EPSRC Network+: Social Justice through the Digital Economy
Call for Collaborative Proposals: Application Form

We are seeking to fund proposals for Not-Equal's second call for collaborative proposals. For full guidance please see details of the call on the Not-Equal website.

Pilot research projects can be between 6-8 months in length. We expect to fund up to 7 projects of up to £40k (80% FEC) for this funding call (will consider shorter projects with smaller budgets).

Please submit this form before the deadline of **5pm, 29th May 2020** to notequal@newcastle.ac.uk, with the subject line 'Application Submission'.

Applicants will be advised on the outcome of their proposal by the 30th July 2020.

GENERAL INFORMATION	
Lead Applicant (PI): Adam Wyner **Email address:** a.z.wyner@swansea.ac.uk **Job Title:** Associate Professor **Department:** Law School **Organisation:** Swansea University	**Co-Investigators (names and organisations):** Richard Owen, Swansea University **Email address:** W.R.Owen@swansea.ac.uk **Collaborative Partner(s):** Patrick O'Brien, BPO Insolvency Ltd The Speakeasy Law Centre **Project Title:** Covid-19 Debt Advice **Project Tagline:** Online, interactive Covid-19 debt advice

WHICH CHALLENGE AREA AND TOPICS DOES YOUR PROPOSAL RESPOND TO?			
CHALLENGE AREA	**X**	**TOPIC**	**X**
Algorithmic Social Justice	X	**Recognition**	
Digital Security for All		**Re-distribution**	
Fairer Futures for Business and Workforce		**Enablement & Radical Trust**	
Topics across challenge areas		**Proactive Resilience & Reparation**	X

1. SUMMARY

Please provide a summary of your proposed research project. Please include an overview of the aims, impact, innovations, method, team and how it aligns with Not-Equal. This section should be understandable to the general public (<400 words).

According to Citizens Advice[1], the coronavirus outbreak has led to financial turmoil for millions of UK residents, undermining fairness, equality, and economic opportunities. Some 11 million people have missed or are expected to miss payment of a key bill including rent, council tax, or phone/broadband, which may lead to severe legal consequences such as eviction, disconnection from services, or enforcement by a bailiff. The consequences fall especially hard on those with lower incomes or underlying health conditions. People might consult online legal advice or qualified lawyers in pro bono legal clinics. Online information is generic and daunting; tailored advice from a lawyer is best, though can be costly or unavailable. As LawWorks identified, the demand for timely, legally appropriate advice far outstrips the supply of advisors[2]. Even as of several years ago, legal advisory services PayPlan and StepChange warned they do not have the resources to cope with the numbers of debtors. The Covid-19 crisis has made matters considerably worse, as more people must be served with fewer resources. Legal advice clinics are desperately in need of greater capacity for restorative practice to help those with debt problems.

The project aims to support greater capacity in pro bono clinics by developing, evaluating, and deploying an online Covid-19 debt advice tool. Using the tool, a user interactively consults information and answers questions that are relevant to the user's specific circumstances and responses. At the end, the user receives a tailored legal debt advice document with information about the law, links to forms, and recommended actions. The user can use the document to either address debt issues themselves or to share with a pro bono advisor for personal assistance. Either way, valuable time and effort can be saved.

The project uses a well-developed, open source framework, DocAssemble[3], to program online, interactive interfaces to legal advice consultations and the 'assembly' of advice documents. The project is interdisciplinary between Law and Computer Science and collaborative between academic and legal practice communities. The research requires: transforming the knowledge and practice of lawyers into information suitable for DocAssemble; incorporating current law related to the crisis; identifying those areas of debt advice that are not amenable to coding, so require further professional advice; and evaluating the tool so it meets the requirements of legal advice practitioners and users.

1. https://www.citizensadvice.org.uk/about-us/how-citizens-advice-works/media/press-releases/millions-facing-financial-cliff-edge-when-coronavirus-protections-end2/, accessed 21 May 2020
2. https://www.lawworks.org.uk/about-us/news/legal-and-advice-sector-response-covid-19-pandemic, accessed 21 May 2020
3. https://docassemble.org/ and https://community.lawyer/.

2. HOW DOES YOUR PROPOSAL ALIGN WITH THE THEMES AND OBJECTIVES OF NOT-EQUAL?

Please describe how your proposal responds to the second call for collaborations and how does your proposal enhance a cross-disciplinary way of working. (<300 words).

Covid-19 debt advice focuses on the Algorithm Social Justice challenge area, aiming to design, develop, evaluate, and deploy an algorithmic decision-support tool for legal advice professionals and clients to identify and resolve

personal debt issues. The project would promote the values of fairness, equality, and economic opportunities, which are at the root of social justice issues within the digital economy. The debt burdens of individuals, particularly those who are vulnerable (low-income, unemployment, health, or lone parent), negatively impact on these values as well as on an individual's health, well-being, and social circles. Access to helpful, clear, and actionable information from pro bono legal services is essential to resolving debt, promoting the values, and improving health and wider social circles. As people have diverse debt issues and complex personal circumstances, 'off-the-rack' solutions and websites of information may be insufficient, while 'tailored' solutions are prohibitively expensive and resource intensive at a time when there are fewer advisors. The project addresses the proactive resilience and reparation theme, as it seeks to help repair the harm of debt burdens. With a cross-disciplinary dialogue and knowledge exchange between Law and Computer Science as well as between academic and non-academic communities, Covid-19 debt advice will transpose legal debt advice expertise into an algorithmic framework which dynamically 'interviews' an individual about their circumstances, ties answers to specific user information, asks relevant follow up questions, identifies relevant information sources, and in sum, provides a practical, 'tailored' advice to an individual's debt circumstances. The result will be operationalised, actionable information as a debt advice document on how an individual can, perhaps with the additional support of a legal advisor, progress towards resolution of their debt burden. Such a result aims to promote fairness, equality, and economic opportunities for debt bearers in particular and for society as a whole.

3. CASE FOR SUPPORT

Please describe your proposed project. This should include your aims and objectives, the design and method of your project, context, background literature and data to be collected. Please also indicate why this research is important and for whom (<1000 words).

When people of limited means have debt problems and related legal issues, they consult pro bono advisors in legal advice clinics. However, the advisors and clinics are overwhelmed by demand. The project addresses this demand with Covid-19 debt advice, a web-based, interactive decision support tool which provides the client with legal advice about how to manage and resolve debt problems. As an interactive and structured tool, it provides a user-experience tailored to advisors and clients. The approach is midway between the dynamic and adaptive knowledge of a conversation with an advisor and the static and fixed information of webpages of text. In Covid-19 debt advice, users answer questions or provide information, and subsequent questions and information are determined dynamically with respect to the client's answers. By interacting with the system, the user's problem and possible solutions are identified. A client and (possibly) a legal advisor will have a structured summary of the issues, possible solutions, and pointers to further information and actions.
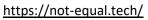
The aims of the project are to:
- understand current approaches to debt advice
- find patterns in data and strategies about debt advice
- create designs for algorithms which interactively and dynamically provide information and questions to clients

The objectives of the project are to:
- gather source data from advisors and client case studies
- analyse the source data for patterns
- formulate typical debt resolution scenarios based on the patterns
- develop designs and algorithms for a decision support tool based on the data and patterns in order to tailor the interaction between the consultation tool and user, whereby:
    - the user's responses to initial questions lead to subsequent, relevant information and questions;

- at each 'stage' of the consultation, the user's responses lead to subsequent, relevant information and questions;
- at the end of the consultation, an advice document is generated based on the user's input.
- implement the designs using a stable, well-developed framework, DocAssemble, which is currently used for Legal Aid consultations
- evaluate the tool with advisors and clients, particularly whether it facilitates the provision of legal advice while maintaining quality

The method of the project is to:
- base the design and evaluation on non-academic partner guidance and information
- scope research into connected phases of development, wherein each phase is cohesive, coherent, manageable, yet extensible to further components over later phases
- use a 'fast draft' tool, e.g. the DocAssemble framework in the Python programming language with YAML and markdown for development and online deployment;
- create user questionaires and conduct comparative outcome studies to evaluate the prototype.

The research is in the context of a general crisis of debt and advice about resolving debt which has been made very significantly worse due to Covid-19. UK household outgoings have surpassed income for the first time in nearly 30 years, and consumer debt levels have exceeded those prior to the 2008 Financial Crisis. In April 2018, Citizens Advice warned that British households owed almost 19bn GBP in unpaid utility bills, council tax and benefit overpayments. PayPlan and StepChange, two of the UK's largest organisations, which provided free debt advice to nearly three-quarters of a million people in 2017, have warned they do not have the resources to cope with increasing numbers of people in debt crisis. The severe economic contraction due to Covid-19 has only made debt matters worse. More people must be served with fewer resources.

The project draws on decades of well-grounded research on knowledge representation and reasoning (see 1), particularly the 'expert systems' paradigm of interactive, user-dependent consultations (see 2). This is implemented in DocAssemble (3), which is a well-developed framework for the development and deployment of online, legal advice consultations.

References:
1. R. Brachman and H. Levesque. 2004. Knowledge Representation and Reasoning. Morgan Kaufmann Publishers
2. I. Gupta and G. Nagpal. 2020. Artificial Intelligence And Expert Systems. Mercury Learning and Information.
3. DocAssemble: https://docassemble.org

Data will be collected from information that pro bono lawyers use in legal advice clinics as well as sample debt consultations in legal advice clinics as part of the evaluation. Appropriate measures will be put in place to protect personal data and meet the requirements of the GDPR.

The project is important to people who are struggling with debt, which can result in poorer physical and mental health, depression, homelessness, reductions of basic necessities, and social exclusion. The project is also important to legal advisors, as it would facilitate their work. Finally, the research is important because it presents an exciting and timely opportunity to make demonstrable contributions to a pressing societal challenge, while achieving credible scientific advances in terms of knowledge about the law and provision of legal services. The

work has broad applicability and relevance in its potential as if we can solve the central challenges at the heart of this work, we can address a range of problems across multiple domains, with far reaching impact on society and the economy.

4. RESILIENCE PLAN

Please describe how you would carry out your project with social distance measures in place. For example, deliver workshops via Zoom instead of in person (<300 words).

The project is intrinsically resilient with respect to social distance measures. All development, consultation, evaluation, and presentation can be carried out online using Zoom (or similar), collaborative web-based software development tools, and online interactive interfaces. Use of such means is standard practice in software development and deployment.

5. INNOVATION

Please explain the innovative aspects of the proposed research project (<150 words).

There are two innovations of the project: transforming the tacit knowledge and practice of debt advice lawyers into explicit information suitable to program; and identifying areas of debt advice that are not amenable to programming, but require consultation with a lawyer. For both, we work closely with lawyers to elicit their knowledge and practice. While the tools and techniques of knowledge representation and reasoning are well established, they have not been applied for legal advice. This may be due to the complexities and subjectivities of legal knowledge and practice. The main effort is to work along the ``degrees of tacitness'' – deeply ingrained, imperfectly articulated, highly articulated, and highly explicit and structured – in order to find the right balance of utility, substance, and clarity. Thus, a key challenge is to identify the ``perimeters'' of what can be explicit and structured from what must be left to human discernment.

6. NON-ACADEMIC PARTNERS

Please explain how your non-academic partners will engage with the project e.g. in-kind time, use of facilities, etc. (<150 words).

Patrick O'Brien, BPO Insolvency Ltd.

In-kind support (documents, legal expertise, guidance, feedback, access to user groups) by way of sector perspective challenges in the provision of debt advice services; access to professional knowledge and insight; interpretation of complex insolvency legislation frameworks and access to legislative and governing bodies (Institute of Chartered Accountants in England and Wales; Insolvency Lawyers Association; Association of Business Recovery Professionals (R3)).

Speakeasy Law Centre, Warren Palmer, Solicitor and Centre Director

In-kind support (documents, legal expertise, guidance, feedback, access to user groups) by way of community-facing legal advice, particularly tackling social welfare issues for vulnerable clients; access to professional knowledge and insight about addressing bailiffs, credit cards and loans, council tax arrears, rent arrears, amongst other debt issues.

7. SOCIAL IMPACT

Please describe the expected social impact of your project (<300 words). This should be understandable to the general public. Please note that the community panel will consider and assess this section against the following criteria. To what extent does the proposal:
1) Consider and respond to the needs of a community (e.g. provide an example of the beneficiaries of your project and the value it would generate for them);
2) Help to overcome/reduce/avoid barriers to access and participation in technology and services (e.g. provide an example of the barriers and how your project addresses such barriers);
3) Support new connections between communities of interest (e.g. provide an example of how the project creates opportunities for new connections between people and/or fosters community building).

The outcomes:
- individuals can get greater understanding of how to resolve their debt;
- advisors on debt relief and legal advice clinics will have greater capacity to help clients;
- the negative impacts of debt will be mitigated somewhat.

The deliverables:
- a deployed online, interactive legal debt advice tool which is adapted to the coronavirus crisis. The tool will output debt advice documents tailored to the user;
- a tool that avoids barriers to access and participation in technology and services as it uses appropriate language in the user interface and advice document;
- an algorithm underlying the tool for providing debt advice, where the algorithm is derived from the knowledge and practice of legal advice advisors;
- an evaluation of the prototype by users.

The social impact is anticipated to be substantial and meaningful. Especially due to the Covid19 crisis, there has been a huge step-change in the numbers of UK households which have run into very substantial and consequential debt problems, risking insolvency at worst or problematic debt management costs at best. Current estimates are unknown, but the debt burden is known to have very significantly increased due to the economic collapse. Often, those who incur problematic debts do not have the resources to get help at cost. Problematic debt negatively impacts on family health and wellbeing as well as worker productivity. Yet, the numbers of qualified, available, and free-low cost debt advisors is outstripped by demand for services; those who are available do not have sufficient resources to help all those in need. Providing debt advice and resolution support tools for both householders and debt advisers could go a significant way to lightening the pressures on both, leading to more debt resolution, thus alleviating some of the negative impacts on householders.
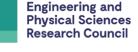
8. WORK PLAN

Please outline the work-plan for your proposed research/activity (<200 words).

A 'waterfall' work plan with iterations for the design and implementation of tool:
Month 1
- Initial consultations between partners gain familiarity about knowledge and practice of debt advice;
- Gather debt advice materials from non-academic partners, e.g., patterns of practice, interview questions, and links to relevant legal materials;

- Hire RA and familiarise RA with issues about debt advice;
- Familiarise team with DocAssemble and familiarize the RA with technical detail.

Month 2
- Phase I design for implementation:
  - identify a useful, `scoped' portion of debt advice to develop initially
  - elicit expert, legal advisor narratives about client discussions of problems and resolutions (if any);
  - outline initial evaluation criteria and potential evaluator `user types'.
- Graphically present Phase I design as a 'flow chart' of questions, information, and decision branches depending on user input;
- Plan extensions and additions for Phase II and III designs for implementation

Month 3
- Implementation and deployment of Phase I graphical design using DocAssemble;
- Iterative critique and reassessment of Phase I implementation by non-academic partners.

Months 4-5
- Phase II design and implementation

Months 5-6
- Phase III design and implementation

Months 7-8
- Evaluation of tool with users;
- Refinements based on non-academic recommendations and user feedback.

9. HOW WILL YOU COMMUNICATE THE FINDINGS OF YOUR RESEARCH TO THE PUBLIC?

Please outline your dissemination plans e.g. events, networking with local support groups, creating vlogs, writing blogs, etc. (<200 words).

The non-academic partners will play a key role in promoting the tool amongst individuals who need debt advice. In addition, the project anticipates event and networking support from The Legal Innovation Lab Wales (LILW)[4], which is a new initiative within the University's Hillary Rodham Clinton School of Law to support collaboration between law firms, technology companies, and security organisations in order to encourage innovation in LegalTech, access to justice, and counterterrorism. The LILW facility maintains facilities for meetings, teleconferencing, and support for engagement activities. As well, the Law School's marketing and PR team may provide support for outreach. Relatedly, the Department of Computer Science at Swansea University has a strong marketing and PR team in CHERISH-DE, which a national Digital Economy Centre funded by EPSRC[5]. CHERISH-DE has the capacity and resources to plan and deliver communications and events to engage the general public and beneficiary communities of this work. The marketing and PR teams have access to broad publication networks across law, science, and innovation channels (magazines, social media, press outlets). Finally, the applied research outcomes and deliverables will be reported in academic meetings and publications.

4. https://www.swansea.ac.uk/law/legal-innovation-lab-wales/
5. https://www.swansea.ac.uk/science/cherish-de/

10. EXISTING FUNDING

Will any existing funding be used on this project (e.g. PhD funding)? If so, please provide information about these and how they will be used for the project (<150 words).

Not relevant.

11. EXPERIENCE & INTERACTION OF TEAM

Please indicate any previous relevant experience, qualifications and publications of the lead applicant and team. If applicable, please detail how the PI-postdoctoral partnership will be beneficial (<300 words).

Team interaction: Wyner and Owen are colleagues in the Law School and regularly discuss how technology applies to legal aid; Wyner and O'Brien have collaborated on a proposal and O'Brien ahs lectured in Wyner's course; Wyner and Speakeasy Law Centre have discussed collaborations.

Adam Wyner, Associate Professor, Swansea University, Law School and Department of Computer Science: research and teaching Artificial Intelligence and Law, specialising in knowledge representation and reasoning and textual information extraction applied to legal information and processes. He has developed applications with community.lawyer/DocAssemble.

- Ruta Liepina, Giovanni Sartor & Adam Wyner. 2020. Arguing about causes in law: a semi-formal framework for causal arguments. Artificial Intelligence and Law, Volume: 28, Pages: 69–89
- Biralatei Fawei, Jeff Pan, Martin Kollingbaum, and Adam Wyner. 2018. A Methodology for a Criminal Law and Procedure Ontology for Legal Question Answering. Semantic Technology, Volume: 11341, Pages: 198 - 214

Richard Owen, Professor, Swansea University, Law School: research, teaching, and practice in legal education, access to justice, and legal clinics across academic, professional, and public settings. Director of the Swansea Law Clinic, Swansea University:

- Owen, R. 2017 LawZone: Mapping Unmet Legal Need. International Journal of Clinical Legal Education Volume: 24, Issue: 2, Pages: 3-42

Patrick O'Brien, Legal practice: Licensed Insolvency Practitioner and practising solicitor. A member of the Insolvency Lawyers Association and the Association of Business Recovery Professionals. Experience of all aspects of insolvency law and representing parties in insolvency litigation proceedings.

Speakeasy Law Centre, Warren Palmer, Solicitor and Centre Director, Legal practice: The Centre provides free legal advice across Cardiff and the Vale of Glamorgan, tackling social welfare issues including welfare benefits, debt, housing and employment law. Concerning debt, the Centre addresses matters about bailiffs, credit cards and loans, council Tax arrears, rent arrears, amongst others.

12. BUDGET BREAKDOWN

Please provide a detailed budget breakdown and justification for your budget - for example: salary grade, point, duration and %FTE: specified journeys or conferences; identified items and quantities of consumables (<300 words).

Grade 8.31, 8 months at 50% FTE. This staff level and time is needed to employ a software engineer to carry out the design, development, implementation, and evaluation work on the project. There are no journeys, conferences, or consumables.

Please list in GBP under the headings – Overall Cost, Staff, Travel and Other

	Directly incurred costs (80%)	**Directly incurred costs (100%)**
Staff	14,030.80	17,538.50
Non-Staff Costs: Consumables	0	0
Non-Staff Costs: Facilities/Equipment	0	0
Non-Staff Costs: Travel	0	0
Non-Staff Costs: Estates (RA's only)	3078.81	3848.51
Non-Staff Costs: Indirect (RA's only)	13,748.88	17,186.10
Overall Cost*	Total Not-Equal Funding Requested: 30,858.49	Total for information only: 38573.11

Directly Incurred Posts

Role	Post	Start Date	Period on Project (months)	% of Full Time	Scale	Increment Date	Basic Starting Salary	Super-Annuation and NI (£)	Total cost on grant-80% FEC (£)	Total cost on grant-100% FEC (£)
Software Engineer	RA	01/09/2020	8 months	55	8.31	NR	34,804.00	4198.94	30,858.49	38573.11

*Please note you are able to claim for RA time and RA relevant FTE related costs, PI/Co-I time and other non-staff costs. You are not able to claim for FTE related costs attributed to PI/Co-I time.

Further Information

If you have any further questions regarding this call for proposals, please contact notequal@newcastle.ac.uk or Rachel Sparks (Not-Equal Project Manager) on 0191 2088268.

Privacy Notice

Not-Equal is collecting your data to record submission of your application, and we will only contact you to provide you with information about the application and related Not-Equal activities.

You have provided your consent for the University to process your personal data for the purposes detailed above. You have the right to request that the University deletes this personal data at any time, noting if you do so, the University will be unable to provide you with information relating to Not-Equal. On an annual basis we will ask you to confirm that you wish to continue to receive this information: if you don't or you do not respond, we will delete your personal details within one calendar month.

We won't share your data with anyone outside the University, unless required to by law, and it will be stored securely within Open Lab at Newcastle University.

If you would like to discuss this further, please contact rec-man@newcastle.ac.uk

If you would like more information about how we manage personal data more generally, including your rights under law, and the contact details of the University's Data Protection Officer, please see our website: http://www.ncl.ac.uk/data.protection/PrivacyNotice.htm

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