

In their project for the Global Brain Health Institute at Trinity College Dublin, **McCullough Mulvin Architects** mirrored the research that is being carried out

McCullough Mulvin Architects

Architect | **McCullough Mulvin Architects**
Civil and structural engineer | **Arup**
Mechanical and electrical engineer | **JV Tierney and Co**
Quantity surveyor | **Linesight**
Contractors | **Monami**
Photography | **Ros Kavanagh / Arup**

McCullough Mulvin Architects' approach to making new facilities for the Global Brain Health Institute, which is a cooperation between Trinity College Dublin and the University of California at San Francisco, began with the end users, their work and research into dementia and brain health and gaining an understanding of the brief. The research centre, on the ground floor of the Lloyd Building, at the heart of Trinity campus, was then developed to make a distinctive place to support this.

'Not only will this be an environment to foster creative thinking around this critical area of research for the future,' say the architects, 'what has captured our imagination is the potential for the project to tell the story of the research, to mirror the operation of the brain.'

The research teams are charged with raising awareness of dementia and cognitive impairment in our ageing population through new combinations of brain stimulation, mental training and pharmaceuticals – based on the thesis that education

physically shapes and builds the brain, while neglect, deprivation, social isolation and illness damage it. The research develops innovative programmes and training to promote behaviour-changing in the general population – in much the way that preventative measures in the field of coronary heart disease raised awareness in the general public and changed behaviour.

The design aimed to unite the functional zones of the office plan into a single architectural language. Externally, new large curtain walling brings natural light deep into the plan. Internally, the regular column grid of the plan is transformed by folded timber walls which are carefully positioned to create pockets of space within the office and circulation areas. A variety of workspaces such as private offices, meeting rooms, study carrels and informal break-out spaces are provided across the research centre to facilitate training and connecting the next generation of leaders in brain health through the Atlantic Fellows for Equity in Brain Health programme.

Mindful design



1. The interactive ceiling comprises a dense LED lighting array that has the capability to respond to the behaviour of participants by graphic colour change



A circular central space within the carefully integrated set of linked, timber-lined rooms and spaces, is naturally daylit and opens onto a landscaped area. The circular space has an interactive ceiling – an innovative piece of lighting design which responds to the behaviour of participants by graphically showing, with a dense LED lighting array, the effect of certain actions on the molecular structure of the brain, describing the degenerative process of dementia, the positive ways that degenerative process can be slowed, and facilitating early detection and prevention.

The project will support the research intent by becoming a dynamic demonstration of work into the creative and the focused sides of the brain – the explorative and the exploitative – developing a narrative which directly links research with training

facilities, supporting funding and mapping progress over time, providing a series of inspirational spaces which give the context for dementia research.

The spaces provide a great environment for working: they are free of clutter, spacious and airy, capable of fostering individual work in assessment rooms (where researchers work with dementia sufferers), facilitating private investigation in offices, and group research in spaces for a large body of researchers in a collegiate environment, and provide meeting rooms where video conferencing facilities connect the research teams in Dublin and San Francisco. Trinity College is a magnet drawing in talented people from Ireland and abroad, and the new facility creates a world class set of spaces in which to support them.

2. Externally, the removal and enlargement of existing window openings brings natural light deep into the plan of the new facility
 3. A view from the meeting room of the interconnected, timber-lined rooms and break-out spaces
 4. The circular central space is interlinked with the timber-lined conference room
 5. Lighting in the ceiling is calibrated to act as a stimulus to room user
 6. A detailed view of the study carrel in the fellows' and scholars' room



“THE DESIGN AIMED TO UNITE THE FUNCTIONAL ZONES OF THE OFFICE PLAN INTO A SINGLE ARCHITECTURAL LANGUAGE

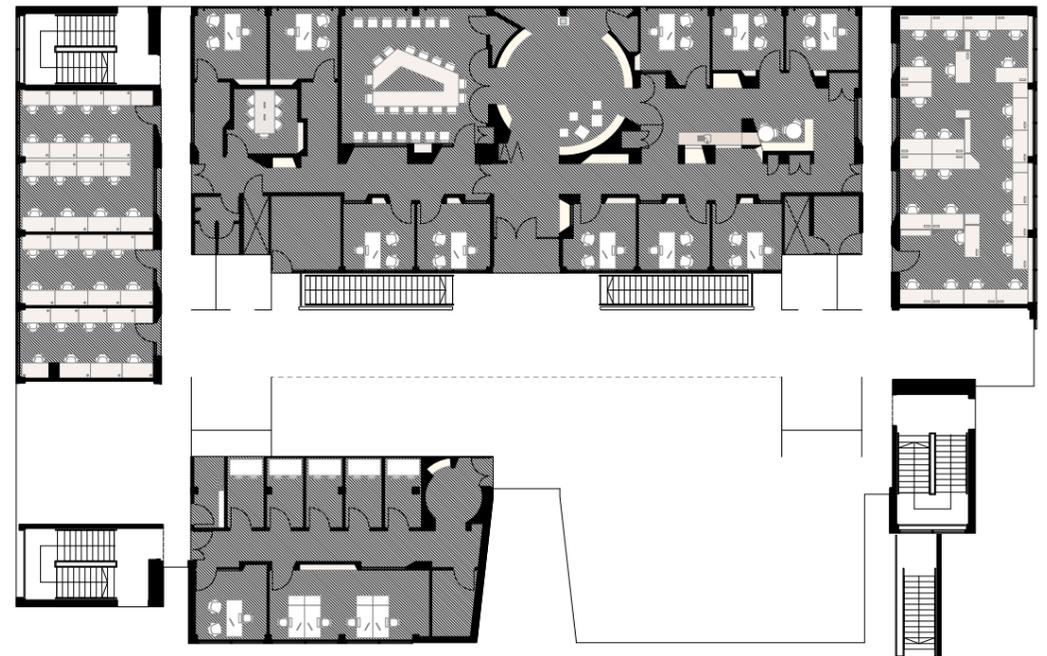
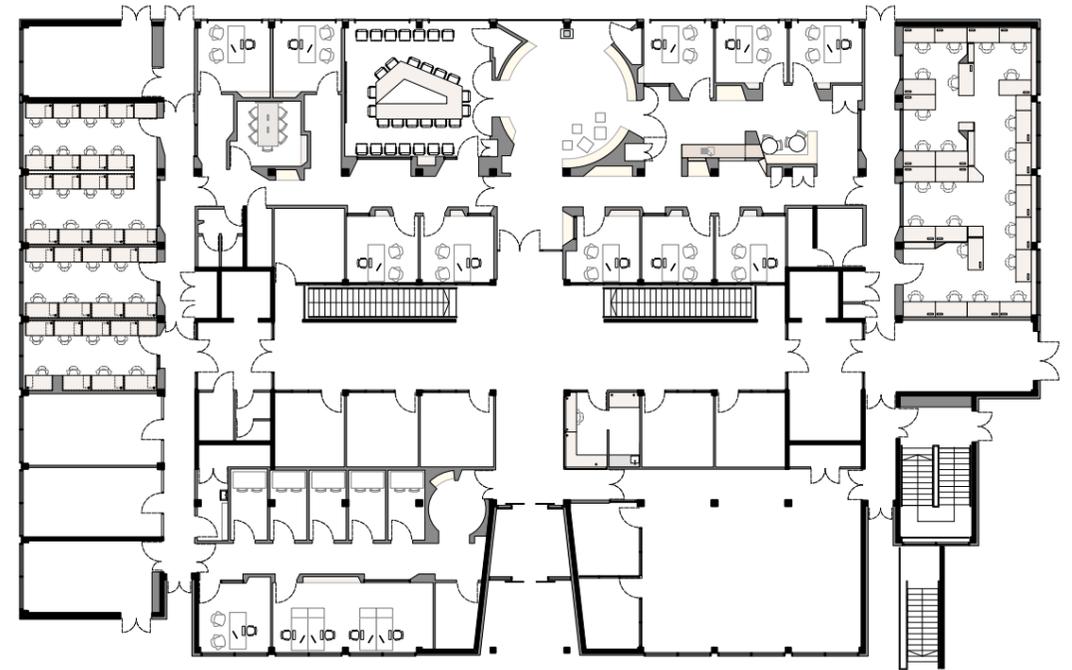


7.



8.

7. A tour of the facility during 'Open House Dublin' in 2018 8. Research spaces for visiting fellows and scholars



Ground floor plan