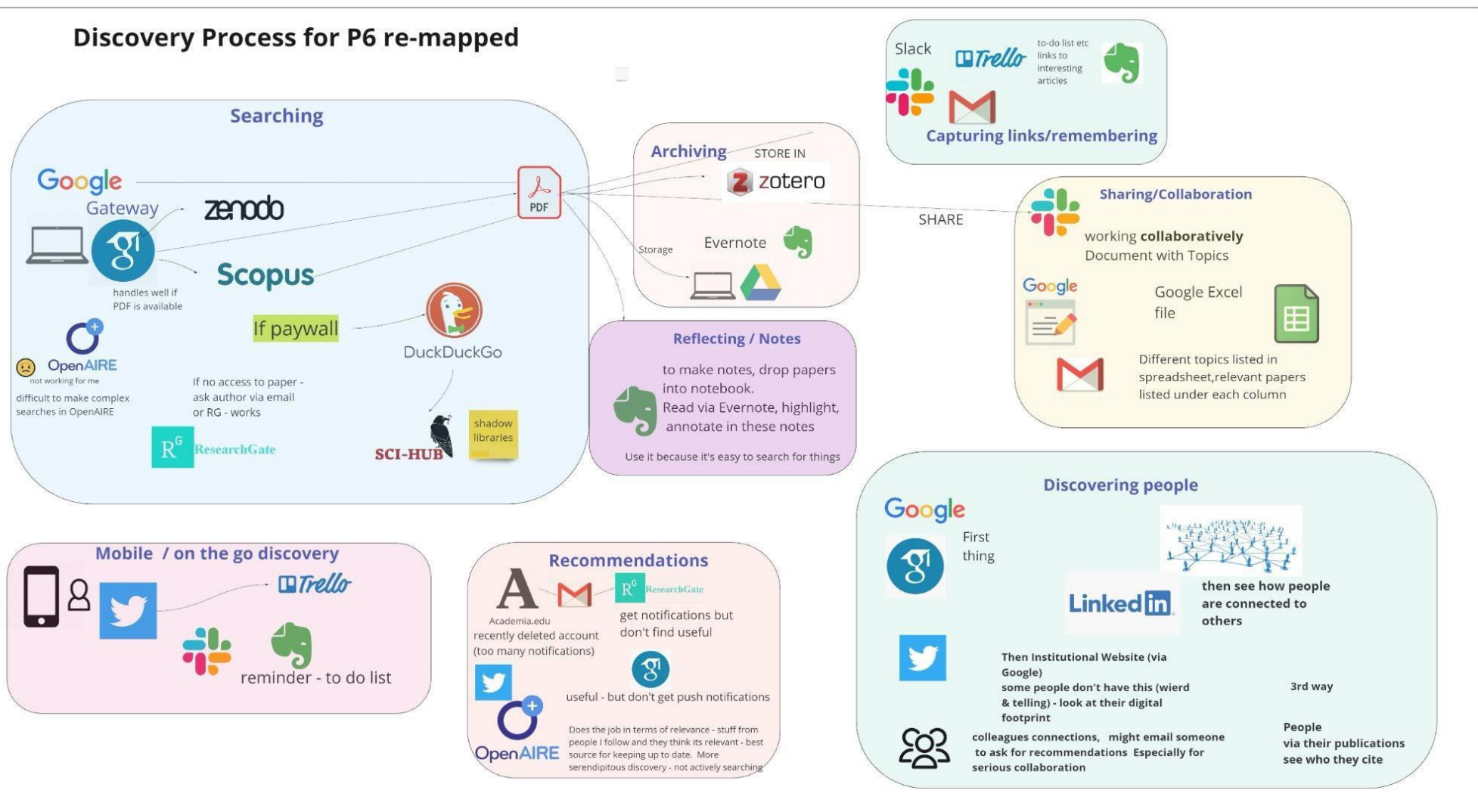


# Artifact Ecology Map (P6)



# Artifact Ecology Re-Mapping

## Discovery Process for P6 re-mapped



# Outcome of Method Adaptation

- I found using Miro to be an extremely valuable tool. Benefits definitely outweigh any constraints on the remote method
- Miro Boards easy to duplicate for different participants, saving a lot of time
- Excellent Templates available on Miro for inspiration
- Recordings of the session useful for going back and clarifying anything that's ambiguous after a workshop
- Completed workshop Boards are very visual, can easily share visual results with other team members



# Some Key insights

- Search pathways are often multistage, common starting point is Google/Google Scholar, these are often a gateway to other research portals
- More specialised or discipline specific libraries e.g.Scopus, Elsevier, OpenAIRE are often used next, Silo effect of different disciplines
- Cascading discovery, finding one relevant article is a source of others of interest, either in citations or (thanks to metrics being available) future articles which have cited the original source
- Issues around lack of common ontologies especially across disciplines
- Changing work practices/tools is common when collaborating
- Lack of Open Access to articles/data and of clear labelling
- Need to have link to original uploaded article (not just a pdf) for link to associated data and also for tracking metrics (eg number of downloads)
- Renaming downloaded PDFs to store articles





# Reflecting on the Two Methods Used

Cognitive Walkthrough	Artifact Ecology Mapping
Does not rely on memory	Relies on memory
Can be used for novel or seldom used tasks	Only useful for well-known tasks
Focus is usually on a single device	Can take into account multiple devices/tools
Results in a more linear (less divergent workflow)	Results in more divergent and complex workflows over a longer time-frame
Accurate portrayal of user journey	Believed to be an accurate portrayal of user journey
Focus is on a time-constrained interaction	<b>Takes into account longer-term interactions</b>
Useful for seeing any issues in-situ	<b>Useful for capturing 'in-between' interactions over time</b> (eg. push notifications/collaborative work done by others) Passive: Active



# Any Questions so far?



.....Moving on to the  
Innovative Services of GoTriple

Credit: <https://www.maxpixel.net/photo-1015308>



# Innovative Services Co-Design Workshops

As GoTriple will be made up of several Innovative Services, we also needed to know what User's would need for each of them.

WP3 ran separate Co-Design workshops on:

- Crowdfunding
- Annotation
- Recommender System
- Trust Building System (MEOH)
- Visual Discovery (OK Maps)



# Co-Design: Recommender System

We had a number of meetings with the developers (partner Know-Center) of the GoTriple recommender system to get directions on the kind of problems, issues or needs for the design that required investigation from a user/co-design perspective. In these meetings, a set of **objectives** for user investigation were defined and agreed on. These are as follows:

- How much Control does the user want over type/frequency of data?
- How much explanation should be given regarding why the recommendations have been chosen - ie transparency of the system workings?
- What factors are important for recommendations of other researchers?
- Would the user like to receive 'serendipitous' recommendations bringing more surprising items to their attention?
- How important are potential biases from recommender systems (eg gender/career level)?



# Recommender System Insights

This workshop found the following:

- The importance of different items that could be recommended is not static but changes over time
- Users should be able to modify their preference settings to allow for this flexibility.
- Push notifications are useful, but user should have control so that they don't become excessive
- Users want control over the kind of information they receive via the recommender system
- They are interested in knowing *Why* they receive certain recommendations
- They would like to be surprised with recommendations of peers/articles and projects of relevance
- Publications were deemed more important than other types of information and more frequent notifications preferred for this category (although always should be the option to choose in preferences)



# Co-Design: Crowdfunding Service

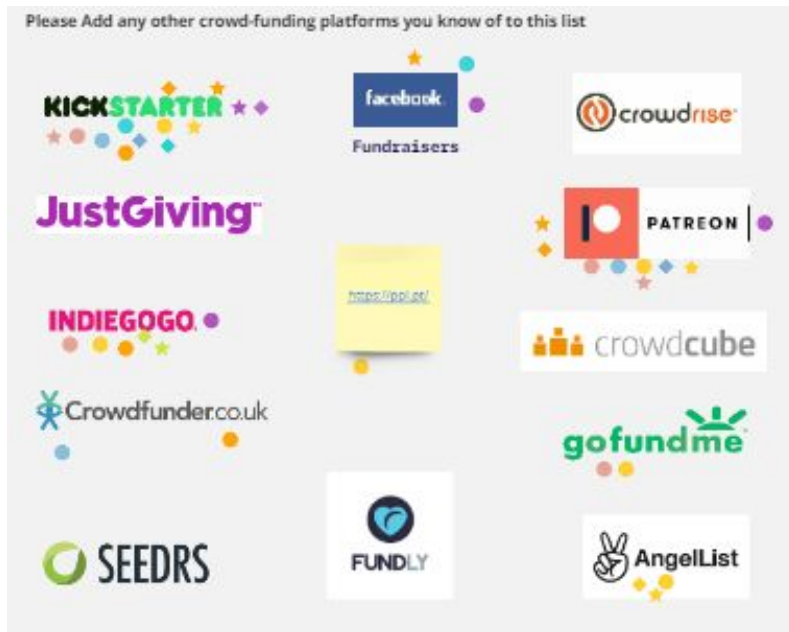
For gaining insights into what the important features of a crowdfunding solution for GoTriple are, two separate end-user groups were considered:

1. Funders (i.e. members of the public/citizens)
2. Researchers who would benefit from the crowdfunding.

Preliminary discussions were held with relevant people from other work packages involved in implementing the Innovative Services to discuss the **main questions** they would like to address in the workshops.

For funders (citizens) this would be to find out:

- if they would be willing to fund projects via crowdfunding?
- what concerns would they have about this type of funding?
- what factors would motivate them to fund projects?
- how would they like to be kept informed about any projects that they contributed to?



# Crowdfunding Insights Researchers

For Researchers the main **questions** were:

- to find out if they would be keen on using this type of funding platform?
- how the relevance and quality of any project proposal could be ensured?
- and also, to investigate how they would like any funds to be managed?

In addition, knowing what would be required in terms of offering support for

researchers planning to create a Crowdfunding appeal, such as:

- Knowledge about how to obtain funding via the platform
- Promoting a research project to get funding
- Presenting the research proposal (possible video creation support)



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# Crowdfunding Motivations Researchers



## Main Motivations for Crowdfunding

- Common Good (High)
- Empathy (High)
- Interest in the topic (High)
- Well presented research proposal (Medium)
- Local interest (Medium)
- Recommendation (by known others) (Medium)
- Good Visual presentation (Medium)



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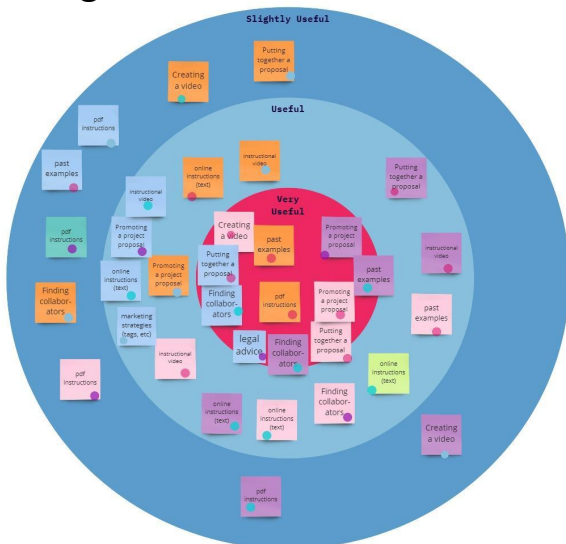
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# Researchers workshop (Crowdfunding)

## Support Features Needed:

- Putting together a proposal Score =7.5 (High)
- Promoting a proposal Score =7.1 (High)
- Online instructions (text) Score = 6.4 (High)
- Finding collaborators Score = 6.4 (High)
- Instructional video Score = 5.7 (Medium)
- Past examples Score = 5.6 (Medium)
- PDF instructions Score = 5.1 (Medium)
- Creating a video Score = 5.1 (Medium)

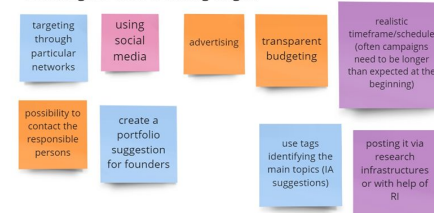


## Ensuring High Quality Research

- Peer review/Open Peer review
- Defining Milestones in any Proposal
- Media Strategy for dissemination
- Stating where results would be published, eg Zenodo Open Edition
- Having an information email/newsletter
- Being transparent about the research process and results
- Having clear Data Management protocols
- Would depend on the audience; may need different output streams for academic and non-academic audiences
- Having a 'stamp of approval' from a recognised institution or internationally recognised scholar

### Getting the Funding

What could happen to give the greatest chance of reaching the crowdfunding target?



### Before Funding

What could happen to ensure high quality research proposals?



### After Funding/ Reporting Process

What should you do to ensure high quality research is delivered?

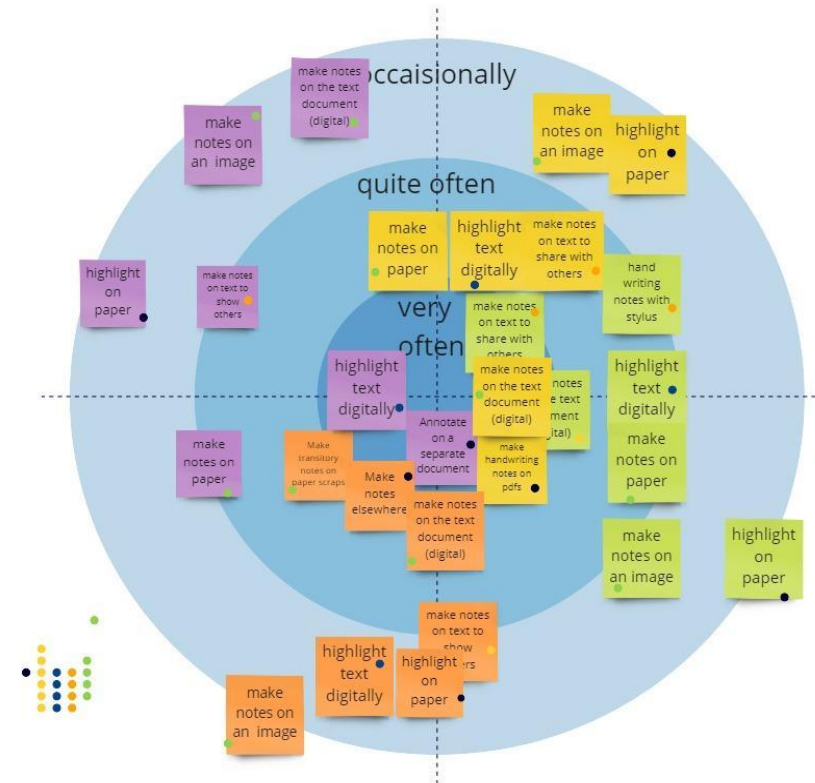


# Annotation Insights

We had several meetings with the developers (partner Net7) of the **Pundit** annotation system to get directions on the kind of problems, issues or needs for the design that required investigation from a user/co-design perspective. In these meetings, a set of **objectives** for user investigation were defined and agreed. These are as follows:

- Why do they make annotations?
- What types of annotations do researchers make?
- What problems do they have when making annotations?
- What features are the most important to researchers?
- Do researchers use semantic annotation?
- What tools do they use and what is the user journey?

What type of annotations do we make most frequently?

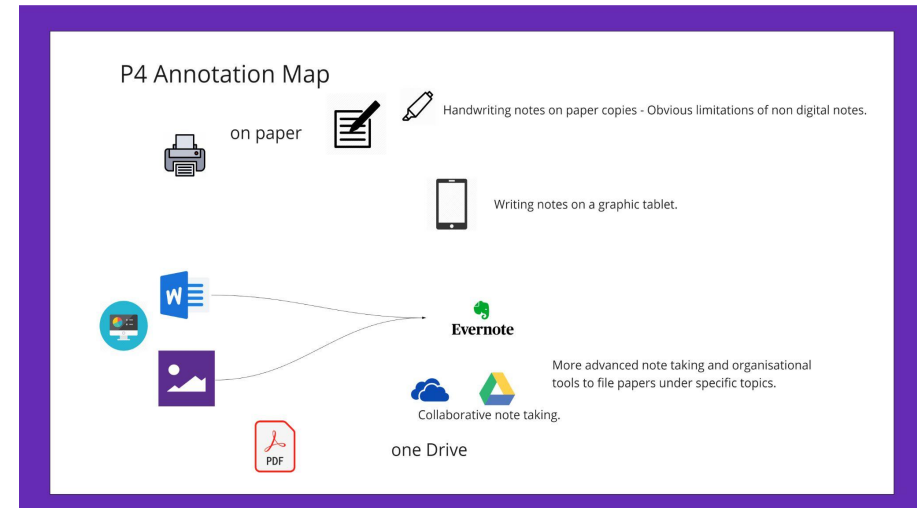
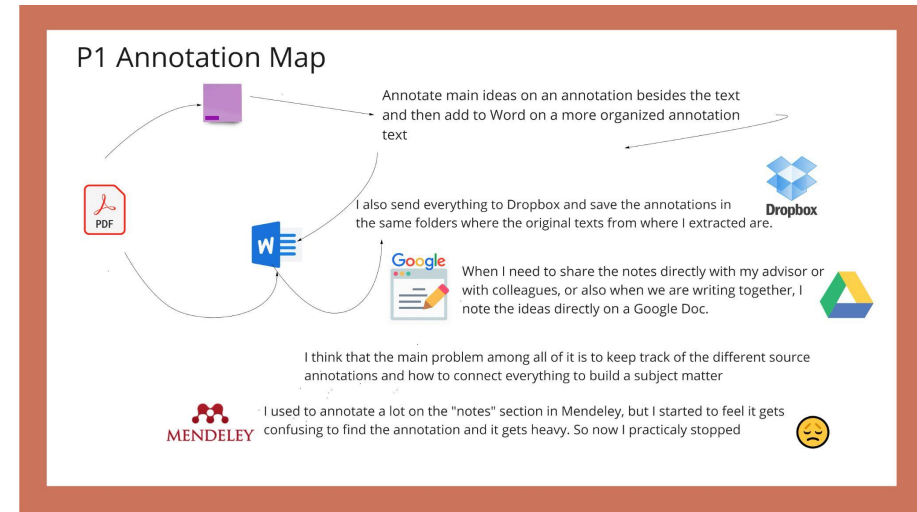


# Annotation Insights

Researchers' use of Annotation tools varies widely, with many different tools being used and for several different purposes. Annotations may be made to keep track of ideas or insights; to add detail to or expand text; to summarise text; to create a pointer or reminder for future review.

A commonality is that, for most people (involved in our workshops at least) note-taking and the subsequent 'sense-making' of the notes is seen as a multi-step task, usually done in the following order:

1. A quick skim read of the material
2. More detailed read when annotations/highlighting of important sections will be created
3. Compilation (often into a new document) of the combined new notes/annotations and linkages to existing ideas/material.



# Desirable Features for a new Annotation Tool

Participants were asked about the features that they would really like to have for annotation; the following responses were given:

- Ability to automatically track in the notes where the text came from
- Ability to export the annotation/citation to Zotero/Mendeley
- Copy text (from a publication) and an automatic citation is generated
- E-tag reference (for generating a citation)
- Allow for multiple participant input simultaneously
- Synchronous back-up on all devices (or cloud storage)



# Objectives Insights for Visual Discovery Tool

Overall, the aim was to identify how visualisation tools can support SSH researchers in their discovery process. The specific objectives were:

- To identify the most important use cases/benefits for the following visualisation tools: knowledge map, streamgraph, and diagram components (e.g. bar chart, geo map etc.)
- To identify additional ideas and use cases for the proposed visualisation tools
- To understand what role multilingualism plays in their research discovery process
- To understand what visualisation tools and what use cases to focus on
- To inform design choices for the visualisation tools and for the whole discovery platform



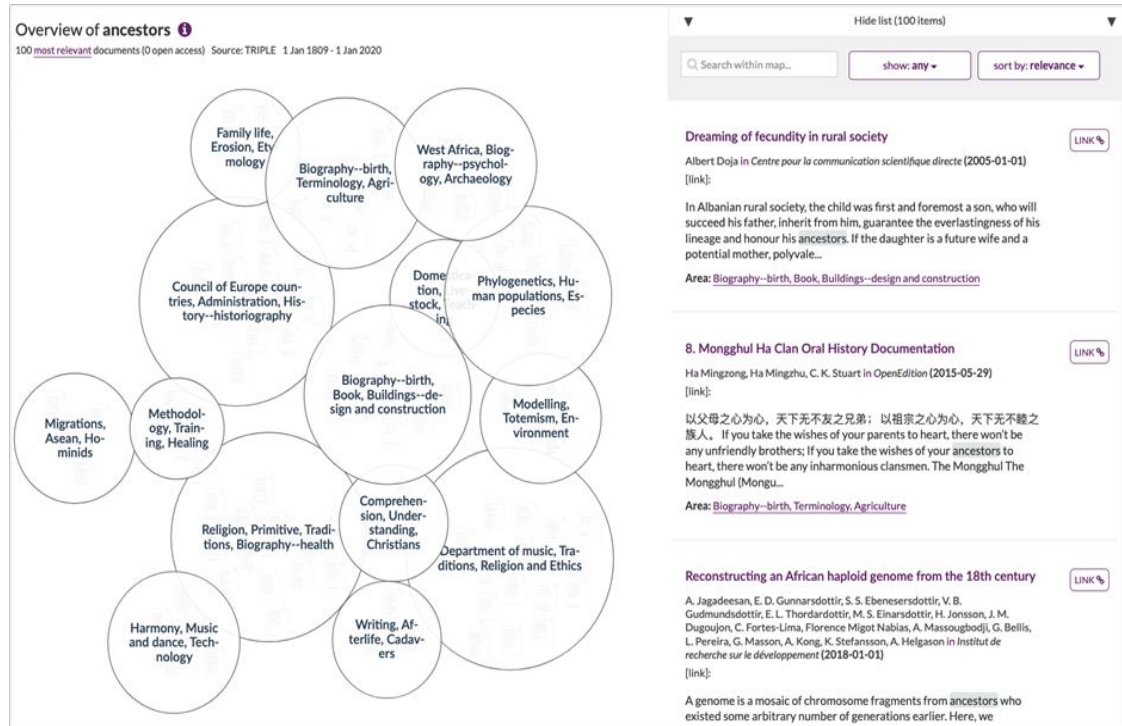
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# Knowledge Map Insights



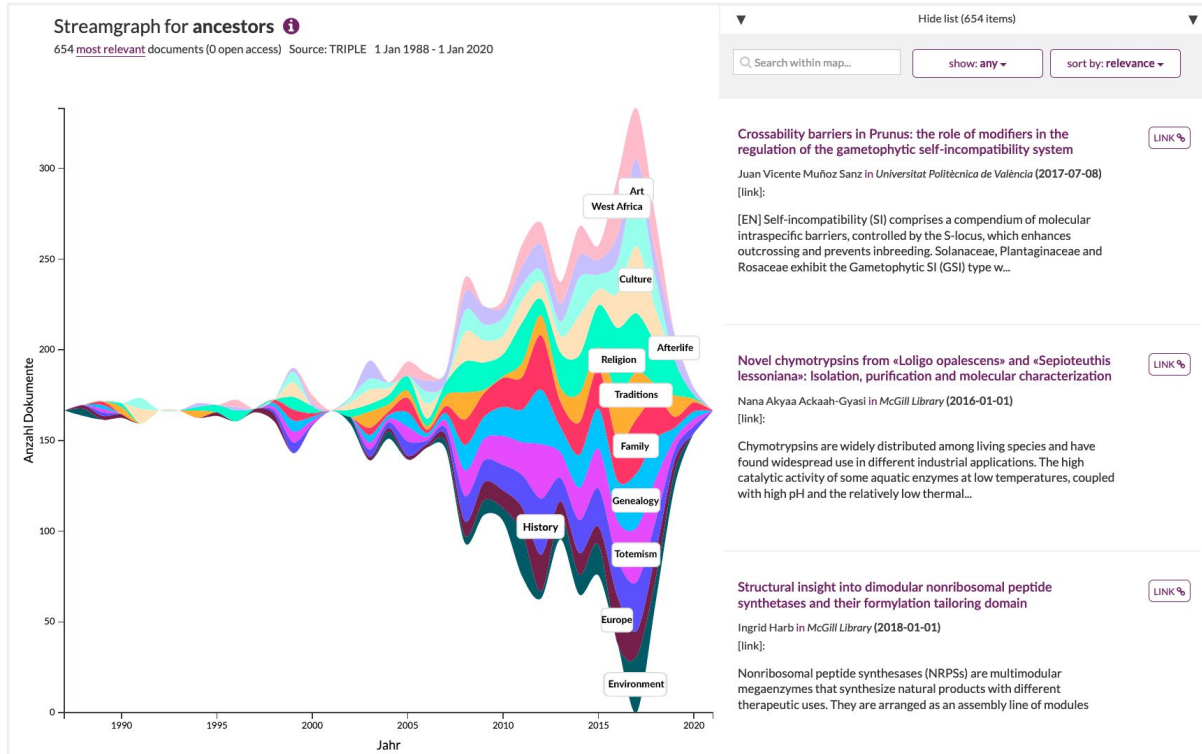
Important Metadata to display for the publications in the visualisation were: Title; Author; Year and also Keywords, Links to document (PDF) and Abstract (or abbreviated abstract).

Groups agreed that this type of visualisation is very helpful when you start out on a new research topic. Most Important:

- To get an overview of an unknown research topic
- To find academics / key researchers within an area of expertise
- To identify disciplines that do research on my topic of interest
- To show relationships between resources
- It could be used to foster issues related to the “noise” due to the polysemy of words



# Streamgraph Insights



There was a consensus amongst the groups on following benefits being the most important:

- To find out how terminology is currently used across disciplines
- To identify emerging topics over time
- To understand hot topics of the moment

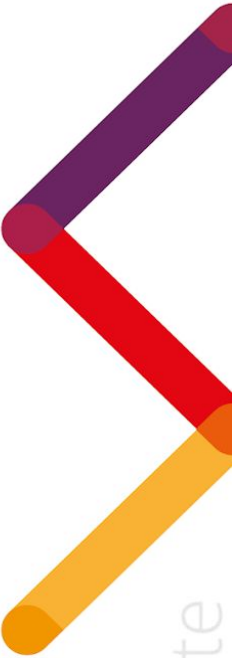
Streams could also represent:

Authors; Keywords; Artists; Sources (based on content analysis)

# Evaluation Methods

## User Testing

- We have recently created a Beta Tester Group to support our User Testing activities – Thanks to anyone who signed up! 😊
- Have a user go through a few tasks and watch them, can ask them to talk you through what they are doing (Think Aloud Walkthrough).
- ReachOut User Evaluation Tasks plus Survey

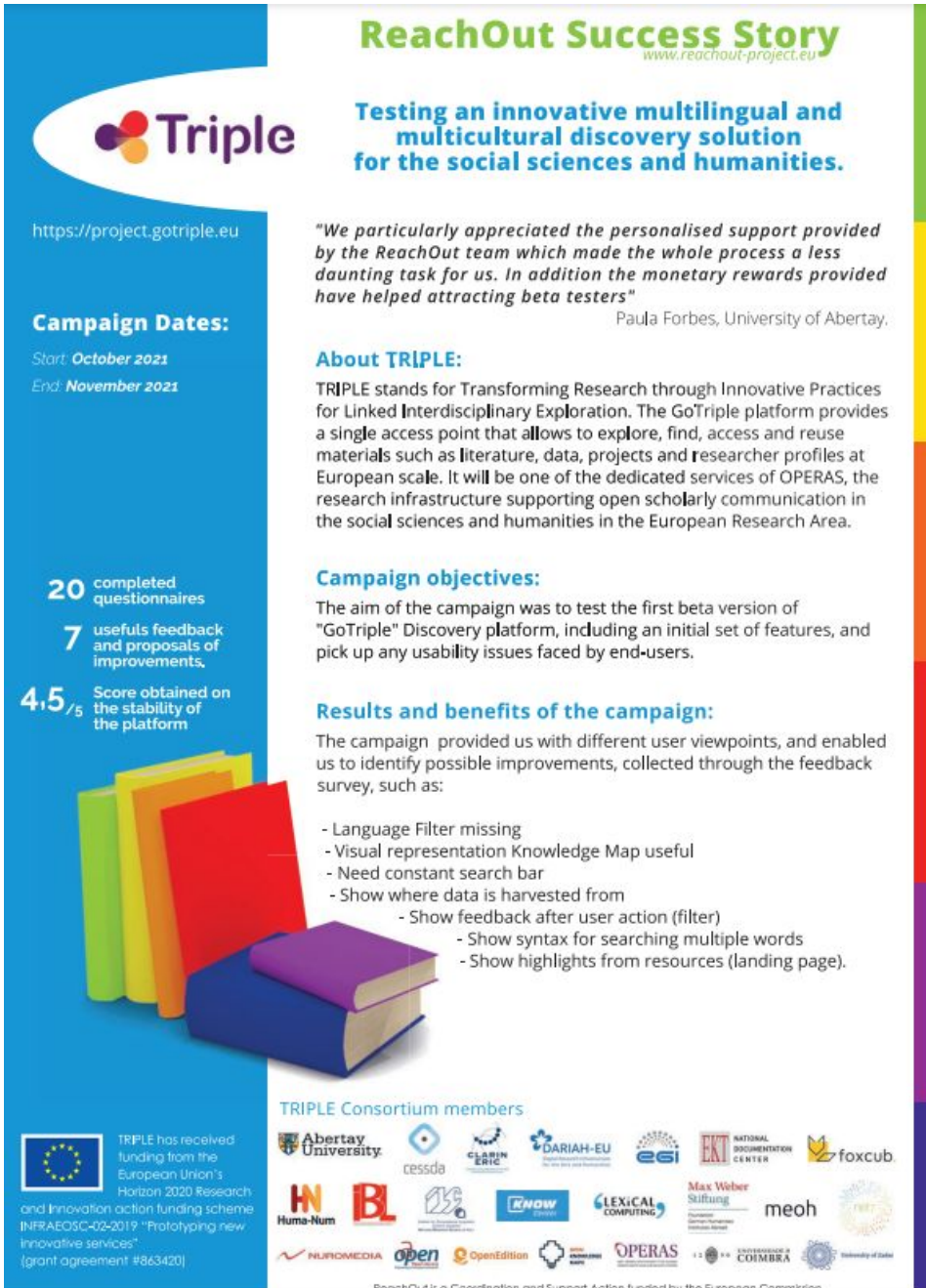


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# ReachOut Campaign Results

- Need to have a constant Search Bar
- Need to have a Language Filter
- Users would prefer more feedback when carrying out actions such as filtering
- Users would like to know where data is harvested from
- Users would prefer to see some highlights from resources on the landing page
- Show what the syntax is for searching with multiple words



**ReachOut Success Story**  
www.reachout-project.eu

**Triple**

https://project.gotriple.eu

**Campaign Dates:**  
Start: **October 2021**  
End: **November 2021**

20 completed questionnaires  
7 usefuls feedback and proposals of improvements,  
4,5/5 Score obtained on the stability of the platform

**Testing an innovative multilingual and multicultural discovery solution for the social sciences and humanities.**

*"We particularly appreciated the personalised support provided by the ReachOut team which made the whole process a less daunting task for us. In addition the monetary rewards provided have helped attracting beta testers"*  
Paula Forbes, University of Abertay.

**About TRIPLE:**  
TRIPLE stands for Transforming Research through Innovative Practices for Linked Interdisciplinary Exploration. The GoTriple platform provides a single access point that allows to explore, find, access and reuse materials such as literature, data, projects and researcher profiles at European scale. It will be one of the dedicated services of OPERAS, the research infrastructure supporting open scholarly communication in the social sciences and humanities in the European Research Area.

**Campaign objectives:**  
The aim of the campaign was to test the first beta version of "GoTriple" Discovery platform, including an initial set of features, and pick up any usability issues faced by end-users.

**Results and benefits of the campaign:**  
The campaign provided us with different user viewpoints, and enabled us to identify possible improvements, collected through the feedback survey, such as:

- Language Filter missing
- Visual representation Knowledge Map useful
- Need constant search bar
- Show where data is harvested from
  - Show feedback after user action (filter)
  - Show syntax for searching multiple words
  - Show highlights from resources (landing page).

**TRIPLE Consortium members**

Abertay University, cersda, CLARIN ERIC, DARIAH-EU, EGI, EKT NATIONAL DOCUMENTATION CENTER, foxcub, Huma-Num, BL, INNOVATION, LEXICAL COMPUTING, Max Weber Stiftung, meoh, NLRIONMEDIA, open, OpenEdition, OPERAS, UNIVERSIDADE DE COIMBRA, University of Zadar

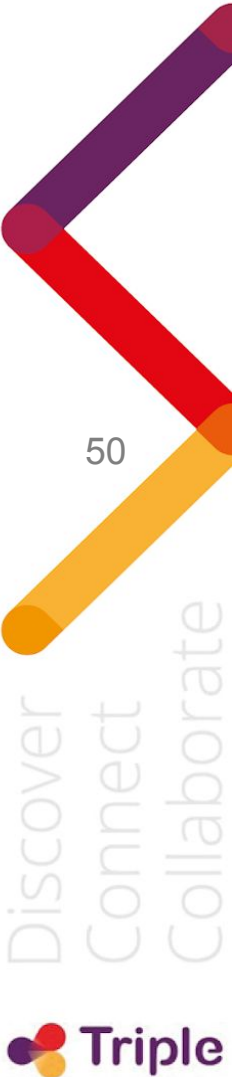
TRIPLE has received funding from the European Union's Horizon 2020 Research and Innovation action funding scheme INFRAEOSC-02-2019 "Prototyping new innovative services" (grant agreement #863420)

ReachOut is a Coordination and Support Action funded by the European Commission

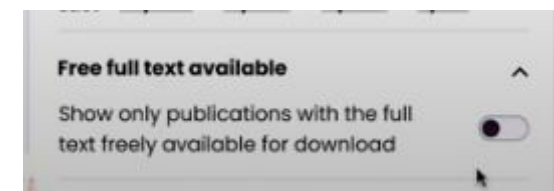
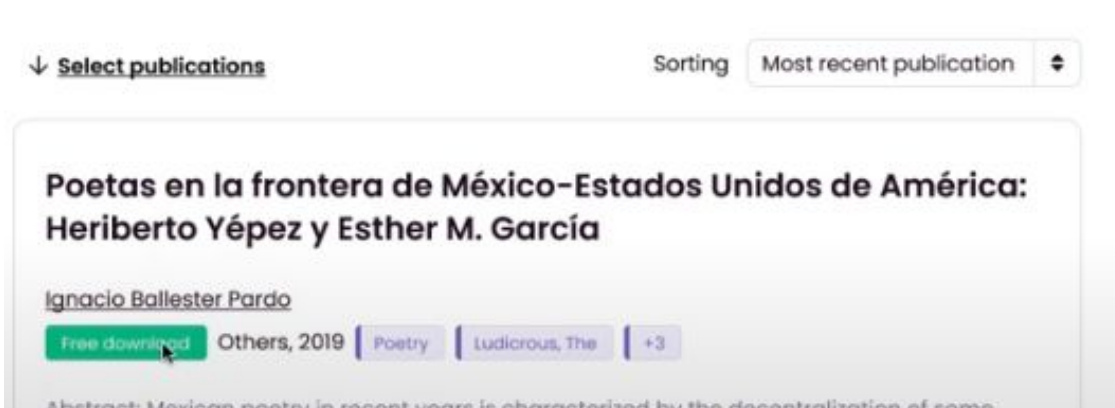
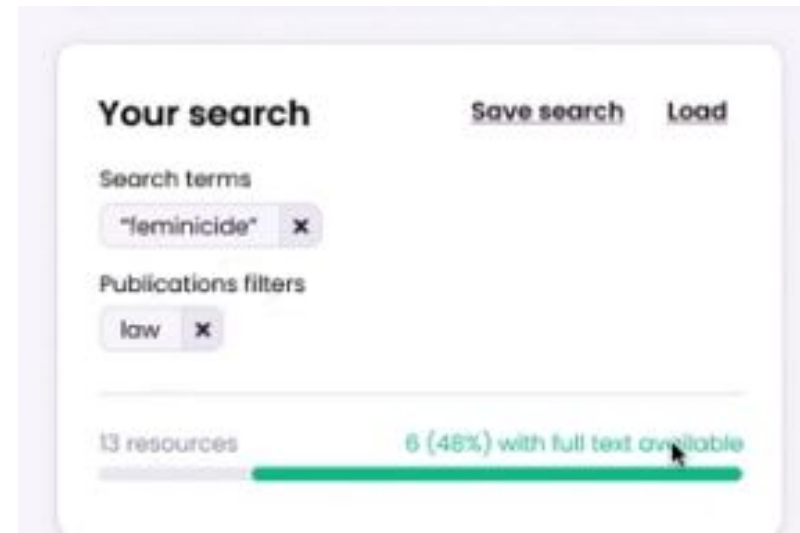
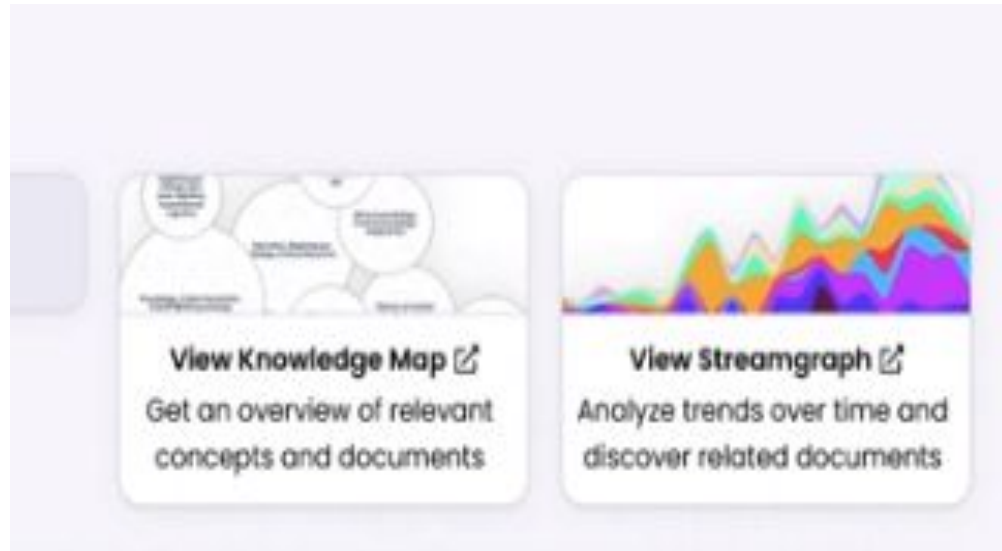


# Issues found from User Testing

- Filtering problems
- Lack of clarity regarding 'topics'
- Lack of clarity regarding 'types' of material presented
- Need better user feedback for some actions (eg filtering)
- Needs to be Easier to know which articles are available to view without any paywall

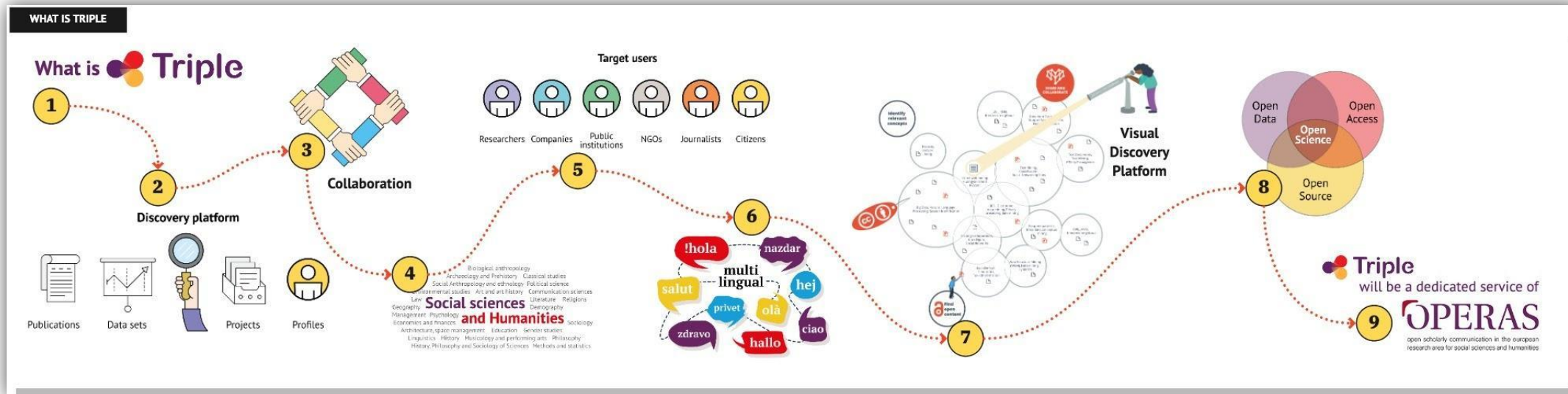


# Amended Designs after User Testing





# Transforming Research Through Innovative Practices for Linked Interdisciplinary Exploration



## References:

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 **TRIPLE Open Science  
Training Series**

**Thank you!  
Any Questions?**



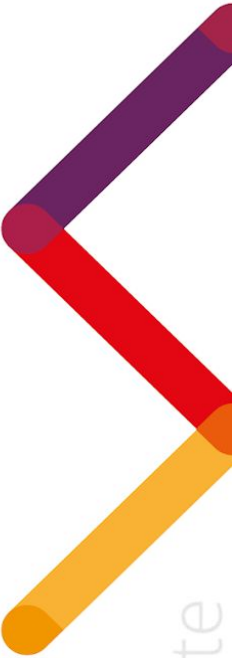
# Post Training Survey

We use Mentimeter to collect feedback on the training.  
You can fill it in at the end of the event.



Go to <https://www.menti.com/>

with the Code

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# TRIPLE Open Science Training Series Upcoming Events

- **TRIPLE Training - the GoTriple Trust Building System**

Date: **Wednesday, 16th March 2022, 14.00 – 15.30 (CET)**  
Presenters: Gaël Van Weyenbergh and Maxime Bouillard (MEOH)

Website: <https://www.gotriple.eu/training/>