Taighde agus Nuálaíocht OT Baile Átha Cliath
TU Dublin Research and Innovation

Entanglement: Irish Pavilion at the Venice Architecture Biennale 2021

Donal Lally (TU Dublin), Dr David Capener (Ulster University), Alan Butler, Sven Anderson (Former TU Dublin researcher/now TCD), Professor Clare Lyster (University of Illinois), Fiona McDermott (TCD)

European Culture and Technology Laboratory+

Arts and Tourism
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Infinite Possibilities

Summary of the Impact

Entanglement, Ireland's national pavilion at the Venice Architecture Biennale 2021, challenged audiences worldwide to rethink the hidden physical and environmental costs of our digital lives. Taking the form of performative installation, it revealed the material footprint of 'the cloud' and explored how Ireland has become a global hub for data infrastructure.

The exhibition reached hundreds of thousands of people at the Biennale and subsequent festivals and exhibitions in Europe and the United States. It was covered in leading global media outlets including Euronews, The Irish Times, The Economist, Der Standard, RTÉ, and Architect's Journal, with more than 40 additional media mentions overall. Entanglement was also nominated for the European Commission's prestigious S+T+ARTS Prize, recognising outstanding projects that connect science, technology and the arts.

Research Description

- Entanglement investigated the materiality of data by making visible the environmental, cultural, and societal impacts of data infrastructure.
- Ireland has long been at the centre of communication technologies, from the landing of the first transatlantic telegraph cable in 1858 to the country's present role as Europe's data centre hub. This research explored how these infrastructures shape both landscapes and societies.
- The pavilion used heat as its central theme, showing how the production and storage of data is bound up with thermodynamic processes. Designed as a 'campfire' built from artefacts of data storage, the installation invited visitors to consider connections between primitive human gathering spaces and today's global networks of information exchange.
- Interactive elements, including thermographic imaging and machine-learning generated text, encouraged visitors to reflect on how digital technologies reshape our environment and our everyday lives. By collapsing complex infrastructures into a visceral, sensory experience, the pavilion opened a public conversation about the sustainability of digital culture.

Description of the Impact

The impact of Entanglement can be seen across several areas:

- Public Engagement: The exhibition made the invisible impacts of digital infrastructure tangible for broad public audiences, prompting reflection on the sustainability of the 'cloud.' It has been seen by over 250,000 people
- Cultural Influence: Showcased at the world's leading architectural exhibition, it positioned Irish research and creative practice at the forefront of international debate on data, environment, and society.
- Academic and Artistic Discourse: The project has been cited in scholarly publications, presented at leading conferences, and discussed in artistic and architectural forums across Europe and North America.
- Policy and Sustainability Awareness: By reframing data as a physical and environmental issue, Entanglement contributed to broader awareness of energy use, waste heat, and the ecological footprint of digital infrastructure.

What SDG goals does this contribute to?

- SDG 7.3: Affordable and Clean Energy – Double the global rate of improvement in energy efficiency. By highlighting the energy demands of data centres, the project raises awareness of the urgent need for more sustainable digital infrastructures.
- SDG 9.4: Industry, Innovation and Infrastructure – Upgrade infrastructure and retrofit industries to make them sustainable. Entanglement shows how digital infrastructure can and must evolve in ways that minimise environmental harm.
- SDG 11.4: Sustainable Cities and Communities – Strengthen efforts to protect and safeguard cultural and natural heritage. The project connects Ireland's heritage in communications technologies with its present and future role in data infrastructure.
- SDG 12.2: Responsible Consumption and Production – Achieve sustainable management and efficient use of natural resources. By revealing the hidden materiality of data, the exhibition encourages more sustainable digital consumption practices.
- SDG 13.3: Climate Action – Improve education, awareness-raising, and human and institutional capacity on climate change mitigation. Entanglement educates the public about the ecological costs of digital technologies, directly supporting climate literacy.

Evidence/Sources to Corroborate Research Impact

- Exhibitions at the Venice Biennale, Transmediale (Berlin), Galway International Arts Festival.
- Media coverage in Euronews, The Irish Times, RTÉ, La Vanguardia, Der Standard, Architect's Journal, Domus, and others (40+ total references).
- Academic outputs including book States of Entanglement: Data in the Irish Landscape (Actar, 2021).
- Citations in international scholarly publications, including Ars Electronica CyberArts Catalogue (2022) and works on critical making and decolonial art practices.
- Nomination for the European Commission's S+T+ARTS Prize.

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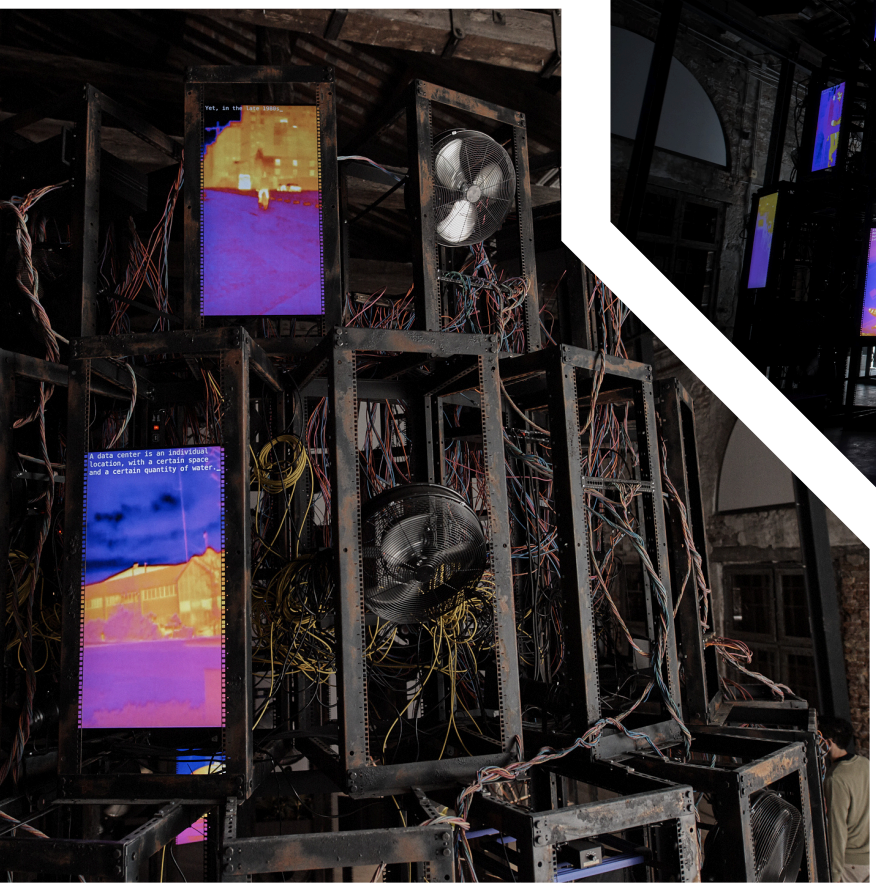

Contact Us

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