

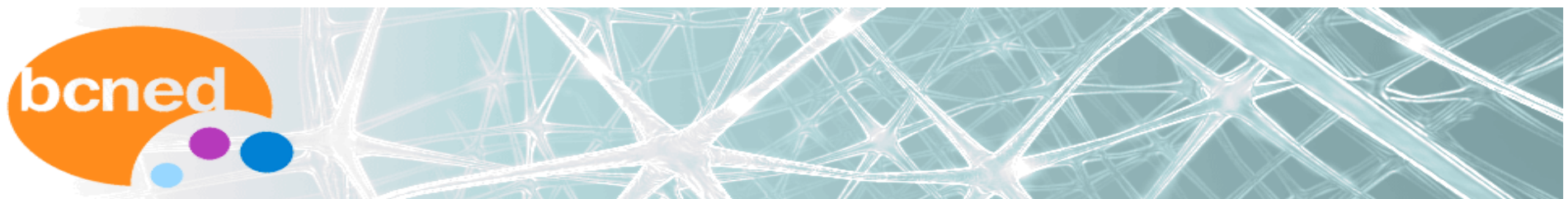
Mapping Global Value Chains & Business Integration Across Europe

Dr. Emanuela Todeva

**Director of Research Centre for Business Clusters,
Networks and Economic Development**

University of Surrey

Dublin, 3-4 July 2014



GVC – Interconnected Input-Output Markets for

- resources (*supply networks & trade of intermediate products*)
- skills (*outsourcing networks*)
- capital (*shareholder networks*)
- production technology (*R&D alliances*)

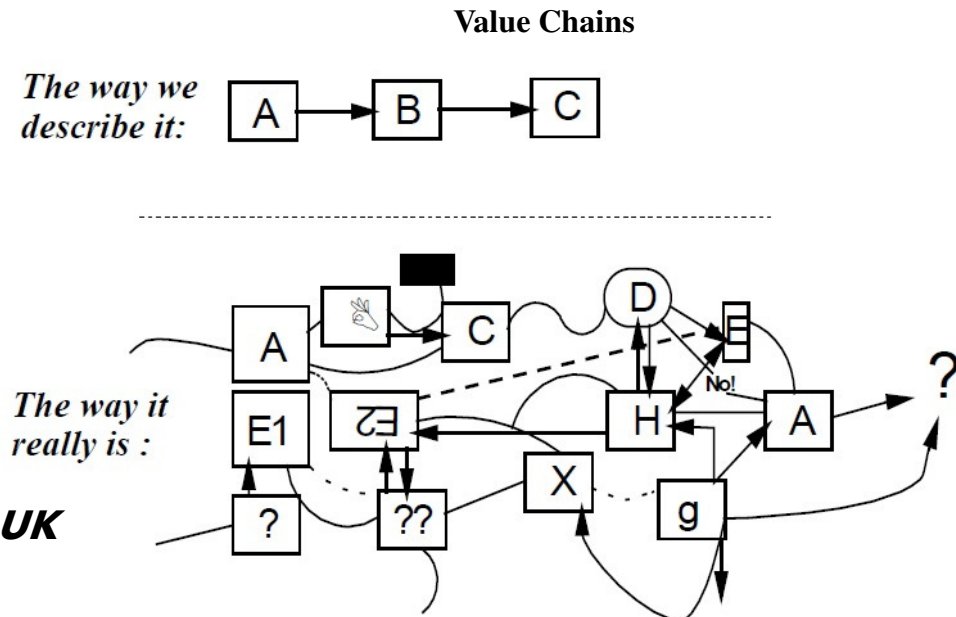


GVC – Organisation & Coordination
of production and value added activities
across borders and firm boundaries

GVC – Interconnected Organised Production Capabilities and Country Resources

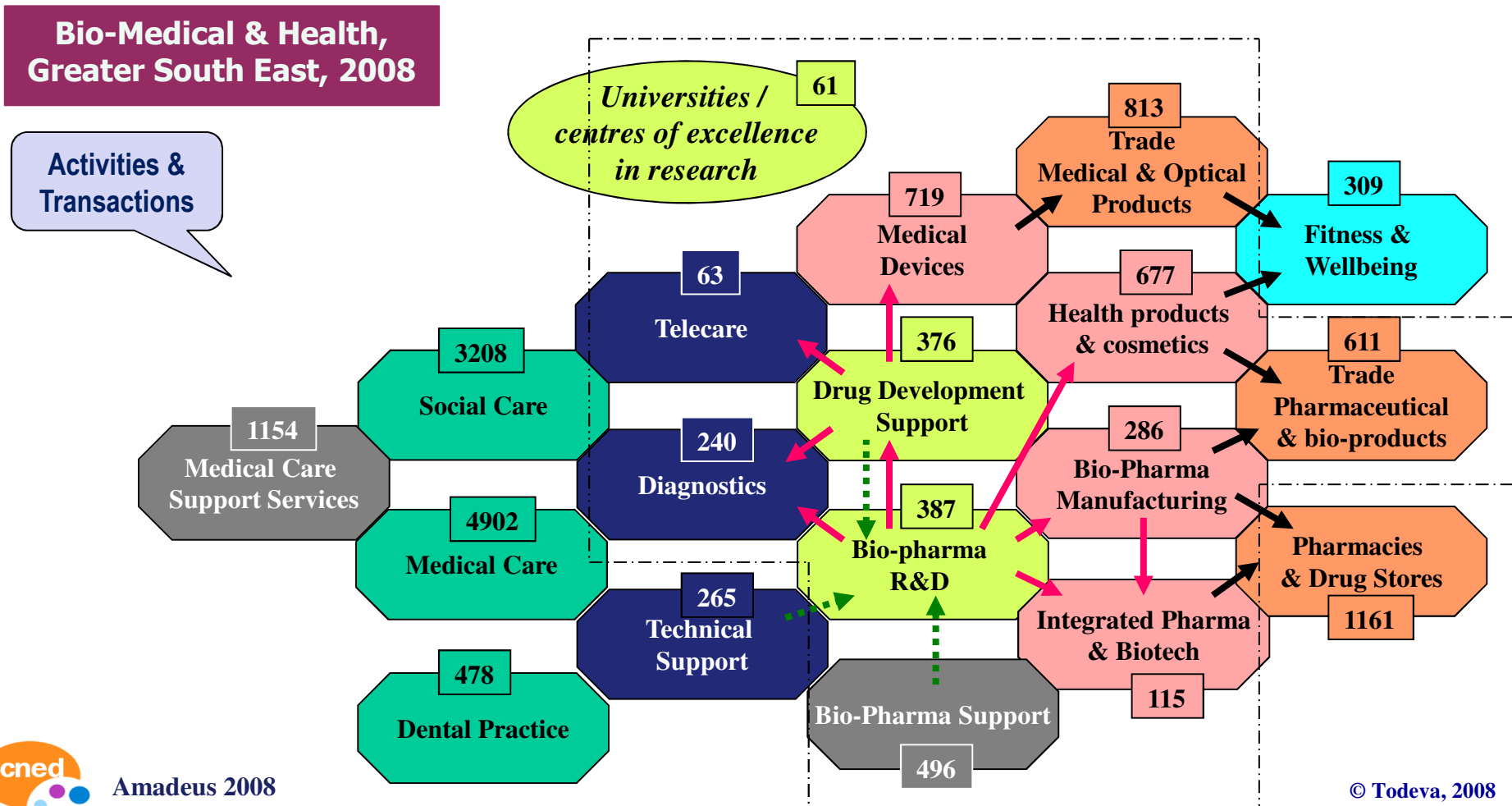
- **Agents boundaries**
- **Location boundaries**
- **Activities**
- **Costs**
- **Value added**
- **Transfers, transactions**

*(these will be illustrated with
the empirical findings from cluster
mapping of the Bio-Medical and
health cluster in the Greater South East, UK
and the Nano-tech Europe) in the
following diagrams)*



- The Use of complementary databases comprising of the entire population of firms and funded research projects
- Developed a Multi-Stage Cluster Methodology for Cluster mapping and analysis
- Investigating Brokerage, Intermediation, & Information sharing across firm / regional / country boundaries

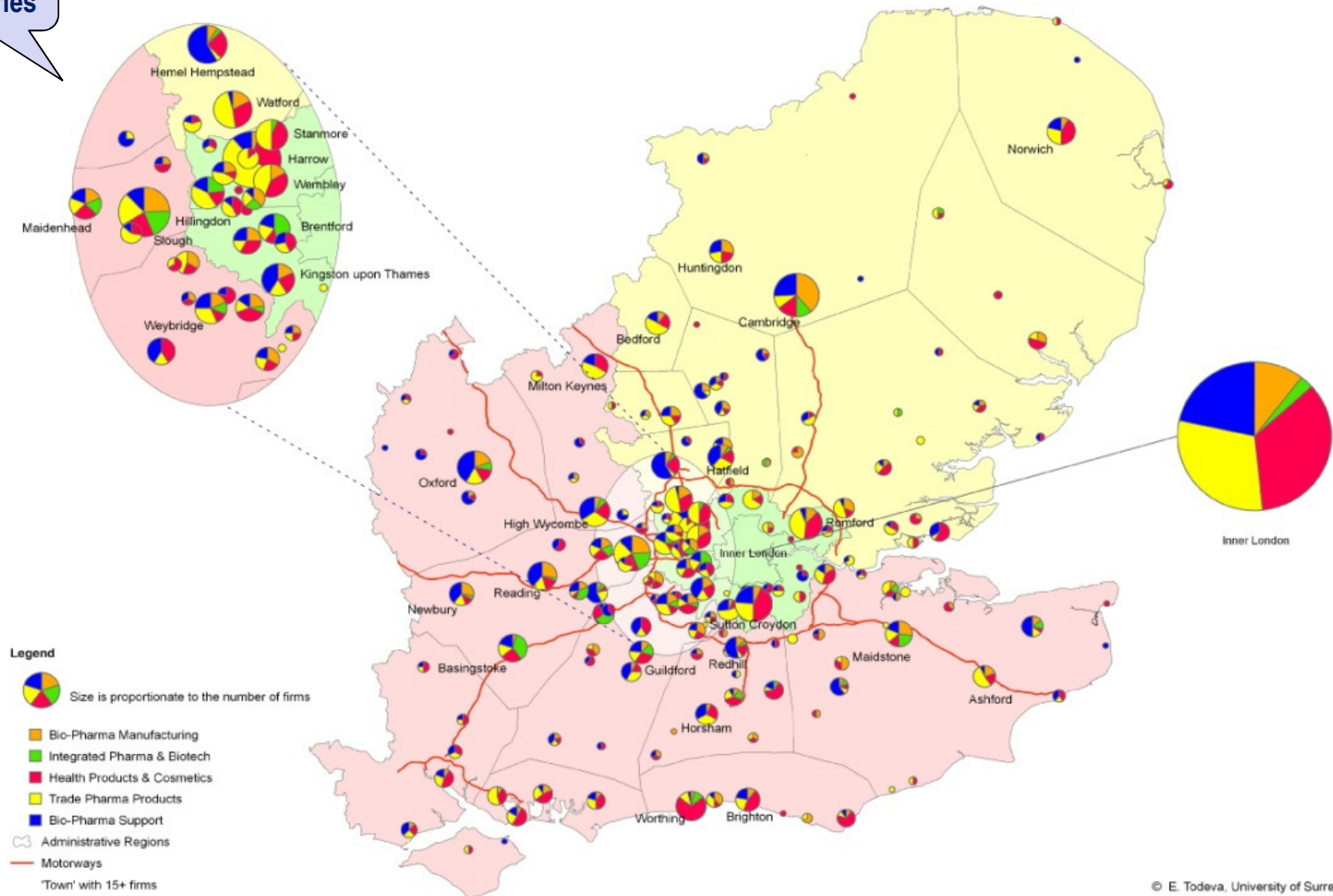
Database Firms
'Concentration of firms in the Value Chain in the Region'
Greater South East, UK



Bio-Medical & Health, Greater South East, 2008

Location
Boundaries

Database Firms 'Locational Concentration Across Regional Boundaries' Greater South East, UK

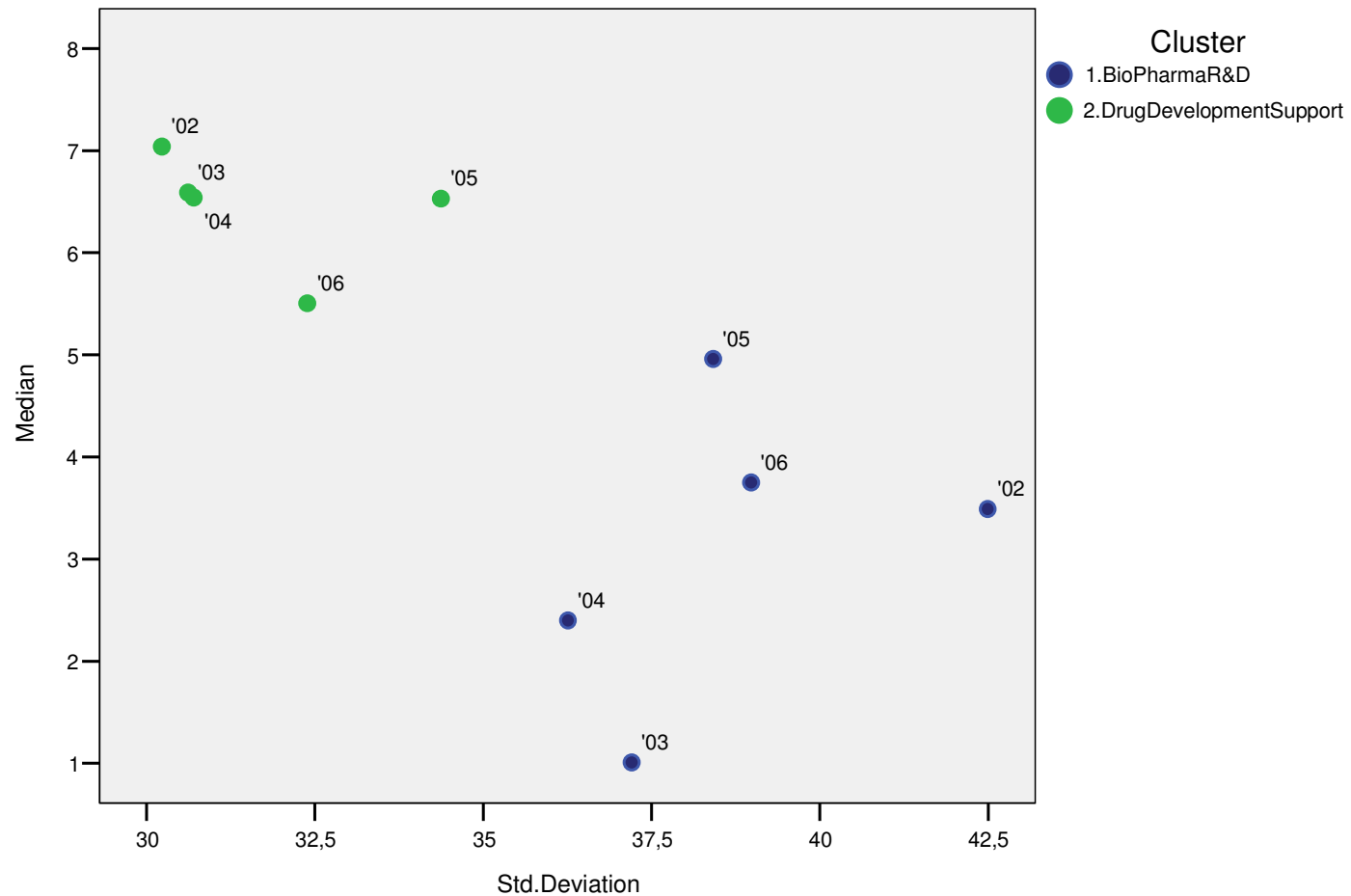


**Bio-Medical & Health,
Greater South East, 2008**

**Costs / Value
Extraction**

**Database Firms
'Comparative Longitudinal
Performance Analysis'
Greater South East, UK**

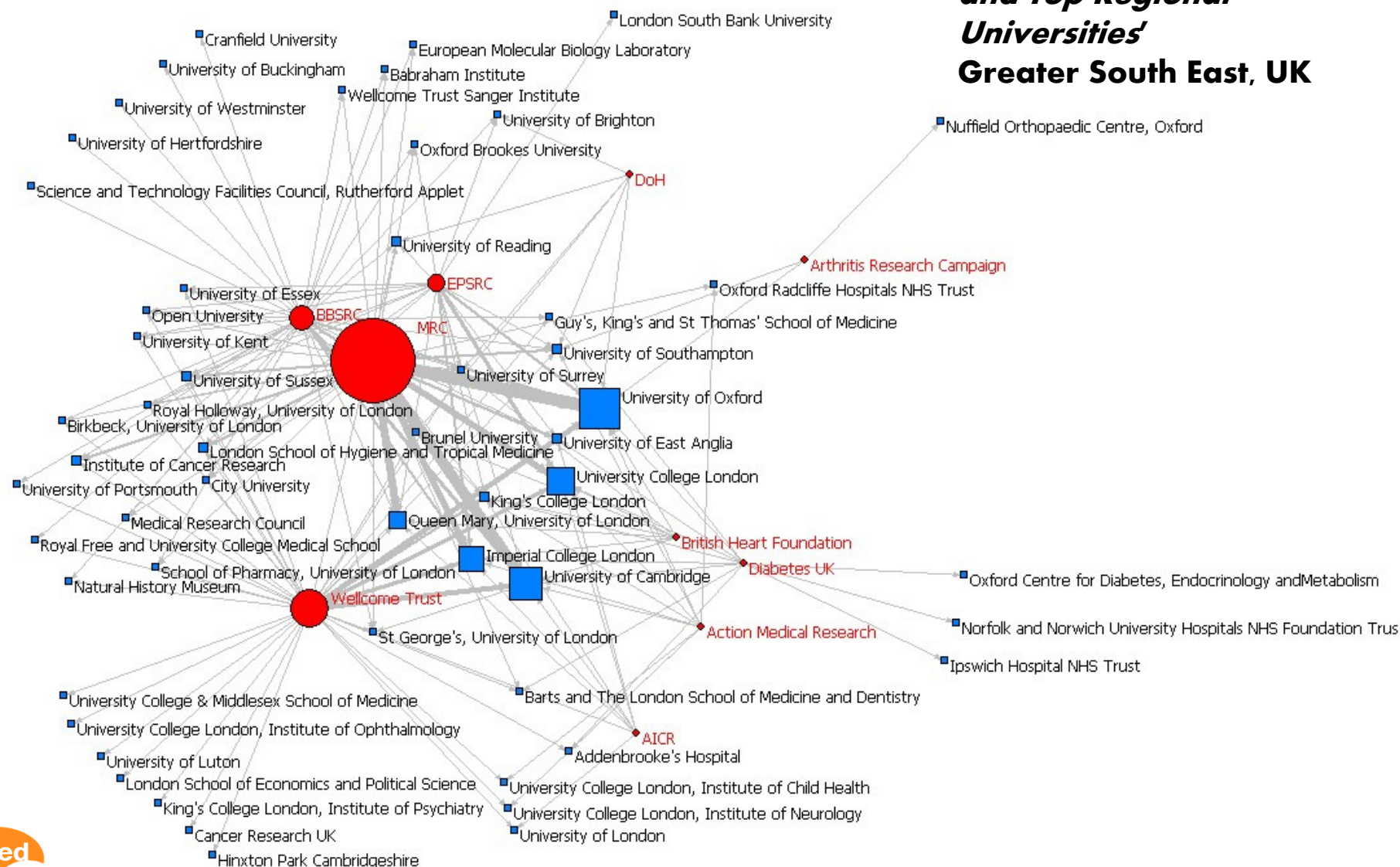
Risk-adjusted Performance



Bio-Medical & Health, Greater South East, 2008

Resource Allocation

Database Research Projects 'Funding Relationships Between Funding Bodies and Top Regional Universities' Greater South East, UK



Bio-Medical & Health, Greater South East, 2008

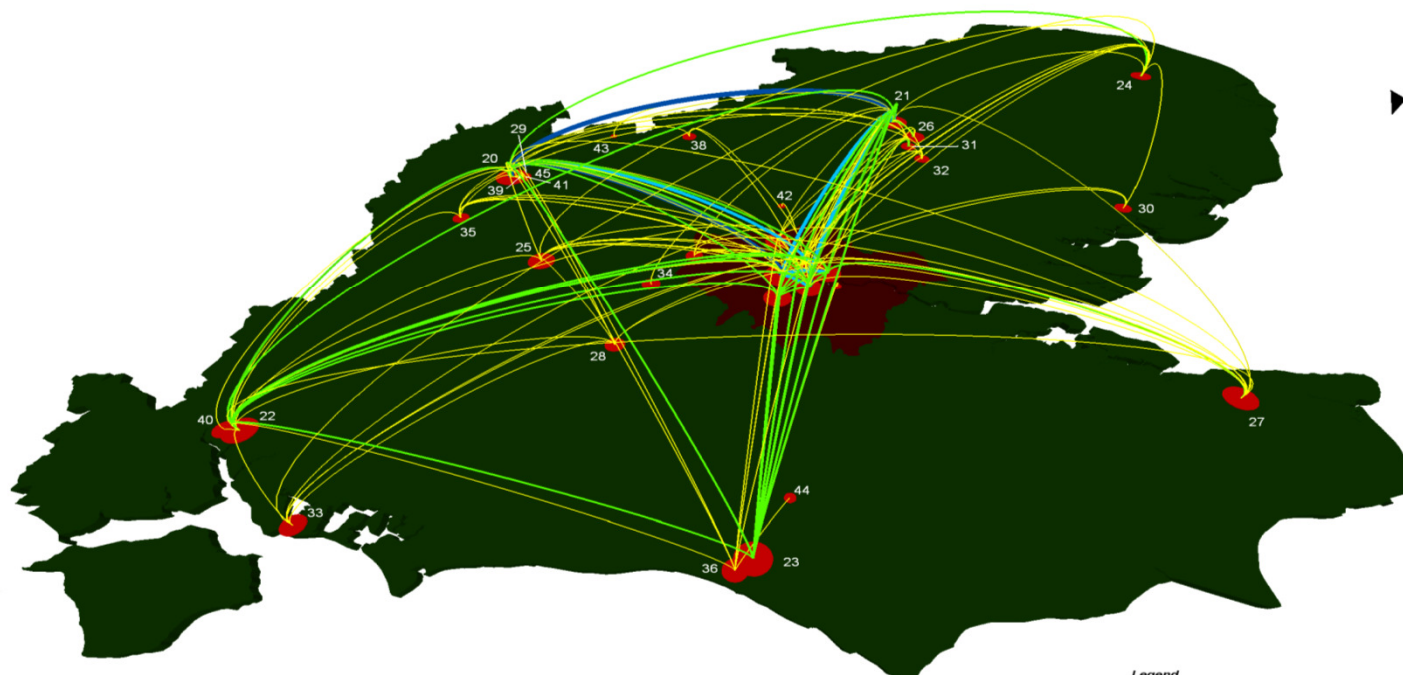
Regional Inter-University Alliances & Partnerships

Database Research Projects 'Regional University Collaborations' Greater South East, UK

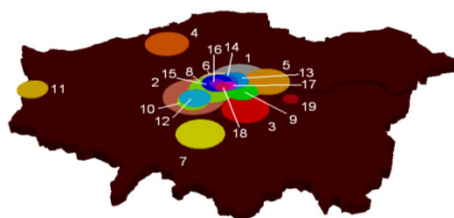
Map of Regional Research Collaborations in Health Technology and Life Sciences
Greater South East, UK

Grant Holders - London	Total Nb Grants
1 University College London	1471
2 Imperial College London	1242
3 King's College London	669
4 Medical Research Council	500
5 Queen Mary, University of London	246
6 London School of Hygiene and Tropical Medicine	238
7 St George's, University of London	134
8 Birkbeck, University of London	119
9 Guy's, King's and St Thomas' School of Medicine	66
10 Institute of Cancer Research	46
11 Brunel University	34
12 Natural History Museum	24
13 City University	23
14 School of Pharmacy, University of London	22
15 Royal Free and University College Medical School	21
16 University College & Middlesex School of Medicine	6
17 Health Protection Agency	4
18 Cancer Research UK	4
19 University of Greenwich	2

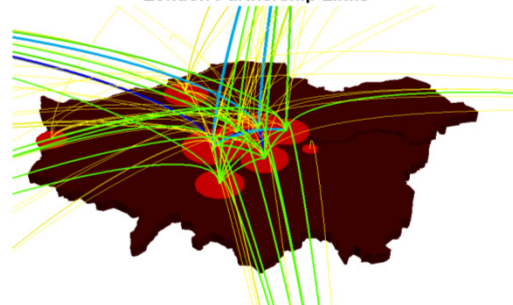
Grant Holders - Rest of GSE Region	Total Nb Grants
20 University of Oxford	1605
21 University of Cambridge	1515
22 University of Southampton	324
23 University of Sussex	208
24 University of East Anglia	145
25 University of Reading	138
26 Babraham Institute	130
27 University of Kent	101
28 University of Surrey	74
29 Oxford Radcliffe Hospitals NHS Trust	44
30 University of Essex	42
31 European Molecular Biology Laboratory	38
32 Wellcome Trust Sanger Institute	37
33 University of Portsmouth	34
34 Royal Holloway, University of London	32
35 Science and Technology Facilities Council	31
36 University of Brighton	26
37 Hinxton Park Cambridgeshire	25
38 Open University	24
39 Oxford Brookes University	16
40 Southampton University Hospitals NHS Trust	14
41 Nuffield Orthopaedic Centre, Oxford	8
42 University of Hertfordshire	5
43 University of Buckingham	2
44 South Downs Health NHS Trust	1
45 Oxford Centre for Enablement	1



Grant Holders - London



London Partnership Links



Legend

The thickness of the link corresponds with the number of projects in partnerships between two grant-holders.

- 1 - 3 partnerships
- 4 - 8 partnerships
- 9 - 14 partnerships
- 15 - 21 partnerships
- 22 - 31 partnerships
- 32 - 44 partnerships

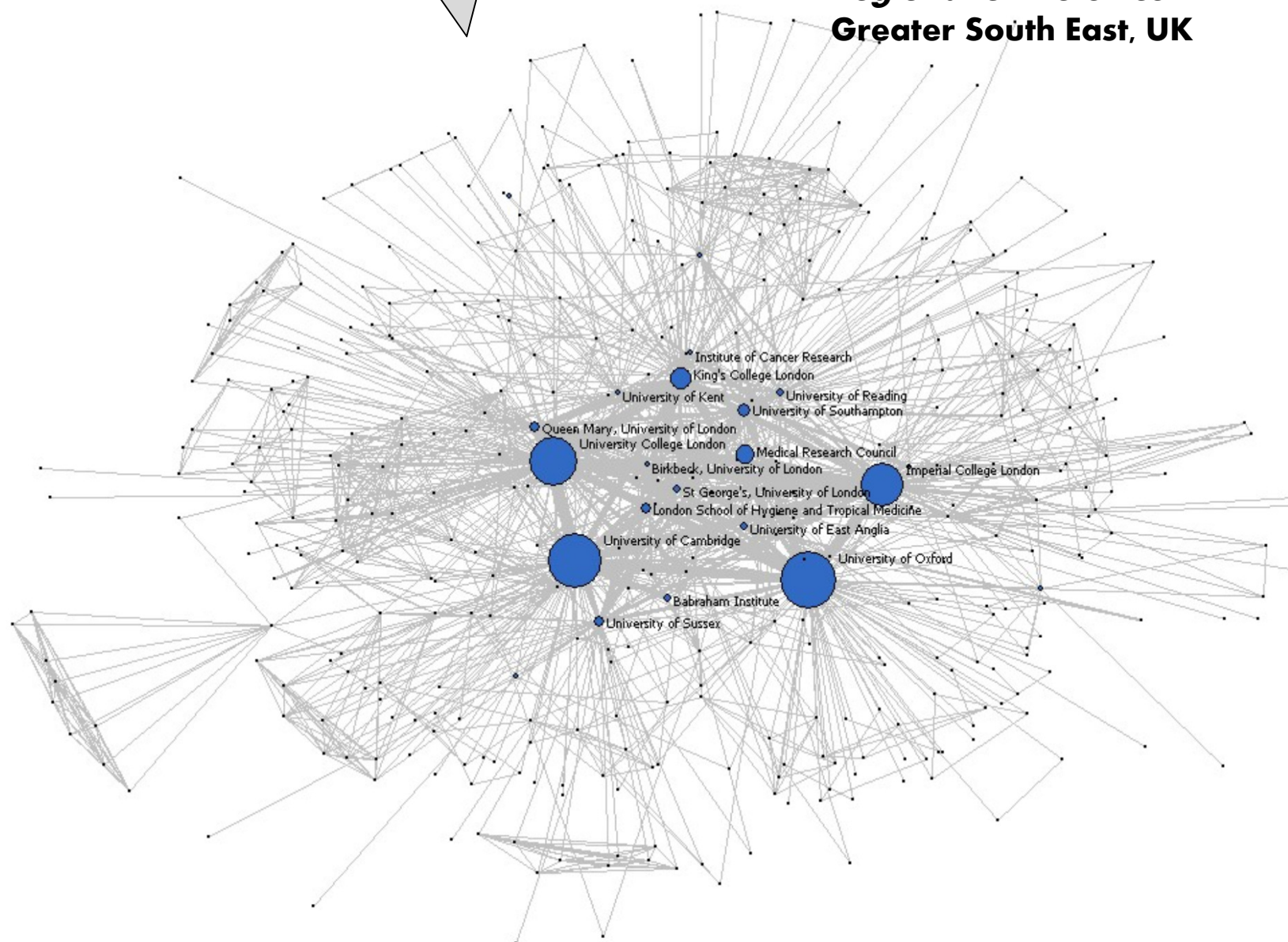
The size of the pie is proportionate to the total number of grants received by each institution.

- 1 - 10 received grants
- 11 - 100 received grants
- 101 - 1000 received grants
- < 1000 received grants

**Bio-Medical & Health,
Greater South East, 2008**

**Global University
Alliances &
Partnerships**

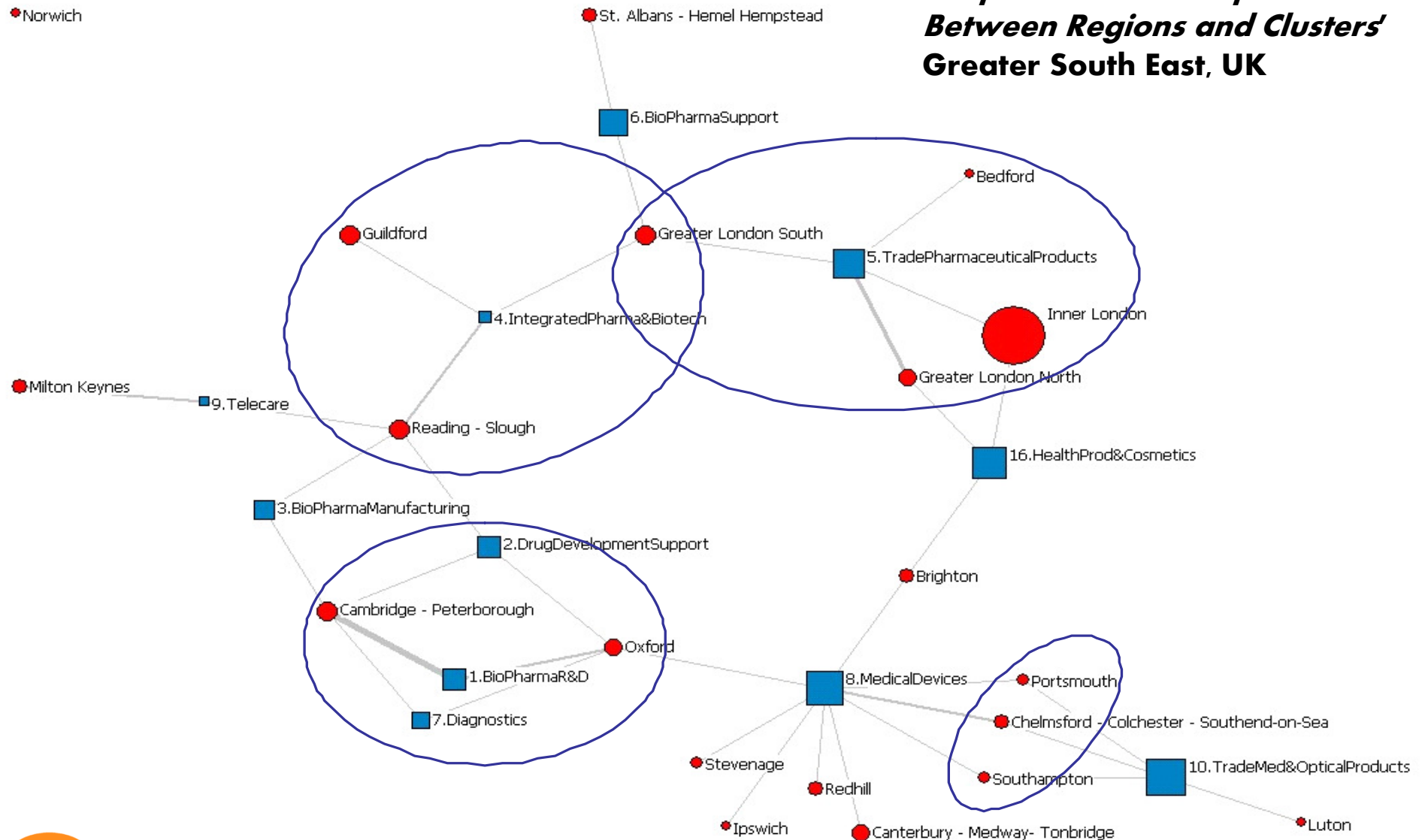
**Database Research Projects
'Global Collaborative
Relationships of Top
Regional Universities'
Greater South East, UK**



Bio-Medical & Health, Greater South East, 2008

Location of Capabilities

Database Firms 'Regional Concentrations of Capabilities Measured with a Two-mode Graph of Relationships Between Regions and Clusters' Greater South East, UK



**Nano-Tech,
Europe, 2010**

**Market
Capabilities**

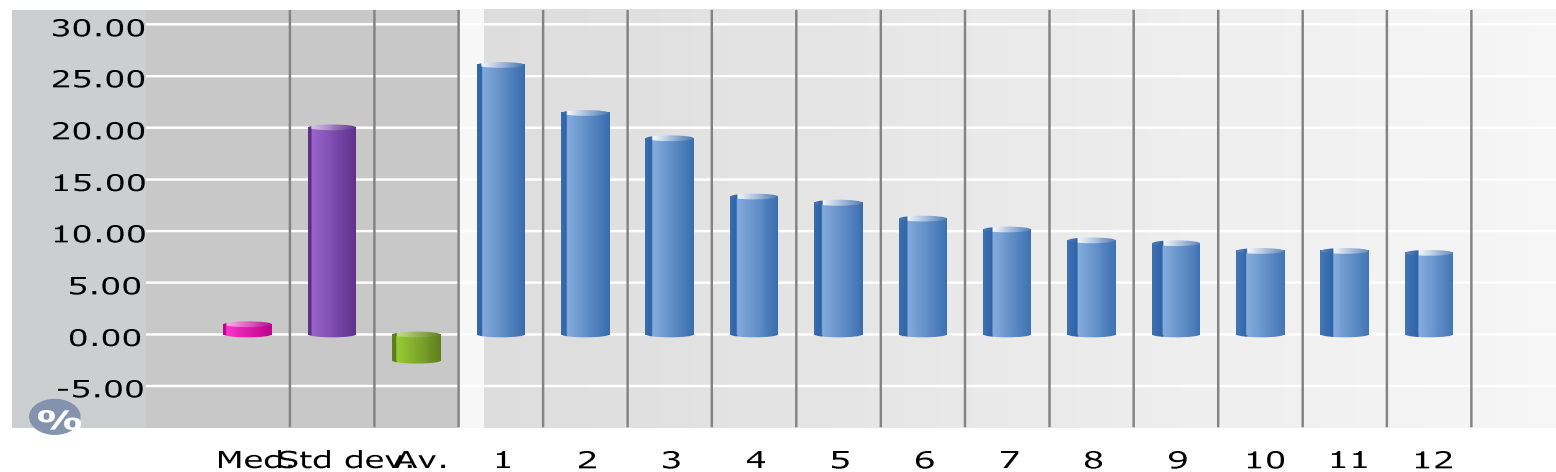
**Preliminary Dataset Firms
'Number of Firms per Country
and Their Total Annual Revenue'
Europe**

Zone	Number of companies with a value	Aggregated Op.revenue th EUR Last available year
<i>Median</i>		34,853
<i>Standard Deviation</i>		618,917
<i>Average</i>		295,036
Germany	25	2,601,063 1
Switzerland	11	1,149,908 2
United Kingdom	10	339,453 3
Slovakia	2	334,330 4
Ireland	1	228,556 5
France	5	213,245 6
Italy	8	178,658 7
Belgium	1	116,387 8
Sweden	5	48,190 9
Denmark	1	21,517 10
Spain	1	17,823 11
Russian Federation	2	15,460 12
Portugal	1	15,248 13
Croatia	1	12,213 14
Hungary	1	10,607 15
Romania	1	5,379 16
Austria	1	2,110 17
Netherlands	1	501 18

Nano-Tech, Europe, 2010

Preliminary Dataset Firms 'Top Nano-Tech Firms in Europe'

Agents'
Boundaries



1.VOCO GMBH
3.ETHYPHARM
5.DENTSPLY DE TREY GMBH
7.OXFORD INSTRUMENTS PLASMA TECHNOLOGICAL LIMITED
9.VACUUMSCHMELZE, S.R.O.
11.STIGA SPORTS AB

2.ADINOTEC AG
4.PHYSIK INSTRUMENTE (PI) GMBH & CO KG
6.MONDI SCP, A.S.
8.CARL ZEISS NTS
10.ЗЕЛЕНГРАДСКИЙ ИННОВАЦИОННО-ТЕХНОЛОГИЧЕСКИЙ ЦЕНТР
12.WORLÉE-CHEMIE G.M.B.H.

Conclusions – Supporting Cluster Development & Its Integration into Global Value Chains Through Intermediation & Facilitation

- prioritising and balancing between competition and cooperation
- bridging to enhance information transparency of suppliers and contracts
- creating effective institutions and intermediation practices
- New policy framework that provides incentives for networking & decision support
- Contract management support (platform governance & legal representation / protection)
- Strategic alliance management
- Market access management

