

Horizon; A Digital Economy Research Centre

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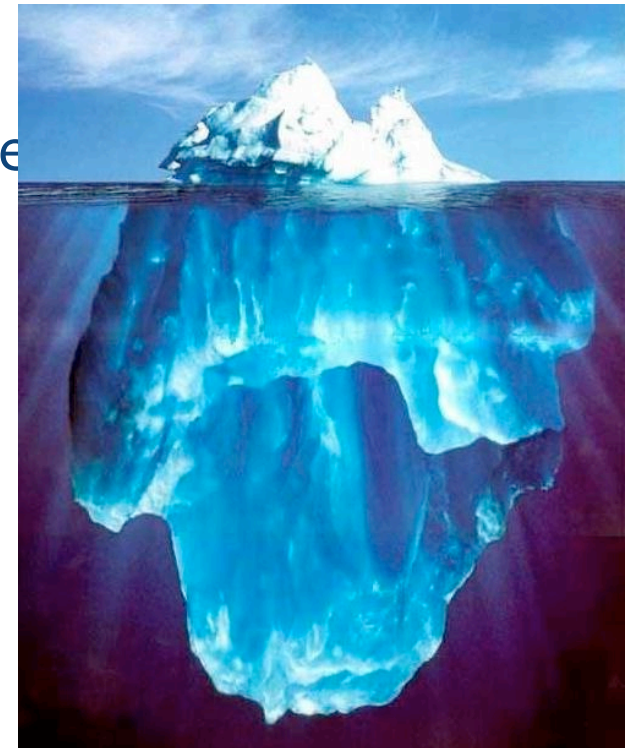
Data Rich Information Poor

- Digitization and cost of storage has already combined to generate enormous amounts of data
- ... but issues of unstructured data, data integrity and appropriate models
 - “...51% of data mining projects either never left the ground, did not realize value, or the ultimate results were not measurable.”
- ... and it's the tip of the iceberg



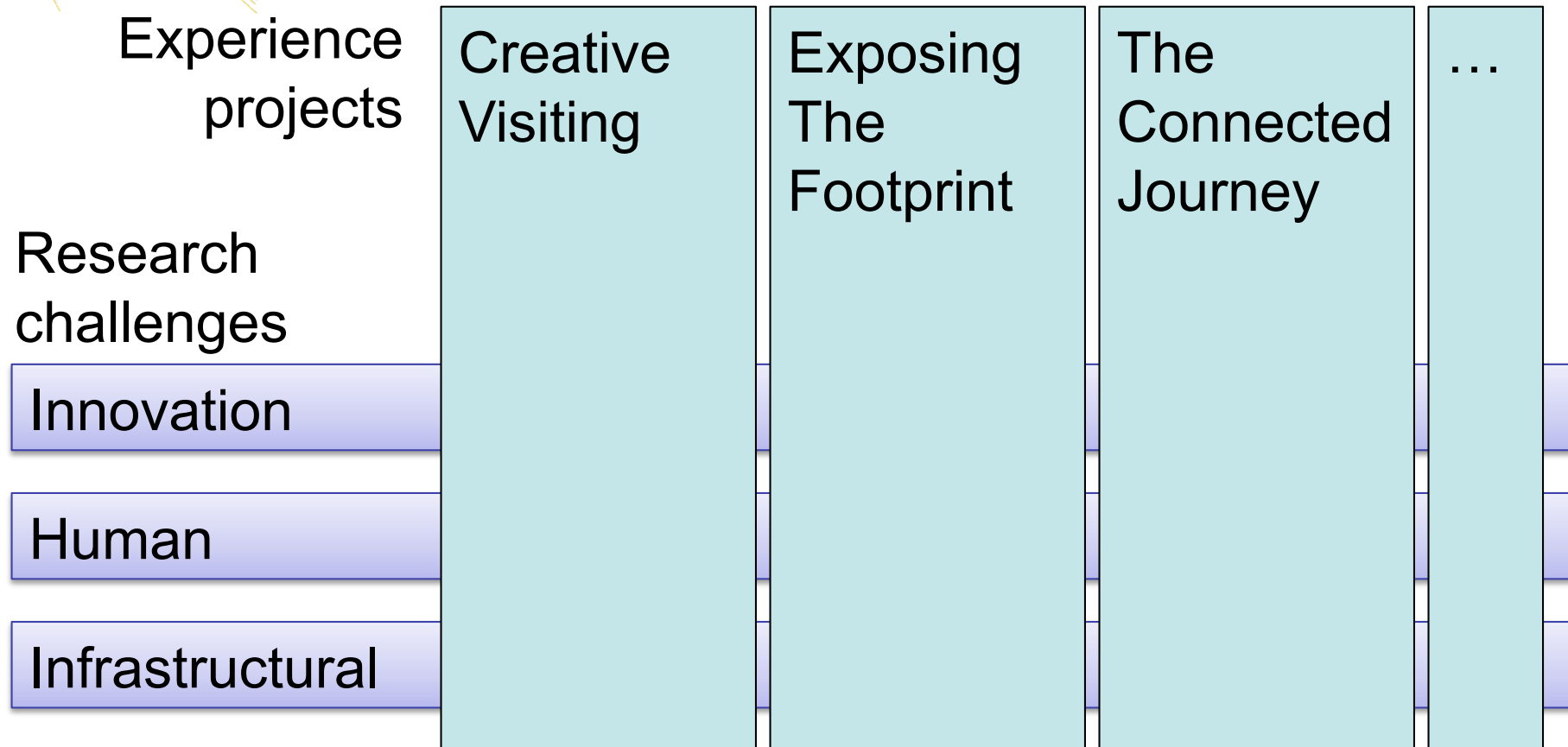
The Contextual Footprint

- Add sensing data from:
 - Buildings, furniture, artefacts, vehicle biosensors
- Together with:
 - Location, context, interactions..
 - ..both virtual and physical
- Issues:
 - Lifetime, privacy, ownership, ...





Experience projects drive challenges...





Creative Visiting

- Visitors and the act of visiting are central features of tourism and leisure
 - integrate the whole visitor experience blending on-line activities with augmented physical sites
 - allow creative connections between visitors & residents and current & past events
- e.g. A Day in the Park:
 - integration of personal and wearable technologies with the park's embedded systems
 - match visitors' 'thrill profiles' to scheduled rides
 - just-in-time virtual and real souvenirs

Mixing virtual with physical

- What is “Can you see me now”?



- No video?
 - Go to <http://www.mrl.nott.ac.uk/~sdb/videos/>

Mixing virtual with physical

- What is “Can you see me now”?
 - a game?
 - a performance?
 - 3D social networking?
 - a group planning tool?
 - a basis for virtual souvenirs?
 - an archive of an event?



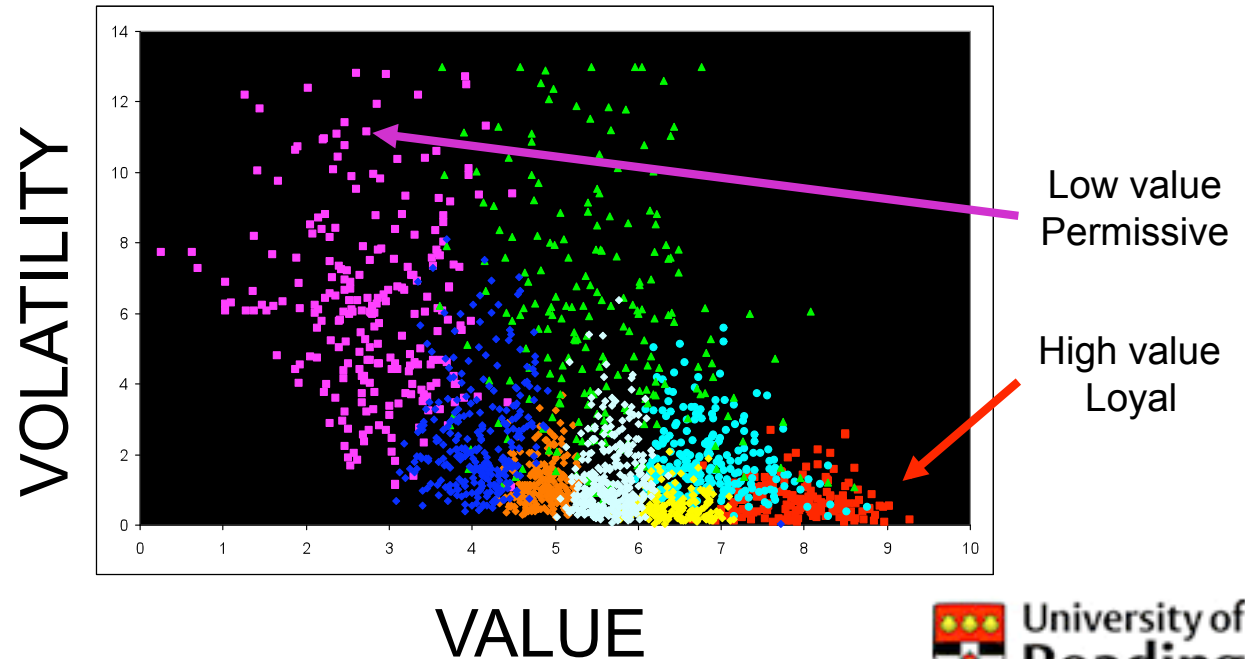


Exposing the Footprint

- Move beyond their current approach of 'targeted profiling' to explore new ways to view and understand contextual information
 - for service providers and consumers
 - on multiple timescales over extended periods of time
- e.g. The Future of Brands:
 - how does on-line consumer-to-consumer (C2C) information exchange impact consumer products and brands
 - how do we create a framework to analyze and benchmark these emergent phenomena

Mobile phone usage behaviour

- Making a behaviour based dynamic model for customers
 - Deployment over vast data sets
 - Presentation of outputs
 - Projections
 - Real-time





The Connected Journey

- Transform the journey of the future to make the experience more connected and the end-to-end journey much better integrated
 - use routine travel experiences to tackle transportation issues
 - understand human and social issues in sustainable transport
- e.g. The Socially Connected Journey:
 - how can technology make ride sharing safe and simple
 - correlate location to understand who could ride share
 - enable safe social interaction so they want to...

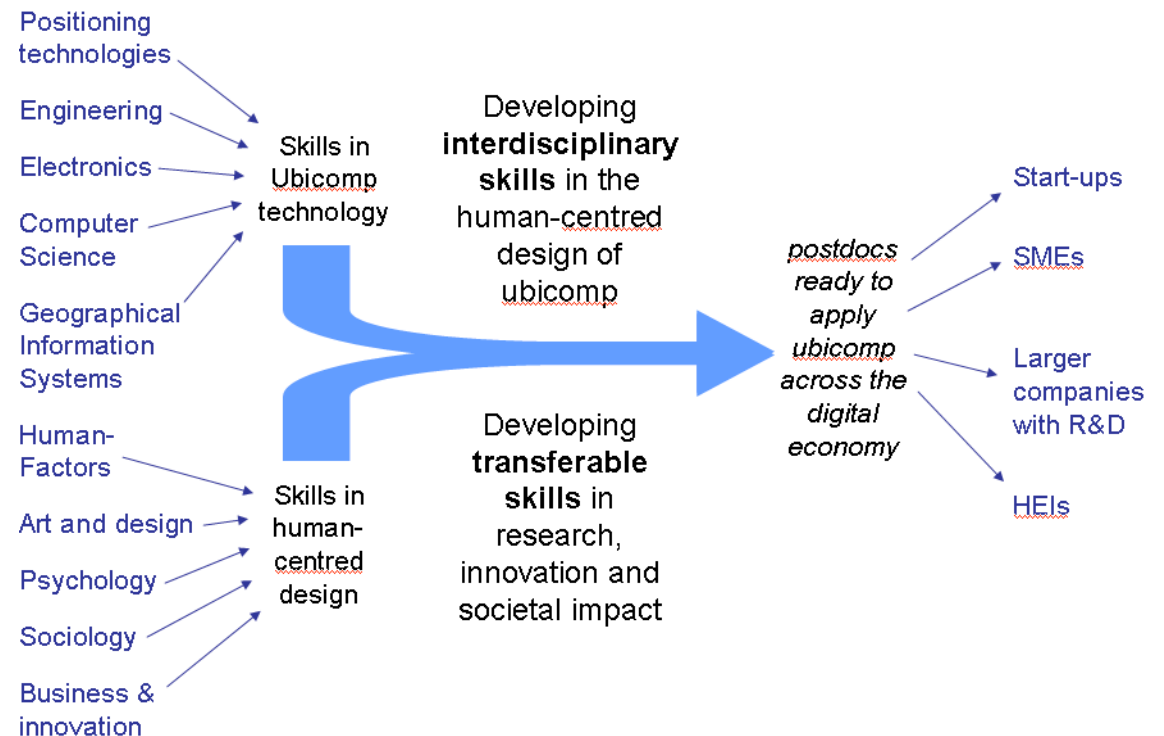
The Connected Journey

- Technical challenges
 - Human Factors
 - Location
 - Modelling
- Social challenges
 - Trust
 - Safety
 - Awareness



Horizon, the DTC

- Interdisciplinary supervision
- At least one 3-month industrial internship
- 4 year programme
- 75 PhDs over 5 years
- Broad skills





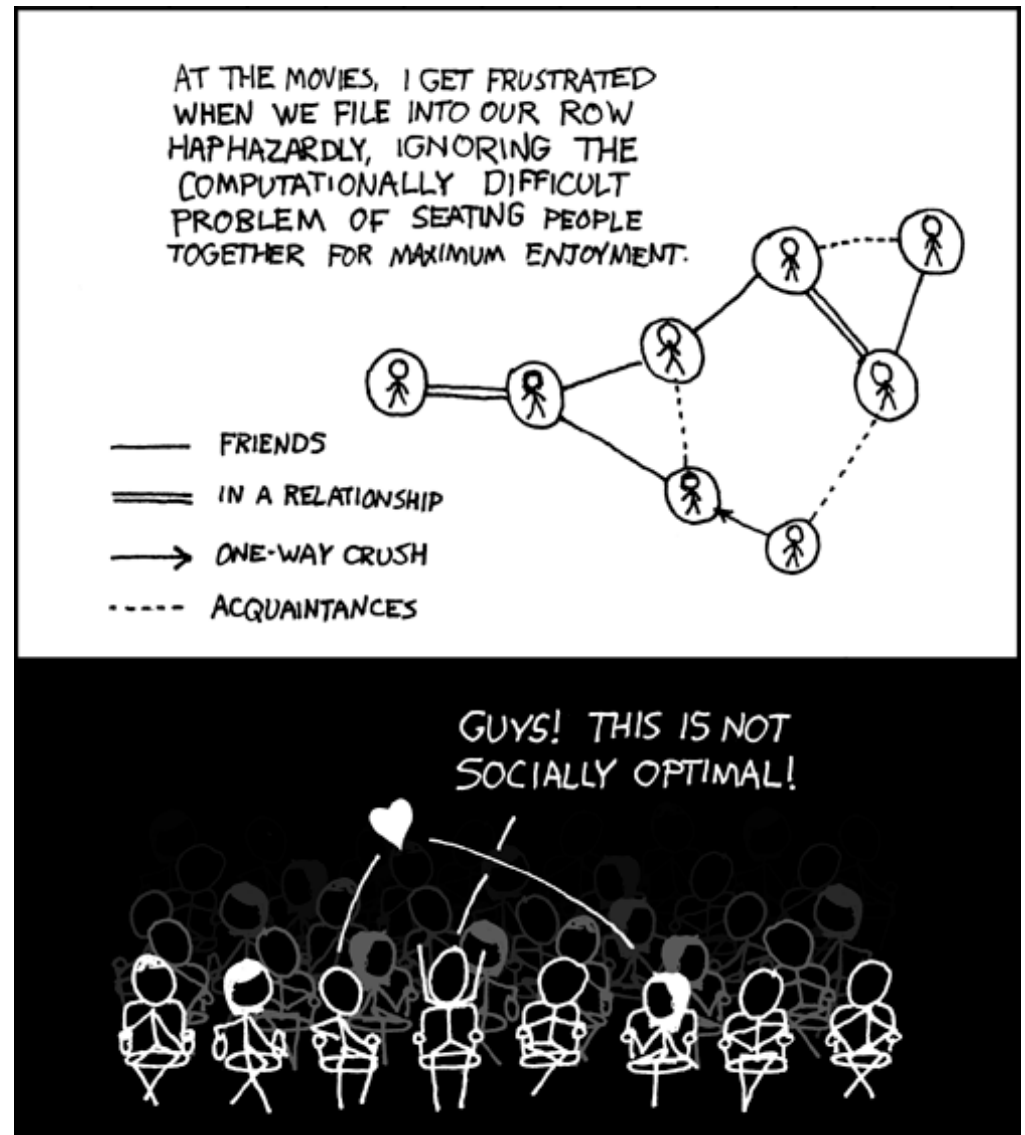
The initial partners

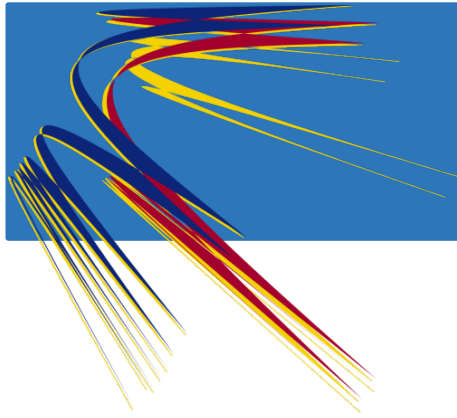
- Universities of:
 - Hub & DTC: Nottingham
 - Hub spokes: Cambridge, Reading, Exeter, St. Martin's
- With:
 - Accelerate Nottingham, Aerial, Alton Towers, the BBC, Blast Theory, The British Library, Broadway Media Centre, BT, the Creative Industries KTN, EADS Astrium, emda, Experian, Greater Nottingham Partnership, HW Communications, Infoterra, the Ingenuity Programme, the IPA, Invensys, Jaguar, Leica, the Location and Timing KTN, Logica, Network Rail, Nottingham City Council, OGC, Oracle, Ordnance Survey, the Radiator Festival, Robocoaster, ScienceScope, the SEA, Sharp, Tenet, TRL

It's the people

- Individual empowerment
- Understanding perceptions
- Ethics
- Inclusion

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Questions?



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