Support Letters

Universities and Academic Institutions

19.11.2010

Prof. Dr. Dirk Helbing
Department of Humanities and Social Sciences
Chair of Sociology (Modeling and Simulation)
ETH Zürich
CLU E1
Clausslusstrasse 50
Boga Zürich
Switzerland

Dear Professor Helbing,

I would like to inform you about the interest of Aalto University regarding the proposed FET Flagship Project FuturICT within the European Union's Framework Programme.

Aalto University is created from the merger of three leading Finnish universities on the beginning of this year. Aalto is multi- and interdisciplinary university focusing on research and education in the fields of economics, art and design, and science and technology.

Our university emphasizes multi- and interdisciplinary approach in research based on high-level basic research. Aalto University's goal is to solve timely and multifaceted problems and questions with scientific research. University supports and encourages its researchers and teachers to international collaboration with the best coworkers around the world.

From the above described point of view I am convinced that visionary, science and goal-driven large-scale initiative of FuturICT will be an appropriate tool to support research at the cutting edge, and integrate the European engineering, natural, and social science communities. In this kind of collaboration frame the European scientists are able to get answers to a whole range of challenging questions. Excellent research and active collaborations have a large potential, and important economical, technological and societal impacts in improving the welfare and competitiveness of Europe and its citizens.

Sincerely yours,

Heikki Mannila
Vice President, Professor

Aalto University
HM/prt

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Professor Panos Argyrakis

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13.09.2010

Letter of Support

To whom it may concern:

I hereby express the full support of the Aristotle University of Thessaloniki, Greece (AUTH) to the FuturIcT Flagship Initiative which is coordinated by Prof. Dirk Hebling of ETH Zurich, Switzerland.

The Aristotle University of Thessaloniki is the largest University in Greece. It is a public government funded institution and has extended expertise in large-scale computer simulations of complex systems, such as disordered lattices, fractals, random walks, and different types of networks, random and scale-free networks. Our research group emphasizes the use of numerical methods and computer experiments to study the topological properties of complex systems, as well as the dynamic/kinetic processes that take place on such systems, e.g. diffusion, spreading phenomena, propagation of information or epidemics and other types of transport phenomena on heterogeneous structures. AUTH holds extensive experience in applying modern methods of Statistical Physics, such as Scaling Theory and Monte Carlo techniques, to problems on complex structures, commonly encountered in Solid State Physics, but now extending to SocioPhysics, EconoPhysics, etc.

The above processes are studied by extended use of Grid Computing and HPC computing, using parallel processing, employing a local facility. AUTH is one of the main stakeholders of the HellasGrid National Grid & HPC Initiative, it has participated in all EGEE phases, as it has been involved in Grid-related IT Infrastructure projects since early 2002.

With this letter of support, we confirm our interest in supporting and participating to the work towards the project proposal and its implementation.

Yours sincerely,

Prof. P. Argyrakis
Scientific Coordinator of the AUTH Grid & HPC Center

BAR-ILAN UNIVERSITY
Department of Physics
Ramat-Gan 52900 Israel

אוניברסיטת בר-אילן
המחלקה לפיסיקה
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Prof. Shlomo Havlin
Professor of Physics
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15/9/10

To whom it may concern:

With this letter, I wish to express the full support of Bar-Ilan University, Ramat-Gan, Israel (BIU) to the FuturIcT Flagship Initiative which is coordinated by Prof. Dirk Hebling of ETH Zurich, Switzerland.
BIU is the second largest University in Israel with over 30,000 students and 5000 graduate students.
BIU is a Government funded institution which focuses on research in natural and human sciences and in particular in multi disciplinary areas. I am heading two research interdisciplinary Centers. One is a National Center for Complex Networks, supported by the government, which involves researchers from engineering, mathematics and computer science from BIU, Tel-Aviv University and the Hebrew University in Jerusalem. The second, is the Minerva Center for mesoscopics, fractals and networks, Which include scientists from Tel-Aviv University and Weizmann Institute and supported by Germany.
My group has much expertise in applying and developing statistical physics tools for understanding complex systems in interdisciplinary areas. My group was between the pioneers of several very active fields including the field of complex networks.
With this letter I confirm my enthusiastic support in proposed FuturIcT Flagship Initiative and I will be glad to actively participate in such an interesting project.

Yours sincerely,

S. Havlin

Shlomo Havlin
Professor of Physics
Director, Minerva Center
Past President, Israel Physical Society

RECTOR

Prof. Dr. Dirk Helbing
Department of Humanities and Social Sciences
Chair of Sociology (Modeling and Simulation)

ETH Zürich
CLU E1
Clausslusstrasse 50
Boga Zürich
Switzerland

Budapest, October 19, 2010

Dear Professor Helbing,

As the Rector of the Budapest University of Technology and Economics (BME), I hereby confirm our great interest in and support for the proposed FET Flagship Project FuturICT within Framework 8 of the European Union.

BME considers the FuturICT project as an ambitious, multi-disciplinary undertaken, aimed at the solution of a large number of important research problems that are pivotal to the great challenges of our times. These include engineering tasks related to the innovation in ICT, techno-social systems, the study of complex systems with special emphasis on ecological modeling, or the well functioning of the economy. In these and other related subjects there is a large amount of experience and expertise accumulated at BME. Correspondingly, several of our units will be in the position of participating in FuturICT like the Institute of Physics, the Institute of Mathematics the Faculty of Electrical Engineering and Computer Science and the Faculty of Chemistry and Bioengineering.

BME is fully supportive of the EU's FET Flagship Initiative and would like to express its strong support for the FuturICT concept and ambition, its support for those involved in proposal preparation, and confirm its interest in active collaboration should the venture be successful.

BME will be represented in the Project by Professor János Kertész, member of the Hungarian Academy of Sciences, Director of the Institute of Physics.

Sincerely yours,

Professor Gábor Péceli
member of the Hungarian Academy of Sciences
Rector of BME

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Vice-Chancellor
Is-Ganghellor
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Professor Steven Bishop
Department of Mathematics
University College London
Room 304, Kathleen Lonsdale Building
Gower Street
London WC1E 6BT

7 November 2011

Dear Professor Bishop

As Vice-Chancellor of Cardiff University, I am pleased to confirm Cardiff University's strong support for the FuturICT proposal for a Future Emerging Technologies programme flagship.

Located in the capital of Wales, Cardiff University is a member of the Russell Group of Britain's leading research-intensive universities with a broad base of research activity. Our research strategy is focused on better understanding the world from different perspectives, notably the living world, the physical world, the human world and the cultural world, through which we are tackling some of the major future challenges facing humanity. Cardiff University has made major investments to advance this interdisciplinary approach, including establishing three new Research Institutes as a key part of its strategy to enable world-leading, agenda-setting research. Research has also been supported by multi-million pound investment in world-leading computing facilities that enable new levels of complexity and support knowledge discovery.

I believe that the mission of the FuturICT consortium is both timely and fundamental, being consistent also with the research agenda supported by Cardiff University. In particular, developing and applying a new understanding and new knowledge about the world is at the core of our mission. As such it gives me great pleasure to see such a bold and fundamental project proposal of international scale.

For these reasons Cardiff University wholeheartedly supports the FuturICT project. Through the leadership of Professor Roger Whitaker, Cardiff University shall provide to the project access to a portfolio of expertise, relationships and activity that combines relevant international research excellence conducted and tested in a Welsh context, with strong local interactions and a diverse population that is governed through a devolved National Assembly based in Cardiff. I believe this can provide an excellent environment to engage diverse stakeholders on a national scale - in essence a point of access to a unique "test nation", as coined by Professor Whitaker. Undoubtedly this is a distinctive and innovative way to add value to the FuturICT mission. I look forward to seeing these developments flourish between the FuturICT consortium and Cardiff University through continued collaboration in this hugely important international research effort.

Yours sincerely,

David Grant

Dr David Grant
Vice-Chancellor

cc: Professor Dr Dirk Helbing, Chair of Sociology (Modelling & Simulation), Department of Humanities, Social & Political Sciences, ETH Zürich

NEXA
Center for Internet & Society

Torino, 20 July 2010

To whom it may concern:

The NEXA Center for Internet& Society at the Politecnico di Torino has an international reputation for cutting-edge research centered on the relationship between the Internet and society.

Our efforts are concentrated in three areas of inquiry, united by the question of how the Internet can elicit the best from its users: Law, Technology, Innovation, and Knowledge.

The NEXA Center has sought and seeks about the future of the Internet and related technologies. In the field of intellectual property, the need for creative solutions derived from understanding the varied motivations of the relevant players, has continued to grow as the economy changes around the world.
Moreover, we see an enormous need to bring clarity to the conversation about the Internet's impact on democracy.
As more and more activists are using the network as an essential set of tools to do their job - in democratic and non-democratic regimes alike - the threats to their personal security and their ability to express themselves are growing.
We envision a growing opportunity to use Internet technologies to improve the way that we teach, learn, and make information accessible to citizens around the world who are not physically proximate to our libraries.

On accounts of our activities which are related in many ways to the FuturICT initiative, I would like to express the strong interest of our community in supporting such project.

Yours sincerely,
prof. Juan Carlos De Martin
co-Director - NEXA Center for Internet & Society
Politecnico di Torino

NEXA Center for Internet & Society

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BUDAPESTI
CORVINUS
EGYETEM

Prof. Dirk Helbing
ETH Zürich
Chair of Sociology, in particular of Modeling and Simulation
Clausiusstraße 50
8092 Zürich, Switzerland
Chair of Steering Committee
FuturICT FET Flagship Initiative

Budapest, 27 February, 2012

Dear Professor Helbing,

In this letter, as the Rector of the Corvinus University of Budapest, I am delighted to provide my strongest support for the FuturICT FET Flagship Initiative.

Our university is considered as the best training and research institution in economics, management, and in many areas of social and natural sciences in Hungary. Hungary and its universities have been shaken strongly by the current financial crisis. We realize that our accumulated scientific knowledge using traditional research methods have not been sufficient to understand and predict the scale and nature of the crisis and we need to keep up with the challenge of complex socio-economic problems today.

From this perspective, we are delighted to provide support and be part of the promising FuturICT FET Flagship Initiative that is a joint effort of natural and social scientists and builds on the power of network science and computational methods that have the credible promise of assisting us in better explaining and predicting of socio-economic and environmental problems of our times and of the future.

We are certain that the FuturICT Initiative will strengthen bonds between different institutions in Hungary and in Europe with various expertise that could largely benefit science and people of the European Union.

The Corvinus University of Budapest will be represented in the Hungarian hub by our Vice Rector for Education, Prof. Dr. Zoltán Szántó, and by Ass. Prof. Dr. Károly Takács, Director of the Research Center for Educational and Network Sciences (RECENS), experts in social network analysis, network science, corruption research and agent based simulation.

Sincerely yours,

Prof. Dr. Zsolt Rostoványi
Rector
Corvinus University of Budapest

CORVINUS UNIVERSITY OF BUDAPEST
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Professor Madeleine Atkins
Vice-Chancellor

Professor Stephen Bishop
Department of Mathematics
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LONDON
WC1E 6BT

FUT0702SMKL01

8th February 2012

Dear Professor Bishop,

FuturICT FET Flagship Proposal – Letter of Support

I am writing to give support from Coventry University for the FuturICT proposal for a Future Emerging Technologies programme flagship to be submitted to the European Commission in autumn 2012.

The work of Professor Sara de Freitas and her group at the Serious Games Institute (SGI) is outstanding in the field of serious games development, deployment and evaluation. The SGI has, since its inception in 2007, become an international hub in serious games research, business and study. The work of the SGI in supporting the FuturICT project reflects the University-wide support of the initiative, which we see as an important contribution to fields of ICT, Complexity Science and Social Science.

Coventry University has recently been awarded the title of "Entrepreneurial University of the Year", and has a strong reputation in the UK and Europe for effective business-academic engagement. This commitment is reflected in a number of EU projects (e.g. the European Enterprise Network (www.een.eu), the Living Labs programme, the EU FP7 GALA network of excellence in Serious Games (www.galanoe.eu) and Cluster 2020) each providing broad and sustained communities of practice which may be used for the scientific and development outputs of the FuturICT project.

The commitment of the University as a whole, and in particular the SGI, is assured in the future years of the project, through development of serious games as part of the Global Participatory Platform and through collaborative projects developed as part of the International Risk, Resilience and Response Centre (IR3C) – a collaboration between the Centre for Disaster Management, Serious Games Institute and Texas A&M University.

Vice-Chancellor's Office
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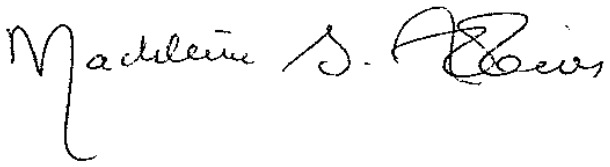
FOR HIGHER AND FURTHER EDUCATION
2007

Coventry University is fully supportive of this project and confirms its interest in continued collaboration in this area of research which aims to address real world problems, and to engage new/diverse communities, through gaming, simulation technologies and high level visualisation.

Yours sincerely,



Professor Madeleine Atkins, CBE
Vice-Chancellor

Dublin City University
Ollscoil Chathair Bhaile Átha Cliath

DCU

Letter of support for EU FET FuturICT Flagship Initiative

23rd January 2012

To whom it may concern:

As Vice President for Research at Dublin City University (DCU), I am pleased to confirm DCU's strong interest in, and support for, the proposed FuturICT FET Flagship initiative.

At the start of the 21st Century, global society is facing an extraordinary confluence of large scale, systemic, challenges. These include profound economic (and consequently social) instability, accelerating anthropogenic climate change, peaking of fossil fuel extraction and continuing exponential population growth. The goal of FuturICT is to apply information and communication technologies to model, understand and manage complex, global, socially interactive systems, and in this way to provide policy makers and governments with the essential tools to effectively address these emerging global challenges. As such, it has huge importance and potential impact for all of Europe's citizens and for the wider global society.

DCU has established strengths in key academic disciplines that would underpin the FuturICT project. These include researchers in a number of national and international research centres based at DCU, including the Rince Institute (communications technologies), CLARITY (Centre for Sensor Web Technologies), the Centre for Scientific Computing and Complex Systems Modelling (SCI-SYM), and the Cloud Computing Research Centre (CloudCORE). DCU also has strongly developed expertise in economics in the DCU Business School and in law, government and communications in the Faculty of Humanities and Social Sciences. All of these disciplines are relevant to the strongly inter-disciplinary research planned for FuturICT.

In summary, I would like to re-iterate DCU's support for FuturICT and our commitment to participating fully in the project if it is adopted as an FET Flagship initiative.

Yours sincerely,

Prof. Alan Harvey
Vice President for Research

Office of the Vice-President for Research
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Dublin 9, Ireland

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Support letter for the FuturICT EU FET Flagship Proposal

To Whom It May Concern:

On behalf of the Eötvös Loránd University (ELTE) I want to express our strong support of the proposed flagship project FuturICT.

The goal of sciences has always been twofold: understand the world around us and contribute to the development of mankind, improve the quality of life. As human society is getting more and more complex, new problems and opportunities are arising as consequences of globalization, technological, demographic and environmental changes. To combat these challenges we have to unite the forces of many disciplines and reach new scientific breakthroughs. We consider the FuturICT proposal as one of the first large-scale multidisciplinary projects in the world addressing techno-socio-economic challenges in a common framework.

Eötvös Loránd University has a long tradition of promoting the endeavour of science and seeking excellence in many fields of research. ELTE was founded in 1635 and now it is the largest research university in Hungary with over 30000 students and 1400 scientists. The mission of ELTE is to preserve and enrich national and universal culture, to cultivate science and to pass on academic knowledge, as well as to shape and satisfy the real, long-term needs of Hungarian society and of mankind. Motivated by the conviction that a high standard of teaching at a university is inconceivable without high-quality research, ELTE aims to represent both sides of the traditional concept of a *universitas*, and at a high level: the creative community of instructors and students (*universitas magistrorum et discipulorum*) and the ideal of an institution actively engaged in the pursuit of many scientific and scholarly disciplines (*universitas scientiarum*).

In conclusion, we are looking forward to actively participate in the proposed FuturIcT Flagship Initiative, in all aspects which are in our capacity.

Budapest, 3 October 2011

Prof. Dr. Barna Mezey
rector

Imperial College London

Grantham Institute for Climate Change
Imperial College London

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www.imperial.ac.uk/climatechange

Professor Sir Brian Hoskins CBE FRS
Director

20 December 2011

To whom it may concern

As Director of the Grantham Institute for Climate Change at Imperial College London, I would like to express both my deep interest and support for the proposed FET Flagship FuturICT.

The Grantham Institute was founded with a mandate to drive forward climate change related research, and to translate this into real world impact; communicating our knowledge to help shape policy direction, to inform citizens, and to support decision-making. The Grantham Institute pursues four main research themes, including sustainable futures, vulnerable ecosystems and human well being, extreme climatic events, and earth system science. The Grantham Institute also led the College's participation in a successful bid to the European Institute of Innovation and Technology (EIT) to establish a Climate "Knowledge and Innovation Community" (KIC), a major international collaboration between business and academia intended to deliver a step change in Europe's capability to innovate in response to major global challenges.

Therefore the FuturICT proposal is complementary to a number of activities in research, training and innovation undertaken in the Grantham Institute, and we would aim to build on such synergies to produce added-value transformative impact for both the Institute and the Flagship itself. In particular we emphasise the importance of both innovation and policy modeling, as supported by the platforms and observatories envisaged by FuturICT.

Given this range of activities, we support the inter-disciplinary nature of the FuturICT consortium, and although we recognise both the difficulty and significance presented by the challenge of "knowledge acceleration", this is not a challenge we can afford to dodge. The kind of open platforms proposed by FuturICT are critically important for addressing fundamental problems that present and future generations face from climate change and environmental pressure on the planet.

The Grantham Institute welcomes the FuturICT initiative, its concepts and its ambitions, is delighted to give the proposal its strong support to the proposal.

Yours sincerely

Professor Sir Brian Hoskins CBE, FRS
Director, Grantham Institute for Climate Change, Imperial College London
Professor of Meteorology, University of Reading

Imperial College
London

Faculty of Engineering
Imperial College London

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14th October 2010

TO WHOM IT MAY CONCERN

Flagship FuturICT

As the Principal of the Faculty of Engineering and Deputy Rector of Imperial College London, I hereby confirm the College's great interest in and support for the proposed Flagship FuturICT.

The FuturICT project is an ambitious, cross-cutting, inter-disciplinary project which embraces a number of important research themes that are critical to the College's mission. As well the significant engineering challenges and the innovation in ICT, for which there are a number of our academics with relevant expertise and experience, there are complementary initiatives in transport and environment science that will inform specific application domains of the proposed research programme. Furthermore, the dynamics of complex systems and how to develop an ecological model to be most relevant to economics and sociology is an area of intense activity.

The proposal therefore engages with major activities of two Departments, namely Computing and Electrical & Electronic Engineering, and also the Centre for Transport Studies, and several Research Institutes within the College, in particular the Grantham Institute for Climate Change, the Institute for Security Science & Technology, the Mathematics Institute and the Energy Futures Laboratory.

Imperial College London is fully supportive of the EU's FET Flagship Initiative and, without prejudicing collegiate support for other proposals, the College would like to express its strong support for the FuturICT concept and ambition, its support for those involved in proposal preparation, and confirm its interest in active collaboration should the venture be successful.

Yours faithfully,

Professor Stephen Richardson,
Deputy Rector & Faculty of Engineering Principal.

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2nd November 2011

Letter of Support

To whom it may concern
Flagship FuturICT

As a director of the Institute of Physics Belgrade, I am very pleased to confirm our explicit interest and support to the FuturICS Flagship initiative.

The Institute of Physics Belgrade is non-profit research and educational centre founded in 1961 by the University of Belgrade and the Government of Serbia. Today, the Institute of Physics represents one of the premier research institutions in the region. The Institute has a permanent faculty of almost two hundred researchers. At a given time more than 80 graduate students are working at the Institute towards their Ph.D.'s. Institute's Scientific Computing Laboratory is designated by the Serbian government as a focal point for R&D in high performance computing, and national Tier-1 center within the European PRACE network of supercomputers.

Our Institute confirms its interests in the FutureICT initiative, particularly in part related to high performance computing, complex systems and modeling of social networks. Institute will involve several of our key scientists.

In conclusion, Institute of Physics Belgrade will strongly support the FuturICT Flagship proposal, is committed to participating in its activities and looking forward to many opportunities for active engagement and new collaborations.

Sincerely,

Dr. Aleksandar Belic, Director

Institutions
Markets
Technologies

IMT

INSTITUTE
FOR ADVANCED
STUDIES
LUCCA

To whom it may concern,

As Director and legal representative of IMT Institute for Advanced Studies, Lucca, I would like to express our strong interest and support for the initiative "Candidate Flagship FuturICT" coordinated by Prof. Dirk Helbing, ETH Zurich, which will be submitted in response to the next call for proposals of the FET-ICT Programme.

IMT can be simultaneously defined as a *Graduate School*, *an Institute for Advanced Studies* and an *Institute of Technology*. Within the IMT *Graduate School*, the integration between research and education is designed around two broad multidisciplinary research areas (Economics and Institutional Change, Computer Science and Applications), which, while stemming from the fundamental concept of "*The Sciences of the Artificial*" (Herbert A. Simon), sustain our PhD programs. As an *Institute for Advanced Studies*, IMT is characterized by its mission to reach the international research frontier and to contribute to push it ahead, concentrating its activities within a limited number of key areas. Moreover, the Institute attracts a persistent flow of visiting scholars. IMT's identity as an *Institute of Technology* is defined by the aim of integrating relevance and excellence in research. Against this background, IMT has decided to adopt an innovative organizational model for its activities, which evolves around a computational and organizational platform, which exploits the complementarity between the Institute's distinctive capabilities in global computing, massive text and data mining, integration and management of heterogeneous knowledge bases, quantitative analysis of real world economic facts and phenomena. In addition, IMT promotes interdisciplinary research in Economics, Political Sciences, Sociology, Physics, and Computer Sciences. In addition, it integrates a rich set of skills as well as macro and micro data mapping onto multiple domains relevant for comparative institutional, economic, and social analysis at the European level.

At IMT, a rich cluster of competences and research units will be involved in the Flagship, collaborating with prof. Helbing and with the other partners. Members of our team have distinctive capabilities in many areas relevant to the project, as Distributed Systems, Global Computing, Grid Computing, Economics of Networks, Topological and Stochastic Investigation of the Evolution of Large Socio-Economic Networks, Comparative Institutional Analysis, Microeconomic Analysis of Market Formation and Evolution, Simulation of the Evolution of Large, Multiscale, Socio Economic Systems; Exploration of Key Properties of Large Economic Systems. Finally, while our scientific organization has an academic orientation, our scholars and fellows collaborate intensively with public and private institutions, in areas which are key for policy making and business development.

The people involved within our organization are:

Prof. Fabio Pammolli, Prof. of Economics and Management, Director – Referent - f.pammolli@imtlucca.it
Prof. Rocco De Nicola, Prof. of Computer Science - Computer Science and Engineering Res. Area - Univ. of Florence and IMT.
Prof. Massimo Riccaboni, Prof. of Economics and Management University of Trento and IMT
Prof. Andrea Vindigni, Prof. of Economics - Economics and Institutional Change Res. Area - IMT
Dr. Mark Dincecco, Assistant prof. of Economics -Economics and Institutional Change Res. Area- IMT
Dr. Luc La Fuente, Assistant prof. of Computer Science –Computer Science and Engineering Res. Area - IMT

Hence, we confirm our interest and willingness to support the initiative and to participate actively to the preparation of the project proposal and then in successfully implementing and promoting the Project activities.

Yours sincerely,

The Director
IMT institute for Advanced Studies
(Prof. Fabio Pammolli)

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I S M B
Istituto Superiore Mario Boella

Torino, May 19 2010

To whom it may concern:

I hereby confirm that Istituto Superiore Mario Boella (ISMB) fully supports the FuturIcT Flagship proposed by Prof. Dirk Helbing and will do everything it can to make the project a success.

Istituto Superiore Mario Boella has an international reputation for its research in ICT and wireless technologies, with applications in domains such as energy/environmental sustainabiity, smart mobility and logistics, e-health.

The laboratories of ISMB, located within the Politecnico di Torino campus, offer high level competences in technological areas such as satellite receivers and navigation, wireless sensor networks, wireless broadband networks, electromagnetic compatibility, e-Health, RFID, multimedia, Intelligent Transport Systems, free space optics and plastic optical fibres.

Istituto Superiore Mario Boella was founded in July 2000 by Politecnico di Torino and Compagnia di San Paolo (non profit organization associated with Intesa San Paolo bank), and it carries out research activities also in partnership with SMEs and industrial partners, therefore representing one of the most successful examples of industry-university cooperation.
Around 150 researchers work at ISMB, half of which are Politecnico di Torino faculties, research assistants or PhD students.

ISMB research activities refer to the enabling potential of Information and Communication Technologies (ICT), which represent the fundamental component of the radical changes that modern companies have to cope with on both technological and process issues. Most of the innovation issues related to ICT will contribute to building the Internet of the Future, the ubiquitous network designed to fulfill the growing demand of connectivity and interaction among people and things (Internet of Things). The deep knowledge of the Network represents the major asset underlying all ISMB research initiatives.

ISMB operates in an international research context, and has developed a solid international cooperation network including research institutes and universities such as the Anderson School of Management of UCLA, Berkeley University (USA), Henry Samueli School of Engineering of UCLA, Colorado University Boulder (USA), University of Hokkaido (Japan), CSIRO (Australia), NICTA (Australia), FAF Federal Air Force University (Germany) and the Office for Outer Space Affairs of the United Nations.

ISMB
Istituto Superiore Mario Boella

In the local context ISMB operates in synergy with the major industrial research centers (Centro Ricerche FIAT, Centro di Innovazione Telecom Italia, CSP, CRIT, etc.) and other institutions involved in innovation such as the Torino Wireless high tech district and the incubator of companies of Politecnico di Torino.

We look forward to contributing our expertise as the Flagship develops.

Yours faithfully,

Edoardo Calia
Istituto Superiore Mario Boella
(Research Director)

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HUIS BETHLEHEM
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KATHOLIEKE
UNIVERSITEIT
LEUVEN

Letter of intent for FuturICT

This Letter of Intent reflects the information available at the date of signature. An update will be provided at submission time of the CP-CSA proposal, following the availability of additional information on the call, evolutions in project approvals and further local cofunding negotiations.

Dear Professor Bishop,

As rector of the KU Leuven I would like to express our strongest support for the FuturICT FET Flagship proposal.

FuturICT aims to provide the backbone for a broadly accessible, planetary scale data-analysis and knowledge creation environment. By complementing the generic framework with domain-specific knowledge and data, the system becomes a very interesting tool for analysing complex situations in an almost endless list of societal relevant problem domains that are considered grand challenges of the 21 century: like "climate change and natural resource exhaustion", "crime management", "global health", "financial crises", ... Both scientists in social and economic sciences as well as politicians and decision makers will receive through FuturICT an extremely interesting instrument to guide their work and decisions.

The FuturICT project addresses both the challenge to build a "generic" ICT backbone (consisting of a Planetary Nervous System, a Living Earth Simulator and a Global Participatory Platform) and the challenge to apply the developed technology in concrete economical and societal relevant domains as is reflected in the concept of "observatories". Both challenges are addressed in an interactive way. It is exactly this interplay between on the one hand "ICT and complex systems science" providing the technology and on the other hand the "societal/economical science" providing challenging and relevant "use-cases" for applying and guiding the technological research, that makes up the value and potential of the project.

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Being a comprehensive university, with in total 6,600 researchers in Socio-Economic Sciences & Humanities, in Sciences, Engineering & Technology, and in Biomedical Sciences, with annual research expenses of 347 million euro (2010), this cross-disciplinary type of research perfectly fits with our mission to be strongly inter- and multidisciplinary in focus. The project indeed offers the potential to bring closer together not only different ICT oriented disciplines but also ICT and non-ICT oriented ones.

As a starting point we see within the FuturICT project a lot of research potential for our LICT (Leuven Centre on Information and Communication Technology) members. With about 50 professors and more than 350 researchers LICT brings together research groups from the KU Leuven and its association partners that are active in the area of ICT, being it the hardware, the software or the social and legal aspects of it. LICT research is oriented amongst 7 research lines: "Wireless communication systems", "Mixed signal interface systems", "Embedded systems and software", "Distributed systems", "ICT security and privacy", "Human-machine interaction" and "Knowledge technologies". Most relevant for the FuturICT project are the latter four research lines for which the available expertise, mission and scientific objectives are well in line with the FuturICT project goals. From within these research lines KU Leuven could offer the FuturICT consortium expertise on "information mining and knowledge representation", "(data and system) security and privacy" and "distributed systems software".

In all these domains KU Leuven-LICT members have a strong expertise and (international) track-record, what can be illustrated amongst others by the number of FP7 projects KU Leuven professors are involved in. For example, the LICT research groups that are most relevant for FuturICT participate in 43 FP7-ICT projects, 5 times as coordinator. Worth mentioning are specifically the ERC grants of Prof. Luc Van Gool, Prof Tinne Tuytelaars and Dr. Jan Ramon. Overall KU Leuven is ranked the 5th university in FP7 with up to now more than 350 accepted projects representing a budget of more than 135 Meuro (4th interim FP7 report, Aug. 2011). Research directly related to ICT accounts for over 20% of these projects, biomedical research for nearly 1/3.

In the area of "information mining and knowledge representation", the DTAI (Declarative Languages & Artificial Intelligence) group researches technologies and solutions for advanced data mining and machine learning with focus on networked, relational, possibly uncertain data, as well as the formalised methods for knowledge representation behind it. The group has 63 members among which 10 professors and 19 postdoctoral researchers. A budget1 of

[1] This number reflects the income from approved projects (EU, national, internal) and PhD or postdoc scolarships running in 2013 and beyond. Projects that are still in an evaluation or submission phase are not included.

12,7 Meuro has already been committed in projects that allow to continue research activities in 2013 and beyond.

Multimodal (text, image, video, spoken language) information mining and (intelligent) visualisation are within the focus of the research groups HCI (Human Computer Interaction), VISICS (VISion for Industry Communications and Services), SPEECH, ASRO (Architecture, Urbanism and Planning) and part of SISTA. The researchers focus on the one hand on retrieving information from (combinations of) texts, video, images and speech fragments and on the other hand on representing this information and the derived knowledge intuitively, interactively and adapted to user needs and preferences. Related is also the work of CUO (Centre for User Experience Research) on user oriented design and user experience research. Together these groups contain about 95 researchers among which 11 professors and 19 postdoctoral researchers. A budget1 of 12,7 Meuro has already been committed in projects that allow to continue research activities in 2013 and beyond.

A second area of LICT research of particular interest for the FuturICT program relates to "(data and system) security and privacy" KU Leuven-LICT has a strong reputation on security and privacy research, including cryptography, secure architectures, software and applications as well as privacy. One of the inventors of the Rijndael algorithm, Prof. Vincent Rijmen, e.g. is a member of the COSIC (Computer Security and Industrial Cryptography) group: one of the two LICT groups technically active in this area. Besides for COSIC also part of the DistriNet (Distributed systems and Computer networks) group is active in this domain. Together, the security oriented part of DistriNet and COSIC represent about 95 researchers among which are 10 professors and 22 postdoctoral researchers. Additionally the ICRI (Interdiciplinary Centre for Law and ICT) group of the Faculty of Law focuses on legal aspects of ICT and media technology and counts for 19 researchers including 2 professors and 4 postdoctoral researchers. In total a budget1 of 15,5 Meuro has already been committed in projects that allow to continue research activities on security and privacy in 2013 and beyond.

Finally LICT can offer expertise on distributed software architectures, multi-agent systems, agent-based simulation and large scale collaborative systems from within the distributed systems oriented section of the DistriNet research group. This part of the group represents 36 researchers among which there are 52 professors and 9 postdoctoral researchers. A budget1 of 4,5 Meuro has already been committed in projects that allow to continue research activities in 2013 and beyond.

[2] Two of these professors have activities in both DistriNet sections

Being a comprehensive university, KU Leuven is also a good candidate to link the ICT oriented research to specific application domains as will be done in the framework of building out the FuturICT Observatories. Although KU Leuven has activities in many of the Observatory Domains, there are two specific domains we want to highlight here: "Crime and Fraude" on the one hand and Biomedical Research with"Virology" in particular on the other hand. Within the area of "Crime and Fraude" the LINC (Leuven Institute of Criminology) and the Institute of Criminal Law together represent about 100 researchers (professors and assistants) that are active in the area of criminological research and education. KU Leuven is also founding member of the Belgian Cybercrime centre of excellence for training, research and education (B-CCENTRE), being a collaboration and cooperation platform for tackling cybercrime matters in Belgium. Through this Centre ICRI, DistriNet, COSIC, LINC and the Institute of Criminal Law collaborate with international academic research groups, industry players and public organisations (law enforcement, judges and policymakers) on cybercrime related research and training.

In the domain of Health the "Laboratory of Clinical and Epidemiological Virology" represents 4 professors, 9 postdoctoral researchers and 23PhD students active in the areas of "Clinical Virology", "Evolutionary and Computational Virology" and "Clinical and Evolutionary Virology".

Summarising the above information shows that as of today there is a human capital of about 300 researchers active in FuturICT related ICT domains and an additional 140 researchers in the areas of crime and virology. The total research budget committed so far for the ICT concerned research groups for projects running in 2013 and beyond amounts to more than 45,4 Meuro3.

Being a member of the Flemish supercomputing Centre KU Leuven could possibly also make available for experiments supercomputing capacity.

Next to this in-kind funding (through existing personpower and infrastructure) KU Leuven is also committed to invest with additional funding in the FuturICT project. We are currently investigating the modalities.

Finally it should also be mentioned that (together with the other universities and research centres in Flanders) we are in active negotiation with the Flemish Minister and Funding

[3] An analysis of the committed research budget within the non-ICT "crime" and "health" related research groups has not been performed yet but would add up to the total in-kind KU Leuven matching funds.

organisations to arrange for Flemish co-funding for the FET Flagships. So far the Flemish authorities already committed to participate in the EraNetplus call during the ramp-up phase. The modalities for the full-phase are still under discussion. A Letter of Intent will be made available before the submission data of the FuturICT final report.

Regarding research valorisation, we also want to highlight that KU Leuven can play an important role in bringing the academic research results to industry or society. With the support of the technology transfer office of the university (KU Leuven LRD), about 100 spin-offs have been created since 1972 and about 320 patent families are under full control of the university. Besides, the individual LICT research groups have a good track-record in collaborating with industry both in a national and international contex, including via its Industrial Research Fund and dedicated industrial research managers.

Allow me conclude by repeating my support for the initiative to link the European Research Community around unifying goals in general and around the FuturICT goals in particular.

Should you have further questions concerning my support, please do not hesitate to get in touch.

Prof. Dr. Mark Waer
Rector KU Leuven

Date: 0 8 MAART 2012

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Prof. Steven Bishop
Department of Mathematics
University College London
Gower Street
London
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22 Oct. 2010

Dear Prof. Bishop,

This letter is to confirm our support for the proposed *FuturICT* EU flagship project, which brings together the expertise needed to tackle the urgent challenges now confronting us.

As detailed in our technical annex, the approaches that we have been developing around annotation and visual analytics for sensemaking complement the other partners' modelling and visualization approaches, and we are excited at the prospect of working closely with them to deliver next generation infrastructure for better collective intelligence.

Yours sincerely

Simon Buckingham Shum

Senior Lecturer in Knowledge Media, B.Sc. (Psych.), M.Sc. (Ergonomics), Ph.D. (Psych.)
Lead, Hypermedia Discourse Group, KMi

SAPIENZA
UNIVERSITÀ DI ROMA

IL RETTORE

Università degli Studi di Roma
"LA SAPIENZA"
Amministrazione Centrale

USCITA
prot. n. 0010322
del 17/02/2012
classif. III/11

To: Wolfgang Boch
European Commission
DG-INFSO
FET-Proactive

Cc: Prof. Steve Bishop
UCL London

Prof. Dirk Helbing
ETH Zurich

As legal representative of the Università di Roma "La Sapienza", I hereby confirm our interest and willingness and strongly support the candidate flagship "FuturICT", co-ordinated by Prof. Dirk Helbing, ETH Zurich.

I believe that among the six candidate flagship projects, FuturICT has a distinctive inclusive breadth in terms of both disciplinary areas and national research communities. It also has the greatest certainty of significant societal benefit, as neither reliant on a single family of technologies that may be superseded by alternatives nor directed towards a narrow cluster of social drivers for which requirements may change. Whilst other areas of the world may be able to focus greater investment and cheaper labour into the development of single families of technology, such as robotics or electronic materials, Europe remains the community that leads the world in establishing innovative social systems for common good. Hence, I believe FuturICT is a far better fit for a shared European endeavour than some of the alternative candidate flagships.

I believe that in many ways FuturICT's goal of using information technology to understand and manage complex, global, socially interactive systems perfectly fits with the research interests of a large, general, university such as "La Sapienza", where all major involved areas, i.e., physics, ICT, sociology, economics, are well represented. Hence, it is no surprise that a cluster of "La Sapienza" departments (Physics, Communication and Social Science, Computer Science, Computer and System Engineering) is already deeply involved in the flagship preparation and in the Pilot CA, collaborating with Prof. Helbing, Prof. Bishop, and the other partners.

"La Sapienza" is ready to actively participate in FuturICT through its most talented researchers and students. The number of researchers who can be involved in the project is of the order of 100, for an equivalent in-kind contribution to the flagship activities of approximately 5 million euro per year.

Furthermore, "La Sapienza" organizes and delivers a number of graduate education curricula (at the PhD and Master level) that are aligned with the main themes of FuturICT in many areas of Complexity Science, ICT, Social Sciences, Smart Cities and Transport. As a specific contribution to FuturICT, "La Sapienza" proposes to activate an interdisciplinary new Master curriculum oriented to the FuturICT goals with 30 potential students, consisting in a contribution of about 0,3 million euro per year. The students will exploit existing and forthcoming joint-labs, realized in collaboration with various companies, to develop ideas and prototypes in the FuturICT core themes. In particular, an interdisciplinary research center would be created, focusing on Global Nervous Systems, Living Earth Simulator, Global Participatory Platform, with a specific contribution of about 0,2 million euro per year.

Luigi Frati

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SAPIENZA
UNIVERSITÀ DI ROMA

Sapienza is the first University in Rome and the largest University in Europe, with over 700 years of history, 145,000 students, over 4,000 professors and almost 4,500 people in the administrative and technical staff.
Sapienza plans and carries out important scientific investigations in almost all disciplines, achieving high-standard results both on a national and on an international level, thanks to the work of its 63 departments and 30 centres devoted to scientific research.

Besides being an excellence in teaching and research, Sapienza has developed extensive experience in dealing with businesses through a considerable annual volume of contract research commissioned by Industry and has achieved many results in Technology and Knowledge Transfers.
In 2011, for example, the volume of research contracts commissioned by companies to the research groups of the University was more than €30ML. In addition to research contracts, Sapienza is constantly working to achieve partnerships and collaborations with industries structured to promote a stable relationship between research and industry.

In particular, in the last years Sapienza has entered into agreements with various industrial associations, such as FederLazio (the association of the 4,000 SMEs in Lazio) and UnIndustria (the Lazio Confindustria). These agreements provide, among other things, regular meetings between business groups and teams of researchers concerning related subject areas. Specifically, industrial representatives regularly visit the Sapienza research laboratories highlighting their technology needs, "talking" directly with researchers and establishing possible joint developments, in order to perform research projects that serve specific needs coming from the market.

With regard to academic entrepreneurship Sapienza participates in 15 spin offs, which comprise the results of internal research developed in different fields such as, e.g., Cultural Heritage, ICT, Environmental Sustainability, Biotechnology, Medical Device, Civil Engineering. These companies produce an average of more than € 200,000.00 annual revenue.

Sapienza projected the formation of joint-Labs. These are interdisciplinary laboratories able to answer the demand for innovation, promoting collaboration with actors in the industry to implement measures to promote scientific and technical assistance. Joint-labs also enable innovative start-ups

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able to operate in sectors with high technological impact. The project provides the creation of 17 technological structures in the fields: Aerospace, Security, Cultural Heritage, Industrial Design; Biotec health, genomics and regenerative medicine; Maritime vehicles; Drugs delivery; Environmental quality and protection of land; Micro-cogeneration; Micro-nano technologies for industrial applications (Nanolab), Interaction Design and Communication; Nutraceuticals and Nutrigenomics; Soft material science; Optics and Photonics for Energy and Industry; Enhancement of Secondary Raw Materials; Materials and Technologies for Energy.
The Join-Lab Nanolab has been inaugurated last week in the presence of all stakeholders.

Sapienza patent portfolio has 220 national and international patents. In the last 4 years the exploitation of the patent achieved contracts for a total of about 10ML euros in addition to further subsequent R&D contracts undersigned by the research groups with national and international companies.

However, Sapienza continues to spread the culture of entrepreneurship between its researchers and students.
An advanced education program "Research and Development Enhancement" has been set up beginning with this year. RED is a project aimed at strengthening the link between university research and entrepreneurial world, by providing university researchers with a cultural mindset towards the likely exploitation of their inventions on a commercial scale. RED project is participated by several collaborators, including Inno AG, D Pixel, Eli Lilly Foundation and Telecom Italia.

At the same time Sapienza is continuing with great success the project financed by the Ministry of Labor and Social Policy called "Formation and Innovation for Job Placement" involving all the PhD course participants for the action "Qualification of Services for the Integration of Research, Innovation and Labor Market ".

All the above mentioned activities are coordinated and monitored by a central office dedicated to Technology and Knowledge Transfers as well as to support Sapienza researchers for national and international grants.

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Univerza v Ljubljani
Fakulteta za računalništvo in informatiko

Matjaž Jurič, PhD
Professor
Faculty for Computer and Information Science,
University of Ljubljana, Slovenia
11.11.2011

To Whom It May Concern:

As professor at the University of Ljubljana, Faculty for Computer and Information Science and Head of the Laboratory for Integration of Information Systems, I would like to express my great support and interest in the FuturICT flagship initiative.

I am very thrilled by the FuturICT agenda which is tackling some of the most topical issues of our world and what is more the FuturICT project is doing that in most comprehensive way and from the most challenging perspectives. FuturICT will use our information knowledge to better understand society which is one of the one of the most elementary understanding which we should have in order to guide our society most appropriately in the long term. Precisely the information knowledge is the field where our research institution is the strongest. Research in our laboratory is based on cloud computing, service oriented architectures and integration of information systems. We are involved in many projects covering fields of semantics, cloud assisted services and communication platforms. I believe that our expertise in integration and interoperability of information systems, architecture and platforms with related services is the foundation on which we should develop our future research and tie it with the FuturICT and the Living Earth Platform.

I believe that our work and research activity is very accordant with the FuturICT proposal what motive us in being connected with this interesting, complex and ambitious initiative. For the conclusion I am expressing my full support and interest in the FuturICT and I believe that that our commitment would be best expressed through the project itself.

Sincerely,

Matjaž Jurič, PhD
Full Professor
Head of the Laboratory for Integration of Information Systems

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Complexity
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2 December 2010

Professor Steven Bishop
FururICT Coordinator
UCL

Dear Steven,

I would like to express my support both for the Coordination Action and the FuturICT Flagship. It brings together three areas which need to co-evolve and influence each other in a more active way for the benefit of humanity. The London School of Economics is the School of the Social Sciences within the University of London, we therefore have a strong interest in state of the art developments in the Social Sciences. When this development is coupled with new developments in ICT, informed and supported by Complexity Science, then the combination is likely to be both robust and ground breaking.

Initially, the LSE Complexity Research Group, with a significant track record in applying complexity theory to real-world, apparently intractable social problems, over the past 16 years; will be joined by the Department of Government (Prof. David Held, Graham Wallas Professor of Political Science), which is one of the largest political science departments in the UK; the LSE Global Governance Research Centre and the Department of Mathematics (Dr Tugkan Batu). Other LSE Departments and Research Centres are also expected to join the FuturICT Flagship.

Not only do we support the idea of the proposal, but we will also be taking an active supporting role in the CA and a leading role in the Flagship. We will also offer full support and take an active role in the London Hub with UCL and Imperial.

Yours sincerely,

Professor Eve Mitleton-Kelly
Director
Complexity Research Programme
LSE

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Professor Judith Rees, CBE
Director

30 November 2011

Professor Steven Bishop
FuturICT Co-ordinator
Department of Mathematics
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Dear Professor Bishop,

I am writing in support of the proposed FET Flagship, FuturICT. The FuturICT project is grand in its ambitions and provides the prospect of harnessing the potential of social networking through crowdsourcing to create comprehensive new datasets on social activities and other trends. By developing the technological tools necessary to process these enormous data sets, FuturICT offers an opportunity to broaden the evidence base on which social scientists rely and improve the quality of the policy advice they provide. It is widely recognized that the solutions to the global issues we face will increasingly rely on a better understanding of the complex inter-dependencies of a variety of variables; the inter-disciplinary approach behind FuturICT provides the opportunity to hone social scientists' skills in analyzing social and other conditions, diagnosing faults, and prescribing policy solutions. The programme has the potential to involve wide interest across the School, and I am pleased to be able to support it.

Yours sincerely

Professor Judith Rees
Director

UNIVERSIDAD DE CHILE
Facultad de Ciencias Sociales
Departamento de Antropología

Prof. Dr. Dirk Helbing
Department of Humanities and Social Sciences
Chair of Sociology (Modeling and Simulation)

ETH Zürich
CLU E1
Clausslusstrasse 50
Boga Zürich
Switzerland

Letter of Support

To whom it may concern,

On behalf of MaSS (Magister en Análisis Sistémico Aplicado a la Sociedad), an interdisciplinary Master within the department of Anthropology, alongside the Social Sciences Faculty in the Universidad de Chile (FACSO / UCHILE), I was ensured to write the present letter in order to express our full support to FUTURICT flagship.

The Chilean Master Degree above mentioned is strongly related to "complexity" as a theme of social investigation and encourages its members to observe the social studies in a more detailed perspective. The MaSS discusses and delivers to its alumni the main tools of Social Systems Theory, seeking to describe the late modern society and cultural understanding. Mainly based on Niklas Luhmann's systemic constructivism, the current Master Degree addresses its basic and advanced concepts closely, by reviewing its current developments and possibilities of intervention in social research.

We are confident that FUTURICT flagship conceived a very interesting opportunity concerning interdisciplinary multi-institutional alliance. It offered a way to support connected investigations that deals with the possibility and perspective of social changes. Indeed, we thoroughly believe that this project is able to assist scientists to observe, study, manage and develop investigations aiming the same fabric of society that we are constructed on daily basis, not an idealized one.

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Av. Capitán Ignacio Carrera Pinto 1045, Ñuñoa. Fono fax (56-2) 978 77 60 mass.facso@uchile.cl

The MaSS team has developed the skills and the motivation to support this project; sustained with its academic expertise, the MaSS can promote and coordinate local activities, such as study groups and colloquiums, as well as produces consistent and nationally renowned scientific articles in various fields of social intervention. Altogether, in our point of view, these experiences qualifies us with enough background – based upon educational and field work activities - to successfully collaborate whith the FUTURICT project.

Therefore, the MaSS team supports the proposal and looks forward on having the great honor to participate in the FUTURICT as a collaborator, throughout the full-extension that shall be carried on by the project. We truly believe in this initiative and strongly hope that many other qualified institutions can also attend to this most important project, in order to produce new ways of addressing problems and solutions related to the late modern society.

Sincerely,

Vº Bº Director
Departamento
Antropología

UNIVERSIDAD DE CHILE * ANTROPOLOGÍA * FACULTAD DE CIENCIAS SOCIALES

Profª. Pamela Jorquera Alvarez
Coordinadora (S)
Magíster en Análisis Sistémico
Aplicado a la Sociedad

MAGÍSTER EN ANÁLISIS SISTÉMICO APLICADO A LA SOCIEDAD * FACSO * UNIVERSIDAD DE CHILE *

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Dpto. Antropología

07_12/2011_MaSS

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MEDIZINISCHE UNIVERSITÄT WIEN

Vienna, October 27, 2011

RE. Letter of support for the EU flagship proposal FuturIC

To whom it may concern

This is a letter confirming that the Medical University of Vienna is interested in the FuturICT project and its participation in the FET Flagship competition. Our Medical University, with its Section for Science for Complex Systems, would be ideally suited to act as the coordination hub for Austria and Slovenia. We are also actively engaged in several of the scientific topics that are addresses in the FuturICT initiative. For our University, the greatest benefit will come from a greater exploration of several public health related issues as well as epidemiologic questions which are rooted in social mass phenomena, such as migration and opinion formation, and which are still only poorly understood. Any progress in early warning systems in these areas would greatly benefit not only science but also public health in general. Our Medical University is in possession of an efficient infrastructure capable of coordinating international projects, and acting as the coordination hub for Austria and Slovenia would be an honor and privilege for us. For these reasons the Medical University of Vienna is proud to participate in the FuturICT initiative.

Sincerely yours

O. Univ.- Prof. Dr. Wolfgang Schütz
Rector of the Medical University of Vienna (Medizinische Universität Wien)

NATIONAL UNIVERSITY OF IRELAND, MAYNOOTH
MAYNOOTH, CO. KILDARE, IRELAND

Professor R.W. O'Neill
Vice President for Research

NUI MAYNOOTH
Ollscoil na hÉireann Má Nuad

1 December, 2011

Prof. Dr. rer. nat. Dirk Helbing
ETH Zurich, Room CLU E1
Clausius Strasse 50
CH-8092 Zurich
Switzerland

Re: FuturICT FET Flagship

Dear Prof. Dirk Helbing,

I wish to confirm that National University of Ireland Maynooth (NUIM) is keen to support and develop the overall vision of the proposed FuturICT FET Flagship Initiative. This inter-disciplinary initiative targeted at the big global challenges is needed now more than ever to help accelerate our understanding of the interplay of complex inter-connected natural and man-made processes in order to implement creative, sustainable and innovative solutions for the future.

NUIM is home to several research institutions sharing the research agenda of FuturICT: National Centre for Geocomputation (NCG), Hamilton Institute, ICARUS Climate Modelling Institute, National Institute for Regional and Spatial Analysis (NIRSA), and Callan Institute for Applied ICT.

NCG is the internationally recognised group focused on advanced spatial analytics and visualisation. It coordinates a number of national and international projects targeted at understanding of the fundamental processes in spatial human dynamics and developing technologies to support spatial decision making. Particularly, it is a lead house of the Strategic Research Cluster in Advanced Geotechnologies (http://www.stratag.ie) which is a large-scale national research programme in this domain. NIRSA is pursuing research in linking spatial processes to social and economical development. Hamilton provides a bridge between mathematics and its applications in ICT, including techno-social networked systems. ICARUS was established in order to improve our scientific understanding of climate change and its impacts nationally and across Europe. Callan Institute is focused on the use of information, computing and communications technologies to address challenges arising from our increasingly complex world of communication- and technology driven environment and their impact on our personal lives. NUIM is currently coordinating an Open Data innovation platform, Dublinked (http://www.dublinked.ie), which will be linked to European Network of Living Labs and is also developing the All Ireland Regional Observatory (http://www.airo.ie), an online portal for national & regional socio-demographic information.

These are the areas NUIM will develop in terms of the current and planned academic and applied research programmes which are strongly aligned with FuturICT agenda.

In conclusion, NUIM would like to express its full support to the FuturICT concept and vision, and feels that the research institutes, the core projects and our upcoming research initiatives can make real contribution to the FuturICT FET Flagship. We will further extend our commitment by promoting a joint research cluster of the main institutes, supported by several future academic appointments, to advance the FuturICT research programme as it develops.

Yours sincerely,

R. O'Neill

Prof. Ray O'Neill
Vice President for Research
National University of Ireland Maynooth

The Open University

Design Complexity Research Group

Faculty of Mathematics, Computing and Technology

Department of Design, Development, Environment and Materials

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Prof Dirk Helbing
ETH Zurich

24th March 2010

Dear Prof Helbing,

FET Flagship: FuturIcT

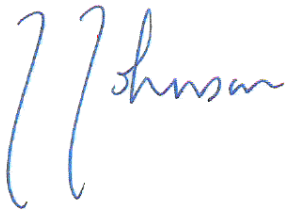
The Open University fully supports the proposed FuturIcT Flagship and will do everything it can to make the project a success. The Design Complexity Group at the Open University has an international reputation for its research into the way complexity impinges on design and design embraces complex systems science. We hope to be able to contribute our expertise as the Flagship develops.

Also we will be pleased to contribute our well known expertise in education and distance learning to the project. With over forty years experience of educating millions of students in many countries the Open University will be able to provide programmes of education and support at the level the Flagship will require across many countries and institutions.

As you know the European ASSYST project based in my department is committed to supporting the FuturIcT Flagship project , which we see as having the potential to be one of the most important scientific innovations of this century . We congratulate you for developing this exciting and innovative project. The ASSYST community strongly supports it.

The Open University will be also pleased to do whatever it can to help prepare and promote the FuturIcT proposal through the efforts of ASSYST and my research group.

We wish you luck, yours sincerely



Jeffrey Johnson
Professor of Complexity Science and Design
Director of the European ASSYST Coordination Action Project

OXFORD MARTIN SCHOOL

UNIVERSITY OF OXFORD

JAMES MARTIN 21ST CENTURY SCHOOL

30th November 2010

To whom it may concern

Flagship FuturICT

As Director of the Oxford Martin School, I am very pleased to confirm our great interest in and strong support for the FuturICT proposal for a FET Flagship.

The Oxford Martin School (formerly the James Martin 21st Century School) was founded through the vision and generosity of Dr James Martin, who gave a benefaction of $100 million to the University of Oxford to establish the School in 2005. The School is a unique, interdisciplinary research initiative that has the mission to address the key challenges that our global society faces in the 21st Century. In 2009, Dr James Martin pledged another $50 million in matching funds to the School. Matching donations of well over this amount were secured from more than 30 different donors (individual philanthropists, charities, corporations and research bodies) and created 19 new research programmes that joined the School. As a result of this expansion, the School relaunched under the new name of Oxford Martin School in Autumn 2010. Research in the Oxford Martin School is clustered around four broad themes: Health & Medicine; Energy & Environment; Technology & Society; Ethics & Governance. The theme of greatest relevance to FuturICT, Technology & Society, provides an umbrella for a number of Institutes and Programmes. These include: the Institute for Economic Modelling; the Institute for the Future of Computing; the Institute for Science, Innovation and Society; the International Migration Institute; the Oxford Institute of Ageing; the Programme on Future Technologies; the Programme on the Future of Cities. These Institutes and Programmes do not only provide a strong interdisciplinary focus on major societal challenges, but are also integrated and cross-linked through their membership of the School.

FuturICT's ambition of combining advances in computer science and related technologies with novel approaches to the social sciences is very much in line with the existing interests and activities of the School, especially since the stated aim of FuturICT is to use these scientific breakthroughs to tackle difficult and important real-world problems. Beyond new ways of combining computer science and the social sciences, a further crucial ingredient of the FuturICT proposal is provided by the emerging interdisciplinary field of complexity science. The School already has significant interests in complex systems research, through the programme that is led by Dr Felix Reed-Tsochas at the Institute of Science, Innovation and Society. It is anticipated that these activities will scale up in the near future, in collaboration with Oxford University's CABDyN Complexity Centre, and serve as an important connecting link between the different thematic interests represented in the School. Hence, there is a very close

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OXFORD MARTIN SCHOOL

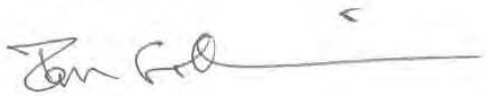
UNIVERSITY OF OXFORD

JAMES MARTIN 21ST CENTURY SCHOOL

alignment between the proposed development of FuturICT activities, and the capabilities and objectives of the Oxford Martin School. The School is therefore very well placed to contribute substantially to the FuturICT agenda, and is committed to playing a significant role as FuturICT activities unfold.

In conclusion, the Oxford Martin School strongly supports the FuturICT Flagship proposal, is committed to participating fully in the initial Coordination Action, and looks forward to many opportunities for active engagement and collaboration as the programme develops. We believe that this an important and significant initiative, and hope that others will share our interest and sense of excitement.

Yours sincerely,



Ian

Ian Goldin
Director
Professorial Fellow, Balliol College

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POLITECNICO DI TORINO

To whom it may concern,

As legal representive of the Politecnico di Torino, I hereby confirm our interest and willingness to participate and support the initiative "Candidate Flagship FuturICT", co-ordinated by Prof. Dirk Helbing, ETH Zurich, that will be submitted in response to the next call for proposals of the FET-ICT Programme.

The action areas of the FuturICT Flagship are critically relevant to the main needs of our present and future Society. In the area of the ICT, the focus of research and technology development has moved from the design of monolithic engineered systems to the design, integration, on-the-fly composition of distributed systems and the development of platforms for such systems. Public and private institutions, industries, commercial and public-sector organisations are increasingly aware that their software applications do not stand alone, but are part of a broad interconnected system.

Social interactions change and adapt to the multifaceted and interconnected effect of ambient intelligence. The challenge of this Flagship will be to establish guidelines, design rules and increase awareness to meet the increasing need to face with these new social paradigms.

Hence, we confirm our interest in co-operating actively to the preparation of the project proposal and then in successfully implementing and promoting the Project activities.

A cluster of Departments (Physics, Information and Communication Engineering, Transport and Civil Engineering) is jointly involved in the Flagship, collaborating with Professor Helbing and the other partners. The members of our team have long-standing skills in many areas of the ICT as for example Statistical Physics, Image Processing, Distributed Information and Communication Technologies, Information and Algorithmic Complexity, Building and Transport Engineering.

The people involved within our organisation are:

Prof. Anna Carbone (anna.carbone@polito.it) Physics Department - Referent

Prof. Enrico Macii (enrico.macii@polito.it) Computer Engineering Department

Prof. Marco Ajmone Marsan (marco.ajmone@polito.it) Electronic Engineering Department

Prof. Cristina Pronello (cristina.pronello@polito.it)Transport Engineering Department

Prof. Bernardino M. Chiaia (bernardino.chiaia@polito.it) Civil Engineering Department

Name and Position of Legal Representative
Prof. Francesco Profumo
RECTOR
Torino, 12 April 2010

Professor Francesco Profumo
Rector
Politecnico di Torino
Corso Duca degli Abruzzi, 24 – 10129 Torino Italia
rettore@polito.it

POLITECNICO DI TORINO

To: Wolfgang Boch
European Commission
DG-INFSO
FET-Proactive

Cc: Prof. Steve Bishop
UCL London

Prof. Dirk Helbing
ETH Zurich

The Politecnico di Torino confirms its keen interest in the initiative “FuturICT (www.futurICT.eu)”, co-ordinated by Prof. Steven Bishop, UCL London, and Prof. Dirk Helbing, ETH Zurich, that will be submitted in response to the next call for proposals of the FET-Flagships ICT Programme.

The Politecnico di Torino believes that the main research areas of the FuturICT FET Flagship proposal are critically relevant to the main needs of our present and future Society. A number of Departments within Politecnico (Physics, Electronic and Communication Engineering, Computer Engineering, Transport and Civil Engineering, among others) are already deeply involved in the research activities of the Pilot CA, collaborating with Professor Bishop, Professor Helbing, and all the other partners.

The Politecnico di Torino is ready to participate in FuturICT and supports the project through its most talented researchers and students. The number of researchers of our institution that can be involved in the FuturICT FET Flagship is of the order of 50, for an equivalent in-kind contribution to the FET Flagship activities of the order of **2.5 million euro per year**.

Furthermore, the Politecnico di Torino organizes and delivers a number of graduate education curricula (at the PhD and Master level) that are aligned with the main themes of FuturICT in many areas of Complexity Science, ICT, Smart Cities and Transport.

The Politecnico di Torino, as a specific contribution to the FuturICT Fet Flagship initiative, proposes to activate a specific new PhD program devoted to the FuturICT objectives, with 10 new PhD students per year, consisting in a contribution of about **0.5 million euro per year.**

Torino, 28 October 2011

Prof. Francesco Profumo
Rector

Prof. Marco Gilli
Deputy Rector

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UNIVERSITATEA *SPIRU HARET*

Acreditată prin Legea Nr. 443/5.07.2002

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Telefon: (0040 21) 314.00.75; 314.00.76
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E-mail: info@spiruharet.ro

Nr. 3004 / 14.09.201

Dear Professor Steven Bishop,

As the Vice-Rector of the Spiru Haret University, Bucharest, Romania I hereby confirm our utmost interest in and strong support for the proposal FuturICT Flagship.

Spiru Haret University (www.spiruharet.ro) is a higher education institution, a legal person of private law and public utility, a part of the national education system, accredited by the Act 443/2002.

Our university has adopted the ideals and principles set forth by the Magna Carta Universitatum, ratified in Bologna in 1988, which advocates for transposition, within the context of higher education and scientific research, of the regulations, norms and values that were voted for during the Bologna Process.

The efforts that **Spiru Haret University** has been making in order to secure its integration into the national and European area of scientific research have been steered to building its own strategy of research-development. This approach is proving the ample openness of the University to the world, its desire to cooperate at various levels, in the European and international space of education and research and bring us funds from research of over EUR 20 million in the past 2 years.

FuturICT' s ambition of combining breakthroughs in computer science and related technologies with the social sciences approaches is very much in line with our existing interest in exploring the social behavior changes derived from the new challenges of the sustainable development and current economic trends. The development of the interdisciplinary research and encouraging the creativity are important for us in sustaining our efforts to become reliable partners in joint/complex research project at EU level.

In conclusion, **Spiru Haret University** strongly supports the FuturICT Flagship proposal and we would like to take an active part in the project activities matching our research capabilities and expertise.

Prof.univ.dr. Manuela Epure

Vice-Rector Research&PhD

TEL AVIV UNIVERSITY
Raymond and Beverly Sackler Faculty of Exact Sciences
School of Physics and Astronomy

אוניברסיטת תל-אביב
הפקולטה למדעים מדויקים
ע"ש ריימונד ובברלי סאקלר
בית הספר לפיזיקה ואסטרונומיה

Prof. Eshel Ben Jacob - ***The Maguy-Glass Chair in Physics of Complex systems***

Tel: 972 -3- 640 7845 Fax: 972-3-642 5787

April 17th, 2011

TO WHOM IT MAY CONCERN

Letter of support: the FutureICT Flagship

With this letter I wish to express the full support of myself and the Tel-Aviv University (TAU), Tel-Aviv, Israel, to the FutureICT Flagship Intiative headed by Prof. Dirk Helbing of the ETH Zurich, Switzerland.

TAU is the largest research university in Israel, with over 30,000 students and 7000 graduate students. TAU is funded both by the government and private institutions and research funds. It has recently been announced that TAU is ranked 11th in the world for in citations per faculty in 2010, alongside the Ivy League universities in the U.S. and the leading universities in Europe.

In TAU, I head a multi-disciplinary research group for the study of complex systems. I am known worldwide for my various research interests, ranging from bacteria decision-making, social intelligence, social networks, and swarm intelligence to pattern formation, multi-agent modeling, neuroscience and econophysics. I currently lead two international initiatives - the Distributed Information Processing in Complex Biological Networks initiative, and the Italy-Israel Initiative on Integrative Network Neuroscience.

As a result of our successful research in the field of econophysics, analyzing correlations and network structure in capital markets, we have established a prosperous collaboration with the Israel Securities Authority (ISA), the regulators of the stock market in Israel. Furthermore, we are acting as the representatives in Israel of the Socio-Economic systems division of the German Physics Society (DPG). Our research focuses on understanding the structure and dynamics of capital markets, by the analysis of correlations. In this context, we are involved in many collaborations, such as with the group of Prof. Rosario Mantegna (Italy) and Prof. Thomas Lux (Germany).

With this letter I confirm my enthusiastic support for the proposed FuturIcT Flagship Initiative. I am looking forward to actively participate in the flagship, in all aspects which are in my capacity.

Sincerely,

Eshel Ben-Jacob.

Eshel Ben-Jacob
Professor of Physics
Maguy-Glass Professor in Physics of Complex Systems
Former President of the Israel Physical Society
Fellow of the American Physical Society
Fellow of the World Institute of Physics

קריית האוניברסיטה, רמת אביב, תל אביב 69978, ת"ד 39040. טלפונים: 03-6409274, פקסימיליה: 03-6409306
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THINKlab THINKsalford

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2 November 2010

FutureIcT Knowledge Accelerator

University of Salford THINKlab

The THINKlab is a futuristic and spacious research environment with state-of-the-art facilities located in the Salford area of Greater Manchester.

It has established an international reputation in the development and use of virtual and data mining technologies to create new distributed collaborative workspace environments working across many industries, sectors and disciplines. This offers innovative new ways to help industry, commerce and the community tackle, for example, complex engineering programmes, or oversee the development of large scale transformational urban regeneration programmes.

The growing capability and expertise within the THINKlab to create new dynamic virtual models which can integrate and visualise many large scale datasets from many scattered sources to support real time planning, development and decision-making in addressing complex societal challenges can, we believe, contribute to the work of the Knowledge Accelerator in the following ways:

- The THINKlab could act as a local node in the distributed global network of the Knowledge Accelerator. It could contribute to the visualisation and translation of local/global simulation scenarios in critical societal, economic and ecological development areas to create the story of reality. This would be achieved through the creation and operation of new scalable data architecture models which would be able to integrate many scattered and massive data resources combining complex social, economic and ecological simulations.
- It can support many of the paradigm shifts expected from the FutureIcT flagship, particularly in developing the capability for real time decision systems.
- It can directly address and contribute to the development of the key methodological ICT challenges:
    - enabling the creation of new algorithms and data structures to support the operation of the global Living Earth Simulator.
    - providing computational and collaborative capacity to support the operation of distributed peer to peer networking in real time.
    - creating simple user interfaces to optimise adoption and use of the simulation models by key decision-makers in government, industry and commerce.

- It can directly address and contribute to the development of the applied ICT challenges particularly in enabling new methods of model-enhanced data representation and interpretation.

At a local level the THINKlab has already begun to explore some of the key areas of the landscape encapsulated by the concept of the Knowledge Accelerator and we believe that the new simulation systems that are now emerging from this work offer significant potential to support government decision-makers, businesses and citizens to build stronger and safer sustainable communities. We believe there is great synergy that will be realised from aligning the current visualisation work of the THINKlab to support and contribute to the ambitions of the Knowledge Accelerator. We strongly support this proposal and welcome the opportunity to work collaboratively with you in taking this forward.

Yours sincerely

Professor Terrence Fernando,
Director of the THINKLab
Director of the Future Workspaces Research Centre,

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 Challanges 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

Coláiste na Tríonóide,
Baile Átha Cliath 2, Éire

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

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www.tcd.ie/research

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 TCDs 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.

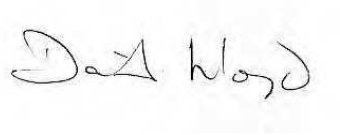
Institute for International Integration Studies (IIIS) was established with the objective to promote research and learning about the many dimensions of global and European integration, its dynamics, impacts and governance. It adopts an interdisciplinary approach in seeking an understanding of the implications 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 breath 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 challanges 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

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Technische Universität München

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Eidgenössische Technische Hochschule Zürich
Prof. Dirk Helbing
Scientific Coordinator of EU FET Flagship Proposal „FuturICT"
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Prof. Dr. Dr. h.c.mult.
Wolfgang A. Herrmann
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praesident@tum.de
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Unser Zeichen: JP/KS

Munich, March 30th 2012

Letter of support "FuturICT"

Dear Professor Helbing,

As the President of the Technische Universität München I enthusiastically support Prof. Sandra Hirche leading a group of excellent TUM-scientists in the FET Flagship FuturICT and thus TUM joining this high-level consortium as a partner.

As the leading technical university in Germany, TUM has established interdisciplinary structures and research areas to tackle tomorrow's challenges by building bridges between disciplines, intertwining the departments, and by involving additional regional (e.g. Ludwig-Maximilian University, Max-Planck-Gesellschaft, Helmholtz, Fraunhofer, German Aerospace Center DLR) and international partner institutions. Current mega themes such as Information & Communication - Energy & Natural Resources - Environment & Climate - Health & Nutrition - Mobility & Infrastructure do not remain in their disciplines alone but exceed in their complexity previous scientific challenges. The solution of such complex problems requires multidisciplinary networking and bundling of intellectual and financial resources within Europe.

FuturICT is perfectly aligned with the TUM overall strategy to address complex scientific challenges of high societal relevance. Particularly the synergy with our core strategic area "Information & Communication" is significant. The TUM-group headed by Prof. Hirche includes leading experts in complex networked systems, in particular in data analysis, communication, decision making and control in complex large-scale networked systems.

Prof. Hirche is one of the Prinicipal Investigators in TUM's Cluster of Excellence "CoTeSys", established by the German Research Foundation (DFG) within the framework of the German Excellence Initiative. This cluster follows

Technische Universität München

the approach to combine methods from neurocognition-psychology with methods from informatics-engineering to realize technical cognition. This cluster currently attracts third party funds of around 3.7 Mio € per year coming from public and industry funded projects.

The upcoming MUNICH CENTER FOR TECHNOLOGY IN SOCIETY (MCTS) will be established as a cross-faculty Integrative Research Center at TUM in order to consolidate research on technology-oriented science from the perspectives of the humanities and social/human sciences. In the near future seven new professorships will be established within this center financed from industry, public funding and TUM's own resources. Therefore, MCTS would greatly enrich the activities of FuturICT regarding socio-economic systems and socially inspired ICT.

TUM offers also access to large-scale computational resources like the technical and scientific high performance supercomputing centre Leibniz-Rechenzentrum, (LRZ). This centre develops and provides the know-how for a nation-wide high performance centre - the highest concentration of supercomputing power within Germany. Additionally, in 2012 a new supercomputer will be fully operational and available for European researchers.

Furthermore, the Institute for Advanced Study (TUM-IAS) represents a power center for top-level research at our university and equips top-level scientists with time, scope, and resources for creative, innovative research. The FET Flagship FuturICT will benefit from the IAS fellowships attracting top researchers from academia and industry from all over the world. As a member of the Advisory Council Prof. Hirche takes part in strategic decisions of the TUM-IAS and therefore an organic connection of the FuturICT and the IAS is guaranteed.

If FuturICT succeeds, TUM will attract even more funds that we could commit to the FuturICT. We expect that TUM with the excellent scientists involved and lead by Prof. Hirche will bring world-leading expertise into the consortium. As the President of TUM, I therefore strongly support the active participation of Prof. Hirche in FuturICT.

Sincerely,

Prof. Wolfgang A. Herrmann
President

Umeå University, SE-901 87 Umeå, Sweden
Deputy Vice-Chancellor for Research
Marianne Sommarin
Phone: +46 90-786 60 30 Fax: +46 90 786 0000
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www.umu.se

Prof Dirk Helbing
ETH Zurich

FET Flagship FuturICT

Dear Prof Dirk Helbing,

Umeå University was founded in 1965 and is Sweden's fifth oldest university. Today, we have a strong international and multicultural presence with students, teachers and researchers from all over the world. As one of the leading comprehensive universities in the nation, we are alive with enthusiasm, creativity and fresh ideas.

We constantly strive towards being one of Scandinavia and Europe's best environments for education, research and community engagement that meets the challenges of an ever-increasing global society.

As our goals parallel the vision of FuturICT, I am convinced that the large-scale multidisciplinary and integrative efforts of the Flagship provide the best means for better understanding our complex world.

Sincerely yours,

Marianne Sommarin

Deputy Vice-Chancellor for Research, Professor

Universidad
Carlos III de Madrid

Re: Flagship FuturICT

To whom it may concern:

As the Vice-President for Research of the Universidad Carlos III de Madrid, I hereby confirm the Universidad's great interest in and support for the proposed Flagship FuturICT. Our university emphasizes multi- and inter-disciplinary approaches based on high-level basic and applied research, and supports and encourages its researchers and teachers to international collaboration with the best researchers and center around the world.

The FuturICT project is an ambitious, cross-cutting, inter-disciplinary project which embraces a number of important research themes that are most important for Universidad Carlos III de Madrid. These include significant engineering challenges in ICT and in modeling of complex systems, for which there are a number of our academics with relevant expertise and experience, as well as complementary initiatives in climate and environment science that will inform specific application domains of the proposed research programme. Furthermore, the dynamics of complex systems and how to develop an ecological model to be most relevant to economics and sociology is an area where Universidad Carlos III de Madrid is also very active.

The proposal therefore engages with major activities of Departments such as Mathematics, Economics and Telematic Engineering, and also the Research Institutes IMDEA Networks and the soon-to-be-started Center for Global Change (joint with CSIC). Universidad Carlos III de Madrid is fully supportive of the EU's FET Flagship Initiative and, without prejudicing collegiate support for other proposals, the Universidad would like to express its strong support for FuturICT as an appropriate tool to support research at the cutting edge and integrate the European engineering, natural and social science communities, and confirm its interest in active collaboration should the initiative be successful.

Sincerely yours,

VICERRECTORADO DE INVESTIGACIÓN

Prof. Carlos Balaguer Bernaldo de Quirós
Vice-President for Research

Avda. de la Universidad, 30 – 28911 Leganés * MADRID * ESPAÑA * Tlf.: (34) 91 624 9033 * Fax.: (34) 91 624 9149

To whom it may concern,

As legal representative of the Università Politecnica delle Marche (UNIVPM), Ancona, I am pleased to confirm UNIVPM's great interest in and strong support for the FuturICT proposal for a FET flagship, coordinated by Prof. Dirk Helbing, ETH Zurich.

Our University considers the FuturICT project as an ambitious multi-disciplinary endeavor that addresses some of the most important challenges to science and society in our time. As we have witnessed over the last few years, the complex interactions of humans in socio-economic systems can easily lead to systemic instabilities and contagious reactions that all too easily put the well-being of our societies at risk. Obviously, a deeper understanding of the interaction among human dynamics is required to face the grand challenges of our century.

UNIVPM is not only a great institution for research and teaching across a broad range of disciplines, but also a driving force for social change. In its current incarnation this ambition is embodied by the centrality within our research strategy of our Grand Challenges: Global Health, Sustainable Cities, Intercultural Interactions and Human Wellbeing. These are global problems that must be addressed if we want to give to future generations the opportunity to flourish. However, their scope lies beyond any single academic discipline or activity. Fortunately, UNIVPM has always had a strong culture of interdisciplinary collaboration across its broad spectrum of academic excellence. Hence, we are in a unique position to be able to link research activities and outputs in order to make a difference on these global issues. A cluster of Departments (in the fields of Economics, Social Sciences, Management, Computer Science, Electronics Computer Engineering and Systems, Biology) at our University have the competence to fruitfully integrate their research skills with those of the mentioned flagship program.

Members of these Departments have strong expertise in many aspects of ICT, including mathematical models and methods for social systems, computer networks, next generation telecommunication networks, context and ambient aware applications, wireless sensor networks, embedded systems, complex systems and bio-inspired computing.

The reference persons within our organization are:
Prof. Gian Luca Gregori - Dean of the Faculty of Economics "Giorgio Fuà";
Prof. Francesco M. Chelli - Dean of the Department of Economics and Social Sciences;
Prof. Mauro Gallegati - Department of Economics and Social Sciences.

Ancona, 22 November 2011

Prof. Ing. Marco Pacetti
RECTOR

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UTIU
UNIVERSITÀ TELEMATICA
INTERNAZIONALE UNINETTUNO

To whom it my concern,

as legal representative of the International Telematic University Uninettuno, I hereby express my full support and appreciation to the FuturIcT Flagship initiative, co-ordinated by Prof. Dirk Helbing, ETH Zurich.

The University Uninettuno will be able to contribute to the project with his huge research in the field of ICT applied to teaching.
Innovation, research and experimentation are the basis of the International Telematic University Uninettuno. The research carried out at Uninettuno is experimental, pure and applied and involves international professors from different fields: technologists, computer scientists, educationalists, psychologists, experts in different languages and communication. The interdisciplinary results affect several areas (technical and engineering, psycho-cognitive, pedagogical, socio-cultural, methodological) and have helped to identify new face-to-face and distance teaching-learning processes, having a relevant effect on the theories related to learning processes, teaching methodologies, the relationship of interaction distance. They have also created the basis of the evolution of educational psychology and educational model that has led to the creation of a new model of distance teaching and learning adopted by Uninettuno and recognized by the international scientific community. Uninettuno also due to the results of his research has made important innovations in practice.

This important research activity has led Uninettuno in this years to be leader or partner of several European research projects on ICT and its applications.

So Uninettuno will be pleased to support the FuturIcT proposal and do whatever can be helpful to prepare and promote it.

Maria Amata Garito

UNIVERSITA' TELEMATICA INTERNAZIONALE
"UNINETTUNO"
Corso Vittorio Emanuele II, 39 - 00186 Roma
cod. fisc. 97394340588

Prof. Maria Amata Garito
Rector of the International Telematic University Uninettuno

Rome, 12/05/2010
Prot. N. 3632/10

Universitaet Klagenfurt
Universitaetsstrasse 65-67
9020 Klagenfurt
Austria

Letter of Support

Klagenfurt, October 28 2011

Alpen-Adria-Universität Klagenfurt
Universitätsstraße 65-69
9020 Klagenfurt
Austria

To whom it may concern,

This letter is to express the explicit interest of the Universitaet Klagenfurt in the FuturICT Flagship initiative. There exists a strong connection of particular FuturICT topics to our interdisciplinary research focus on self-organization. Furthermore, there is a particular relevance to our research focus on smart energy networks. Our institution plans to engage in several of the visions sketched out in FuturICT which will involve several of our key scientists. We are looking forward to see FuturICT materialize and intend to support it by our institution.

With best regards

O.Univ.-Prof. Dr. Dr.h.c. Heinrich C. Mayr
Rektor

UNIVERSITAT
ROVIRA I VIRGILI

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43007 - Tarragona
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Fax +34 977 55 86 36
www.urv.cat

Tarragona, April the 5th of 2011

To whom it may concern,

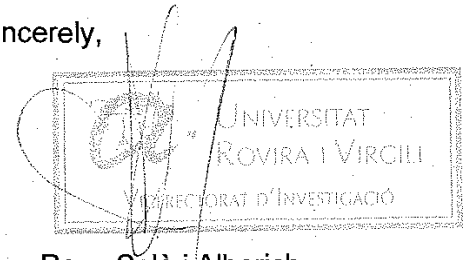
As the Vice-Rector for the Research and Connections with Health Institutions of the *Universitat Rovira i Virgili (URV)* I hereby confirm our strong interest and support to participate in the FuturICT FET Flagship proposal.

At the Universitat Rovira i Virgili, a number of researchers from the *Algorithms embedded in Physical Systems* Research Group, who will possibly be involved in the Flagship FuturICT initiative, have strong expertise in ICT related areas such as numerical methods in parallel and grid computing, scheduling and power-aware algorithms in real time systems, structural and dynamical analysis of complex networks. All these topics are strongly required by the initiative of FuturICT.

The ambitious goal of the FuturICT Flagship, which is to understand and manage complex global, socially interactive systems with a focus on sustainability and resilience, largely overlap with the mission of URV and are in compliance with the University's function of generating knowledge to contribute to the development of the society and economy.

Therefore, we support the participation of Prof. Dr. Alexandre Arenas at the FuturICT project, where he will act as interface on behave of URV. We will support his activities and contribute to the success of FuturICT project.

Sincerely,



Dra. Rosa Solà i Alberich
Vice-rector for the Research and Connections with Health Institutions
Universitat Rovira i Virgili

MINISTERUL EDUCAȚIEI, CERCETĂRII,
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02.11.2011, Bucharest

To the kind attn. of **H.E. Mr. Ambassador Liviu BOTA – Honorary President**
Mr. Sever AVRAM – Executive President
EUROLINK-House of Europe Foundation in Bucharest, Romania

Your Excellency Mr. Ambassador Bota,
Dear Mr. Executive President Avram,

We already know about your activities and involvement in the field of competition and competitiveness since the year 2004, under the aegis of the ***CEFTAC Platform*** *(Central European Advocacy for a Fair and Transparent Competition Platform)*, which annually organises the European Competition & Competitiveness Day in Romania.

We also noticed your strong commitment to support the innovative SMEs sector, as it resulted from the information and training events you organised under the aegis of the ***EU-RO Clearing Funds Platform***, which mostly focuses on the absorption process of EU Structural Funds in Romania.

We recently learned that **EUROLINK-House of Europe Foundation** was the initiator and coordinating organisation of the ***Black Sea - Danube Regional Network for Social & Economic Innovation***, which was launched at the Palace of the Parliament, on the 22nd of May 2011, on the occasion of the Regional Fair dedicated to the celebration of European Maritime Day in Romania.

In this context, we would like to express our strong interest in supporting the development of the Regional Network with the aim to build valid partnerships in our Central and South-Eastern European region, in order to implement projects under FuturICT framework.

Aware of the opportunities opened by the participation to the FuturICT innovative program, we are ready to support your Regional Network by *using such knowledge or technology to tackle problems in more than one of the FuturICT application areas (society, economics, technology, and environment).*

Sincerely yours,

Prof. Corneliu BURILEANU
Vice-Rector, University "Politehnica" of Bucharest

AMMINISTRAZIONE

To whom it may concern

As legal representative of Alma Mater Studiorum – Università di Bologna, I hereby confirm our interest and willingness to participate and support the initiative *"Candidate Flagship FuturICT"*, coordinated by Prof. Dirk Helbing, ETH Zurich, that will be submitted in response to the next call for proposal of the FET-ICT Programme.

The themes that the FuturICT flagship wants to address are critically relevant for the development of new concepts, methods and models in all areas of Information and Communication Technologies, including physics and mathematics, and will find useful applications towards the development of a sustainable society.

Indeed, modern society is increasingly facing challenges deriving from economic instabilities and extreme dynamics in social behavior, raising the necessity for sustainable development to ensure proper quality of life in large metropolitan areas. These challenges require an effort at the European level and in an interdisciplinary scientific context. We consider the FuturICT flagship project as a fundamental step for a coordinated action to cope with future crises in complex social-economic systems.

A cluster of Departments (Physics, Mathematics, Computer Science, Electronics Computer Engineering and Systems) at the University of Bologna have the competence to fruitfully integrate their research skills with those of the mentioned flagship program.
Members of these Departments have strong expertise in many aspects of ICT, including mathematical models and methods for social systems, computer networks, next generation telecommunication networks, nanotechnologies, context and ambient aware applications, nanotechnologies, wireless sensor networks, embedded systems, photonics, robotics, complex systems and bio-inspired computing.

The reference persons within our organization are:

Prof. Armando Bazzani, Department of Physics
Proff. Pierluigi Contucci and Mirko Degli Esposti, Department of Mathematics
Prof. Ozalp Babaoglu, Department of Computer Science
Prof. Giovanni Emanuele Corazza, Department of Electronics, Computer Engineering and Systems

Bologna, 25 November 2010

Name and Position of Legal Representative
Prof. Emilio Ferrari
Deputy Rector

UCC
Coláiste na hOllscoile Corcaigh, Éire
University College Cork, Ireland

Office of the Vice-President for Research & Innovation,
4th Floor, Block E,
Food Science Building,
University College Cork,
College Road,
Cork,
Ireland.

7th January 2011

Re: Flagship FuturICT

To Whom It May Concern

As Vice President for Research at UCC, I am pleased to confirm UCC's strong interest in and continued support for the FuturICT proposal for a FET flagship.

UCC's strategy includes a focus on concentrating research resources in areas that are producing research at the highest international levels, consolidating research activities through clustering to establish critical mass in organised research units while also promoting and supporting large scale interdisciplinary research projects and new emerging areas of research.

The ambitious goal of the FuturICT Flagship which is to understand and manage complex, global, socially interactive systems, with a focus on sustainability and resilience has our full backing and furthermore deserves the support of the broader scientific and academic community. The focus on revealing the hidden laws and processes underlying societies by integrating ICT, Complexity Science and the Social Sciences will facilitate a symbiotic co-evolution of ICT and society and spur further activity in many different areas within academic and industrial research.

The global problems that are posited in the FuturICT proposal require a multi-disciplinary approach as the breadth of the problem is too large for any singular academic research area. The scale of these problems require a Flagship approach in order to address and tackle the multiple issues if future generations of humanity are to avoid the severe impacts of decisions made by the previous and present administrations. Fortunately, UCC has always had a strong culture of interdisciplinary collaboration across its broad spectrum of academic excellence and are in a strong position to be able to link research activities and outputs in order to help make a difference on these global issues.

In conclusion, given this synergistic research agenda, we are delighted by the ideals of FuturICT in seeking to provide new ways to combine knowledge and information for social good, addressing all these challenges and others besides. It has grand aims, but we believe that progress on these topics is both possible and essential to the pursuit of a better society for all humanity through the application of knowledge.

UCC is strongly committed to FuturICT, and hopes to have an opportunity to further extend that commitment as the programme develops. We hope others will share our excitement at the opportunities offered.

Yours sincerely,

Professor M. Peter Kennedy
Vice President for Research

UCD Research

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Prof. Dr. rer. nat. Dirk Helbing
ETH Zurich, Room CLU E1
Clausius Strasse 50
8092 Zurich
Switzerland

Re: FuturICT FET Flagship Proposal

Dear Prof Helbing

I wish to confirm that University College Dublin (UCD) is strongly supportive of the FuturICT FET Flagship Initiative.

The Future and Emerging Technologies Flagship Initiatives are vitally important to maintaining Europe's reputation as the leader in social and scientific innovation. Coordinating European and national institutions on such a scale will allow the serious challenges facing the world to be addressed in a coherent manner. FuturICT, one of these seven Flagship Initiatives, aims to bring a new level of understanding to the technological, social, economic and environmental sciences and their complex interactions.

At the heart of UCD's research strategy are four major themes: Earth Sciences, Energy and the Environment; Global Ireland; Health and Healthcare Delivery; Information, Computation and Communications. These major research themes span from basic disciplines and individual scholarship through to large-scale interdisciplinary programmes and on to more applied research, technology resources and engagement with industry. While these thematic research areas receive particular attention, UCD academics are engaged broadly across our entire range of disciplines in the humanities and the sciences.

Innovation is the third pillar of UCD's core mission as it relates both to economic development and to culture and society which it serves through the nurturing of the creative environment and the evidence-based design of better and more efficient social services. A key recent development has been the formation of the Innovation Alliance with Trinity College Dublin. UCD is also involved with a number of national and international partnerships

The breadth and interdisciplinary nature of the FuturICT initiative make it an ideal fit for the broad ICT research landscape of UCD. There are strong overlapping goals shared by FuturICT and several of UCD's Schools and Research Institutes including:

- The **UCD Complex Adaptive Systems Laboratory (CASL)**, UCD's institute for applied mathematics, computer science, informatics, and the computational sciences whose mission is to provide world-class leadership in the science of extracting value from data, and extrapolating predictions from simulation to provide insight and vision to drive innovation and address major global challenges in the areas of networks and data analysis, natural computing and optimization, security and trust, and simulation science and extreme events.

- The **UCD Earth Institute (EI)** focuses on Earth Systems: climate change, water and geohazards, sustainable bioresources; Energy Supply: renewable and sustainable energy; Emissions: reduction and control; Transport and infrastructure; and Economics and Policy Analysis. The UCD EI will play a pivotal role In connecting these multifaceted aspects of Earth Science with FuturICT initiatives.

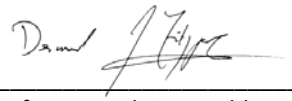
- The **UCD Geary Institute** is one of the leading social science research institutes in Ireland and is home to a number of research projects in areas of human development, behavioural and applied micro economics, computational social science, political science, public health and social statistics. In particular, its Dynamics Lab focuses on complex behaviour in social networks and group processes. It fosters an interdisciplinary approach in training and research in computational social science, including dynamic social network analysis, agent based social simulation, group social processes, group decision modelling and dynamic game approaches.

- **The UCD CLARITY Centre for Sensor Web Technologies** will play a critical role in connecting FuturICT research to the human side of the mission using the sensor technologies that CLARITY is developing for sensing people's preferences and intentions, sensing physical status and wellness indicators, and sensing interaction between people and their environment.

These research institutes and centres at UCD will engage hundreds of researchers in the collaborative endeavours of the FuturICT initiative making UCD an invaluable partner and contributor.

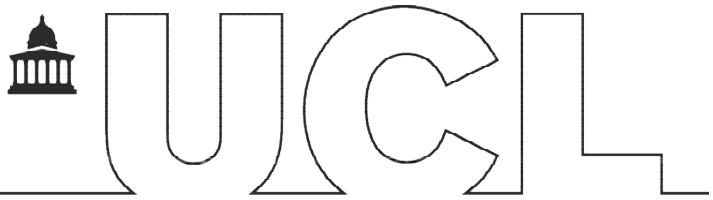
In conclusion, UCD sees the FuturICT Flagship Initiative as a hugely significant research effort and will remain fully committed to and supportive of its aims and ambitions.

Yours sincerely,



Prof Desmond Fitzgerald
Vice-President for Research
University College Dublin

LONDON'S GLOBAL UNIVERSITY
Office of the Vice-Provost (Research)
Prof G David Price FGS MA PhD
Vice-Provost for Research



02 November 2010

To Whom It May Concern

Flagship FuturICT

As Vice-Provost (Research) at UCL, I am pleased to confirm UCL's great interest in and strong support for the FuturICT proposal for a FET flagship.

UCL's founders sought not merely to create a great institution for research and teaching across a broad range of disciplines; inspired by Bentham, they also believed that universities could be a major force for social change. In its current incarnation this ambition is embodied by the centrality within our research strategy of our Grand Challenges: Global Health, Sustainable Cities, Intercultural Interactions and Human Wellbeing. These are global problems that must be addressed if future generations are to have the opportunity to flourish. However, their scope lies beyond any single academic discipline or activity. Fortunately, UCL has always had a strong culture of interdisciplinary collaboration across its broad spectrum of academic excellence. Hence, we are in a unique position to be able to link research activities and outputs in order to help make a difference on these global issues. For more details on our activities, see www.ucl.ac.uk/grand-challenges.

Obviously, given this agenda, we are delighted by the ideals of FuturICT in seeking to provide new ways to combine knowledge and information for social good, addressing all these challenges and others besides. It has grand aims, but we believe that progress on these is both possible and essential to the pursuit of a better society for all humanity through the application of knowledge. We are proud of the leadership that Professor Steve Bishop of the UCL Department of Mathematics has shown in both the Global System Dynamics and Policies project and now the FET Flagship consortium.

FuturICT brings together computer science and social sciences with a mix of complexity science. UCL has numerous activities within these domains that could link in, but to cite just a few with which Professor Bishop has already developed projects:

- The Centre for Advanced Spatial Analysis (CASA) has a global reputation for applying complexity science techniques to understand space, location and the built environment.
- The UCL Energy Institute has a particular focus on energy demand reduction and modelling future energy use, including the application of advanced modelling and data analysis techniques.
- The UK PhD Centre in Financial Computing (joint with LSE and LBS) is a unique collaboration between the financial services industry and academia seeking to apply cutting edge computer science techniques to the emerging challenges of modern finance.

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Personal Web Page: http://www.es.ucl.ac.uk/people/price.htm

All of these activities have UK government funding of more than £1M pa secured over the next few years, so we are confident that there will be a substantial base of excellent research at UCL with which FuturICT can engage.

Unsurprisingly, given this huge potential for links, two of UCL's faculties (Engineering Sciences and Mathematical and Physical Sciences) have already made significant investment to support meetings and a research assistant to help prepare the bid. We are already discussing with Professor Bishop the possibility of expanding this support, potentially to the scale of establishing a new UCL Institute for Global System Dynamics (or similar) that provided a physical home for these activities at UCL and could serve as a major long-term hub for FuturICT activities more generally. In the nearer term, we will look to support further activities, such as meetings and small projects, linking FuturICT to the UCL Grand Challenges.

In conclusion, UCL is strongly committed to FuturICT, and hopes to have the opportunity to extend that commitment as the programme develops. We hope others will share our excitement at the opportunities offered.

With best wishes

PROFESSOR G DAVID PRICE
UCL Vice-Provost (Research)

UNIVERSITY *of* LIMERICK

OLLSCOIL LUIMNIGH

Letter of Support for FuturICT FET Flagship

20th December 2011

To whom it may concern,

As Vice President for Research at the University Of Limerick (UL), I am pleased to confirm UL's support for the FuturICT FET Flagship proposal.

The goal of the FuturICT Flagship is to understand and manage complex, global, socially interactive systems, with a focus on sustainability and resilience. By unifying the efforts of hundreds of the best scientists in Europe to explore social life on earth and everything related to it, the FuturICT Flagship proposal will produce historic breakthroughs and provide powerful new ways to manage challenges that make the modern world so difficult to predict, including the financial crisis.

The success of FuturICT will require unprecedented interaction between mathematicians and scientists from other disciplines, and I believe that UL is particularly well-placed to contribute to this effort. Professor James Gleeson is co-director of the Mathematics Applications Consortium for Science and Industry (MACSI), and his research group is very active in the area of dynamics on complex networks. They apply their mathematical modelling techniques to better understand the spreading of diseases and of rumours over social networks, and have also made some important progress on the modelling of systemic risk in banking networks. As part of MACSI, their work is always closely connected to real-world problems, with close collaborations with colleagues from engineering, science, and industry. MACSI was founded by the largest award ever made to mathematics in Ireland (€4.34 million), and the University has recognized the importance and relevance of this field by identifying Applied Mathematical Sciences as one of six priority research areas in its new Strategic Plan for 2011-2015.

In summary, I would like to express UL's strong support for the FuturICT initiative, and to confirm its interest in active collaboration should the venture be successful.

Yours sincerely,

Dr Mary Shire
Vice President Research

Vice President - Research Office
UNIVERSITY of LIMERICK

Ollscoil Luimnigh, Luimneach, Éire. Teil: +353-61-202700 Facs: +353-61-330316 Gréasán: www.ul.ie
University of Limerick, Limerick, Ireland. Tel: +353-61-202700 Fax: +353-61-330316 Web: www.ul.ie

UNIVERSITÀ DEGLI STUDI DI MODENA E REGGIO EMILIA

To whom it may concern

As legal representative of the University of Modena and Reggio Emilia, I hereby confirm our strong interest, support, and willingness to participate in the initiative "Candidate Flagship FuturICT", coordinated by Prof. Dirk Helbing, ETH Zurich, which will be submitted in response to the next call for proposal of the FET-ICT Programme.

The "Candidate Flagship FuturICT knowledge accelerator" initiative's ambitions, foreseeable innovation spin-offs and impact are deemed to be crucially relevant to address some of the grand challenges of our present and future society. The success of the initiative will critically depend (among the others) on the ability to create an interdisciplinary scientific context to bring together and coordinate the work of people with expertise in possibly very different scientific and technological areas. We consider this project as a crucial step for a cooperative action to tackle future social-economic crises.

At the University of Modena and Reggio Emilia, a number of researchers from the departments that will be possibly involved in the Candidate Flagship FuturICT initiative have strong expertise in ICT and ICT related areas, telecommunication, physics and mathematical sciences. Specific topics which are strongly required by the initiative include (but are not limited to): data and knowledge modeling, accessing, integration, and mining; design and management of large systems for Internet-based applications; computer and network security; software agents and pervasive computing; wireless ad-hoc and sensor networks; embedded systems; mathematical models and methods for social systems, probabilistic description of competition and cooperation in social and biological systems.

The reference people at the University of Modena and Reggio Emilia are:

Prof. Sonia Bergamaschi, Department of Information Engineering
Prof. Cristian Giardinà, Department of Communication and Economics
Prof. Claudio Giberti, Department of Science and Engineering Methods
Prof. Cecilia Vernia, Prof. Luca Zanni, Department of Mathematics

Modena, 16 December 2010

Prof. Aldo Tomasi
Rector

UNIVERSITA' DEGLI STUDI DI MODENA E REGGIO EMILIA

IL RETTORE
(Prof. Aldo Tomasi)

Jill Trewhella
Deputy Vice-Chancellor (Research)

17 November 2011

Professor Dirk Helbing
Chair of Sociology
Swiss Federal Institute of Technology Zurich

By email: dhelbing@ethz.ch

Dear Professors Dirk Helbing and Steven Bishop

As Deputy Vice-Chancellor (Research) at the University of Sydney, I am pleased to confirm the University's interest in and strong support for the FuturICT proposal for a Future Emerging Technology flagship.

FuturICT is a visionary research project that will challenge and has the potential to galvanise, accelerate and unite science in the next decade. Importantly, it will engage more effectively the social sciences as it endeavours to simulate the complexity of the entire planet. It will serve to integrate knowledge across the natural and social sciences in new ways, drawing on and advancing cutting edge ICT methodologies and complex systems simulation methods. These ambitious aims are aligned with the University Sydney's strategic goals for promoting large scale cross-disciplinary research addressing issues of significance to our communities (see http://sydney.edu.au/strategy/white_paper/). Our researchers are keen to contribute their expertise to this endeavour. Australia and our region must of necessity be part of any planet earth simulator and we look forward to working with the many distinguished researchers and research institutions from around the world involved in this project in pursuing its aims.

FuturICT can help our global community address many of the challenges confronting us; including climate change, population pressure, the emancipation of peoples and the problems of dealing with a highly complex, dynamic, evolving, interconnected, globalized socio-economic system. To grapple with these issues the global community needs to work together and better see and understand itself; and to better access, process and use the vast amounts of information now available to us, to become better able to anticipate and deal with potential future calamities and opportunities.

The significant challenges FuturICT aims to address extend beyond the reach of any single discipline or activity.

As Australia's oldest university, founded in 1850, The University of Sydney is a comprehensive university with strength across many disciplines that will make significant contributions to the research required to achieve the ambitious goals of FuturICT. Our centres of research and education excellence that cross disciplinary boundaries and where we already are having impact include:

- Centre for Obesity, Diabetes and Cardiovascular Disease
- China Studies Centre
- US Studies Centre

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ABN 15 211 513 464
CRICOS 00026A

- Brain and Mind Research Institute
- Institute for Sustainable Solutions
- Centre for Computer Supported Learning and **Co**gnition (CoCo)

The University of Sydney also leads many more discipline focused Centres of Research Excellence aligned with National Research Priorities of the Australian Government that are relevant to FuturICT research and teaching methodologies, including:

- Australian Research Council Centre of Excellence for Ultra-high Bandwidth Devices (CUDOS)
- Australian Research Council Centre of Excellence in All-Sky Astrophysics (CAASTRO)
- Australian Centre for Field Robotics (ACRF)
- Centre for Advanced Materials Technology
- The Australian Institute of Nanoscience
- Institute for Innovation in Science and Mathematics Education

There is additional strength and capability in our Faculties related to complex systems research. This depth of activity includes research centres and programs in computer science in the Faculty of Engineering, in Biological and Ecology Systems modelling, and complex systems research and education initiatives in the social, business and economic sciences, agriculture, education and the natural sciences. Another significant emerging area of interest at Sydney and perhaps an exemplar of complexity is Food security, which not only involves developing the capacity to produce more food, but also the socio-economic factors affecting access and affordability. Perhaps more significantly, it also involves the factors that affect consumption and dietary choice that not only influence the sufficiency of food, but also the health consequences.

We are delighted to support the aims of FuturICT in seeking to provide new ways to combine knowledge and information for social good and addressing the challenges already mentioned. These are grand aims, but important ones to progress in applying the current state of knowledge to critical societal issues.

FuturICT has the potential to broadly engage countries and universities and we are pleased to have the opportunity to join with other universities and research institutions in Australia, our region and elsewhere to further the aims of FuturICT. We have long standing and strong partnerships with the major research institutions in our region at the institutional level as well as though individual collaborations. These partnerships could form part of an emerging regional FuturICT research hub that could be developed and sustained.

We hope others will share our excitement at the opportunities offered by FuturICT and look forward to our participation.

Yours sincerely

Professor Jill Trewhella
Deputy Vice Chancellor (Research)

UNIVERSITY OF WARSAW
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00-927 Warsaw, Poland
tel.: (48-22) 55-20-355, 55-20-342, fax: 55-24-000
e-mail: rektor@adm.uw.edu.pl

RECTOR
Prof. Katarzyna Chałasińska-Macukow

BOB-620/66/2010

ETH Zürich
SOMS
Eingegangen
19. JULI 2010
Gesehen: Hel

Prof. Dr. rer. nat. Dirk Helbing
ETH Zuerich
CLU E 1
Clausiusstrasse 50
8092 Zuerich
Switzerland

Warsaw, 12 July 2010

Dear Professor Helbling,

Thank you for your letter of 15 June 2010. We are honoured and happy to accept your invitation to join the consortium applying for a FuturIc grant under the 7^{th} Framework Programme.

University of Warsaw, announced the best university in Poland in the ranking of the higher education establishments in Poland 2010[1], has appropriate scientific and administrative potential to join the Flagship project which is considered as one of the most important big-scale European research initiatives. Our scientists can significantly contribute with their extensive expertise in respect of ICT research to the project objectives and particularly Prof. Andrzej Nowak – our leading expert in the field.

Looking forward to our future fruitful cooperation I remain with best regards,

KChMacukow

[1] A yearly ranking prepared by the educational monthly „Perspektywy" and daily „Rzeczpospolita".

Judy Raper
Deputy Vice-Chancellor (Research)
13 January 2012

Professor Dirk Helbing
Chair of Sociology
Swiss Federal Institute of Technology Zurich
By email: dhelbing@ethz.ch

Dear Professors Dirk Helbing and Steven Bishop

University of Wollongong is pleased to support the FuturICT flagship project proposal to understand, and manage complex, global and socially interactive systems. FuturICT is being proposed at a time when the world is experiencing increased data generation and significant computing capability. In essence two of the key components required to successfully execute the goals of the project are now readily available. The third key component is the assembly of a multidisciplinary team of experts to focus on and solve problems that cut across traditional boundaries of science, technology, social science, health and medicine. One of the strategic goals of University of Wollongong is the promotion of interdisciplinary research that focuses on sustainability and resilience. This effort is being supported by the complex system modelling and simulation (SMART) facility and the Illawarra Health and Medical Research Institute (IHMRI). In essence the aims of FuturICT are congruent with strategic direction of the University of Wollongong.

The University of Wollongong is a comprehensive university with deep roots in engineering and information technology. Our researchers are internationally respected and cut across the broad multidisciplinary areas that are important for the successful execution of an audacious project such as FuturICT. They have extensive experience in working across national boundaries and contributing to international projects. Our multidisciplinary research effort is thematic and has achieved high international impact and commercialisation in:

Environmental Sustainability
Innovative Materials
Engineering & Manufacturing
Health & Medical Research
Information & Mathematical Sciences
Society, Policy & Culture

FuturICT is a project that is relevant now and its outcome bodes well for a well managed planet. We are excited to be part of this project and look forward to participating and contributing to its success.

Yours sincerely,

Professor Judy Raper
Deputy Vice Chancellor (Research)

Deputy Vice-Chancellor (Research) University of Wollongong NSW 2522 Australia
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CRICOS Provider No: 00102E

Universiteit Utrecht

Executive Board

Heidelberglaan 8, Utrecht

O&O, P.O. Box 80125, NL-3508 TC Utrecht, The Netherlands

To whom it may concern

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Date
October 14, 2011
Subject
Letter of Intent FuturICT

As the President of Utrecht University, I would like to express our great interest and support for the FuturICT Flagship initiative. The FuturICT vision to combine complexity science with advanced ICT tools to address fundamental as well as socially urgent socio-economic problems provides a pioneering new scientific paradigm for the 21st century.

Utrecht University has various groups with strong expertise that match with the FuturICT research aims. This includes faculty from multi-disciplinary backgrounds such as sociology, economics, human geography and planning, information sciences and mathematics.
In particular, the FuturICT initiative is closely related to: ongoing research in our Department of Sociology, where the main fields of research include cooperation, social networks, online networks, social inequality, social influence, migration; research in the Department of Information and Computing Science including research on media technology, decision support systems, social simulation and data mining; research in the Urban and Regional Research Centre Utrecht (URU) on regional resilience and mobile ICT; and to the Climate-KIC in which Utrecht University participates, which aims to significantly accelerate the innovation required for a transformation to a low-carbon economy. Some of these groups are already actively involved in ongoing activities within the FuturICT initiative.

Utrecht University is fully supportive of the EU's FET Flagship Initiative and would like to express its strong support for the FuturICT concept and ambition, its support for those involved in proposal preparation, and confirm its interest in active collaboration should the venture be successful.

Yours faithfully,
the Executive Board,

Yvonne C.M.T. van Rooy,
President

c.c.: prof. dr. V. Buskens