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Building data infrastructures

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Why social science data infrastructures?

- Provide easily accessible high quality data to meet societal challenges
- Facilitate new discoveries through secondary analysis, comparative analysis, interdisciplinary research and new methodologies
- Foster high standards and promote research integrity
- Maximize value for research funders
- Preserve national social heritage
- Connect with European and world data networks

Contexts for development under PRTL

European context

ESFRI Roadmap (2006)

- Pan-European research infrastructures
- Five pillar SSH infrastructures:
 - CESSDA, CLARIN, DARIAH, ESS, SHARE

National context

HEA/FORFÁS Report (2007)

“The absence of an adequate national data archive is a serious impediment to social science research in Ireland, as well as to research undertaken in other countries that is inclusive of data pertaining to Ireland.”



Irish Social Science Data Archive

- “Ireland’s leading [centre](#) for quantitative data acquisition, preservation, and dissemination. Based at UCD Library, its mission is to ensure wide access to quantitative datasets in the social sciences, and to advance the promotion of international comparative studies of the Irish economy and Irish society.”
- Established under PRTL12, received additional support under PRTL14. Currently supported by UCD Library
- Flagship datasets include:
 - Growing up in Ireland
 - TILDA
 - EU-SILC



All-Island Research Observatory

- Funded as part of the ISSP under PRTL14
- [Centre](#) for spatial analysis in NIRSA at Maynooth University
- Undertakes academic and applied mapping research and produces spatial datasets and specialist tools to aid in their analysis.
- Provides a suite of free public mapping and data visualisation toolkits aimed at improving evidence informed planning and also undertakes contracted applied research and consultancy projects in the area of socio-demographic and economic analysis, spatial planning and environmental analysis.
- Delivers a series of training and development workshops in the area of geographical information systems (GIS) and evidence informed planning.



Measurement Instrument Database for the Social Sciences

- A [repository](#) for instruments used to collect data from across the social sciences
- Housed at the Whitaker Institute in NUIG
- Funded as part of the ISSP under PRTL14
- Flagship instruments
 - Wolf Motor Function test
 - Quality of Life in Adult Cancer Survivors
 - McGill Friendship Questionnaire



Irish Qualitative Data Archive

- A central [access point](#) for qualitative social science data generated in or about Ireland. Frames the parameters and standards for archiving qualitative data within the Irish research community
- Based in NIRSA at Maynooth University
- Established in 2008 as part of the ISSP under PRTL14 with additional support under PRTL15
- Key datasets and resources
 - Growing Up in Ireland
 - Life Histories and Social Change
 - Teaching Resources



Digital Repository of Ireland

- A national trusted digital [repository](#) for Ireland's social and cultural data. The repository will link together and preserve both historical and contemporary data held by Irish institutions, providing a central internet access point and interactive multimedia tools. As a national e-infrastructure for the future of education and research in the humanities and social sciences, DRI will be available for use by the public, students and scholars.
- Six academic partners: RIA, MU, TCD, DIT, NUIG and NCAD; funded under PRTL15
- Social science demonstrator:
 - Irish lifetimes

ISSP Data Infrastructures: Achievements

- Network of repositories and data services
 - Protocols, training workshops
- Scaling up
 - Example: DublinDashboard
- European engagement
 - Example: DASISH FP7 Infrastructures project
- Enhanced potential to attract major funding
 - Example: RESCuE FP7 Collaboration project

ISSP Data Infrastructures: Challenges

- Absence of a sustainable funding model
 - Threatens core functions
 - Preservation
 - Data integrity and data protection
 - Limits capacity to integrate with European and world networks
 - Damages reputation and wastes resources

Threats to core functions 1: preservation

“What will be the point of storing all this scientific data if, a century from now, it has degraded, been corrupted, or is simply too difficult for anyone but a well-equipped expert to use? Over time non-maintainability of essential hardware, software or support environment may make the information inaccessible and/or users may become unable to understand or use the data.”

– Kvalheim and Kamme (2014)

Threats to core functions 2: data integrity and data protection

- Key principles: consent, authorisation, integrity and data security
- However:
 - Requires management and support at all stages of the research process from data collection to dissemination
 - Increasingly complex landscape
 - New data types
 - Changing legislation (Schmidutz et al. 2013)

Further threats

- Limited capacity to engage with European research infrastructures e.g.
 - In order to be a full member of CESSDA , a service provider “must be appropriately supported (financially and operationally) by the individual member states’ ministry of research or a delegated institution.”
- Reputation
 - Researchers and other stakeholders unwilling to engage

Conclusion

- ISSP data infrastructures have achieved much, but urgently need cross-platform, national support to move from a *reactive* to a *proactive* phase of development
 - Make decisions about funding and business models to ensure participation, preservation and access
 - Develop policies to actively support data sharing and re-use at all stages of the research process

References

- Kvalheim, Vigidis and Trond Kamme. 2014. “Policies for sharing research data in social sciences and humanities.” International Federation of Data Organizations for Social Science.
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