DCU
Ollscoil Chathair
Bhaile Átha Cliath
Dublin City University

**School of Computing**
**RESEARCH ETHICS COMMITTEE**

# APPLICATION FORM FOR ETHICAL REVIEW OF A RESEARCH PROJECT INVOLVING HUMAN PARTICIPANTS WHICH IS IN THE CATEGORY OF NOTIFICATION ONLY

There are 3 generally accepted levels of ethical review for projects carried out in a University or similar setting. These are notification only, expediated and full committee.

This notification only level of review is to approve relatively low-risk research involving human participants, primarily using social science methodologies in which any personal information collected is not of a sensitive nature. The School of Computing Research Ethics Committee has been delegated responsibility by the University to approve ethics submissions from undergraduate and taught Masters projects only, which are in the category of notification only.

Examples of projects in this category include:

- Anonymous surveys in which the topic itself is not likely to elicit significant difficulties for the participants, such as: anonymous internet surveys (e.g. Survey Monkey), street questioning.
- Observation (without audio or visual recording) of public settings where privacy would not normally be expected, such as observing people on streets or at sports events.
- Research carrying no risks beyond those of everyday life (as experienced by the intended participant population), such as asking people's opinions about products or services; asking students about educational experiences; monitoring the impact of daily activities.
- Interviews with public figures, professionals or others in their professional capacity regarding their professional activities.
- Analysis of data (e.g. health records) which have had all identifying information removed by the data holder and been provided to the researcher in accordance with data protection legislation.
- Collection of biological samples which are anonymised and do not require invasive techniques (e.g. hair, nails).

If your project is using data from a public repository like Kaggle or is not generating or using any form of personal data then you do not need research ethics approval, you do not need to complete and to submit this form and your project supervisor should indicate this on the project dashboard.

If your project involves collecting or processing personal data which is of a personal nature, you must first complete the DCU online Data Protection training course and review the "Data Protection – Key Points for DCU Researchers" guidance from the Data Protection Unit to assist you in meeting your legal obligations under GDPR and associated Irish law.

Once you have completed this form (if you need to) you should save it as a PDF file, not WORD, and upload it to the your project dashboard before you start gathering data. It will then be read and assessed by two members of the committee and once two members of the committee approve your submission you will be automatically notified by email and your project can start data gathering.

There are strict deadlines for submitting this form for each class group, undergraduate and taught Masters by which your submission must be made and you will be informed of these deadlines by your course board chair or project co-ordinator. If you do not submit by these deadlines then the research ethics committee is not obliged to approve your submission and when that happens and your project is assessed and graded at the end of the year, you will be awarded 0 for that component of your project.

## SECTION 1 – GENERAL DETAILS

### 1.1 Project Title

| |
|---|
| **Votegrity** |

### 1.2 Applicant Details

| Name | Student or Supervisor | E-mail |
|---|---|---|
| Rishabdev Sidhu | Student | rishabdev.sidhu2@mail.dcu.ie |
| Thomas Kelly | Student | thomas.kelly46@mail.dcu.ie |
| Geoffrey Hamilton | Supervisor | geoffrey.hamilton@dcu.ie |

Other Investigators: *Including any external to DCU*

| Name | School/Unit/External Institution | E-mail |
|---|---|---|
| | | |
| | | |
| | | |

### 1.3 Key Project Dates

| Proposed start date for data collection | Proposed end date for data collection | Proposed project completion date |
|---|---|---|
| 01 April 2024 | 14 April 2024 | 21 April 2024 |

### 1.4 Please indicate which academic award

| | |
|---|---|
| Undergraduate ☒ | Taught Masters ☐ |

### 1.5 Please confirm the location(s) where the research will be carried out

*If research will be carried out abroad, you will need to address the ethical challenges raised by this in Section 3 of your application - consult the Conducting Research Abroad document in the Ethics Resources and Guidelines section of the DCU Research Ethics webpage).*

| |
|---|
| DCU Glasnevin Campus, Online |

### 1.6 Please state what additional permissions may be required to access participants.

*Specify from whom the permission is required (e.g. a school Board of Management), and when their written approval will be obtained*

| |
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| |

## SECTION 2 – PROJECT DESIGN AND METHODOLOGY

Research Overview - Please respect the indicated word counts in the following sections and explain all acronyms in full text the first time they appear.

**2.1 Provide a brief description of the research (max 250 words):**
*Please use lay language, include the scientific/theoretical background of study and a justification as to why this research project should proceed in that context*

Votegrity is a blockchain voting system designed to enhance the transparency, security, and accessibility of election processes. Leveraging the decentralized and tamper-resistant nature of blockchain technology, the system ensures the voting integrity of each vote cast while providing a secure and transparent platform for users, employs smart contracts to automate and validate the voting process, eliminating the risk of fraud and manipulation. The system prioritizes user privacy and trust, employing cryptographic techniques to safeguard sensitive information and accommodates various authentication and verification methods, ensuring a seamless and accessible voting experience for all users. Participants will be required to navigate through the system and answer a questionnaire on their experiences with the voting process.

**2.2 Please state the aims and objectives of the project (max 200 words)**

The aim of this project is to create a transparent and secure online voting system, the user's votes will be deployed to the blockchain network where the data will be encrypted and added to a chain of blocks using smart contracts and transactions to verify the votes.

**2.3 Please confirm your methods of data collection:**
*Tick all relevant check boxes and provide details for each one, including any devices used to collect data, and whether the data will be anonymous, potentially identifiable or identifiable <u>at point of collection</u>*

| Method | Describe briefly |
|---|---|
| ☐ Interviews or focus groups | |
| ☒ Surveys/questionnaires | • Ask knowledge of technical expertise<br>• Ask knowledge of online voting systems<br>• Ask overall experience using the system |
| ☐ Audio/video recordings | |
| ☐ Public observations | |
| ☐ Persons in public office | |
| ☐ Using existing data (incl. secondary data) | |
| ☐ Using human derived material (biological samples) | |
| ☐ Standard tests (educational/personality etc.) | |
| ☐ Standard educational practices | |
| ☐ Other (please specify) | |

**2.4 Please confirm who the participants on this study will be, including group size and composition:**
*Include associated demographic characteristics, and state how your proposed sample size was determined (e.g. power analysis)*

| |
|---|
| The participants will be anyone who accepts to be involved in the testing of the system, participants will be friends, students in CASE, any gender, and over the age of 18. Participants will be chosen as individuals not groups. |

**2.5 Please outline your recruitment process, including where you are sourcing participants from and your criteria for inclusion/exclusion:**
*Where gatekeepers are involved, outline the procedures relating to their involvement*

| |
|---|
| Participants will be friends and family both from inside and outside the course, Most will be contacted in person or online via social media. Participants will use and traverse the system and answer a questionnaire afterwards. The surveys will be done online through google forms. |

**2.6 Addressing participant vulnerability – if your participants fall into any of the following categories, please check the relevant tick box/boxes and state below what special arrangements will be made to protect them:**
*If your participants are not in any of these categories, tick N/A*

| |
|---|
| ☒ N/A |
| ☐ Children under 18 years of age |
| ☐ Persons in unequal relationships with the researcher *(e.g. lecturer-student, therapist-client, employer-employee)* |
| ☐ People with a recognised or diagnosed intellectual, physical or mental impairment |
| ☐ People confined to institutions *(e.g. prisoners, residents in 24 hr nursing facilities)* |
| ☐ People who have undergone traumatic or adverse emotional events |
| ☐ People with diminished cognitive ability |
| ☐ Marginalised sections of society |
| ☐ Other (please specify) |
| ***Special arrangements:*** |

**2.7 Involvement of children under 18 years of age – if your participants are in this category, please confirm compliance with the following:**
*If your participants are not in this category, tick N/A*

| |
|---|
| ☒ N/A |
| ☐ We confirm that we have read and agree to act in accordance with the DCU Child Protection policy and procedures (*as per the DCU Child Protection Unit webpage*) |
| ☐ We confirm that we have put in place safeguards for the children participating in the research |

| |
|---|
| ☐ We confirm that we have supports in place for children who may disclose current or historical abuse (whether or not this is the focus of the research) |
| ☐ We confirm that all requirements will be met prior to commencing the research *(e.g. TUSLA Children First Training completed, Garda Vetting in place)* |

**2.8 Please confirm how the results of the research will be disseminated:**
*Include a statement on whether the participants will be provided with any information as to the findings or outcomes of the project*

| |
|---|
| It is not required to provided the participants on information as to the findings or outcomes of the project unless they specifically ask and provide their contact details. |

## SECTION 3 – ETHICAL ISSUES AND RISK MANAGEMENT

**3.1 Please identify all issues including ethical issues which may arise in the course of this research. What are the potential risks to participants, and how will those risks be addressed or minimised?**

*Potential risks can be physical, psychological, social, legal, etc. Please include details of any additional support being provided for participants during/after the study*

| |
|---|
| No ethical issues or risks involved |

**3.2 Please identify the potential benefits (direct and/or indirect) to those participating in this research:**

*Potential benefits should outweigh the potential risks to participants*

| |
|---|
| No potential benefits |

**3.3 Please describe what measures/protocols you have put in place in the event that there are any unexpected outcomes or adverse effects to participants arising from involvement in the research:**

| |
|---|
| No measures/protocols required, should there be any unexpected outcomes or adverse effects to participants arising from involvement in testing the web application, they are free to leave testing. |

**3.4 Do you intend to provide payment or incentives to participants?**

| | |
|---|---|
| Yes ☐ | No ☒ |

*If Yes, please consult the REC Guidelines on the Use of Compensation and Incentives (in the Ethics Resources and Guidelines section of the DCU Research Ethics webpage) before providing additional details below*

| |
|---|
| |

**3.5 Does this research raise any potential risks for the researchers themselves?**

*Please consider the location/environment where the research is being conducted, exposure to distressing data content etc.*

| | |
|---|---|
| Yes ☐ | No ☒ |

*If Yes, please describe further and explain what risk management procedures will be put in place to minimise these risks to researchers:*

| |
|---|
| |

**3.6 Does this research raise any potential conflict of interest?**

*Please consider any potential real or perceived conflicts of interest that might influence the integrity of the research, or give rise to bias in conducting and reporting the research, or affecting publication (consult the DCU Conflict of Interest Policy for assistance)*

| Yes ☐ | No ☒ |
|---|---|

*If Yes, please identify and explain the steps being taken to address that conflict:*

| |
|---|
| |

**3.7 Please describe how the conduct of the research will be monitored:**
*Regular oversight by the PI is required to ensure the project conforms to the procedures set out in this application (especially where several people are involved in carrying out the research procedures)*

| |
|---|
| The assessor will record how long it takes for users to perform certain tasks. The data of the user's knowledge and experience of using the system will be collected through a questionnaire. |

## SECTION 4 – CONFIDENTIALITY AND DATA MANAGEMENT

**4.1 Considering your previous response in section 2.3 of the form on data collection, please confirm whether you are collecting or processing personal data in this research project:**
*Personal data is any information about a living person, where that person is either identified, or could be identified from the data itself, or when it is combined with other data. This includes paper based, electronic and biological samples data. If your data is fully and completely anonymous, it is not personal data.*

| | |
|---|---|
| Yes ☐ | No ☒ |

*If Yes, please confirm your compliance with the following by ticking the checkboxes:*

| |
|---|
| ☐ We confirm that we have completed the DCU Data Protection training module on Loop. |
| ☐ We confirm that we have read the "Data Protection – Key Points for DCU Researchers" guidance on the DCU Data Protection Unit (DPU) website and agree to protect and manage our data in accordance with same. |
| ☐ We have assessed the degree of risk inherent in the personal data being used in the research project, and confirm that all DPU GDPR requirements have been met prior to submitting this application *(e.g. completion of Data Protection questionnaire, confirmation that any survey tool being used is GDPR compliant, that required Data Processing or Sharing Agreements will be in place, etc.)* |

**4.2 Data access – please confirm whether access to participant data is confined to the investigators named on this application:**

| | |
|---|---|
| Yes ☒ | No ☐ |

*If No, please name who the other individuals are and why they need access. Any proposed transfer of data (including outside of the EU) should be detailed here.*

| |
|---|
| |

**4.3 Data storage – please confirm compliance with the following:**

| |
|---|
| ☒ Data collected on mobile devices will be protected with a strong password/passphrase at a minimum, and/or encrypted if the device supports it |
| ☒ Data will be removed from mobile devices as soon as is practicable and stored in a secured location in DCU (on server or institutional Google Drive) |
| ☒ Paper based data will be held securely in locked cabinets in DCU, with access restricted to the named researchers |
| *Specific arrangements in relation to biological samples should be stated here:* |
| *Any exemptions to the above compliance statements should be justified here:* |

**4.4 Please confirm who will be responsible for the secure storage of data generated by the research:**

*Name the relevant DCU investigator/s*

| |
|---|
| Thomas Kelly and Rishabdev Sidhu |

**4.5 Please confirm how long the data will be held for:**

*For personal data, consult section 15: Retention of Personal Data in the "Data Protection – Key Points for DCU Researchers" guidance on the DCU Data Protection Unit (DPU) website*

| |
|---|
| The data will be held until the project has been graded by the examiner. |

**4.6 Please confirm what will happen to the data collected at the end of the study:**

*Please tick the relevant checkbox and complete the associated follow-up section for that category*

| | | |
|---|---|---|
| Archived ☐ | Destroyed ☒ | Other ☐ |

**4.6.1 Archived data**

*Please provide the following details:*

| | |
|---|---|
| Name the DCU staff member responsible for archival and future use of data | |
| Confirm whether the data will be made available to other researchers, and if so, how? | |
| Confirm how the data will be prepared for archive (e.g. will datasets be anonymised) | |
| Confirm where the data will be archived and who will be allowed to access it | |

**4.6.2 Destroyed data**

*Please provide the following details – Note: for student projects, the supervisor must take responsibility for data destruction if there is no guarantee the student will have access to the data at the time of destruction*

| | |
|---|---|
| Please justify why the data will be destroyed | The data is no longer required once the project has been graded. |
| Name the DCU researcher responsible for destruction of data | Thomas Kelly and Rishabdev Sidhu |
| Confirm when the data will be destroyed (specify date) | 31 May 2024 |
| Confirm compliance with the following destruction methods (tick relevant boxes) | ☒ Electronic data will be overwritten/securely deleted<br>☐ Paper based data will be confidentially shredded<br>☐ Medical samples will be disposed in accordance with the relevant DCU approved SOP |

**4.6.2 Other - Please explain what will happen to the data if not being archived or destroyed:**

| |
|---|
| |

## SECTION 5 – PARTICIPANT INFORMATION AND INFORMED CONSENT PROCEDURES

**In addition to completing this form you are required to attach, within the single PDF that you submit, a copy of (1) the Participation Information Sheet which you share with your participants and (2) a copy of the Informed Consent Form which your participants sign.**

**5.1 Please confirm that the following items have been addressed in your Participant Information Sheet which should be shared with all participants whether it involves online or in-person data gathering:**

*The items below should be used as headings in yourinformation sheet. Note the language used under each item must reflect the participant age group and corresponding comprehension level– if your participants have different comprehension levels (e.g. both adult and child participants) then separate sheets must be prepared for each set. Templates are available via the REC Forms - Applications, Templates and Amendments section of the Research Ethics website.*

| Checklist – tick the relevant check box for each item | Yes | No |
|---|---|---|
| Introductory Statement (Researcher names and titles, school, title of the research study) | ☒ | ☐ |
| What is this research about? | ☒ | ☐ |
| Why is this research being conducted? | ☒ | ☐ |
| Why have you been invited to take part? | ☒ | ☐ |
| What will happen if you decide to take part in this research study? | ☒ | ☐ |
| How will your data be used? | ☒ | ☐ |
| How will your privacy be protected (including any legal limits to confidentiality)? | ☒ | ☐ |
| What are the benefits of taking part in this research study? | ☒ | ☐ |
| What are the risks of taking part in this research study? | ☒ | ☐ |
| Can you change your mind at any stage and withdraw from this study? | ☒ | ☐ |
| How will you find out what happens with this project? | ☒ | ☐ |
| Contact details for further information | ☒ | ☐ |

*If you marked any item as No, please explain and justify why:*

| |
|---|
| |

**5.2 Informed Consent Procedures – please confirm whether written consent is to be obtained:**
*Please tick the relevant checkbox*

| Yes ☒ | No ☐ |
|---|---|

*If Yes, describe the procedures by which written consent will be obtained. If you are involving child participants, you will also need to obtain their written assent. Templates are available via the REC Forms - Applications, Templates and Amendments section of the Research Ethics website.*

| Written consent will be obtained by using the google form layout provided below |
|---|

*If No, describe the procedures regarding how consent/assent will be obtained:*

| |
|---|
| |

If you are gathering data from an online process such as Google Form or SurveyMonkey then you should use a page such as the one below, to capture participants' informed consent and your data gathering should not proceed until participants have completed this form with the appropriate answers.

## *Participant – please complete the following (by clicking Yes/No for each question)*

I have read the Plain Language Statement (or had it read to me) *

- (●) Yes
- ( ) No

I understand the information provided *

- ( ) Yes
- ( ) No

I have had an opportunity to ask questions and discuss this study *

- ( ) Yes
- ( ) No

I understand the information provided in relation to data protection *

- ( ) Yes
- ( ) No

I have received satisfactory answers to all my questions *

- ( ) Yes
- ( ) No

I understand I may withdraw from the Research Study at any point *

- ( ) Yes
- ( ) No

I have read and understand the arrangements to be made to protect confidentiality of data, including that confidentiality of information provided is subject to legal limitations *

- ( ) Yes
- ( ) No

I have read and understand confirmations relating to any other relevant information as indicated in the PLS *

- ( ) Yes
- ( ) No

I consent to participate in this research study *

- ( ) Yes
- ( ) No

## SECTION 6 – SUBMISSION CHECKLIST AND RESEARCHER DECLARATION

### 6.1 Please confirm all required supplementary documentation to be included in this application within Section 7:

| Checklist – tick the relevant check box for each item | Yes | N/A |
|---|---|---|
| Participant Information Sheet/s | ☐ | |
| Informed Consent Form/s | ☐ | ☒ |
| Informed Assent Form/s | ☐ | ☒ |
| Recruitment Advertisement | ☐ | ☒ |
| Questionnaire/Survey | ☒ | ☐ |
| Interview/Focus Group Questions | ☐ | ☒ |
| Debriefing Material | ☐ | ☒ |
| Bibliography | ☐ | ☒ |
| Approval from another Research Ethics Committee | ☐ | ☒ |
| Evidence of other external approvals (e.g. Board of Management letter) | ☐ | ☒ |
| Evidence of internal approvals (e.g. BSC approval review letter) | ☐ | ☒ |
| Other – provide details here: | ☐ | ☐ |

### 6.2 Signed Declaration

*By submitting this form, the applicant (and supervisor) agree to the following:*

*The information contained herein is, to the best of my knowledge and belief, accurate. I have read the University's current research ethics guidelines, and accept responsibility for the conduct of the procedures set out in the attached application in accordance with the form guidelines, the REC guidance and resources, the University's Conflict of Interest Policy, its Code of Good Research Practice and any other condition laid down by the Dublin City University Research Ethics Committee. I have attempted to identify all risks related to the research that may arise in conducting this research and acknowledge my obligations and the rights of the participants.*

*I also acknowledge my requirement to be informed as to other duties and legal obligations applying to my research, and to comply with these duties and obligations – this includes being informed about DCU Data Protection guidelines for researchers, DCU Child Protection policy and procedures (where relevant) and DCU Insurance requirements.*

*I and my co-investigators and/or supporting staff have the appropriate qualifications, experience and facilities to conduct the research set out in the attached application and to deal with any emergencies and contingencies related to the research that may arise. Research will not commence until required consents and approvals are in place.*

**Electronic Signature(s):**

*Supervisor:* Geoff Hamilton

*Print Name here:* GEOFF HAMILTON

*Date:* 6/3/2024

*Student(s) signature(s):* Rishabdev Sidhu Thomas Kelly

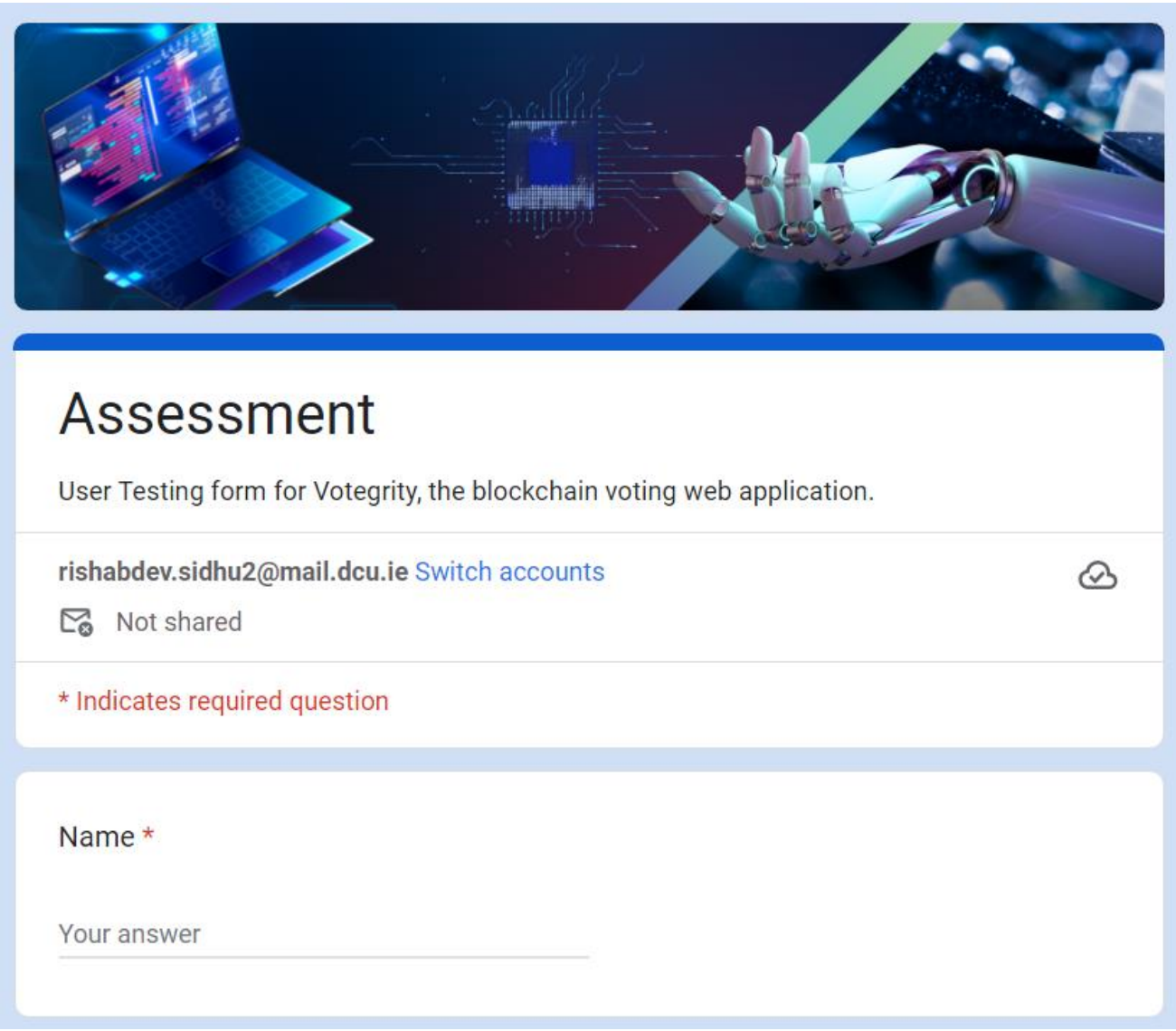
*Print Name(s) here:* RISHABDEV SIDHU THOMAS KELLY

*Date:* 15/3/2024

## SECTION 7 – SUPPLEMENTARY DOCUMENTATION

**Please attach all required documentation as confirmed by you in the previous section. The application should then be saved as one file in PDF format before submission via the project dashboard.**

https://docs.google.com/forms/d/e/1FAIpQLSflmv2UqxEcq1fI2Aw3hlYe920at4C0F8rm9-OjkoVDK4Bn0g/viewform?usp=sf_link



Age Range *

- ◯ 18-25
- ◯ 26-35
- ◯ 36-45
- ◯ 46+

What is your level of technical expertise? *

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| I have never used a computer/mobile | ◯ | ◯ | ◯ | ◯ | ◯ | I am very comfortable using a computer/mobile |

Do you know about blockchain technology and how it works? *

- ◯ Yes
- ◯ No

How easy was it to navigate through the system *

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| I didn't know what I was doing | ○ | ○ | ○ | ○ | ○ | I easily knew where to go or what to do |

Would you be willing to use this system in the real world? *

- ○ Yes
- ○ No

On a scale of 1-10 rate your overall experience *

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Very Poor | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Very Good |

Were there any issues while using the application?

Your answer

Were there any features that could have been added/improved?

Your answer

Were there any features that could have been added/improved?

Your answer

Please add any additional comments you may have about the system

Your answer

I have read the Plain Language Statement (or had it read to me) *

- ◯ Yes
- ◯ No

I understand the information provided *

- ◯ Yes
- ◯ No

I have had an opportunity to ask questions and discuss this study *

- ◯ Yes
- ◯ No

I understand the information provided in relation to data protection *

- ◯ Yes
- ◯ No

I have received satisfactory answers to all my questions *

- ◯ Yes
- ◯ No

I understand I may withdraw from the Research Study at any point *

- ◯ Yes
- ◯ No

I have read and understand the arrangements to be made to protect confidentiality of data, including that confidentiality of information provided is subject to legal limitations *

- ◯ Yes
- ◯ No

I have read and understand confirmations relating to any other relevant information as indicated in the PLS. *

- ◯ Yes
- ◯ No

I consent to participate in this research study *

- ◯ Yes
- ◯ No

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Google Forms