



Innovation

DSR Annual Seminar 2008

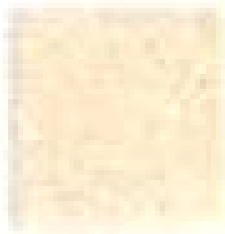
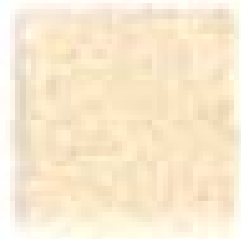
July 10th

Dr Richard Luxton



Overview

- Innovation in academia
- Case study
- Drivers
- Barriers
- Way forward



Definition

- Innovation is the process that translates knowledge into economic growth and social well-being.
- "An important distinction is normally made between invention and innovation. Invention is the first occurrence of an idea for a new product or process, while innovation is the first attempt to carry it out into practice" (Fagerberg, 2004)

Technology Roadmap

Basic research

Applied research

Translation

Adoption



Invention

Innovation

Exploitation

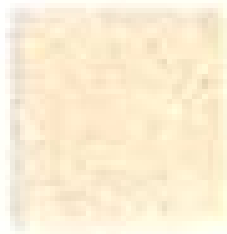
Technology

Commerce

Social systems

Economic development

Policy development



Successful Innovation

- Novel ideas
 - Understanding of need
 - Funding
 - Exploitation pathway
 - Uptake and implementation
-
- Improved technology, business systems, service

Drivers

- Potential funding
- Working with Industry
- Wider networks
- Exploitation of research
- Future income
- Prestige

Barriers

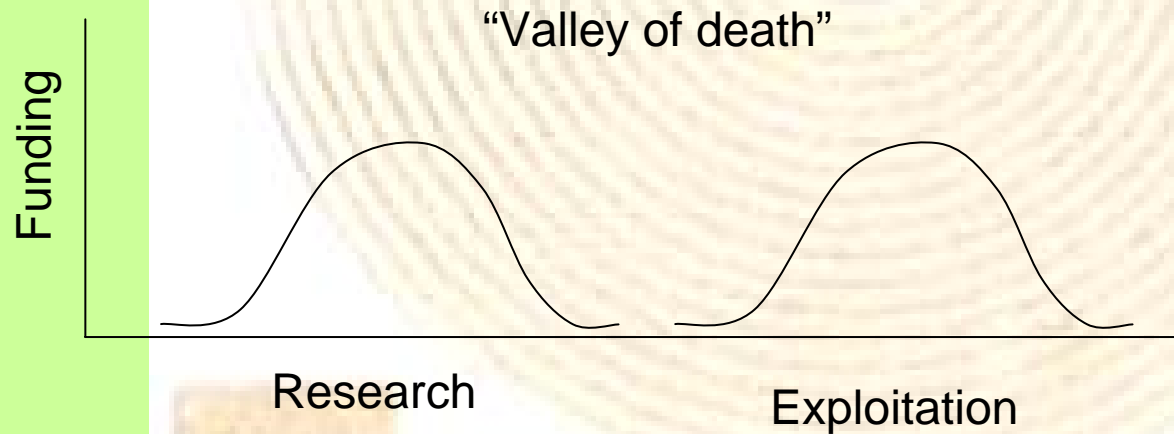
- Ideas but no Funding
- Fear of the unknown
- Not understanding need
- Working in isolation
- Lack of understanding of exploitation process
- IP issues



Promoting innovation in academia

Innovation in academia

- Formation of an Institute
- Help to grow a business



IBST

- Mission: to develop consortia to generate multi-disciplinary research projects to create and exploit new technology.
- Academic groups from across SW England (and beyond)
 - Universities in Bristol, Bath, Exeter, Plymouth
- Strong links with New Jersey – Hackensack Medical Center, UMDNJ, NJIT
- Strong Industrial partnerships
- Large international, multi-disciplinary network of academic and industrial researchers.
- Affiliate of Government Sensors and Instrumentation Knowledge Transfer Network.

Collaborators

- Academic:** Broad range of academic partner expertise covering disciplines of biomarkers discovery, sensor science, instrumentation and signal processing, data interpretation, communications
- Industry (>40 companies supporting Institute)**
 - QinetiQ
 - Smiths Detection
 - GE Healthcare
 - Astra Zenica
 - Lonza
 - Axis Shield
- Other bodies, e.g.**
 - NHS Health Trusts
 - KTNs (eg sensors and instrumentation)
 - Special Interest Groups
 - National Physics Laboratory
 - National Centre for Sensor Research
 - Bioapproaches SW



Set Squared Partnership

- Universities – Bath, Bristol, Southampton and Surrey
- Established 2002
 - Over 100 start ups
- Pre-incubation and incubation space
- University research and private sector business expertise



Developing Innovation

Identify need

- Understanding product type
 - Complexity
 - Specification
 - Approval processes
- Understanding industrial environment
 - Culture
 - Security
 - Speed

Collaboration

- Consortia, informal relationships, joint ventures, partnering, strategic alliances,
- Project management
- Exploitation and IP issues

Funding

- Public Funding
- Industry Funding
- Competition of Ideas
- Grand Challenges

Way forward?



"I'll be happy to give you innovative thinking. What are the guidelines?"