

Optoelectronics in the UK

A Presentation to Delegates at the German-UK Optoelectronics Mission

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Oxford Innovation Ltd

- “Innovation Engineers”
 - Business Incubators and Innovation Centres
 - Spin-out companies
 - Industry-driven Networks and Clusters
 - Economic Development projects
 - Oxfordshire Investment Network
 - SME support programmes
- A spin-out from The Oxford Trust, a charitable foundation for the *study and application of science and technology*



“Services for the knowledge-based economy”

Oxford Innovation has expertise in the following high tech sectors:

- Media
- Medical Science
- Materials Sciences
- Advanced Engineering
- IT
- Electronics
- Communications

Oxford *innovation*



Business Services

- Mentoring to innovation centre tenants and new companies
- Technology and business assessment
- Strategic support for businesses
- Consultancy for both the private and public sectors
- Fund raising
- Technology audit
- Business networking opportunities



Network and Cluster Initiatives

- General Objectives
 - Identify key issues for future growth of clusters
 - Link universities and service providers with needs
- Examples of our cluster activities in Oxfordshire and the South East
 - Motorsport Industry Forum
 - BiotechNet/BioScience
 - Software and IT Forum
 - Optoelectronics
 - Composite Materials
 - OxmediaNetwork



Optoelectronics in the UK

- Optoelectronics clusters in the UK are at critical stage in development.
- Global demand for communications, display and materials technology is driving local research base, financial markets and manufacturing.
- Challenge is to enhance competitive advantage to retain companies that will become world-class enterprises.

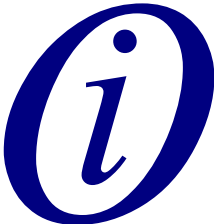
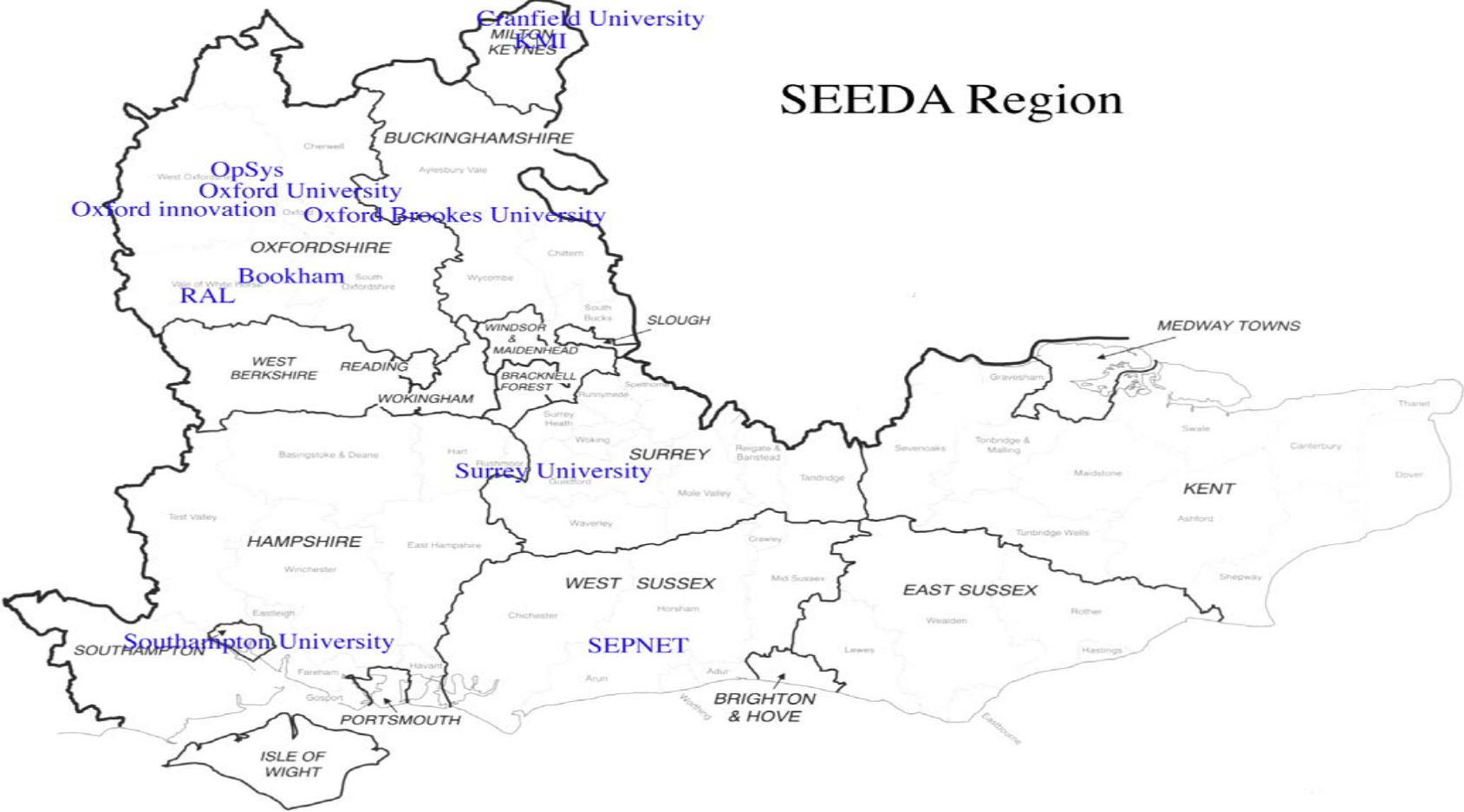


UK Optoelectronics cluster organisations

- UK Consortium for Photonics and Optics (**UKCPO**) – www.ukcpo.org.uk
- South East Photonics Network (**SEPNET**) – www.sepnet.org.uk
- Welsh Optoelectronics Forum (**WOF**) – www.wof.org.uk
- Scottish Optoelectronics Association (**SOA**) – www.optoelectronics.org.uk
- Midlands Photonics Cluster (**MPC**) – www.midlandsphotonicscluster.org



SEEDA Region



Cluster formation: Oxford

- Oxford Optronix
- Oxford Lasers
- Bookham Technology
- Printable Field Emitters
- Sharp Laboratories of Europe
- Kamelian
- Wafertech
- Opsys



Cluster formation: Southampton

- Merck
- PointSource
- Southampton Photonics
- Mesophotonics



Skills Delivery Programmes

- On-site and remote skill delivery addresses specific needs of industry.
- Intensive lab-based residential courses for technical subjects.
- Distance training for foundation, theory, economic material.
- Industry-delivered training for cluster partnerships.



SEEDA Funded Initiatives: SEOS

- South East England Optoelectronics Skills Delivery Plan
 - “To train workers in the fast-expanding field of optoelectronics in order to meet current demands and anticipate the future needs of the industry.”



SEOS

- Aims of SEOS
 - Development of training courses within tertiary education Colleges (vocational and academic) to increase the optoelectronics skills base in the South East
 - Develop general public awareness of optoelectronics
 - Development of South East Photonics Network (SEPNET)



SEOS-Training Course Development

- Professional development courses have been developed by the universities of Surrey and Oxford
- Introduction to manufacturing course delivered to Marconi by the Rutherford Appleton Laboratory
- Approximately 40 companies have been involved in course development
- On-line training by industry experts has also been developed. Examples include
 - Manufacture of photonics components
 - Quality systems for photonics manufacture



SEOS-Formula Schools

- Mobile exhibit ‘Spectrum Mobile’ has been taken to schools and exhibitions throughout the UK.
- The University of Southampton has taken the Light Express Roadshow to over 30 schools in the region.
- The emphasis has been on the use of photonics which relate closely to and deliver parts of the National Curriculum.
- Further promotion has taken place through press, general and local radio and TV.



Promoting Awareness

- The project has implemented 2 resources for widening awareness of photonics:
 - “Mastering Light” video
 - Website – www.see-photonics.org.uk, which has been set up for anyone wishing to learn about photonics

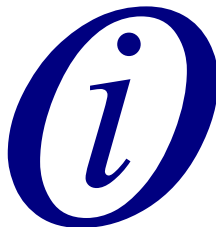


South East Photonics NETWORK

What is SEPNET?

SEPNET is a group of businesses, research institutes, universities and support organisations in the South East dedicated to developing the commercial applications of:

- Photonics
- Optoelectronics
- Laser machining
- Microsystems



SEPNET contd.

- Target markets for SEPNET include:
 - Telecommunications
 - Aerospace
 - Defense
 - Transport
 - Marine
 - Healthcare
- Major expertise of SEPNET members:
 - Optical sensing
 - Display technologies
 - Nanotechnology



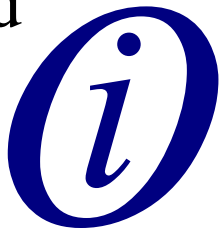
SEPNET Activities

- Several SEPNET meetings held in 2001-2002 as part of the network's activities
- Consolidated directory of SEPNET members and target members within the South East set up.
- SEPNET is the main dissemination and promotional channel for the SEOS project.
- The role of this network is twofold:
 - A channel for contacting companies within the sector
 - A channel for disseminating information about the work of the project



OPTRANET – taking optoelectronics skills delivery to Europe

- OPTRANET (Optoelectronics Training Network) is our latest optoelectronics skills delivery programme jointly funded by SEEDA and the EC.
- Optranet is giving the activities of SEOS and SEPNET a European dimension and is a welcome addition to the ongoing activities of SEOS and SEPNET.
- Optranet will provide a means to better define the required skills for an optoelectronics graduate and validate it at the European level.



Conclusions

- Optoelectronics is a key platform technology that is vital to economic development
- Various government bodies support cluster organisation in optoelectronics in the UK
- There is a wealth of optoelectronics companies in Oxfordshire and the South East
- Oxford Innovation is working to strengthen relationships between professional bodies, industry, academia and secondary schools



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