SUMMARY

The application of Geographic Information Systems (GIS) to research has two key benefits: it facilitates the analysis of data through visualisation and it provides a method for disseminating research findings in an accessible and impactful way.

In the Library’s Geographic Information Systems (GIS) Survey 2012, respondents cited the lack of available training, skills and assistance at UCD as key barriers to using GIS. The Library addressed the need to provide both training and assistance across campus by introducing a centralised GIS support service, ensuring a positive impact for researchers who discovered how to: acquire relevant GIS skills; access and use relevant spatial data more easily; present research findings visually on a map; use GIS to facilitate analysis and interpretation; use GIS to reveal patterns and trends, thereby adding a further dimension to research; disseminate research findings in a more accessible way; increase their employability.

As a literary scholar working with ecologists to promote research on the cultural value of our coastlines, the GIS clinic was invaluable in showing me how to produce multi-layered maps which visualise the relationship between culture and ecology. The clinic provided an accessible step-by-step guide to GIS mapping, a tool which is very rarely used in my discipline. The maps I have made as a direct result of the clinic have already been used in conference presentations and research funding applications, and have helped to make my research more accessible to scholars outside my field.

Professor John Brannigan, UCD School of English, Drama and Film
Description
UCD Library’s GIS Service aims to address the lack of cross-campus support for GIS and responded to a situation where pockets of activity were centred in a few Schools and Research Institutes & Centres.
Recognising the wide range of disciplines which can benefit from using GIS, the GIS Library Service sought to develop a model which would reach out to and assist all potential users of GIS in the UCD research community.

How the services has delivered
• Developing expertise within the Library and engaging the assistance of a PhD GIS researcher
• Subscribing to Ordnance Survey Ireland’s product MapGenie – a suite of mapping data for Ireland

Creating a GIS online guide which includes:
• Listing of sources for Irish geospatial data
• Step-by-step guides on using GIS to visualise data
• Details of GIS modules available within UCD
• Citing and referencing GIS data

Designing and delivering hands-on workshops, including:
• Introduction to ArcGIS: visualising environmental data
• How to put your data on a map: geospatial visualisation using Scribble Maps
• How to put your data on a map: geospatial visualisation using Google My Maps
• Display your historic map over modern data: georeferencing to enable visual comparisons
• Introduction to GIS for Humanitarian Studies

Introducing and running free drop-in GIS Clinics:
• One-to-one consultation service provided at the point of need by two dedicated staff
• 31 free GIS Clinics were held between January 2016 and May 2017
• Each GIS Clinic runs for 2 hours

Impact
The following research areas at UCD have benefited from the UCD Library GIS Service since its launch:
• Water quality in rivers
• Land use interpretation
• Urban regeneration
• Historical buildings locations
• Teaching Irish – dialects in Gaeltacht areas
• Forest management planning
• Livestock health – identifying infections
• Linguistic ethnography
• Geochemistry - analysing groundwater
• Printing industry - Iberian Peninsula
• Folklore – versions of prayers
• Health – ambulance journeys
• Waste management and treatment
• Expenditure on R&D globally
• Locations of US pharma companies in Ireland
• Traffic accident analysis to improve road design
Overview of access to our services

- The GIS online guide has been accessed by 154 different countries, reaching a global community via 27,906 views between March 2014 and April 2017.
- 58 unique visitors attended the GIS Clinics. In total, there were 81 visits made to the GIS Clinics.
- 194 UCD researchers, staff and students attended 12 hands-on workshops & presentations between September 2016 and May 2017.

Breakdown of attendance at GIS workshops and presentations by College

Testimonials from attendees at GIS

- I am very grateful to your GIS clinic team for all their help advice and support. I found the clinics invaluable for my research...The set-up of the clinics was great in that a person could drop-in when issues or queries arose and have them dealt with there and then, while at the same time, pick up new skills and information which saves a lot of time in the long-run.
- [GIS Clinics] have been extremely valuable in introducing me to the benefits and power of GIS in a very approachable and easy to understand manner. I've found they've really added to my skill set and I hope to use these skills more in future research and teaching practice.
- A great service, and very helpful staff, which help contribute to the "presentability" of my research results.
- [GIS] is also an important skill to demonstrate familiarity with when the students make job applications having qualified.
- GIS helped me present and interpret my results, and helped me understand where to focus next.

Links

- Online GIS Guide: http://libguides.ucd.ie/gisguide
- Book a workshop: http://ucd.libcal.com/