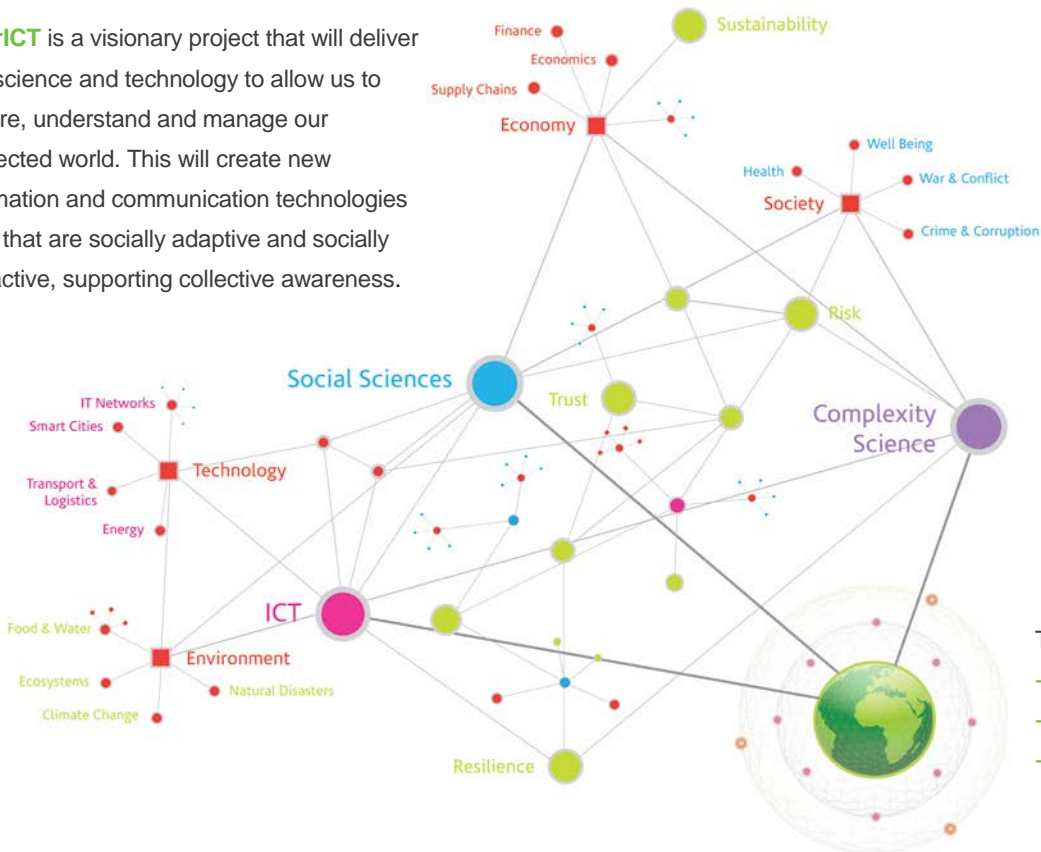




FuturICT is a visionary project that will deliver new science and technology to allow us to explore, understand and manage our connected world. This will create new information and communication technologies (ICT) that are socially adaptive and socially interactive, supporting collective awareness.



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

Economics Observatory

FuturICT will build a sophisticated framework for simulation, visualisation and participation, called the FuturICT Platform. A suite of models forming the Living Earth Simulator will power Observatories, to detect and mitigate crises plus identify opportunities in specific areas. These models will be driven, and calibrated, by data aggregated in real-time, which are gathered by a digital Planetary Nervous System. Both models and data will support the decision-making of policy-makers, business people and citizens, through a Global Participatory Platform which is intended to facilitate better social, economic and political participation. Exploring interactions among society, technology, environment and the economy will promote innovation.

We are facing the biggest financial-economic crisis since the Great Depression. According to an IMF report, the economic loss due to the financial crisis was 11.9 trillion \$, around 1800 \$ per adult or child on the planet. The financial crisis began as a relatively small US mortgage crisis, quickly turned into a general banking crisis, and expanded into a global financial, economic and debt crisis. FuturICT combines complexity science and socially inspired ICT tools for a better understanding and early on line detection of crises. In the Economics Observatory, financial and economic data will be aggregated and visualized to provide policy makers with early crisis detection and thus help them to manage complex financial-economic systems.

We need new approaches in Economics and Finance

In November 2010, European Central Bank (ECB) Governor Jean-Claude Trichet opened the ECB's flagship annual Central Banking Conference with a challenge to the scientific community to develop radically new approaches to understanding the economy:

"When the crisis came, the serious limitations of existing economic and financial models immediately became apparent. Macro models failed to predict the crisis and seemed incapable of explaining what was happening to the economy in a convincing manner. As a policy-maker during the crisis, I found the available models of limited help. In fact, I would go further: in the face of the crisis, we felt abandoned by conventional tools."

An important component of FuturICT will be to deliver the complementary tools that Governor Trichet is calling for. This will involve developing agent-based complex network models of the economy pushing the envelope of what is technologically possible, using new information technology and computational capabilities to greatly expand the state of the art in the collection and modeling of data, at a hitherto unprecedented scale. In particular, we shall investigate the impact that new information technologies coupled with a natural tendency of market participants to "herd" has had on the evolution of financial market prices.



Managing complex economic systems

An important goal of FuturICT is to build a "wind tunnel" for policy makers that can be used to gain experience in managing financial-economic crises or an EU debt crisis. The simulator that will be built will use advanced ICT-tools collecting real data and having state of the art graphics, to make it easy to visualize what the simulator is doing and what the outcomes of the simulation and different policy measures are.

In the scenario proposed by FuturICT, economic policy prescriptions have fundamentally novel aspects. They specifically take into account the fact that the tools used to stabilize the economic system must be designed to manage a complex system with heterogeneous agents interacting through networks. Pinpointing critical actors, countries and institutions in this way, evokes a passage similar to that one from chemotherapy to targeted medicine, with individualized treatment.



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