FuturICT
Global computing for our complex world

FuturICT is a visionary project that will deliver new science and technology to allow us to explore, understand and manage our connected world. This will create new information and communication technologies (ICT) that are socially adaptive and socially interactive, supporting collective awareness.

The FuturICT Platform:
- Planetary Nervous System
- Living Earth Simulator
- Global Participatory Platform

FuturICT - Achieving Big Impact from Big Science

Globalization and technological change have made our world a different place. This has created or intensified a number of serious problems, such as global financial and economic crises, political instabilities and revolutions, the rapid spreading of diseases, disruptions of international supply chains, organized crime, international conflict and increased cyber-risks.

However, there are also new opportunities to create unprecedented benefits for our economy and society, based on a whole range of new methods and innovations. Although creating more interconnected systems has contributed to the above problems, future information and communication technologies (ICTs) can also be key to the solution. FuturICT will lead Europe into the next era – a wave of social and socio-inspired innovations. This requires us to establish a new science of multilevel complex systems, bringing the best knowledge of experts on information and communication systems, complex systems and the social sciences together. The vision of the FuturICT flagship project is to develop the capacity to explore and manage our future, based on a fundamental understanding of the institutional and interaction-based principles that make connected systems work well.

The methods and 'Big Data' needed for such a scientific endeavour are now becoming available: it is therefore time to make a federated and open 'Big Science' effort akin to the Human Genome Project. Open, because we need to

prevent private monopolies of socio-economic data; federated, because joint efforts are the only way to tackle humanity's global challenges and ensure leadership in socio-inspired ICT innovations. The investments into the FuturICT project can benefit citizens and society in many ways, by mitigating global problems and systemic risks, and by creating new possibilities to participate in social, economic and political affairs. In particular, FuturICT will create new spin-offs, business opportunities and jobs.

What FuturICT will do - A way forward aided by information

Scientists and engineers rely on massive computer power and data processing to design and test everything from cars and electronic devices to medical drugs. We face even greater complexity in our socio-economic systems, especially in the interaction with the rapidly expanding technological infrastructures such as the Internet and mobile phone networks. Globally connected systems, applications and infrastructure span the continents but only recently have we begun to exploit the power of information technology to gain a better understanding of the human-Earth system, and to improve our capacity to sustainably manage this system on the basis of well-founded knowledge.

The growth of the internet, mobile applications, social media and other applications have rapidly immersed governments and businesses in a flood of data that has become too large to deal with using existing systems and approaches. The potential answers that might be locked within various sources of data will require researchers, industry and governments to collaborate in order to unlock real answers. These insights will help position businesses to collaborate on uncovering new local, national and global whitespace markets that have not been tapped by industry. In addition, FuturICT will enable the development of a new Data Science that will be a required skill for any business in the 21st century.

The FuturICT project aims to develop new science and technology, capitalizing on the current data revolution, which in turn will aid and accelerate the progression of the knowledge worker in the knowledge economy of the future. The project will develop a visionary information platform, considering insights from social sciences, complexity theory and computer scientists. This system will be able to act as a 'Policy Simulator' or 'Policy Wind Tunnel', allowing people to test multiple options in a complex and uncertain world, and produce pluralistic perspectives of possible outcomes. The platform will analyse data on a massive scale and leverage them with scientific knowledge, thereby giving politicians, businesses, decision-makers and citizens a better understanding to base their decisions on. In the long run, this will enable all of us to explore the possible or likely consequences of even barely imaginable scenarios, effectively helping us to see just a little around the corner into possible futures.

FuturICT is partnering with governments, businesses, NGOs, SMEs, policy makers and others in the development phase as well as the technology transfer phase which will enable a smooth transition to industry. The scientific and technological developments, skills and knowledge from FuturICT will be shared by the academic research community with a range of organisations and individuals who can further develop and exploit these advances leading to new technology, products or services. This intellectual property (IP) will help start new spin off companies, increase collaborations within and among SMEs, spur lucrative licensing agreements with larger businesses and initiate other exciting opportunities to deploy FuturICT solutions to help with planetary scale projects. The potential benefits are huge: reducing the impact of major societal and economic problems by only 1 percent would save the European Union billions of Euros every year. Similar to weather forecasts, it is expected that FuturICT can create value that is many times higher than the required investments.

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