

NOT-EQUAL

EPSRC NetworkPlus: Social Justice through the Digital Economy

Project Review Form - Mid-Term Review Pilot Project

Please submit this form to notequal@ncl.ac.uk.

GENERAL INFORMATION	
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Job Title: Lecturer	Project Title: Designing Security Infrastructures for Communities with Sensitive Data (DeSIC)
Department: School of Computing	Project Reference Number:
Organisation: Newcastle University	

1. SUMMARY

Please provide a summary of the activities and/or initial findings of your research project to date. This also includes events, engagement activities with non-academic partners and any other activities. Please include any images or website links that could be used for dissemination purposes (at least 500 words).

Ethics and project setup

As the project involves access to organisations that work with vulnerable groups, and more specifically talking to gatekeepers in these partner organisations, the first 2-3 months of the project (October - December) we focused on getting and ethics application submitted and approved, while also thinking about conceptual frameworks and research methodologies in relation to data feminism and positive security.

For the latter we had an initial meeting between the project's core team (Yannis Efthymiou, Rachel Clarke, Vasilis Vlachokyriakos) and Professor Lizzie Coles-Kemp and Dr Rikke Jensen from Royal Holloway, where related literature and a possible re-configuration of our research approach was discussed. We decided to have recurring meetings in relation to the project, which hopefully can later support us with interpreting our data and findings in relation to positive security. The core project team has been meeting bi-weekly to discuss developments and next steps.



Data collection and methodology

The first 1-3 months of 2021 we focused on: i) having introductory meetings with the Angelou Centre and UWAH; ii) organising interviews/focus groups with staff members of both organisations; iii) creating an interview guide that relates to the conceptual framing of the project; and iv) undertaking a preliminary analysis of the qualitative data collected.

Interviews and focus group discussions were conducted remotely using Zoom and transcribed for later analysis. We interviewed two staff members from each organisation (Angelou Centre and UWAH). Our interview questions focused on what services are provided to beneficiaries in each organisation, how these services are being designed and executed and why, with a particular attention on “data journeys” within and outside of the organisation -- i.e. how data is captured, processed and stored, when/if/how data is shared and negotiated etc.

A systematic thematic analysis of the data has not been conducted yet, as this will be done after the collection of data from a design workshop that we are currently planning, and our post-deployment interviews. For the purpose of this stage of the project, the transcripts were coded deductively in order to come up with a list of functional requirements for designing and developing a digital prototype. The aim of the prototype is not to provide a solution to a well-specified problem, but to be used as a system that will allow us to conduct further design research activities (i.e. a design workshop with staff from the two organisations).

Preliminary findings

Information safekeeping & sharing:

We have found within these small organisations everyone is involved in different aspects of data management and collection with varying degrees of access to sensitive files. Staff who are involved in communicating to different services such as social services and police have access to all women’s files and share minimal details with these services and do so very carefully so as not to cause future potential harm with anticipated court cases.

Staff at the Angelou, in particular, changed their data collection strategies based on funders and government policy, in particular to highlight ethnic, racial and violent intersections as much as possible. Data about women was not always possible to share with them other than a printed file that was kept at the centres.

The UWAH on the other hand has a different mode of operations from the Angelou Centre. The latter has a more holistic approach and the former has a more targeted approach in consulting and providing psychological support to their beneficiaries. UWAH is far behind Angelou as far as technology penetration inside the organisation is concerned. UWAH has an ISO standard which they follow. This standard has to do with the safe keeping of files regarding the women they support, inside a “locked drawer”, in print. On the other hand, Angelou has dedicated password protected servers to safekeep these files electronically.

Access to data and classification:

Despite their differences, staff from both organisations noted that administration members have different levels of access to the women’s personal data and information. Both organisations use forms to classify data. The forms are present in every step of their contact with the women they support. From front-desk communications to mental health assessments. Particularly, a staff member from the Angelou Centre called themselves “queens of forms”.

The staff from Angelou told us that they type all information during the meetings with women, while the UWAH writes them down. For UWAH this poses a problem which is costly time-wise and sometimes tedious.

“Our forms are designed in a way that resembles note taking in order keep them light and not overwhelm the experts. All of these forms are handwritten and rarely printed. They are kept inside the aforementioned locked drawers and are categorized by case and by date.” [UWAH staff member]

Communication aspects:

Communication with the women before the COVID-19 pandemic for both organisations happened either by beneficiaries dropping-in or by phone. During the past year communication channels have changed and mostly take place through social media (facebook, linkedin, etc.) and emails. A member of staff from the Angelou Centre, highlighting the problems with using email, commented that they couldn't always trust if women's messages weren't being looked at by their partners or even written by them.

Technical Design

To address the initial findings from our work with the organisations we decided on the following design directives:

The application is split in two parts. One for the administration, to be mainly used by staff members of such organisations and the other for the women (i.e. beneficiaries). The **admin app** consists of forms that map the data each organisation needs to have on each case.

The screenshot shows a web application interface for managing incidents. The main content area displays the details of a specific incident. The form fields are as follows:

Field	Value
Beneficiary	Maria Pappas
Title	What is Lorem Ipsum?
Keywords	typesetting, Letraset, passages
Category	General Category
Date	Jan 20, 2021
Description	Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

At the bottom right of the form, there are three action buttons: **EDIT** (green), **EXPORT TO PDF** (orange), and **DELETE** (pink).

Figure 1. Example of an incident form

All data are encrypted in the front-end of the application and then are mapped onto the database.

This functionality will give the opportunity to UWAH to change their *locked drawer* for something more secure.

The **admin app** has the functionality of giving specific access rights. The administrator of the organisation has CRUD access on all data on the application and staff members have limited access pertaining to their expert domain.

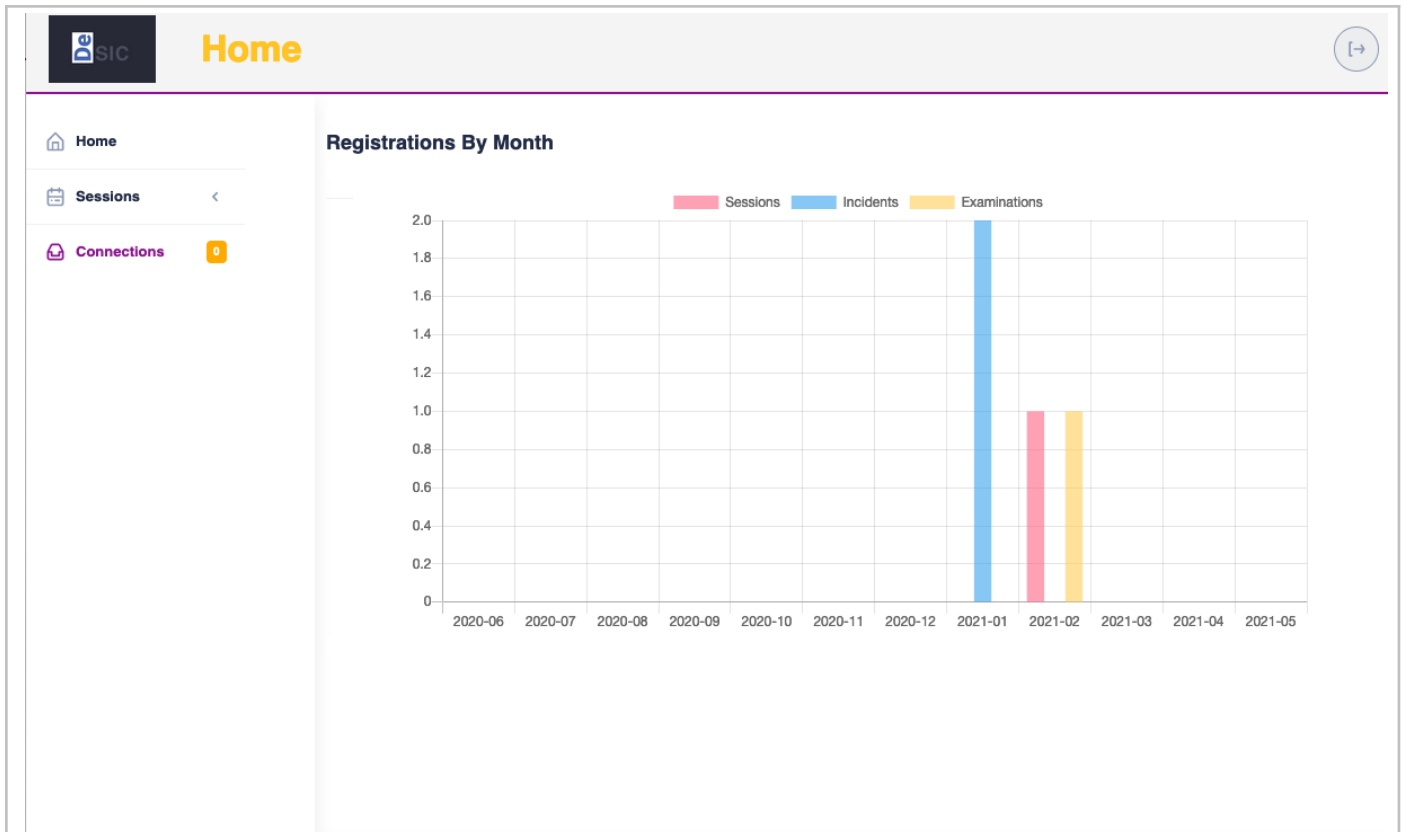
The screenshot displays the 'Members' section of an application. On the left is a navigation sidebar with options: Home, Settings, Administrators, Members (selected), List, Create, Incidents, Sessions, Examinations, Connections (with a notification badge), and Posts. The main content area is divided into two columns: 'Marital Status' (In a relationship) and 'Employment Status' (Unemployed). Below these are two buttons: 'EDIT' (green) and 'EXPORT TO PDF' (orange). The 'Update Access Rights' section contains a table with four rows, each representing a user role and their access level:

Role	Description	Access Level
SO	Social One Read & Write in Social Documents	No Access
LO	Lawyer One Read & Write in Law Documents	Access
DO	Doctor One Read & Write in Medical Documents	Access
LT	Lawyer Two Read & Write in Law Documents	Access

An 'UPDATE' button (green) is located at the bottom right of the table.

This functionality will make it easier for the organizations to separate concerns for security and privacy reasons.

In addition the **admin app** provides basic visual representations of data.

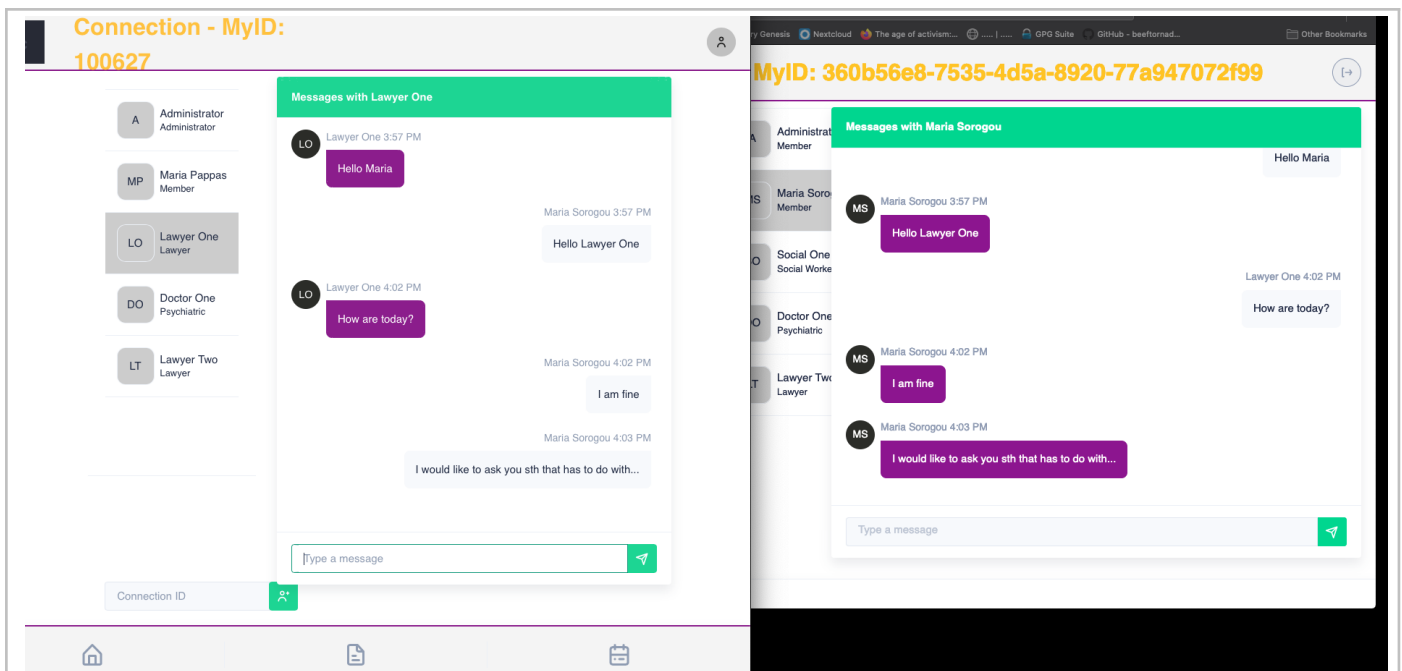


This feature is put together in order to help the organisations make meaningful decisions about their cases and their workflow. At the same time provide a sound basis on which they can make projections and interpretations of these data for specific uses (sharing with other organisations, public authorities, etc.).

The **client app** is designed having the women’s needs in mind. Meaning inside this application each woman has access to the data concerning her case. She can give access to these files to certain members of the staff and at the same time revoke access to them. This is a procedure that can happen in coordination with the organisation administrator. The administrator can make suggestions to a woman telling her to give access to a particular staff member with the woman having the right to disagree.

Also, the **client app** serves a means of communication between the organisation and the women by letting them know when certain activities are available, and providing them with the functionality to **chat** with each other. The chat is end-to-end encrypted. Moreover, beneficiaries can chat with each other within the application by exchanging a small key. Conversations do not stay inside of the application, and stay live while the application stays open.





This functionality will create a safe space where women can chat with each other and staff, as well. Keeping far from mainstream routes for communication (such as facebook) and thus creating a more secure and private space. This feature is barebones and does not entail anything fancy or high-end in order to offer an easy and alternative way of communication for women who might not be tech savvy.

Please indicate if these details can be shared in a blog post on the Not-Equal website YES NO

We are happy for the content of this report to be blogged, but we just need to make some small changes in consultation with our partners to make sure that confidential information is not disclosed in relation to their data practices.

In any case, you can share the website of the project, too. Please, visit desic.io.

2. WORK PLAN

Please explain any deviations from your work plan, the reasons for this and plans to address the issue (up to 250 words)

We had to submit a full ethics application at the beginning of the project (which we weren't expecting) and as such, undertaking data collection was postponed to later within the project. COVID-19 (of course) has impacted the availability of our research participants, but this was mitigated through multiple phone calls and teleconference interviews with partner organisations. Finally, project contracts were processed with significant delays at the beginning of the project, which even though didn't affect the project significantly, it increased the administration work needed. Nonetheless, we have now caught up with work and the project should be concluded as initially planned -- with academic writing however being planned to happen during the summer and after the end of the project.

Further Information

If you have any further questions regarding this form, please contact notequal@ncl.ac.uk.

