

## **THINK LAB**

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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,