



Trinity College Dublin  
Letter of support for EU FET FuturICT Flagship Initiative

29th August 2011

To whom it may concern,

As Dean of Research at Trinity College Dublin (TCD), I am pleased to confirm TCDs strong interest in and continued support for the FuturICT proposal for a FET Flagship.

The goal of the FuturICT Flagship is to understand and manage complex, global, socially interactive systems, with a focus on sustainability and resilience. It aims to combine in an interdisciplinary way expertise from computer science, physics, mathematics, environmental science and economics through psychology, ecology, anthropology and sociology using supercomputing, networked systems and laboratories.

Trinity's research strategy encompasses all major academic disciplines and is committed to worldclass research activities in key areas across science, engineering, social sciences, medicine and the arts. The College's strategic focus includes the follow research priorities; Smart & Sustainable Cities, Sustainable Environment, Human & Social Networking, International Development, Health & Ageing and Telecommunications. In each of these areas Trinity has significant research activities, links nationally and internationally and builds on a cornerstone of inter-disciplinarity to deliver research of global consequence.

Trinity has significant research partnerships with multinational and indigenous industry. TCD embeds partners at the heart of collaborative research projects. Many of the Grand Challenges targetted within FuturICT map directly to our priority research themes. Therefore FuturICT forms a very good match with TCD's strategy for development. Along side excellence in teaching and research, TCD endeavors to maximize the economic and social impact of society's investment in the university.

There are a number of Research Institutes and Centres embeded within TCD that could link in with FuturICT. Some of the reseach activity will benefit from the data mining and scenario analysis envisaged within FuturICT, where as others such as those within Computer Science and Statistics will help enable the develpment and implementation of those analysis and techniques thereby helping to build crises observatories. The following lists a selection of these relevant Research Institutes, Centres and Schools;

**The Centre for Transport Research and Innovation for People** (TRIP) is a multidisciplinary centre, hosted at the School of Engineering at TCD which has a link with Univerity College Cork. The aim of the Centre is to develop and deliver cohesive and dynamic interdisciplinary research on a range of topics including ICT in transport, solving urban congestion, quality of life, safety and the environmental impacts of transport.

**The Centre for the Environment** research spans a wide range of interests from physico-chemical and ecological studies, environmental technology and engineering, and social sciences. Various research groups within the Centre are looking in detail at such issues as; climate change and adaptation, pollution, sustainable management of resources, including marine environments, earth observation and assessment tools and drinking water treatment and sustainability.

David Lloyd BSc (DCU), PhD (DCU), CChem, MICI, MRSC  
An Déan Taighde

David Lloyd BSc (DCU), PhD (DCU), CChem, MICI, MRSC  
Dean of Research

T 353 (0)1 896 1634  
F 353 (0)1 677 2400

**Trinity's Research and High Performance Computing Centre** is Ireland's premier High Performance Computing Centre with large scale Supercomputing and Visualisation facilities. It lies at the heart of TCD's computational science initiative. The Centre has experienced researchers and technical staff with expertise the areas of numerical modelling, risk analysis, molecular dynamics, supercomputing/high performance computing, visualisation, systems administration and linux training.

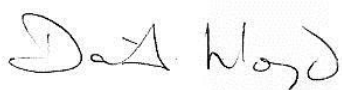
**Institute for International Integration Studies (IIIS)** was established with the objective to promote research and learning about the many dimensions of global and European integration, its dynamics, impacts and governance. It adopts an interdisciplinary approach in seeking an understanding of the implications of international integration for economic and social development plus the challenges it poses for decision makers in the public and private sectors. It analyses the different layers of globalisation – financial, political, technological, media-based, cultural and religious – and develops frameworks and criteria for solutions to improve the management and outcomes of globalisation processes.

**The School of Computer Science and Statistics** comprises five academic disciplines that together reflect both the breadth of its expertise and the focus of its research activity and which are all highly relevant in the context of FuturICT.

- **Computer Systems** undertakes “systems research” at the hardware/software interface and has a particular research focus on telecommunications and networked computer systems including the architecture and protocols of the future Internet. CTVR is a National Telecommunications Research Centre led by TCD. It carries out industry-informed research in wireless and optical networking. The approach to designing for change focuses on creating networks that are evolvable, sustainable and submissive. Industry partners are an integral part of the research programme.
- **Information Systems** focuses on the impact of ICT on society, business and learning.
- **Intelligent Systems** focus on computational issues related to perception, cognition, decision and interaction by, and between, systems and their human users. This discipline hosts the Graphics Vision and Visualisation group which carries out leading edge research in computer graphics, computer vision and all aspects of visual computing.
- **Software Systems** has significant strength in programming language and middleware technologies and the formal foundations that underlie them. TCD is a partner in Lero, the Irish Software Engineering Research Centre which brings together leading software engineering teams in a coordinated centre of research excellence with a strong industry focus. The Centre delivers world-leading research in software engineering with a special emphasis on Evolving Critical Systems.
- **Statistics** provides statistical learning techniques and in modelling uncertainty. STATICA, a research group in Statistics is developing new statistical methods that can handle the size and complexity of large data sets, thus allowing more complicated questions about the data to be answered and to extract as much information as possible.

I have provided an introduction to some of the Trinity Research Institutes and Centres that could link in with FuturICT. We believe that FuturICT will enable us to gain a new level of understanding into highly complex challenges which form the basis of research being conducted by the research groups outlined above. Therefore I reiterate Trinity's support for the development of this Flagship Initiative.

Yours sincerely



Dr David G. Lloyd  
Dean Of Research, Trinity College Dublin

David Lloyd BSc (DCU), PhD (DCU), CChem, MCI, MRSC  
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Coláiste na Tríonóide,  
Baile Átha Cliath 2, Éire

Trinity College Dublin  
Dublin 2, Ireland

dean.of.research@tcd.ie  
www.tcd.ie/research