

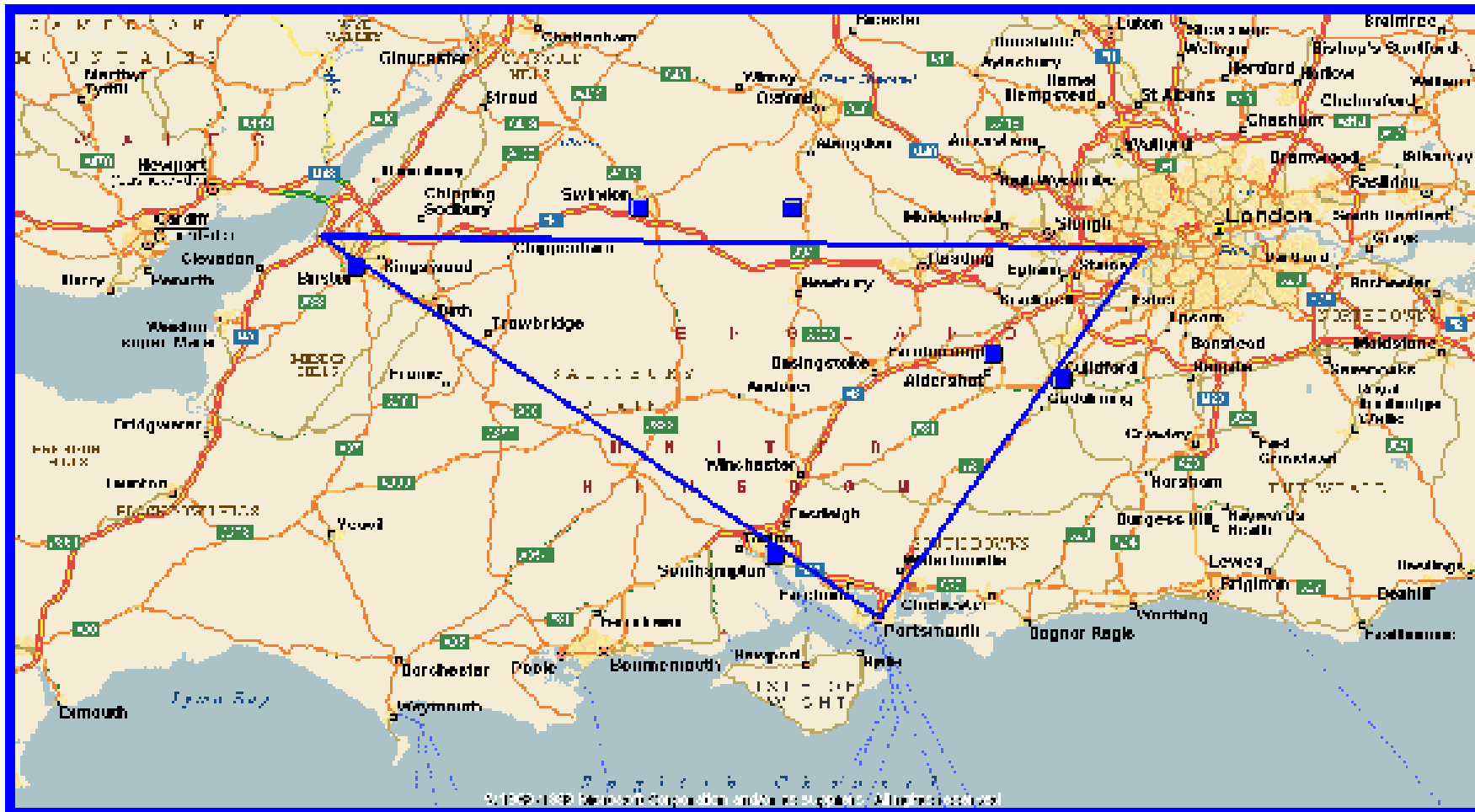


University - industry co-operation in Europe: a view from academia

Professor Bill Wakeham
Vice-Chancellor
University of Southampton



University of Southampton





University of Southampton

- c.19,000 students from 156 countries (2001/02)
 - 9,652 students in Science, Engineering, Mathematics and Medicine
 - 9,290 students in Arts, Humanities, Law and Social Sciences
- c. 5,000 staff including
 - 1,277 academic staff
 - 997 research-based staff
- An annual turnover of c. £250m
- 7 campuses

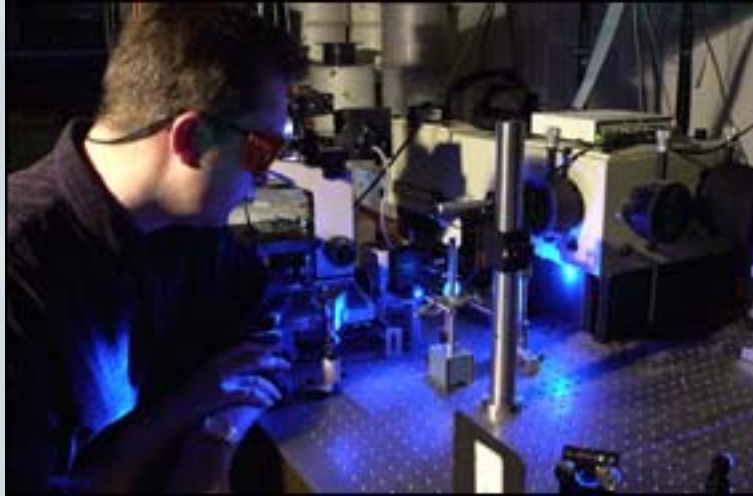


Southampton Oceanography Centre



Optoelectronics Research Centre

Institute of Sound and Vibration Research





UK context

- Differentiated HE sector
- Student funding
- Inter and multi-disciplinarity
- Collaboration
- Widening participation
- New format RAE
- Knowledge economy
- Lambert Review
 - Business-Industry Relations



The Issues for Academia

- Trained Graduates
 - Nature of skills
- Strategic Alliances
- Technology transfer and intellectual property
 - staff retention and motivation
 - income generation?
- Consulting and Knowledge transfer
- Funding and incentives
 - Costing and Pricing



The Issues for Academia

- Governance and management
 - Conflicts of Interest
 - Ability to take risk
- Small and Medium-sized Enterprises (SMEs)
- European/National/Regional issues



Graduates

- Trained for a vocation?
 - Technically competent
 - Business skills?
 - IT/Presentation?
 - Large companies?
- Trained for future flexibility?
 - Entrepreneurship
 - open-minded
 - SME's



Strategic Alliances

- Multinational Companies
- Long-term
- Overarching IP agreements
- Staff exchange
- Student employment
- Cross-disciplinary
- Threat of distortion of mission
- Exclusivity



Technology Transfer

- Third Mission of Universities
 - Culture
- Intellectual property
 - Ownership
 - Licensing versus spinouts
 - Venture Capital
- European/National/Regional dimension
 - Spectrum of cultural development

Undergraduate courses
(such as Entrepreneur
Training and Experience
Works Programme)

**Institute for
Entrepreneurship**

Postgraduate courses
(such as Entrepreneurship
Training and
External Collaboration)

**Mentoring
centre**

“Mentored Hatchery” to
develop business plan funded
by “Pathfinder Funding”

Entrepreneurial Cycle

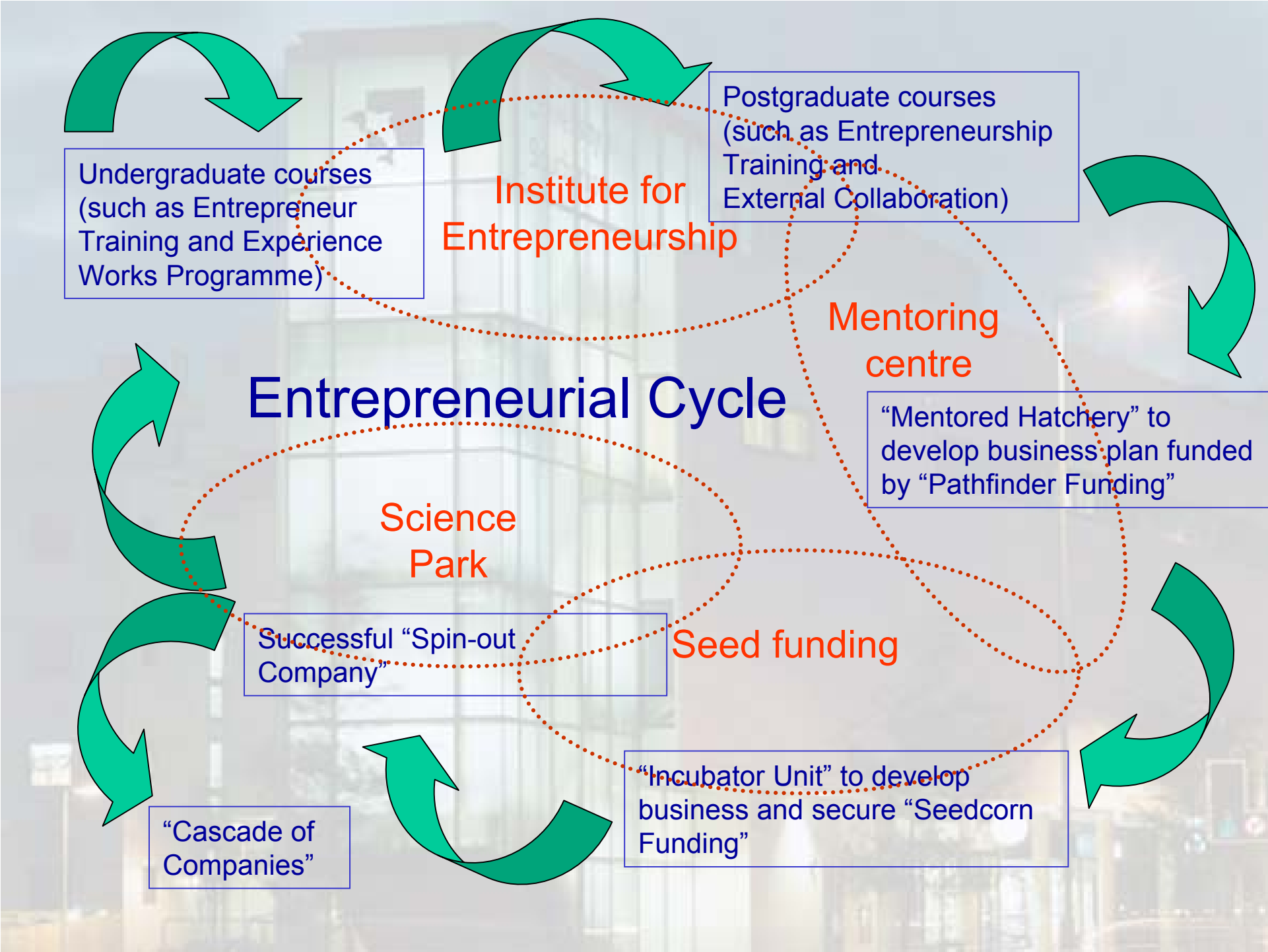
**Science
Park**

Successful “Spin-out
Company”

Seed funding

“Incubator Unit” to develop
business and secure “Seedcorn
Funding”

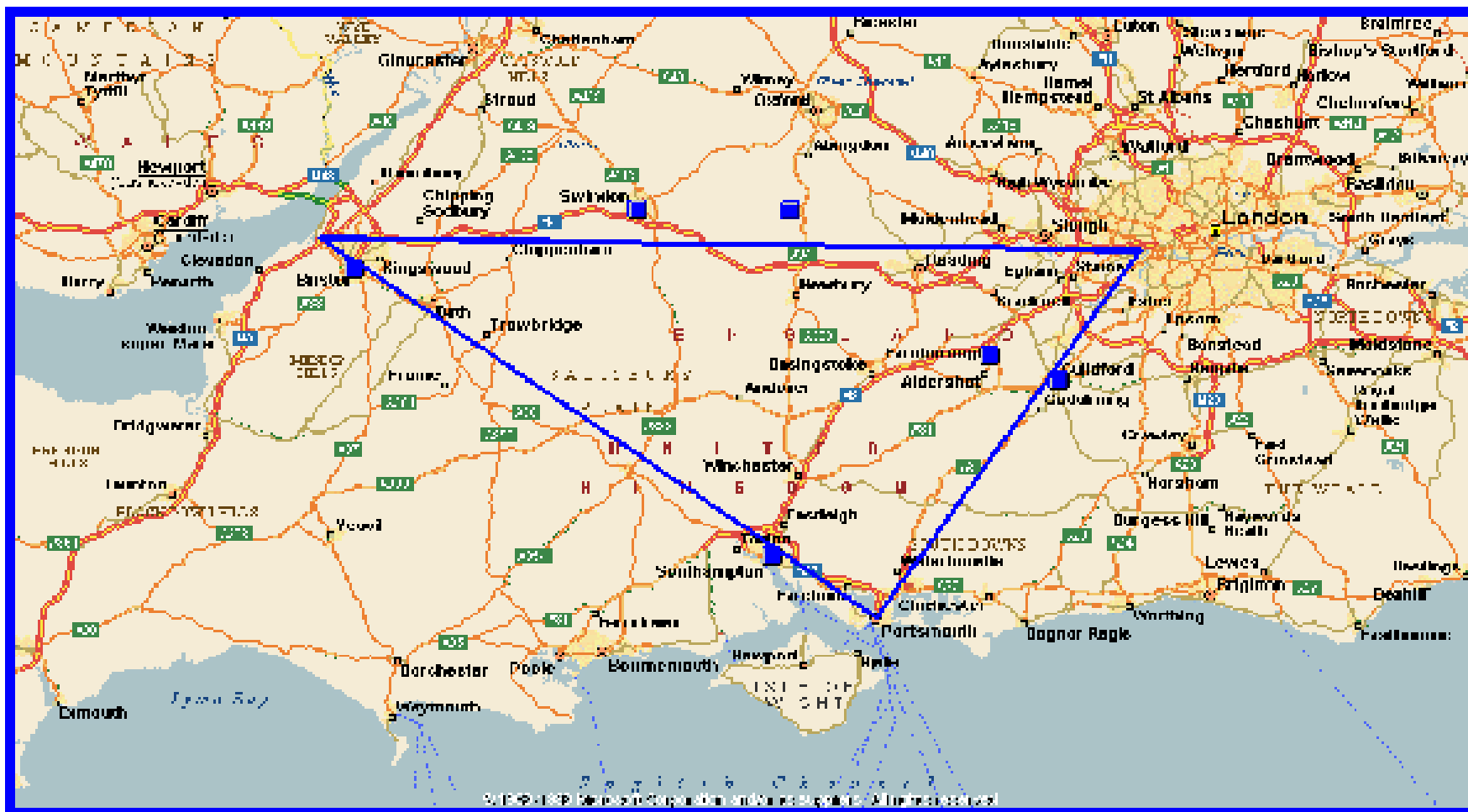
“Cascade of
Companies”





Enterprise agenda

Leader of regional enterprise agenda





Chilworth Science Park

Southampton Photonics Limited





Knowledge transfer

- Staff exchange
 - Career paths
- University reach out activity
 - Culture and staffing
- Collaborative and contract research
 - conflicts of interest
- Consultancy work
 - conflicts of interest
- Joint Ventures



Funding

- Full economic costs?
 - Government input for research?
 - Fees for students?
- IP revenue
 - ownership
 - benefit
- Individual staff benefit
- Venture Capital input
 - IP2IPO
 - European Investment Fund/Bank/



Governance

- Legal framework
 - IP
 - Employment
- Conflicts of Interest
 - Individual
 - Corporate
- Risk
- Staffing
 - Training



Benefits to universities

- Enhanced role in regional/national European economic development
- Funding
- Working with real world problems
- Bringing good ideas to the market place
- Access to facilities
- Staff recruitment and retention incentives



Barriers for universities

- Research overhead costs
- Difficulties in reaching out to SMEs
- Negotiations over IP ownership and valuation
- Changes in partners' business strategies and leadership
- Short termism of industry/business





Strengths

- Ranked among the top 10 UK universities for Research, including:
 - All of Engineering in top grade
 - All of Science / Medicine in top two grades
- Top marks for teaching quality across a range of disciplines, including:
 - 24/24 for Electrical and Electronic Engineering and Medicine
 - 23/24 for General Engineering and Biosciences

Technology Transfer through Spin-Out

