UK-Ireland Collaboration in the Digital Humanities

Synthesising creativity across the arts and humanities with digital technologies

IRISH RESEARCH COUNCIL
An Chomhairle um Thaighde in Éirinn

UKRI

Arts and Humanities Research Council

A co-funded programme defined by our research communities

Researchers in the UK and Ireland have been leading global practice in digital humanities since the emergence of this distinctly modern discipline. With research culture and infrastructure in both nations demonstrating clear advancements in this field, a collaborative research funding programme was developed by the Arts and Humanities Research Council (AHRC) and the Irish Research Council (IRC) to synthesise the strong foundations built through trailblazing research conducted across the two neighbouring nations.

AHRC and IRC developed this programme with a community-led approach. Beginning with a networking workshop hosted in Dublin in October 2019, the programme set collaborative principles and opportunities as a core priority from the offset. This ensured that both funders invested in the exploration of both the critical issues facing the digital humanities and – crucially – the major opportunities presented by this interdisciplinary field, which pulls on the greatest strengths of both human knowledge and technological development.

During this workshop, 60 delegates from across the UK and Ireland established four priority areas for the AHRC-IRC programme:
• Digital humanities, emerging technologies and research practices
• Digital humanities and engagement with societies
• Digital humanities and the creative industries
• Digital humanities and cultural heritage

These broad, inclusive themes framed two calls co-funded by AHRC and IRC. Through these opportunities, twelve research networking grants and eleven major research grants have been funded. Each project has successfully delivered on a range of objectives, partnerships and social impacts despite the unprecedented challenges posed by COVID-19.

UK–Ireland Collaboration in the Digital Humanities

Networking Awards

UK–EI Digital Humanities Association

A network for research capacity enhancement

University of London (UK Lead)
Trinity College Dublin (Ireland Lead)

Digital humanities is a well-developed field of research in the UK and Ireland, with multiple world-leading centres established in both countries. The cultures of the two national research communities have developed in unique, divergent ways, creating a multiplicity of strengths and opportunities which the UK-EI Digital Humanities Association networking project set out to catalyse.

This research network set out to build a foundation for a permanent Digital Humanities association within the UK and Ireland, centred around sustainability, inclusivity, training, advocacy and career progression.

Building on an existing knowledge base, this network conducted extensive research consultation to better understand how a UK-Ireland association could support centres and practitioners of digital humanities to expand capacity for excellent research and teaching, establish and sustain more effective connections with industry professionals and organisations (notably Galleries, Libraries, Archives and Museums), and create new pathways for collaboration.

Through this collaboratively designed project, stakeholders from across the digital humanities community were brought together to develop a roadmap for the Association's first three years, outlining goals for community building, governance, programming and publications.

**Collaborating research organisation:
University of Exeter**

**Project partners:
CONUL
Research Libraries UK
Jisc Digital Resources
European Association of DH
DARIAH–EU**

The UK-Ireland Digital Humanities Network has now transitioned from a grant-funded network to a permanent, self-sustaining Association.

The Association is working towards adopting a formal constitution, and in the meantime sets its baseline against its core values:
• Inclusivity
• Community
• Collaboration
• Sustainability
• Openness and transparency
• Advocacy and action

One of the core steps in the Association's first year as a self-sustaining organisation was to develop and announce its first cohort of five Community Interest Groups. These groups are flexible and bottom-up organisations purposed with building community that is inclusive, collaborative, and sustainable through providing spaces driven by and designed through community participation.

This first cohort of groups are clustered around the following five topics:
• Research Software Engineering in the Arts and Humanities
• Digital Humanities Climate Coalition
• Digital Correspondence: transhistorical perspectives on language, materials and corpora
• Multilingual DH in the UK and Ireland
• Protecting the Investigator in Traumatic Research Areas

The Association is open to multiple kinds of participation from all members of the digital humanities community, including those working in galleries, libraries, archives and museums, the creative industries and the technology sector. Participation could include attending events, signing up to the Association's newsletter, or joining one of the Community Interest Groups.

The Association has already seen a high level of interest from across the research communities in the UK and Ireland, and is beginning to develop partnerships further afield through interaction with individual researchers, research organisations and research infrastructures across Europe.

A network for research capacity enhancement - Intersections: Feminism, Technology and Digital Humanities

University of Sussex (UK Lead)
National University of Ireland Maynooth (Ireland Lead)

Collaborating research organisation:
Technological University of Dublin

Project partners:
Irish Museum of Modern Art
Haringey Vanguard
Olivia Jack

This network set out to change the culture of Digital Humanities through embedding intersectional feminist theory in digital praxis. The research team worked towards establishing an inclusive and responsive framework which critically engages with the structural inequalities that have a profound impact on so many elements of digital transformation, including algorithmic bias, data injustice and inequitable concepts of authorship, ownership and legacy.

IFTe sought to develop capacity in all of its members (including artists, archivists, technicians and developers) to reflect on and counter inequitable practices when working with and designing digital tools and technologies.

This objective was pursued through a series of workshops co-designed and co-delivered with industry partners and practitioners.
Through these events, the network produced new insights and consolidated understanding around:
- ethical management of collaborations between small archives and larger institutions;
- knowledge sharing between creative industries, Digital Humanities and other adjacent disciplines
- community archiving as an intervention in community self-knowledge and organisation.

Building on the foundations of this research network, the research grant Full-Stack Feminism received funding through the second phase of the AHRC-IRC Collaboration in the Humanities with the aim of developing an intersectional feminist framework for digital arts and humanities practice and research.

Developing a Digital Framework for the Medieval Gaelic World

Queen's University Belfast (UK lead)
National University of Ireland Maynooth (Ireland lead)
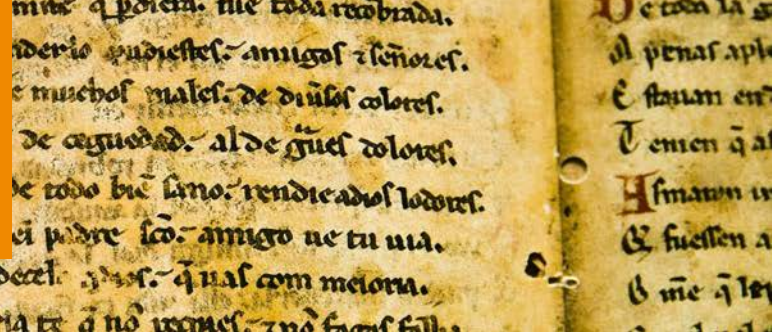
This network was set up to assess and develop the capacity for digital studies within Gaelic language, literature and history, with an ambition of improving applications of technology in future research and enabling more intelligent, innovative use of resources. Conscious of how editorial mediating of texts impacts meaning and perception, and how this is amplified in digital settings, the network examined how digitisation has changed the way both scholars and the public access, interact with and read materials from the medieval world. Findings mapped out several major area of concern for the field, including appropriate data standards, interoperability, sustainability and the public impact of digital projects.

Through a series of workshops, the network began to identify risks, opportunities and recommendations for the field, including through:

- A commissioned report exploring the areas of concern from an information technology perspective, including a set of recommendations focused on the production and maintenance of permanent URLs
- Flagging the need for institutions and funding bodies to provide financial and technical support to ensure the sustainability of digital outputs
- A special additional workshop aimed at postgraduate students, focusing on designing digital projects, accessing funding and working with data standards

Following from this network, the research team has received three further awards from AHRC:

- a major four-year research grant to develop 'A Chronology of the Medieval Irish Lexicon'
- a fellowship grant to work on 'Digital visualisations through the Chronicle of Melrose Abbey'
- the three-year research grant co-funded by IRC 'Harnessing Digital Technologies to Transform Understanding of Ogham Writing'.

Collaborating research organisations:
University of Glasgow
University College Cork
University of Cambridge

Project partners:
British Library
National Library of Scotland
Library of the Royal Irish Academy

Archives in the UK/Republic of Ireland and AI (AURA)

Bringing together Digital Humanists, Computer Scientists & Stakeholders to unlock cultural assets

Loughborough University (UK lead)
Dublin City University (Ireland lead)

The AURA network was developed in response to the wealth of cultural assets currently held out of reach from users in 'dark' digital archives. Built on the premise that access to archival materials is essential to producing new knowledge and fostering public engagement, this interdisciplinary network set out to scope the potential of Artificial Intelligence to increase the accessibility and usability of archives.

Especially in born-digital archives, there is often a tension between the prospective archive user's interest in open access and the source creator's authorship, ownership and right to privacy.

Application of AI can mitigate these challenges through:
- identifying whether resources are confidential
- expunging personal data to enable partial viewing of documents
- mining content for named entities (such as names, dates and events) to link across and outside of an individual archive

AURA hosted a series of workshops to unpick the intersection between open data and privacy and explore the challenges and opportunities which AI offers archives, archivists and archive users. The majority of papers delivered through these workshops, as well as open-access articles published in two journal special issues, are publicly available via the project website.

Collaborating research organisations:
The National Archives
Southeast Technological University
University of Galway

Project partners:
National Library of Ireland
National Library of Scotland
British Library
Irish Traditional Music Archive
International Council on Archives
University of Edinburgh

Communicating Hidden Archaeological Monuments and Heritage Landscapes to Different Audiences through Advanced Digital Technologies

University of Bradford (UK lead)
University College Cork (Ireland lead)

Through digital documentation and visualisation, public audiences can transcend both geographical and knowledge-based barriers to discover hidden archaeological landscapes, building and monuments which have otherwise very limited access routes.

This network set out to trial digital methods for enhancing heritage resources in collaboration with both heritage professionals and socially inclusive public audiences.

Foundational work assessed the technological needs of researchers to develop public virtual accessibility to hidden monuments and heritage landscapes, including evaluation of the logistical steps and ethical considerations necessary to this work.

The reciprocal relationship between existing datasets and digital documentation and visualisation was also examined, highlighting how current records could be integrated and updated with citizen science findings.

Finally, the network developed an integrated methodology which draws on digital technology, citizen science and artistic mediation to develop and deepen virtual public engagement with hidden heritage.

Five discrete archaeological landscapes (dating from the Bronze Age through to the medieval) were identified across Rathgall and the Burren to provide case studies for this project.

This network was successful in securing funding from AHRC for a follow-on funding project entitled 'Kilmallock - Derry - Bradford: Twinning North-South Irish Walled Towns and UK Cities of Culture' (AH/Y007409/1).

The project draws upon the Irish Walled Towns Network established by the Heritage Council, supporting conservation monitoring and anchoring narratives.

This work will additionally build legacy for Bradford's role as the next UK City of Culture in 2025 through direct linkage to Derry as the first UK City of Culture and outreach work with the Irish diaspora in Bradford. AHRC investment of £150,000 in this follow-on work is matched by in-kind contributions from project partners valuing over £134,000.

Project partners:

Virtual Bradford

Historic Environment Scotland

Burren College of Art

The Discovery Programme

National Museum of Ireland

The Burren & Cliffs of Moher UNESCO Global Geopark

Caherconnel Archaeological Field School

National Monuments Service

Bradford Metropolitan District Council

Clare County Council, Wicklow County Council

Carlow Archaeological and Historical Society

Sarah O'Connor

3D CRAFT: Digitally recrafting lost interiors in Britain and Ireland

Project partners:
The Office of Public Works
The Discovery Programme
Virtual Building Engineering Lab

National Trust (UK lead)

Trinity College Dublin (Ireland lead)

3D CRAFT brought together leading heritage, conservation and research institutions across the UK and Ireland to build interdisciplinary, cross-border partnerships which explored the potential of digital technologies to capture and communicate the multi-layered character of historic buildings.

This approach was founded on new insights into construction and craft processes following a fire at Clandon Park, a National Trust owned historic house, in 2015. Whilst this disaster resulted in extensive destruction of artefacts and serious damage to the interior fabric of the building, the new exposure of its underlying framework became a critical site of study and learning about historical craftsmanship.

3D CRAFT took this case study as an impetus to develop a clear strategy for making heritage assets hidden under the surface of buildings visible to visitors through digital intervention. A narrated film was made to communicate the extraordinary physicality of the laid bare house to the researchers and partners in Ireland, with a digital animation of the Provost's House in Dublin used to demonstrated how a fully documented, intact house could be used to interpret Clandon Park post-fire.

Research questions, ideas and solutions put into development through project activities remain live, and will continue to be fed into the future research and interpretation of Clandon Park through the UK-Ireland partnership established through this network.

IIIF for research (IIIF4R) Network

**University of Glasgow (UK lead) Trinity College Dublin (Ireland lead)**

The International Image Interoperability Framework (IIIF) has been one of the most successful digital humanities innovations of recent years. Improving the ease and quality of sharing, annotating and manipulating digital images across institutional and national boundaries, IIIF has revolutionised access to collections held by libraries, archives, galleries and museums across the globe.

The IIF4R network set out to investigate the vibrant potential for new forms of scholarly discussion and interchange resulting from this technology. Workshops were open to interested members of the public alongside researchers, technical specialists, librarians, archivists and other professional users of heritage materials, with reports and presentations from these sessions

made available to libraries and heritage organisations to shape discussions around the design of IIF resources.

The network also worked with the international IIIF consortium (iiiF-C) to carry out a preliminary study of how IIIF can support and change digital image-based research practice. Through a co-designed survey, IIIF4R and iiiF-c gathered data on current researcher preferences for working with digitised collections in order to map opportunities for IIIF to enrich existing practices.

This study has informed iiiF-C's support for the IIIF research community and continues to inform the implementation of the framework in heritage organisations.
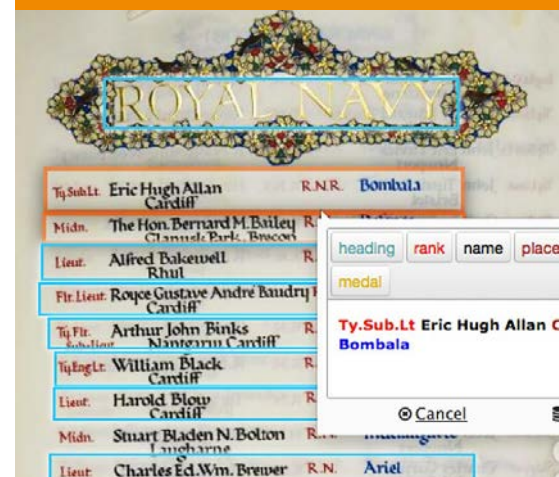
Collaborating research organisation:
University of Wales

Project partner:
IIIF Consortium (IIIF–C)

The network has started an important conversation between researchers, heritage organisations, and technical organisations around the use of digital images in research.

8

Make Film History

Opening up the Archives to Young Filmmakers

Kingston College (UK lead)
University College Cork (Ireland lead)

Make Film History has opened audio-visual archives to emerging filmmakers in partnership with the British Film Institute (BFI) National Archive, BBC Archive, Northern Ireland Screen Digital Film Archive, the Irish Film Institute and the London Community Video Archive. Collectively, 270 films have been made available to emerging filmmakers and educators in the UK and Ireland, building on the Archives for Education scheme established and maintained by the Make Film History research team.

This network was established to remedy the lack of standardised framework to open audiovisual archives up to creative reuse by filmmakers in education and the community. Without significant film or broadcaster funds to pay commercial license fees, emerging filmmakers could not learn and create through reuse of national audiovisual collections across the UK and Ireland. The model established by Make Film History ensures sustainable accessibility to this material through educational licensing agreements. Since the network was established, 84 higher education institutions and 11 organisations that deliver film festivals and training have signed up to Archives for Education. The network has developed new partnerships between academic researchers, audio-visual archives, cultural heritage organisations, schools and training providers, and regional film festivals.

Over the duration of this networking award, 61 new film outputs were created by emerging filmmakers through a series of workshops and virtual film camps led by professional filmmakers. These outputs include video essays and documentaries produced by students which integrate archival representations of London into contemporary stories of life in the city. Films produced through this initiative were screened at film festivals in Cork, Rathmullan, Glasgow and Leeds.

The Make Film History network also prepared the research team for a large-scale collaboration with Screenocean and Reuters on the Newsfilm for Education scheme, which provides unprecedented access to one of the world's oldest, largest, and most renowned video archives. This initiative, inspired by Make Film History, licenses raw video coverage of international news to academic institutions for creative reuse, including over one million clips from the Reuters News Archive.

Make Film History won the 'Excellence in Unlocking the Value and Potential of Archives Award' at the International Federation of Television Archives (FIAT/IFTA) Archive Achievement Awards following a nomination from BBC Archive. The project was also nominated for the Online Education Resource category in the 2023 Learning on Screen Awards.

The Make Film History network was successful in bidding for additional AHRC funding to mark the BBC centenary. From June to October 2022, the research team offered emerging filmmakers across the UK access to 150 films from BBC Archive for creative reuse in short film projects.
Through workshops in Belfast, London, Glasgow, and Leeds, 50 emerging filmmakers created 46 short films inspired by 100 years of BBC storytelling, mentored by some of the leading filmmakers in the UK working with archive film in their practice. The short films produced showcase an extraordinary range of new voices and creative responses to 100 years of film and social history.
This exciting new work premiered at sold-out screenings in Belfast, London, Glasgow, and Leeds at the end of October and is now available to watch on the project website (www.archivesforeducation.com).

A selection of the 46 films was also published on the BBC 100 website.

"This project goes beyond rights issues and opens up selected collections for creative re-use. It is a great example of a cross-border collaboration between AV archives and academia... showing the value of the archive as an inspirational source and supporting a practice-based education of next generations of filmmakers."
– FIAT/IFTA Archive Achievement Awards Judges' response

Digital Edgeworth Network

University of Oxford (UK lead)
University College Cork (Ireland lead)

The manuscript archive of the celebrated 18th century Anglo-Irish author Maria Edgeworth and her family poses a series of challenges and opportunities for international collaboration and digital research. The rich and varied collection of papers, which includes manuscript drafts, drawings and family correspondence drawn from across three centuries of Edgeworth family history, are split almost equally between the National Library of Ireland in Dublin and the Bodleian Libraries in Oxford.

The _Digital Edgeworth Network_ formalised a series of intersectoral partnerships across higher education, libraries, heritage and tourism. Together, the network developed a number of outputs including enhanced digital access to the archive, scholarly analysis of the archive listings using Digital Humanities methods, and contributions to the tourism and heritage sector.

As a result of the project some 4000 pages from the Edgeworth archive at the Bodleian libraries are now searchable.

The research team also digitised a typewritten manuscript 'calendar' held at the Bodleian itemising the correspondence. A plan has been agreed with the National Library of Ireland to digitise the Edgeworth correspondence there.

The network established a continuing relationship between a heritage centre and two academic departments in Universities (UCC and Oxford).

A display panel prepared by the team outlining the family relationships was donated to the heritage centre. A creative writing competition in local schools at the annual Edgeworth festival promoted educational understanding of the research material and connections between schools, universities and the heritage centre.

Project partners:
Edgeworth District Development Association
The Edgeworth Society
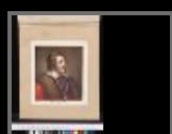**Maria Edgeworth Centre**
Bodleian Libraries (Weston Library)
National Library of Ireland
Royal Irish Academy
Digital Repository of Ireland
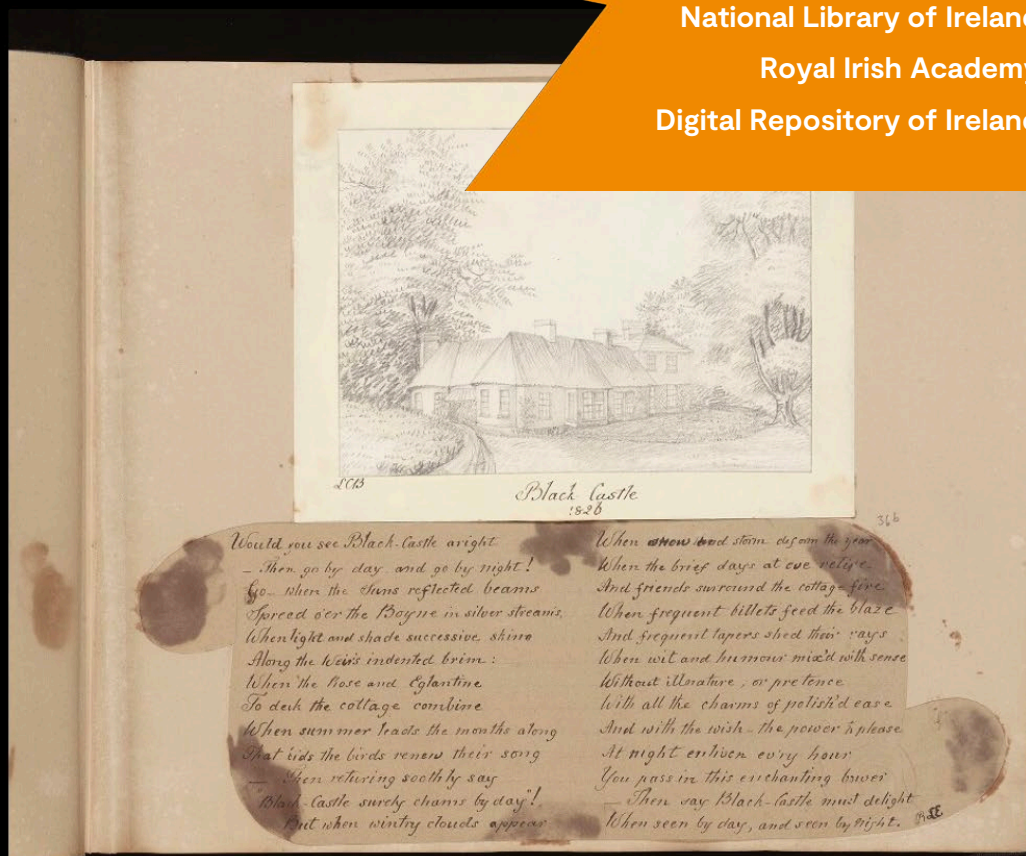
Premodern Digital Cultural Heritage: networking Open-Access Image Repositories of ancient and Medieval content

University of Oxford (UK lead)
University College Dublin (Ireland lead)

The *Premodern Digital Cultural Heritage* network was developed to resolve two key issues for digital archive projects engaging with cultural heritage issues: duplication of effort between projects and limited audience development outside of academia.

The network drew together open-access digital projects based in the UK and Ireland with a focus on ancient and medieval cultural heritage, including art, architecture, and archaeology.

Drawing on these thematic similarities, the network ran a series of workshops to synthesise and develop the knowledge of practitioners and researchers with regard to project missions, operating processes, sustainability, usability and accessibility for different audiences and outreach to younger audiences.

The research team also ran a user survey to gather data on how users from various backgrounds – from academia to local interest groups – use digital heritage resources.

The network pulled information from these collaborative events to design flexible teaching units on ancient and medieval cultural heritage topics which can be incorporated into secondary level school curricula across the UK, Ireland and further afield.

These teaching materials are based on materials contributed by the project partners and freely available to the general public via the Premodern Digital Cultural Heritage website.

Comparing and Combining Early Modern Irish and Scottish Land Records
New Transkribus and Natural language processing approaches

This network connected digital humanities researchers with civic and public stakeholders to scope the potential of transcribing and natural language processing software in making land ownership records more accessible and comprehensible. In partnership with the National Records of Scotland (NRS) and Property Registration Authority of Ireland (PRAI), this network tested Transkribus against the Irish Registry of Deeds and Scottish Register of Sasines.

An exceptional 91.7% accuracy rate (close to professional transcription rate) was recorded from the final model developed for the Irish Deeds. The volume of non-standard Latin and paleographic variation in the Scottish Sasines led to much more variable results, establishing challenging but clear parameters for the future scaling-up of this work.

The network expanded to include partnerships with three local authority archives in Yorkshire responsible for the only comparable set of deeds material for England.

This enabled the network to compare and contrast the compatibility of datasets across three nations. Knowledge generated through this project informed the development of Tailte Eireann's Registry of Deeds Digitisation Strategy. The research team published an open access guide, aimed at a public readership, to the Memorials and Transcription Books of the Irish Registry of Deeds, who acknowledged this publication as a critical development in opening up their records. Archival partners in the Tailte Eireann were recognised for their contribution to this project with an Excellence and Innovation award and a further nomination for the Irish Civil Service Excellence and Innovation awards.

Experience together: a live visceral sense of dance performance across the internet

Virtual broadcast is having an increasingly broad and profound impact on the way that the general public accesses live performance across the world. International broadcasts from national companies based in the UK have been met with vast success since 2009, owing to the fractional costs and travel involved in either purchasing a broadcast ticket from a local cinema or paying for a livestream directly into your home.

More recently, smaller performance arts companies have found virtual broadcast an increasingly important part of their business model, with practitioners and technologies alike striving to new heights to counter the impact of pandemic restrictions.

This project was designed with creative industry co-creation at its centre, with the network including researchers and practitioners from psychology, sociology and anthropology, media and entertainment, computing, choreographic practice, dance scholarship, music and design. The network set out with a dual aim of improving the actual praxis of capturing and sharing performance whilst building a resilient case for the sustainable and inclusive benefits of offering virtual broadcasts. The learnings captured through this multidisciplinary partnership were shared with professional networks and public audiences through a variety of digital environments, including performance, websites, blogs, social media and mainstream media.

UK–Ireland Collaboration in the Digital Humanities

Research Grants

Interactional variation online

Harnessing emerging technologies in the digital humanities to analyse online discourse in different workplace contexts

Cardiff University (UK lead)
Mary Immaculate College (Ireland lead)

The COVID-19 pandemic enforced deep global change in workplace communication. The 'digital pivot' took place at great speed and, for many workplaces, without an established infrastructural foundation, training or review process. *Interactional Variation Online* set out to develop the next generation of analytical frameworks to facilitate a better understanding of virtual discourse in workplace settings. This work is underpinned by consistent attention to how digital communication platforms and virtual meetings impact equitability.

This project drew on the expertise of researchers in the UK and Ireland and their collaborators as part of a two phased user-driven design. The work began with a survey of people's experience of online communication through the peak of the pandemic. 371 responses were received from individuals across a range of industries, including academia, pharmaceuticals, medical technologies, finance, real estate, IT, media, charity and creative arts. Analysis of these responses formed the baseline for the continuation of the project, with the resulting data from this survey capturing the seismic nature of change in communication technology since early 2020: 41% of respondents said that they never had online meetings before the pandemic and only 3% said they never had online meetings during the pandemic.

Phase two of the user-driven design involved consultative interviews with partners of the Project Advisory Group who contributed data to the project and inform the direction of design and analysis from the outset to maximise real-world applicability of findings. The issues arising from these interviews guided the development of the Interactional Variation Online corpus.

The multimodal corpus linguistics drivers behind the project mean that this research is predicated on the understanding that communication goes far beyond the verbal. The research team have based their analysis of a corpus of online interactions on a holistic understanding of how speech, gesture, intonation and collaboration intersect to create meaning. The team has examined, for example, what happens to turn-taking in virtual environments, who can speak when, and whether online meetings are more transactional and less relational than face-to-face meetings. Details insights on gained from the research will be published in the Routledge Corpus Linguistics Guides series in 2024.

The research team is continuously updating a suite of technical protocols designed to evolve standardised approaches to language use which are accessible and usable for other researchers, including non-technical experts in the Humanities. This set of resources is used to advocate for a multi-modal methodology when capturing and analysing interaction, demonstrating how to transcribe a gesture and align it with an utterance.

Collaborating research organisations:
University College Dublin
University of Nottingham
University of Aberdeen
University of Limerick

Project partners:
The Funding Centre
Cambridge University Press
Auctioneers Estate Agent
LimeTree Theatre and Belltable
Public Health Wales
Nottingham UNESCO Cities of Literature
Dublin UNESCO Cities of Literature
Irish World Academy of Music and Dance
Petroleum Technology Company

By synthesising existing knowledge from corpus linguistics with a new, evolving understanding of how remote working has radically altered workplace interaction, the research team behind Interactional Variation Online are ensuring that this significant step-change in the history of communications can be recorded in its full dimensionality. This theoretical development is now in the process of practical implementation through the development of industry-applicable strategies for communicative competence.

Tackling Online Hate in Football (TOHIF)
University of Loughborough (UK lead)
Dublin city University (Ireland lead)

Football is the most watched and played sport across the globe, with an estimated 3.5 billion fans worldwide. This sheer geographical reach positions football as an extensive medium for political, economic, cultural and social exchange on local, national and international levels, with key matches often becoming a powderkeg of built-up opinion.

Consumption of the sport is changing in the digital era. Digital broadcast and online fan culture are inarguable economic and cultural drivers of football, creating unlimited new channels of interaction with a new set of practices, rules, and experiences. The game has a historic record of social discord, hate speech and discrimination, which have been exacerbated exponentially through the conditions of this new environment.

Fans, players and officials facing prejudice-driven abuse have their experience amplified by the reach of online discussions, which extends far beyond the pitch, whilst policy makers, football governing bodies and grassroots anti-hate organisations are largely left playing catch-up with the rapidly shifting realm of online hate.

The aim of Tackling Online Hate in Football is to create a bridge between state-of-the-art quantitative data analysis, nuanced qualitative critical analysis and grassroots activism against hate speech.

In addition to conducting over 70 stakeholder interviews, the research team have developed hate dictionaries and machine learning methodologies to analyse an enormous digital dataset of tweets from the 2022 World Cup, 2021 Africa Cup of Nations, 2021 Copa América, and all European Championships since 2008.

By combining these research methodologies with active community engagement, the researchers and project partners behind TOHIF are synthesising cutting-edge thinking and knowledge exchange between academia and the football industry.

The research team are building a suite of open access resources which contributes towards the evidence base for scholarship into online hate in sport whilst mapping out avenues of cultural change.

One critical report assesses how English football's institutions, organisations, and clubs have responded to the problem of racism on social media, concluding with recommendations as to how systemic failings can be addressed.

Further assets include a scoping paper mapping out existing scholarship into online hate and sport, and multiple examples of focused analysis based on key moments in the mediasation of sport over the last few years.

From workshops designed to empower industry stakeholders facing online hate through to fan-facing podcast appearances to raise awareness of this issue, TOHIF balances developing knowledge of a continuously shifting landscape with practical, proactive advocacy for enacting positive social change.

Project partners:
Immigrant Council of Ireland
Sport against Racism Ireland,
Show Racism the Red card
Kick it out,
Football Supporters Federation
Football Supporters Association
Football Association Wales
Sporting Equals

Full stack feminism in digital humanities

University of Sussex (UK lead)
Maynooth University (Ireland lead)

The aim of [Full Stack Feminism in Digital Humanities (FSFDH)](#) is to show areas within project development that have unconscious bias; predominantly within data models, archives, access rights and use of access tools.

Focusing on 3 areas (stacks) it explores – data and archives, infrastructure, tools and code, access experience and integration.

FSFDH will provide an open source toolkit, enabling Digital Humanities Communities to follow a structured method to guard against biases. By challenging head-on, systems set-up to indirectly discriminate, it aims to avoid the automated bias in algorithms, gendered/binary information systems and also the routes via which information is documented, digitized and prioritised.

Digital Humanities (DH) does have a good impact on society – FSFDH is unafraid to challenge the limits of systems and via intersectional feminist theory is building a community that is able to embrace the needs of both its industry but also that of wider society.

DH is also faced with a historic background of heteronormative and pre-gendered systems.

FSFDH both enables and improves public access to digital cultural heritage whilst blending this with intersectional feminist methods.

Social Scientists, Policymakers, Computer Scientists, Software developers, Data Journalists, Archivists/Community Archivists and Digital Artists can all find support and guidance via the toolkit in their development of policy.

Feminist art making histories

Loughborough University (UK lead)
Dun Laoghaire Institute of Art, Design and Technology (Ireland lead)

This project sets out to preserve the legacy of feminist artists by creating a unique digital archive of five decades of art history across Ireland and the UK. The research team has digitally captured oral histories and ephemeral memorabilia relating to the development of ideas, networks, events, exhibitions, practices and works associated with the feminist art movement from the 1970s to the present day.

Through partnership with the Digital Repository of Ireland, this project creates a permanent digital archive of these works which will enshrine the transformative and radical advances of this generation for future practitioners, researchers, curators, historians, cultural policy makers, and public stakeholders.

Feminist Art Making Histories has utilised digital transformation as a means of preserving memories, identities and cultures against the increasingly time-urgent limitations of living memory and ephemeral record-keeping. Surviving key practitioners of the 1970s-1990s are now in their 60s-90s, and loss of tangible and intangible memories put hidden heritage at risk of becoming permanently lost.

This is especially the case as the feminist art movement across Ireland and constituent parts of the UK has not received the equitable curatorial, museological, or historiographic attention which its sister movements have benefitted from in, for example, London, New York, and California.

The research team is recording their development of new methodologies for collating and presenting similar resources. This learning will be shared across the digital humanities community to collaboratively develop best practices in archiving the at-risk histories of similarly marginalised groups.

Collaborating research organisation:
Technological University of Dublin

Project partners:
Cambridge Digital Humanities
Digital Repository of Ireland
Irish Museum of Modern Art

Collaborating research organisations:
University of Cambridge
University of Leeds

Project partners:
New Hall Collection
Digital Repository of Ireland

Project Radiocarbon: Big data, integrated cross-national heritage histories

Manchester Metropolitan University (UK lead)
University College Dublin (Ireland lead)

Collaborating research organisations:
University of York
Historic England
Historic Environment Scotland

The development of the radiocarbon (^{14}C) dating technique in the 1950s revolutionised archaeological thought. This major new approach enabled for the first time accurate scientific dating of past activity over 60,000 years of human history, and a vast quantity of money has been spent producing 14C measurements in Ireland and the UK.

However, due to inconsistencies in reporting, archiving and curating – particularly across international borders – these data are often compromised and not curated in line with Findable, Accessible, Interoperable and Reusable (FAIR) principles. Variation in the definition of time periods, improper recording practices and a lack of training across the sector put these vast datasets at serious risk.

Project Radiocarbon collaborated with project partners across the islands of Britain and Ireland to clean, restore and archive c. 29,000 legacy measurements from 75 years of modern archaeological research across 60 millennia. The initial production of these data cost over £11.6 million, 30 times the total of the initial collaborative investment AHRC and IRC awarded to this project.

The research team also created the first ratified descriptors for the periodisation of archaeological activity across the island of Ireland, which made heritage data from both its jurisdictions interoperable, findable and discoverable.

The approaches, methods and digital tools developed through this project have immense potential for wider application, proving the exceptional potential of international collaboration to maximise the legacy of past scholarship in order to build a more connected and resilient future.

> This project has preserved circa 29,000 radiocarbon measurements taken over 75 years. The cost of originally producing this data would have been over £11.6 million – 30 times the amount invested in this project between AHRC and IRC

Project partners:
The Heritage Council, Ireland
National Monuments Service, Ireland
Transport Infrastructure Ireland
Department for Communities, Northern Ireland
Royal Commission for Ancient and Historical Monuments Wales
The Discovery Programme, Ireland
National Museum of Ireland

OG(H)AM: Harnessing digital technologies to transform understanding of ogham writing from 4ᵗʰ Century to 21ˢᵗ

University of Glasgow (UK lead)
Maynooth University (Ireland lead)

The ogham script is highly unusual among world writing systems. Consisting solely of a succession of straight lines and notches, it is read vertically and written in three dimensions across the edge of a solid object. These three-dimensional texts form the earliest evidence for the Gaelic languages, positioning them as immensely valuable objects for historical linguists. The ogham script also has an enduring social value, reflected in its increasing popularity for decorative, symbolic and creative functions.

The OG(H)AM project set out to create 3D documentation of all c.640 examples of epigraphic ogham in various media held by the National Museums of Scotland, Ireland, Northern Ireland and Wales, the British Museum, and the Manx Museum, as well as the over a hundred examples of the ogham script used in the Gaelic manuscript tradition from the 8th to the 19th century.

This all-islands approach builds on the 'Ogham in 3D' website, which captured around 25% of surviving ogham through photographs, 3D models and supporting information.

By expanding the technical, thematic, chronological and geographical scope of this previous work, the OG(H)AM research team have radically expanded the possibilities for multidisciplinary analyses of these texts. This includes the development of authoritative guidance on accurate and authentic use of ogham for creative and commercial practitioners who may wish to enrich their work with this Gaelic cultural heritage.

The project was designed with a focus on collaborative working, resource-sharing and skills, which has strengthened partnerships between academia, museums, libraries, and state heritage agencies across all 6 nations in the UK, Ireland and Man. The research team have additionally worked to position ogham in the vanguard of global epigraphical studies by engaging with research projects, consortia and research infrastructures across Europe.

These conversations have bolstered the collection, management and applications of the collected data through ensuring consistent standards and interoperability.

Project partners:
Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW)
Dublin Institute for Advanced Studies Ireland
Historic Environment Scotland
The British Museum
National Museums of Scotland
Manx National Heritage
The Discovery Programme
National Monuments Service (Ireland)
National Museum of Ireland
National Library of Scotland
National Museum of Northern Ireland
The Manx Museum
National Museum of Wales
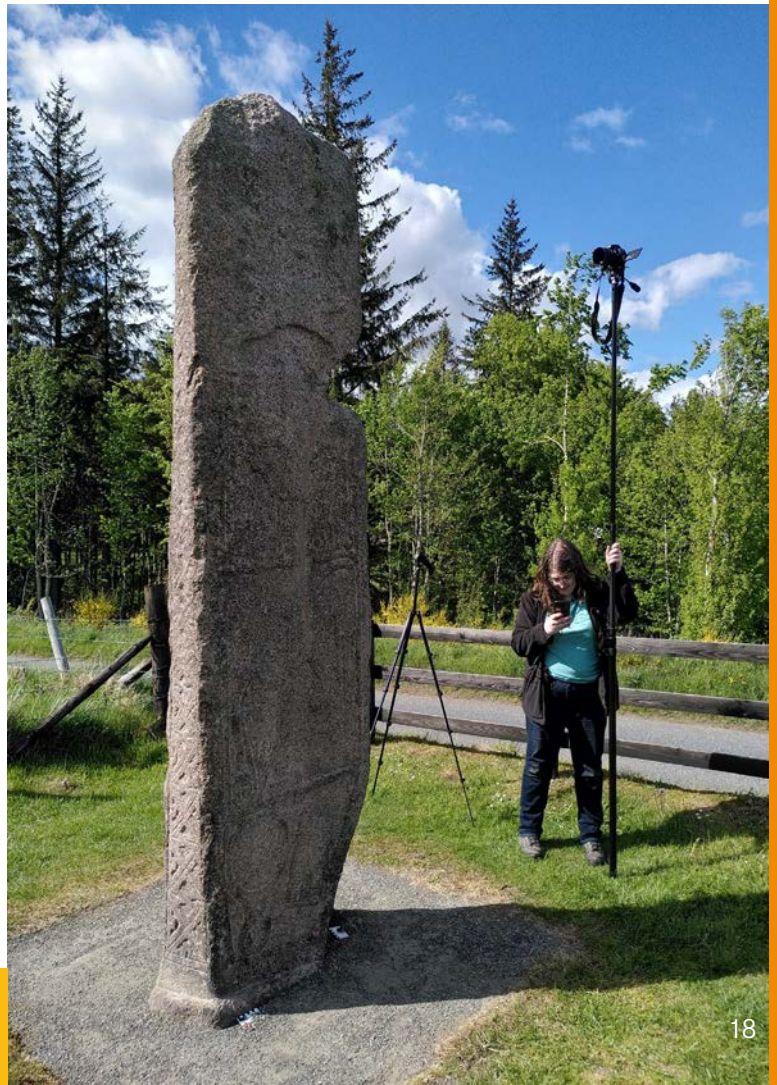
Decoding hidden heritages in Gaelic traditional narrative with text mining & phylogenetics

University of Edinburgh (UK lead)
Dublin City University (Ireland lead)

The narrative traditions of Scotland and Ireland are richly intertwined, encapsulating much of the two nations' joint cultural history.

This project set out to rediscover this legacy through the stories preserved in a vast corpus of Gaelic folkloric manuscripts held by the Tale Archive of the School of Scottish Studies Archives and the Main Manuscript Collection of the Irish National Folklore Collection.

Fusing deep qualitative analysis with cutting-edge computational methodologies, the project team are digitising over 80,000 manuscript pages.

Leveraging new digital tools and techniques, the team will decode, interpret and curate these hidden heritage assets to bring them newly to life.

Recent advances in Natural Language Processing and machine translation will bolster the wider accessibility of this corpus of texts, whilst data mining and phylogenetic techniques are being employed to develop new understanding of how Scottish Gaelic and Irish Gaelic tales converge and diverge.

Map and graph based visualisations of corpus data and resulting analysis will be made publicly available via a new aggregator website.The project team has already received further funding from Bòrd na Gàidhlig (The Gaelic Funding Board) and the Scottish Government to develop these tools, demonstrating regional recognition of their cultural significance.
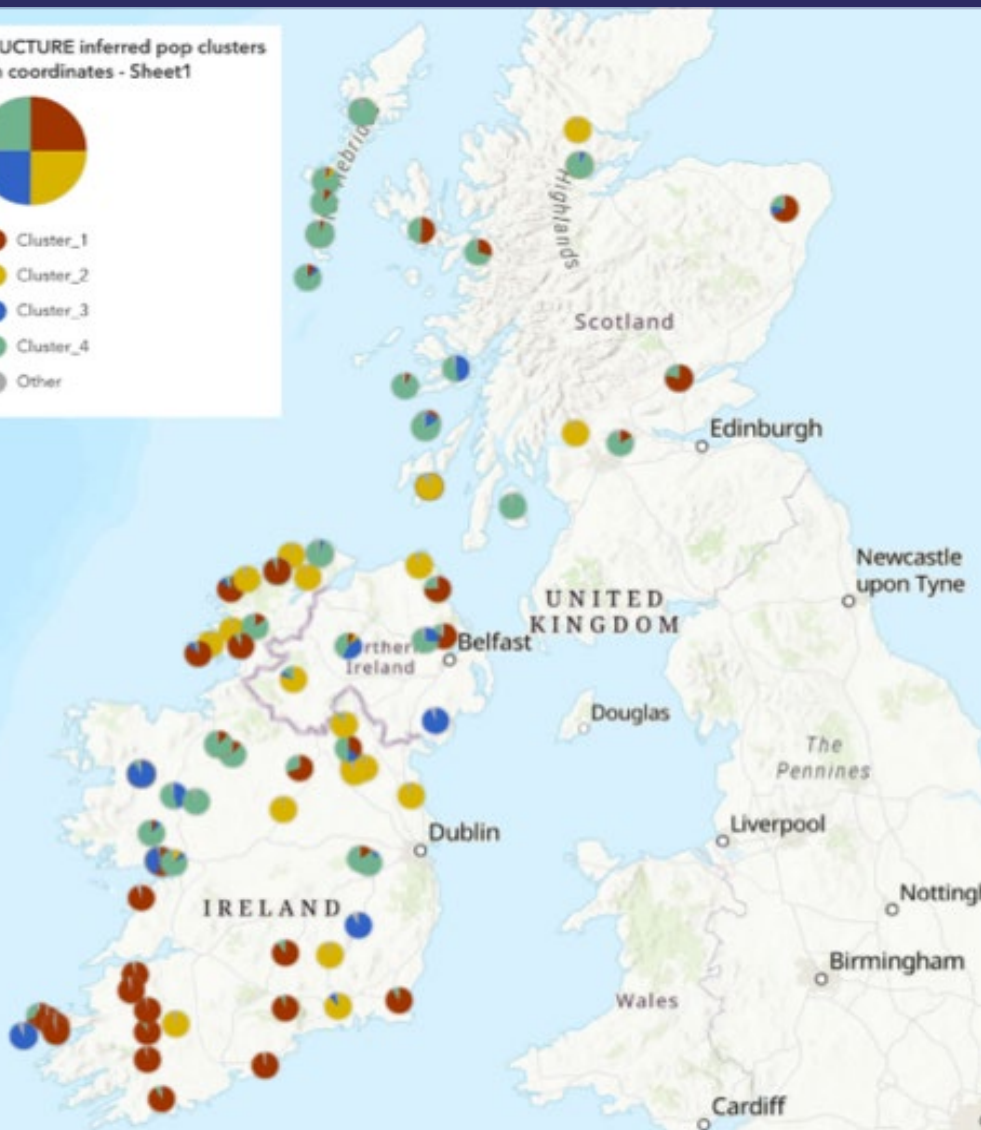
Collaborating research organisations:
Durham University
University College Dublin
Indiana University
Dublin City University

Project partners:
Tobar an Dualchais—
Kist o Riches
Government of Ireland: Tourism, Culture, Arts, Gaeltacht
Soilise
School of Scottish Studies Archives
Irish National Folklore Collection
Duchas

Women in Focus: Developing a feminist approach to Film Archive Metadata and Cataloguing

University of East Anglia (UK lead)
Maynooth University (Ireland lead)

Research conducted recently has highlighted that pre-existing assumptions are leading to items being missed from data-sets, and women being missed from film archive records or cataloguing.

'The Invisible Women' analyses what actions archives can undertake, provides key practical suggestions to improve, and uses two national collections as a benchmark to see how it has already been done, thus demonstrating the vast hidden heritage that is behind women's creativity.

The project also builds on a previous pilot study from 2019 that used records from six UK regional archives. This showed a definite lack of metadata regarding women filmmakers.

There being considerable practical issues in delivering such a commitment, the project works with archives to catalogue women filmmakers from the Institute of Amateur Cinematographers at the East Anglia Film Archive (EAFA) plus the collections of the Irish Film Archive (IIFA).

New Digitised Films will also be made, demonstrating the potential for more robust, clearer and timeless records (that can then be effectively catalogued).

The toolkit produced via the project is able to guide archiving into the future, and help archives use and understand better, the items they already have, and are due to collect.

Collaborating research organisation:
University of Sussex

Project partners:
Irish Film Institute (IFI)
Irish Film Archive
East Anglian Film Archive
Wessex Film and Sound Archive
Amateur Movie Database

Collaborating research organisation:
University of Glasgow

C21 Editions: editing and publishing in the digital age

University of Sheffield (UK lead)
University College Cork (Ireland lead)

C21 Editions aims to both research and lead academic digital editing via studying data standards within items such as social media. It also embraces the gate-keeping and statistical production techniques of Digital Humanities via the study of computational analytical methods, and places this within the publishing realm of digital editions.

A "scholary edition" is deemed an expertly reviewed and policed text, that brings consistency and a methodological approach. Unfortunately, such items are in danger of becoming out of date due to digitalisation.

C21 has, as an aim, to establish the routes and rules via which scholarly editions can be published into the future. It will also produce, via the project, two digital editions with highly noticeable effect. These will include items which are not yet published.
These editions will establish a procedure by which a proposed data standard can then be benchmarked.

A toolkit, the two editions, plus the data standard will be made available via the National Library of Ireland. Access will then be available freely to the wider institution and scholarly audience.

Because there is a lack of machine based techniques able to support the study of culture, there is similarly a lack of guidance on preserving digital materials. C21 rectifies this via its engagement with experts and investors and ultimately through producing sound guidance, enabling scholarly editions to become timeless.

OS200: Digitally re-mapping Ireland's ordnance survey heritage

Two hundred years ago, Ireland became the first country to be mapped entirely at the large scale of six inches to one mile – a significant milestone in the global history of map-making. This once-connected corpus of material has since become fragmented and scattered across different collections.

The research team behind OS200 have utilised new and innovative digital methods, techniques and tools to reconnect and enrich these materials, restoring the heritage record developed over three decades of Ordnance Survey (OS) efforts. The project has created a single freely-accessible digital platform which recreates the connections between memoirs, sketches, letters and name-books with the First Edition Six -Inch Maps. This tool will radically alter the possibilities for uncovering otherwise hidden and forgotten stories recorded by OS workers as they created this landmark record.

The OS200 research team have further worked to embed the legacy of these materials within academic, performance, volunteer and public communities through community-facing collaborations. This has included a seminar on 'Singing Places' delivered in partnership with the Irish World Academy of Music and Dance, an interdisciplinary event which welcomed members of the public to contribute to the understanding of how music can preserve localised heritage and place-based identity.

A collaboration with the National Lottery Heritage Fund cross-community project, 'Mapping Monuments', resulted in an upcoming travelling exhibition which uncovers the 'hidden heritage' of the OS Lough Foyle Baseline, in collaboration with the Causeway Coast and Glens Heritage Trust.

Queen's University Belfast (UK lead)
University of Limerick (Ireland lead)

Collaborating research organisation:
Dublin City University

Project Partners:
Department for Communities
Royal Irish Academy
Government of Ireland
Digital Repository of Ireland
Mapping Monuments Community Heritage Project

Typhoid, Cockles and Terrorism

The turbulent history of Anglo-Irish typhoid control in revolutionary Dublin

University of Oxford (UK lead)

University College Dublin (Ireland lead)

As evidenced through the past few years of global events, social phenomena play a crucial part in the trajectory of infectious diseases. This project set out to build a solid critical understanding of how imperial and revolutionary politics shaped public health and typhoid control in 20th century Dublin. Blending historical approaches with digital humanities methods, the research team are developing a pioneering open access database of geospatially coded disease, infrastructural, hydrological, and meteorological data as well as typhoid-related cultural ephemera.

This data is essential to reconstructing an accurate narrative of how British bacteriological and sanitary interventions proved impractical in Dublin and the long-term consequences of colonial politics on Irish public health. Building on the multi-award winning international Typhoidland exhibitions previously delivered by this research team, the project is developing a diverse suite of educational resources based on new understandings of how mismanagement of infectious disease impacted local populations.

This will include a major blended open-access exhibition hosted by the Royal College of Physicians in Ireland (RCPI), with a blend of physical and digital elements. Outreach will further be amplified through production of a graphic novel, cutting-edge animations, virtual tours of disease and sanitary interventions over time, and games on vaccine development and hygiene. This project will deliver learning on the social factors of infectious disease response to a wide range of audiences.

Digital outputs will be available to the general public via the project website and educational resources will be integrated into museum partners' outreach programmes for schools and local audiences. The project team has already hosted a workshop for social scientists and historians from the University of Oxford and University College Dublin, with the objective of exploring the different social dimensions of disease control and developing strategies for how social scientists can inform decisions and policy-making going forward.

Project Partners:

Dublin City Council

Royal College of Physicians of Ireland