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Institiúid Teicneolaíochta  
Leitir Ceanainn

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of Technology

**Project Title:** *VICI: An AI digital assistant for Virtual Ideation & Collaborative Innovation*

**Supervisors:** Dr Michael McCann, Dr Vicky O'Rourke

**Keywords:** *Digital Assistant, Virtual Meetings, AI, Machine Learning, Ideation, Innovation, Digital Disruption*

**Project Summary:**

The COVID-19 pandemic has accelerated digital adoption of new ways of organisational working. Increased remote collaboration, use of advanced technology in operations, and in decision making, have been spurred by the pandemic. Technology driven corporate strategy is a key differentiator of successful firms (LaBerge *et al.*, 2020). Notwithstanding the acute digital disruption, retaining characteristics of cross functional and agile teams, and a learning organisation, also remain key to success (Kane *et al.*, 2020). Communication is the cornerstone of good business; these challenges are being faced by a broad section of the workforce as this unprecedented acceleration of a remote working culture impacts across society. AI and data analytic innovation is having a significant impact on improving communication in these contemporary working practices, evaluating performance based upon factors such as pace, tone, contribution, sentiment, and body language. The value of remote collaboration in ideation for innovation practices in industry plays a vital role in successful exploitation of new ideas and is crucial to business success and sustainability. This study explores the use of advance AI technology to provide insight and intelligent assistance in the virtual environment of remote working for innovation leaders and facilitators. The proposed Virtual Ideation & Collaborative Innovation (VICI) AI assistant will provide both real-time and post-event analytical insight to innovation stakeholders in performance and output of their virtual meetings and workshops. This interdisciplinary research project provides scope for significant advances in knowledge in this area and the potential to impact remote working practices for business innovation.

Virtual meetings are becoming the go-to solution for driving collaboration and improving operational efficiency across industries, this shift in working practices is driving research to enhance solutions with advanced capabilities and improve virtual communication even further. Recent advances in AI technology are providing technological capacity to make virtual meetings more intelligent, efficient and secure. There are a number of applications of AI technology in the virtual meeting space that provide a significant opportunity for research and innovation to advance the knowledge within both AI and digital transformation of workplace practices.

**Aims:**

The aim of this study is to investigate the challenges faced by innovation leaders and stakeholders in the rapidly changing virtual workspace to identify the key performance related engagement activities that deliver successful outcomes. Using this insight the project will develop a Virtual Ideation & Collaborative Innovation (VICI) AI digital assistant to provide users with real-time analysis around current engagement, oratory skills such as tempo and

rhythm and post-event analytics on sentiment, intelligent word cloud generation, overall engagement and comprehension metrics. The study will assess the implementation to extend the knowledge, understanding, value and potential that AI solutions provide to ideation & innovation in virtual working practices.

### **Objectives:**

- Conduct semi-structured interview to engage with innovation stakeholders to explore the stakeholder needs and challenges to inform and shape study
- Identify the Key Performance Indicators (KPIs) for successful virtual collaborative innovation engagements.
- Investigate advanced AI techniques to deliver insight and innovation enhancement and productivity value in virtual collaborative engagements.
- Design and implement Virtual Ideation & Collaborative Innovation (VICI) AI digital assistant to provide real-time direction to meeting facilitators and attendees and post event insight analysis.
- Conduct follow-up supplementary qualitative research to review and assess the success factors of the digital assistant design and implementation

### **Research Question**

*What is the impact of AI technologies in driving success for collaborative ideation & business innovation in remote virtual working practices?*

- I What are the key factors and challenges to innovation creation in the virtual space?*
- II Can the design and implementation of AI digital assistant provide crucial insight to address these challenges?*

### **Candidate Qualifications/Requirements:**

- Minimum:
  - 2<sup>nd</sup> class honours upper division (2:1) in a relevant subject.
- Desirable:
  - MSc with including significant element of Data Science or Innovation Practices
  - Knowledge of Business Ideation and Innovation Practices
- All applicants are required to demonstrate a high level of competence in the English language and meet the Institute's English Language Requirements