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The new regionalisation of UK higher education

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THE NEW REGIONALISATION OF UK HIGHER EDUCATION

Dr John Harrison Professor Darren P Smith Dr Chloe Kinton



THE NEW REGIONALISATION OF UK HIGHER EDUCATION

Something interesting started to happen in the mid-2000s. UK universities which had previously been organised into spatial inclusive regional alliances began to form new spatially selective research consortia and doctoral training partnerships. Today there are over fifty new partnerships between universities for research and training purposes, operating at a variously defined regional scale.

Stated bluntly what we are witnessing is the emergence of a new regional geography of higher education. Yet, despite much attention being paid to the uneven geographies of higher education emerging at the global and local scales, there has to date been no systematic attempt to account for the geographical basis of these new regional constellations of higher education.

We argue in this report that the regional dimension is the 'missing middle' in research on uneven geographies of higher education. Nevertheless, what now represents the brave new world of higher education has proved to be something of a 'silent revolution'.

Dr John Harrison
Professor Darren P Smith
Dr Chloe Kinton

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Executive summary

1. Aims and objectives

The project aim is to use the formation of research consortia and doctoral training centres/ partnerships as a lens through which to examine critically the new, uneven geographies of UK higher education.

To meet this aim, the project has four main objectives:

- To map the new regionalisation of UK higher education;
- To analyse critically how these new regional alliances are being defined, designated and delimited;
- To examine the roles of different actors in the regionalisation of higher education;
- To investigate through what mechanisms higher education is being regionalised, and to what end.

2. Methods

The research was conducted between September 2013 and June 2014 and offers an 'in retrospect', 'in snapshot' and 'in prospect' take on the regionalisation of higher education as it is emerging in the UK.

2.1 Desk research

Initial desk research reviewed literature relating to the regionalisation of higher education, in particular: Government policy documents and strategies; speeches; related papers by researchers; press releases; news articles (e.g. Times Higher Education Supplement); and individual university strategies.

2.2 Fieldwork

The fieldwork took the form of semi-structured interviews. These were conducted during January-March 2014. Interviewees included: ex-Higher Education Regional Association (HERA) officials; research consortia and equipment sharing chief executives, directors and managers; Doctoral Training Centre & Doctoral Training Partnership directors, managers and coordinators; and representatives of National University Mission Groupings (Russell Group, 1994 Group, University Alliance, Million+).

3. Summary of key findings

3.1 Geography

Research consortia

- There is a new regionally-scaled geography of research and equipment sharing consortia covering England and Wales.
- This new regional geography of research and equipment sharing consortia is archipelagic.
- The geography of research and equipment sharing consortia bears very close resemblance to the maps of English city-regionalism from the mid-2000s.

Research training centres

- The trend is away from single institutions towards more multi-institution collaborative arrangements.
- Unlike the archipelago of research and equipment sharing consortia, the new regional geographies of research training provision is multi-layered, overlapping and seeing increasingly stretched extra-regional connections between institutions.

3.2 Collaboration

The study identifies four main reasons for collaboration between HEIs:

- 1. The hardened national and international competitiveness agenda;
- 2. UK Government championing research excellence as critical to its wider strategy for improving productivity and innovation performance (due to the perceived shortfall in research and development and innovation performance);
- 3. Research Councils UK (RCUK) encouraging collaboration by favouring consortia and critical mass bids in their appraisal of how best to allocate resource, and;
- 4. The legacy of territorial regionalism.

The study also identifies six main considerations for university leaders when deciding who to collaborate with:

1. Prestige

- Universities that are (or were) Russell Group and 1994 Group members
 dominate research and equipment sharing consortia and DTC/DTPs 93% of
 consortia members are either Russell Group or 1994 Group universities, and 76%
 of all Doctoral Training Centres and Doctoral Training Partnerships have at least one
 Russell Group member.
- a high ranking in national university league tables and being 'research intensive' impacts on membership to consortia, and Doctoral Training Centres and Doctoral Training Partnerships all members of consortia are ranked in the CUG 2014 top 40, and 74% of all Doctoral Training Centres and Doctoral Training Partnerships have at least one member ranked in the top 20.

2. University type (age/history)

 Pre-1992 universities dominate research and equipment-sharing consortia, and Doctoral Training Centres and Doctoral Training Partnerships.

3. Legacy

- Universities are more likely to collaborate and engage with universities with which they currently have (or had) other projects, partnerships and relationships.
- Personal relationships between Vice-Chancellors, academic and research staff
 provide the foundations upon which the majority of collaborations are built, confirming
 that trust is a critical factor.

4. Geographical proximity

- Proximity, distance and travel time between collaborating institutions are important for the success of the collaboration.
- Institutions need to be close enough to share/borrow equipment, use facilities, transfer staff, and hold meetings.
- Being within an acceptable distance to travel to partner universities (approximately
 1.5 hours travel-time) increases likelihood of partnership/collaboration.

5. Research complementarity and/or specialism

- Some higher education institutions seek to reaffirm their national and international status by establishing consortia that include universities with research strengths in a particular area to form a 'super-strength alliance' (e.g. Science & Engineering South has colonised expertise in science and engineering)
- Others seek partners with research strengths in their area(s) of weakness to create a 'strong-across-the-board alliance'.

6. Size

- The trend is towards more multi-institution Doctoral Training Centres and Doctoral Training Partnerships.
- Only the Engineering and Physical Sciences Research Council (EPSRC), the first research council to establish Doctoral Training Centres in 2009, currently operates the Roberts-inspired model of single institution Graduate Schools.
- Since then, the Economic and Social Research Council (ESRC) has established 12 institutional and 9 consortia Doctoral Training Centres (average size = 3.9 institutions), the Biotechnology and Biological Sciences Research Council (BBSRC) 4 institutional and 10 multi-institutional consortia Doctoral Training Centres (average size = 3.2 institutions); the Arts and Humanities Research Council (AHRC) 7 consortia Doctoral Training Centres (average size = 5 institutions) alongside 2 institutional and 9 consortia Doctoral Training Partnerships (average size = 5.5 institutions), and the Natural Environment Research Council (NERC) 4 institutional and 11 consortia Doctoral Training Centres (average size = 3.5 institutions).

3.3 Institutionalisation of research and research training

The research reveals important differences for each of the six main research consortia in relation to the coverage of doctoral research training provision for each of the five research councils studied, the extent to which doctoral training is institutionalised by linking constituent universities together, and whether they are looking within or beyond the consortia for collaborators.

- White Rose Consortium: full coverage of doctoral training provision, very strongly institutionalised, looking inward for collaboration.
- **N8:** full coverage of doctoral training provision, strongly institutionalised, increasingly outward-looking in its collaboration.
- **M5:** partial coverage of doctoral training provision, weakly institutionalised, neither internal nor external preference for collaboration.
- **GW4:** full coverage of doctoral training provision, becoming strongly institutionalised, looking inward for collaboration.
- **SES:** full coverage of doctoral training provision, very weakly institutionalised, very outward-looking in its collaboration.
- **Eastern ARC:** partial coverage of doctoral training provision, weakly institutionalised, neither internal nor external in its preference for collaboration.

3.4 Impact

- Inclusion in/exclusion from research consortia appears to have a significant positive/
 negative impact on the ranking of a university in national university league tables,
 with those institutions included rising by an average of 3.5 places in the Complete
 University Guide 2014 ranking relative to their position when the consortia was
 established, while institutions excluded saw their ranking drop by an average of
 4.0 places.
- Inclusion in/exclusion from doctoral training provision did not appear to have a significant positive/negative impact on the ranking of a university in national university league tables.

4. Conclusions

The report presents six broad conclusions:

- 1. The study clearly reveals a distinctly new regional geography of higher education has been emerging in the first part of the 21st century. Moreover, it is currently unfolding at an accelerated pace as the major research councils implement their new doctoral training centre/partnership arrangements. Nonetheless, our research reveals that there are several important dimensions to this unfolding process, including differences between the regional geography of research and research training consortia, and between the different research councils.
- 2. The geography of research consortia is closely aligned to the geography of cityregionalism which emerged in England during the mid-2000s.
- 3. **Higher education appears more conducive to the weakening of fixed regional territories,** and the emergence of a more resolutely relational configuration of networked regional spaces than the more commonly researched institutional arrangements for subnational economic governance (e.g. Local Enterprise Partnerships).
- 4. As the regionalisation of higher education unfolds, although geography still matters it is becoming less significant as a determining factor in how regionally-scaled consortia are constructed; more important is specialism in a particular area of research. That said, what this research also reveals is that although the regionalisation of higher education may appear to be bringing about a new institutional landscape, the foundations on which these institutional arrangements are being spatially constructed are historically embedded. Critically, there is no tabula rasa on which a new regional geography is unfolding: geography, history, territory and politics all matter.
- 5. Transition from the spatial inclusive map of Higher Education Regional Associations (HERA) to the spatially selective map of research and research training consortia mean larger research-intensive universities are likely to gain most from the new regionalisation of higher education, and moreover, are the only ones likely to gain significantly from this reorganisation.
- 6. Some research consortia have successfully mapped doctoral training centres/partnerships for the major research councils onto the same geography. The White Rose Consortium and N8 Research Partnership are both 'institutionally thick' as a result, whereas for the other research consortia the picture is more fragmented, complex and inherently messy.

1. Introduction

1. Introduction

Something interesting started to happen in the mid-2000s. UK universities which had previously been organised into spatial inclusive regional alliances began to form new spatially selective research consortia and doctoral training partnerships. Today there are over fifty new partnerships between universities for research and training purposes, operating at a variously defined regional scale.

Stated bluntly what we are witnessing is the emergence of a new regional geography of higher education. Yet, despite much attention being paid to the uneven geographies of higher education emerging at the global and local scales, there has to date been no systematic attempt to account for the geographical basis of these new regional constellations of higher education.

We argue in this report that the regional dimension is the 'missing middle' in research on uneven geographies of higher education. Nevertheless, what now represents the brave new world of higher education has proved to be something of a 'silent revolution'.

1.2 A 'silent revolution' – the timeline of reform to UK higher education research and research training

1983	The first regional consortium of Higher Education Institutions (HEIs) in England, the Higher Education Support for Industry in the North (HESIN), comes together in North East England to facilitate collaborative industrial programmes around regional innovation.
1994	The Russell Group, an association of 17 research universities, is established to represent the larger research-intensive universities.
1994	In response to the formation of the Russell Group, the 1994 Group is established, a coalition of 17 smaller research-intensive universities.
1997	Million+ (formerly the Campaign for Mainstream Universities), an association of 22 UK universities, is established to represent many of the post-1992 universities and university colleges.
1997	The incoming Labour Government establishes Regional Development Agencies (RDA) and Regional Assemblies (RA) to work alongside Government Offices (established in 1994) in England as part of a comprehensive programme of Devolution and Constitutional Change.
1997	White Rose Consortium (WRC) is formed, bringing together the three research-intensive universities in Yorkshire – Leeds, Sheffield and York.

1999	Part of Labour's commitment to territorial regionalism, Higher Education Regional Associations (HERA) are established to foster collaboration between member HEIs and regional partners for the benefit of higher education and the region, both through their participation in consultations and strategic reviews and inclusion of one individual HEI representative on each RDA and RA board in England.
2001	Universities UK and the Higher Education Funding Council for England (HEFCE) publish their <i>The Regional Mission – The Regional Contribution of Higher Education</i> report, recommending the strengthening of the HERA.
2001	The UK Government launches its regionally-focused <i>Opportunity for All in a World of Change: A White Paper on Enterprise, Skills and Innovation;</i> further reinforcing the growth of a 'regional mission' in higher education.
2001	Gareth Roberts is commissioned, as part of the UK Government's strategy for improving productivity and innovation performance, to review the supply of people with science, technology, engineering and mathematics skills to ensure the supply of high quality scientists and engineers does not constrain the UK's future research and development (R&D) and innovation performance.
2002	The 'Roberts Report' SET for Success – The Supply of People with Science, Technology, Engineering and Mathematics Skills is published. It recommends the roll out of the single-institution, interdisciplinary, Graduate School model throughout UK HEIs.
2003	UK Government White Paper on <i>The Future of Higher Education</i> is published, recommending for the first time the formation of consortia between HEIs.
2003	The Scottish Funding Council (SFC) creates the research pooling initiative to encourage researchers across Scottish higher education to share their resources.
2005	HEFCE undertake a collaborative review of the HERA – Study of the English Higher Education Regional Associations – which finds that working in the HERA format has added value to what HEIs can achieve individually and that the future of higher education is one in which strategic alliances will prevail.
2005	Cardiff leaves the University of Wales, severing ties with other Welsh HEIs and becomes fully independent.
2006	University Alliance (formerly Alliance of Non-Aligned Universities), a group of 22 business-engaged universities, is established.
2007	N8 Research Partnership, a pan-regional alliance comprising the eight most research intensive universities in the North of England – Durham, Lancaster, Leeds, Liverpool, Manchester, Newcastle, Sheffield and York – is established.

2007/8	The University of Wales ceases to be a federal university when its remaining constituent members – Aberystwyth, Bangor, and Swansea – followed Cardiff in becoming fully independent universities.
2009	Aberystwyth, Bangor, Cardiff, Glamorgan and Swansea form the St David's Day Group.
2009	The Engineering and Physical Sciences Research Council (EPSRC) becomes the first UK Research Council to establish Doctoral Training Centres (DTCs), currently accrediting 80 single-institution centres.
2009/10	A new collegiate <i>University of Wales, Trinity Saint David</i> is established comprising Swansea Metropolitan University, Trinity University College Carmarthen, Trinity Saint David and the University of Wales, Lampeter.
2010	The Economic and Social Research Council (ESRC) establishes a new national network of 21 DTCs (a mixture of 12 institutional and 9 consortia DTCs).
May 2010	The Conservative-led Coalition Government announces Regional Development Agencies are to be abolished and replaced with Local Enterprise Partnerships.
June 2010	Wakeham Report (commissioned by Research Councils UK (RCUK) and Universities UK) Financial Sustainability and Efficiency in Full Economic Costing of Research in UK Higher Education Institutions is published, recommending financial sustainability, effectiveness and efficiency, and that Funding and Research Councils should review their policies on research selectivity and concentration.
December 2011	Innovation and Research Strategy for Growth is published by the Department for Business Innovation and Skills (BIS), underlining the growing importance of research consortia to success in the global innovation economy.
January 2012	The Biotechnology and Biological Sciences Research Council (BBSRC) announces 14 Doctoral Training Partnerships (DTPs), comprising 4 institutions and 10 consortia.
March 2012	Collaborations, Alliances and Mergers in Higher Education – Consultation on Lessons Learned and Guidance for Institutions report is published by HEFCE, offering guidance and example experiences to help institutions make better decisions when considering whether and how to engage in collaborations, alliances and mergers.
June 2012	North West Universities Association (NWUA) ceases operation.
July 2012	Universities for the North East (Unis4NE) ceases operation.

August 2012	M5 (or Midlands Five), a pan-regional alliance of research-intensive universities in the Midlands – Birmingham, Leicester, Loughborough, Nottingham, Warwick, and more recently joined by Aston – is established.
January 2013	GW4 (or Great Western Four), a South West consortia which links Bath, Bristol and Exeter, but extends into Wales to formalise a strategic alliance with Cardiff, is established.
March 2013	Making the Best Better: UK Research and Innovation. More Efficient and Effective for the Global Economy is published by BIS, recommending the utilization of capital budgets, the creation of clusters of excellence and the sharing of equipment.
May 2013	SES (or Science and Engineering South), linking Oxford, Cambridge, Imperial College London, University College London and Southampton in south east England is established.
September 2013	Eastern ARC (or Eastern Academic Research Consortium) brings together East Anglia, Essex and Kent to form a second south-eastern strategic alliance.
October 2013	The Arts and Humanities Research Council (AHRC) announces 7 DTCs and 11 DTPs. All 7 AHRC DTCs are consortia, while the DTPs include 2 institutions and 9 consortia.
October 2013	Encouraging a British Invention Revolution: Sir Andrew Witty's Review of Universities and Growth Review is published by BIS and notes that significant scope exists to better align funding streams, organizational focus and increase cross-institution collaboration.
November 2013	The Natural Environment Research Council (NERC) announces a new national network of 15 DTCs, comprising 4 institutions and 11 consortia.
November 2013	The 1994 Group dissolves after several members leave to join the Russell Group. Membership of the Russell Group now stands at 24.
March 2014	The Times Higher Education World Reputation Rankings 2014 is released, showing that while the UK is the second best represented country in the tables (after the US), there is a growing polarisation between the London-Oxford-Cambridge 'Golden Triangle' and the rest of the country.
December 2014	Our Plan for Growth: Science and Innovation is published by BIS emphasising agility, collaboration, and the importance of place and of openness as core concerns.
January 2015	Richard Bartholomew's Review of the ESRC Doctoral Training Centres Network published.

1.3 The research project

This research project offers an 'in retrospect', 'in snapshot' and 'in prospect' take on the regionalisation of higher education as it is emerging in the UK. The research project was conducted between September 2013 and June 2014 at a time of transition: M5, GW4, SES had been established in the preceding months and the formation of Eastern ARC was about to be formally announced resulting in a new regionally-scaled map of higher education covering all Standard English regions; various rounds of DTC/DTP announcements from UK research councils; the dissolution of the 1994 group; the phasing in of higher student tuition fees alongside funding cuts to universities as part of UK Government austerity plans; and the weakening of 'regionalism' and strengthening of 'localism' as a political project in England.

1.4 Aims and objectives

The project aim is to use the formation of research consortia and doctoral training centres/ partnerships as a lens through which to examine critically the new, uneven geographies of UK higher education.

To meet this aim, the project has **four main objectives:**

- To map the new regionalisation of UK higher education;
- To analyse critically how these new regional alliances are being defined, designated and delimited;
- To examine the roles of different actors in the regionalisation of higher education;
- To investigate through what mechanisms higher education is being regionalised, and to what end.

1.5 Methods

The research project combined the following elements:

Desktop research: Initial desk research reviewed literature relating to the regionalisation of higher education, in particular: Government policy documents and strategies; speeches; related papers by researchers; press releases; news articles (e.g. *Times Higher Education Supplement*); and individual university strategies.

Fieldwork: The fieldwork took the form of semi-structured interviews. These lasted approximately 45 minutes each and were conducted during January-March 2014. Interviewees included *inter alia:* ex-Higher Education Regional Association (HERA) officials; research consortia and equipment sharing chief executives, directors and managers; Doctoral Training Centre and Doctoral Training Partnership directors, managers and coordinators; and representatives of National University Mission Groupings (Russell Group, 1994 Group, University Alliance, Million+).

Methodological notes:

- Our research only focuses on five of the seven UK research councils. We analyse
 the Doctoral Training Centres/Partnerships established by the Arts & Humanities
 Research Council (AHRC), Biotechnology and Biological Sciences Research Council
 (BBSRC), Engineering and Physical Sciences Research Council (EPSRC), Economic
 and Social Research Council (ESRC), and Natural Environment Research Council
 (NERC). We have omitted the Medical Research Council and Science & Technology
 Facilities Council from our analysis as they award studentship quotas to single
 institutions (à la the EPSRC) and therefore do not add significantly to our analysis.
- **University rankings** are based on the Complete University Guide (CUG): University League Table 2014 & 2015.

2

Rationale for the new regionalisation of higher education

2. Rationale for the new regionalisation of higher education

Part and parcel of the rationale for new regionalisation of higher education is a broad theoretical and policy agenda.

2.1. Theoretical rationale

During the 1990s, regions came be seen as competitive and strategic territories in a complex system of multilevel governance multi-layered stretching from the global to the local¹. Part and parcel of this 'new regionalist' discourse was the belief that regions were focal points for knowledge creation, learning and innovation – capitalism's new post-Fordist economic form – and that intervention at the regional level was necessary to create the right conditions for this to occur. Moreover and allied to this, regions were seen to be important in fostering new post-national identities, increasing social cohesion, and encouraging new forms of social and political mobilization. Captivating academics, political leaders and policymakers alike, designing and implementation new regionalist inspired polices became an officially institutionalised task the world over.

The UK proved to be no exception: following the 1997 election, Tony Blair's Labour Government embarked on programme of Devolution and Constitutional Change. Labour's commitment to territorial regionalisation and regionalism led to the creation of a Scottish Parliament, Assemblies in Wales and London, a power-sharing Executive in Northern Ireland, and Regional Development Agencies and Regional Assemblies (to go alongside Government Offices for the Regions) in the eight Standard English regions. An often-overlooked component of this programme of territorial regionalisation in the UK was the establishment of 12 Higher Education Regional Associations (HERA) (see next section).

In recent times, debate over regions and the new regionalism has shifted from 'standard' regional spaces to consider the emergence and growing importance of 'non-standard' regions: regional spaces that do not map onto or conform to known territorial units². Intellectually, this refocusing has been led by those advocating a less territorial, more relational approach to the study of regions and regional space. They argue that in an increasingly mobile world, the flow and movement of goods, technologies, knowledge, people, finance and information means regions are more porous, fluid and open, and must be conceptualised as such. For the strongest proponents of this relational approach this means jettisoning notions of regions as territorially-fixed and replacing it with non-territorial visions of open, unbounded regional space(s)³. Practically, this has manifest itself in calls for more 'appropriate', generally accepted to mean new, more flexible, networked, and smart, forms of regional planning and

¹ Scott (1998)

² Deas and Lord (2006)

³ Amin, 2004; Allen and Cochrane, 2007, 2010

governance. In Europe and elsewhere this has resulted in the proliferation of cross-border regional spaces with fuzzy scales of governance and fuzzy boundaries⁴.

Once again the UK (especially England) has proved no exception:

"In the wake of a faltering commitment to regionalization and regionalism, the UK state in England has recently encouraged a proliferation of competing 'spatial imaginaries' – cities and/or city-regions⁵, localisms⁶ and pan-regionalisms⁷ – in order to identify, mobilize and valorize their economic growth potentials."

Much work has been done to investigate the emergence of these competing spatial imaginaries, often revealing that although the principle by which they are established conform to the theoretical rationale for designing new relationally-constituted forms of regional planning and governance, the implementation has seen state power and territorial politics produce new 'regional' spaces which are constituted through territoriality as well as relationality. Almost entirely focused on spatial economic governance, what has been overlooked is the emergence of a distinctly new regional geography of higher education praxis.

2.2. Policy rationale

There are ten key stages that have underpinned the formation and development of new regionally-scaled research consortia and doctoral training centres/partnerships in the UK:

- (1) Higher Education Support for Industry in the North (HESIN) (1983). HESIN was the first regional consortium of HEIs that facilitated collaborative industrial programmes around regional innovation in North East England. HESIN proved successful in attracting European Regional Development Funding during the 1980s and 1990s.
- **(2) Higher Education Regional Associations (HERA) (1999).** Established in 1999 as part of the Labour Government's Devolution and Constitutional Agenda which saw the regionalisation of economic development activity in England HERAs became key strategic actors in fostering collaboration between member HEIs and regional partners for the benefit of higher education and the region. Through the HERA, HEIs participated in consultations and strategic reviews. One individual HEI representative was included on each RDA and RA board.

⁴ Blatter, 2004; Deas and Lord, 2006; Allmendinger et al., 2014

⁵ Harrison, 2012

⁶ Bentley and Pugalis, 2013; Ward and Hardy, 2012

⁷ Harrison, 2010

⁸ Pike and Tomaney, 2009, p. 14

⁹ Jones and MacLeod, 2004; MacLeod and Jones, 2007; Goodwin, 2013; Harrison, 2010, 2013

(3) "The Regional Mission – The Regional Contribution of Higher Education" (2001). Commissioned by Universities UK and HEFCE this report argued for regional engagement beyond competitiveness, and introduced more diverse understandings of how the HE sector contributes to the region's economy and society through widening participation, contributions to local labour markets, and enhanced sustainability. The main recommendation was the strengthening of the HERA:

"[This report] has outlined the rationale for higher education engagement in the regions and set out an argument as to why the regional mission should not just be seen as a second best option but as an appropriate element of all higher education institutions' strategies."¹⁰

(4) The Roberts Report: "SET for Success - The Supply of People with Science, Technology, Engineering and Mathematics Skills" (2002). The UK Government's commissioned review provided the catalyst for a new regionalisation of training in UK higher education. The Roberts Review led to the roll out of the single-institution, interdisciplinary, Graduate School model throughout UK HEIs. Allied to this was the first indication for the wholesale spatial reorganisation of UK higher education that was to follow:

"[The Review] identified widespread concern over the level of research and training collaboration between universities and businesses. Although there are excellent examples of innovative and mutually beneficial collaborative research, the Review feels that there is both the scope and need for the levels of research collaboration to be increased significantly."¹¹

Crucially, the Roberts Report considered research and training collaboration as one.

(5) "The Future of Higher Education" White Paper (2003). This report signalled how the spatial geographies of UK higher education might be reconfigured. It supported deeper collaboration between HEIs:

"to encourage the formation of consortia, provide extra funding for research in larger, better managed research units, and develop criteria to judge the strength of collaborative work." 12

The Future of Higher Education White Paper also provided important pointers for how higher education should be organised:

"Collaboration should be encouraged, and in a way which reinforces the benefits which it brings when it is done well. But it cannot be imposed top-down. So we do not have a blueprint for particular sorts of

¹⁰ Charles and Benneworth, 2001

¹¹ Roberts, 2002

¹² Roberts, 2002

collaboration – we want to encourage them to grow organically over time. We therefore intend to reward research that is more concentrated and better-managed, without being directive about the precise shape and formation of those collaborations, and without cutting off funding from others in the sector. The collaborations could take many forms. In each case the central issue will be whether the arrangements add value in terms of improving the quality of research or graduate training. Where institutions already have great individual strength and depth in research across the board, there is no merit in forcing collaboration or cooperation just for the sake of it. Nevertheless, this approach would reward research concentration and synergy, and encourage appropriate collaboration between institutions."¹³

In a significant step forward from the Roberts Review, *The Future of Higher Education* White Paper signalled the potential separation of research from training, and emphasised establishing collaborative research and/or training programmes between HEIs.

- **(6) HEFCE collaborative review of the HERA (2004/05).** This review found that those who thought HERAs were not important and/or added little value argued there was a threefold problem with the way HERAs were spatially configured:
 - (1) "institutions sit[ting] close to the geographical edge of their regions, see their natural collaborative partners in neighbouring regions";
 - (2) institutions that see their role principally as national and international players "believe that HE is and will continue to be more competitive than collaborative, and that the future is one in which strategic alliances will prevail"; and
 - (3) "very different geographical distributions of HEIs around regions ... can have a significant effect on their willingness to collaborate within the HERA framework." ¹⁴
- (7) The Wakeham Report "Financial Sustainability and Efficiency in Full Economic Costing of Research in UK Higher Education Institutions" (2010). This report highlighted the importance of exploring how HEIs can make best use of their facilities and resources, focusing on utilisation, asset-sharing and cost-efficiencies:

"We recommend that the Funding Councils and Research Councils keep under review their policies with respect to research selectivity and concentration in the light of the gains in efficiency that might be gained." ¹⁵

¹³ DfES, 2003, p. 29

¹⁴ Brickwood and Brown, 2005, pp. 5-6

¹⁵ Wakeham, 2010, p. 6

(8) "Innovation and Research Strategy for Growth" (2011). This BIS report examined ways of maintaining and strengthening the UK's research base; one key recommendation was the belief in the growing importance of research consortia to success in the global innovation economy:

"We believe that funding mechanisms for research and innovation should recognise the value of collaborations between organisations. Consortia can tackle large-scale and ground-breaking new research beyond the capabilities of a single institution; they may involve a range of partners, including collaboration internationally and with business. To make clear that such approaches are welcomed, Research Councils UK, working with UK HE funding bodies, and in discussion with individual universities and consortia, will establish a principles-based framework for treatment and submission of multi-institutional funding bids." 16

(9) "Collaborations, Alliances and Mergers in Higher Education – Consultation on Lessons Learned and Guidance for Institutions" (2012). This HEFCE report provided guidance and case study examples for institutions considering entering into collaborations, alliances or mergers:

"Institutions are being challenged as never before to reconsider their fundamental role, market position, structures, relationships, partnerships, policies and processes. They will need to continue questioning how they operate internally, engage externally with other institutions and organizations, and interact with the wider society. This raises the profile and potential relevance of collaborations, alliances and mergers [CAM] as part of institutions' response to the drivers for change. Nonetheless, institutions are autonomous and there is no question of a top-down approach in England." ¹⁷

The report goes on to raises three important questions for the future of HEIs: (1) What are the purposes of HE institutions in the 21st century? (2) Which institutional forms will serve those evolving purposes? and (3) How can institutions become more adaptive?

¹⁶ HEFCE, 2012, p. 4

¹⁷ Brickwood and Brown, 2005, pp. 5-6

(10) "Encouraging a British Invention Revolution: Sir Andrew Witty's Review of Universities and Growth Review" (2013). This BIS report noted that significant scope exists to better align funding streams, organizational focus and increase cross-institution collaboration. One of the key recommendations is that universities have extraordinary potential to enhance economic growth and that it will be increasingly important to:

"Structure funding flows by technology/industry opportunity – not by postcode. We should embrace the country's density of population and institutions and drive greater collaboration wherever the 'idea flows' – eliminating unnecessary regional barriers which create domestic competition instead of marshalling our resources to run a global race." 18

¹⁸ BIS, 2013, p. 4

3

The new regional geography of 'research' and 'research training' consortia

3. The new regional geography of 'research' and 'research training' consortia

The project began by posing two important and related questions:

- 1. What is the geographical basis for this new regional geography of UK higher education?
- 2. How are these new regionally-scaled alliances being defined, designated and delimited?

3.1 Research Consortia

3.1.1 England

There are 6 major research and equipment sharing consortia in England:

- White Rose University Consortium. Established in 1997, the White Rose University
 Consortium is a strategic research partnership between 3 research-intensive
 universities in Yorkshire University of Leeds, University of Sheffield and University of
 York. The collaboration comes together to capitalise on their combined research
 strengths in science and technology, and also enterprise, innovation, learning
 and teaching.
- N8 Research Partnership. Established in 2007, N8 is a strategic research partnership between 8 research-intensive universities in the North of England

 Durham University, Lancaster University, University of Leeds, University of Liverpool, University of Manchester, Newcastle University, University of Sheffield and University of York. The consortium aims to promote collaboration between universities and business, deliver excellence and drive economic growth.
- M5 (or Midlands Five). Established in August 2012, M5 is a pan-regional alliance
 of research-intensive universities in the Midlands University of Birmingham,
 University of Leicester, Loughborough University, University of Nottingham, University
 of Warwick, and more recently joined by Aston University. The group has developed a
 register detailing each piece of equipment that can be shared.
- GW4 (or Great Western Four). Established in January 2013, GW4 is the South West
 consortia that not only links University of Bath, University of Bristol and University of
 Exeter, but also extends into Wales to formalise a strategic alliance with Cardiff
 University. The consortium collaborates in common areas of research, shared
 facilities, learning, training, development and other resources.
- SES (or Science and Engineering South). Established in May 2013, SES links
 University of Oxford, University of Cambridge, Imperial College London, University
 College London and University of Southampton in South East England. The
 consortium aims to innovate and explore new ideas through collaboration.

• Eastern ARC (or Eastern Academic Research Consortium). Established in September 2013, Eastern ARC brings together University of East Anglia, University of Essex and University of Kent to form a second South-Eastern strategic alliance. The consortium will focus initially on three broad interdisciplinary areas.

This new regional geography of higher education in England is characterised by an archipelago of regional consortia (Figure 1). Unlike their predecessors, the HERA, regional consortia are not coterminous. Moreover, what is particularly striking about the spatial configuration of regional consortia is the close connection between this new regional geography and the relationally-inspired city-regional geographies which formed in the mid-2000s as part of the English city-regionalism agenda.¹⁹

3.1.2 Scotland

In Scotland, universities have primarily adhered to the HERA format – Universities Scotland is the representative body of Scotland's 19 higher education institutions.

3.1.3 Wales

In Wales, a two-tier system has emerged following the collapse of the University of Wales.

- The St. David's Day Group. Established in 2009, this consortium comprises
 Aberystwyth University, Bangor University, Cardiff University, University of Glamorgan and Swansea University.
- University of Wales, Trinity St. David. Established in 2010, this collegiate grouping resulted from the merger of Swansea Metropolitan University, Trinity University College Carmarthen, and the University of Wales Lampeter.

3.1.4 London

The University of London was first established in the early 19th Century. Federally-constituted it comprises 18 constituent colleges, 10 research institutes and a number of central bodies. Constituent colleges operate on a semi-independent basis and include Birkbeck, Goldsmiths, King's College London, London Business School, London School of Economics and Political Science, Queen Mary, Royal Holloway, School of Oriental and African Studies, and University College London. Imperial College was previously a member but left the University of London in 2007.

¹⁹ Harrison et al., 2014

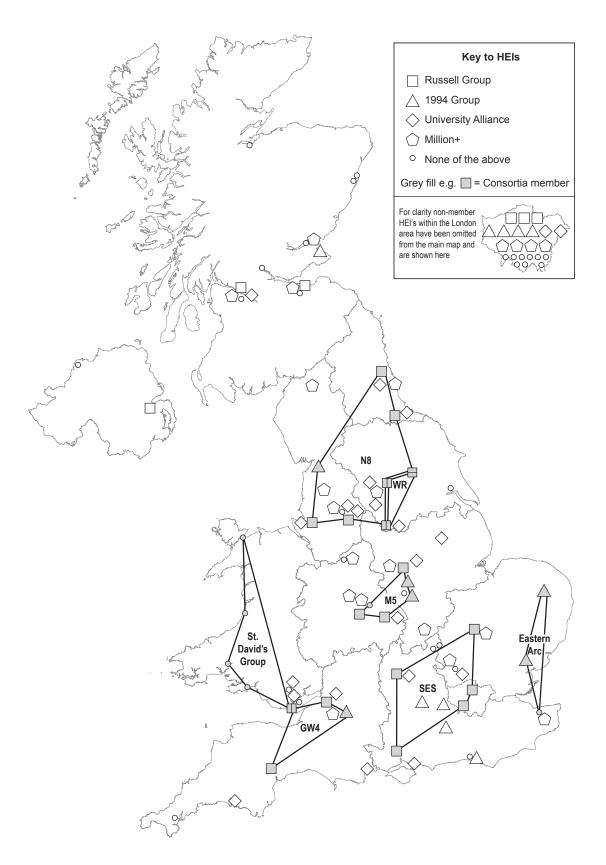


Figure 1: Research and equipment sharing consortia in the UK

3.2 'Research Training' Consortia

Alongside the formation of new pan-regional research consortia, the past decade has witnessed a concomitant process of regionalisation through the establishment of a new national network of single- and multi-institutional Doctoral Training Centres (DTC) and Doctoral Training Partnerships (DTP).

The study identifies a total of 148 Doctoral Training Centres/Doctoral Training Partnerships across five Research Councils:

- Engineering and Physical Sciences Research Council (EPSRC). Established DTCs in 2009, the EPSRC accredits 80 single-institution centres with approximately £390m of funding to support training activities.
- **Economic and Social Research Council (ESRC).** Established DTCs in 2010, the ESRC has a national network of 21 DTCs which administer £40m of funding for training in the social sciences. The ESRC network comprises 12 single-institutions and 9 multi-institution consortia.
- Biotechnology and Biological Sciences Research Council (BBSRC). Established DTPs in 2012, the BBSRC network comprises 4 single-institutions and 10 multiinstitution consortia.
- Arts and Humanities Research Council (AHRC). Established 7 multi-institution consortia DTCs in 2013. The AHRC also 2 single-institutions and 9 multi-institution consortia DTPs in 2013.
- **Natural Environment Research Council (NERC).** Established DTCs 2013, NERC announced a national network of 15 DTCs comprising 4 single-institutions and 11 multi-institution consortia.

⁴ Blatter, 2004; Deas and Lord, 2006; Allmendinger et al., 2014

⁵ Harrison, 2012

⁶ Bentley and Pugalis, 2013; Ward and Hardy, 2012

⁷ Harrison, 2010

⁸ Pike and Tomaney, 2009, p. 14

Jones and MacLeod, 2004; MacLeod and Jones, 2007; Goodwin, 2013; Harrison, 2010, 2013

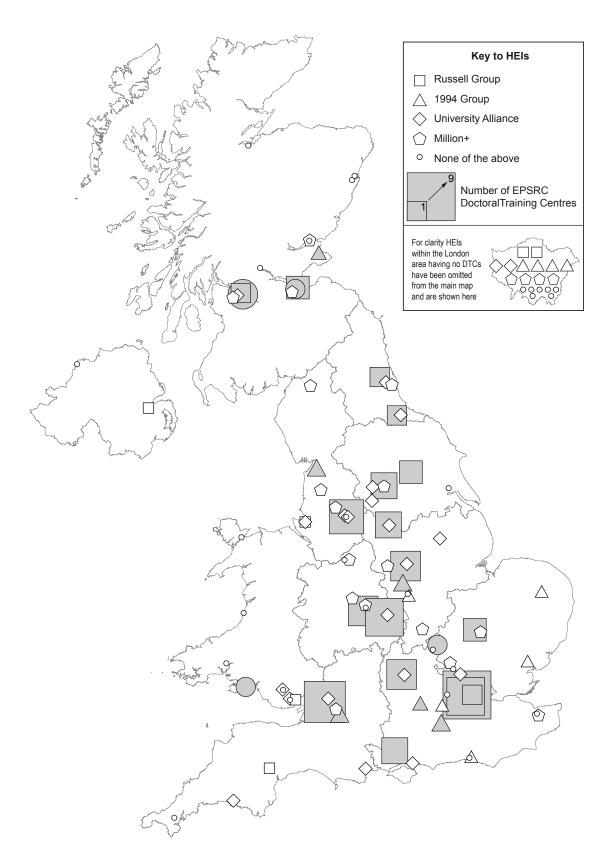


Figure 2: The geography of EPSRC doctoral training provision

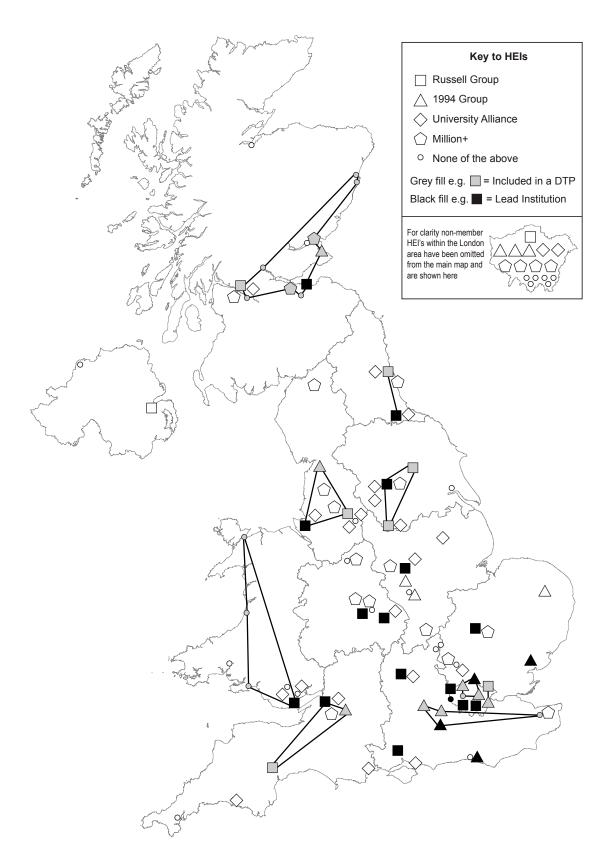


Figure 3: The geography of ESRC doctoral training provision

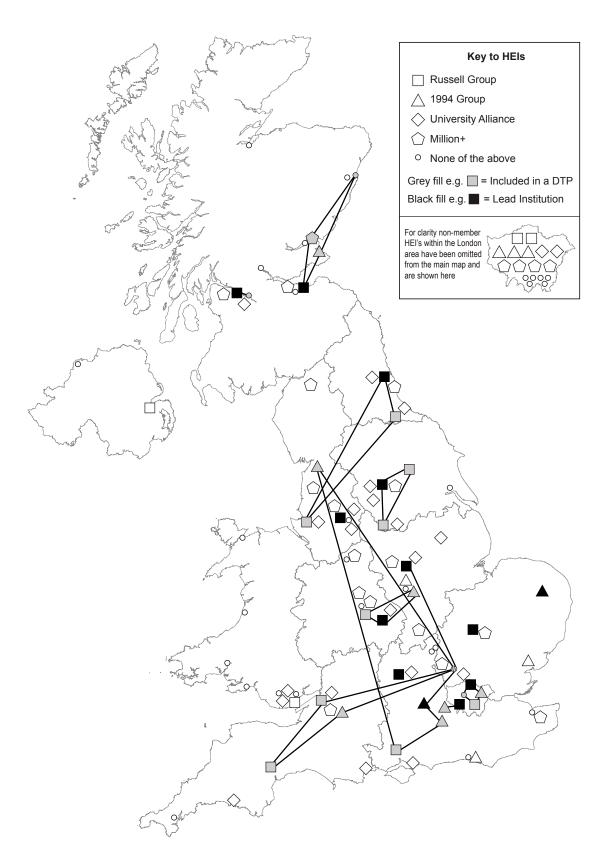


Figure 4: The geography of BBSRC doctoral training provision

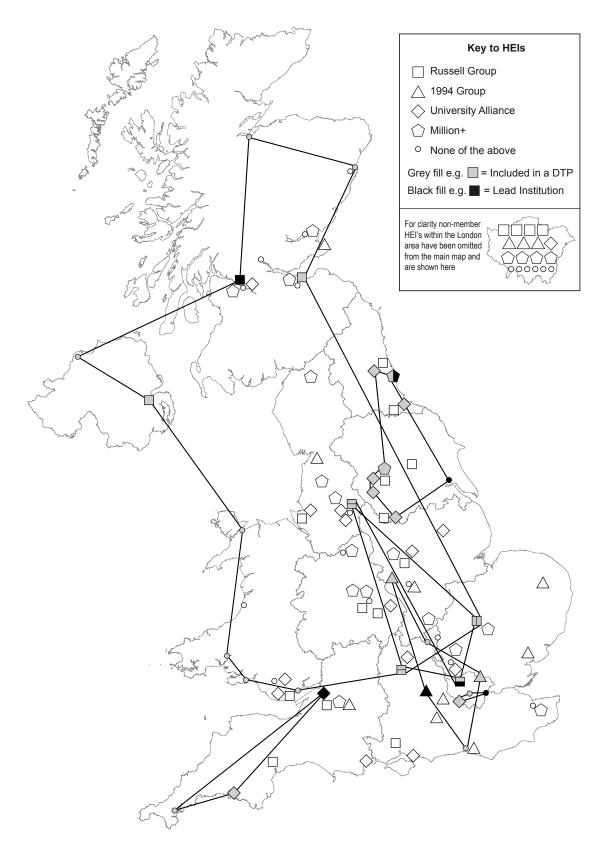


Figure 5: The geography of AHRC doctoral training provision through DTCs

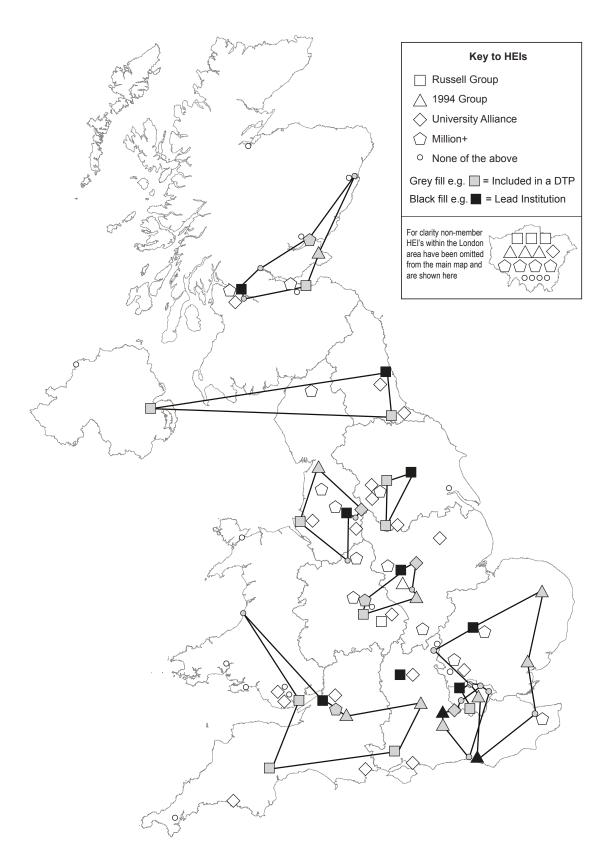


Figure 6: The geography of AHRC doctoral training provision through DTPs

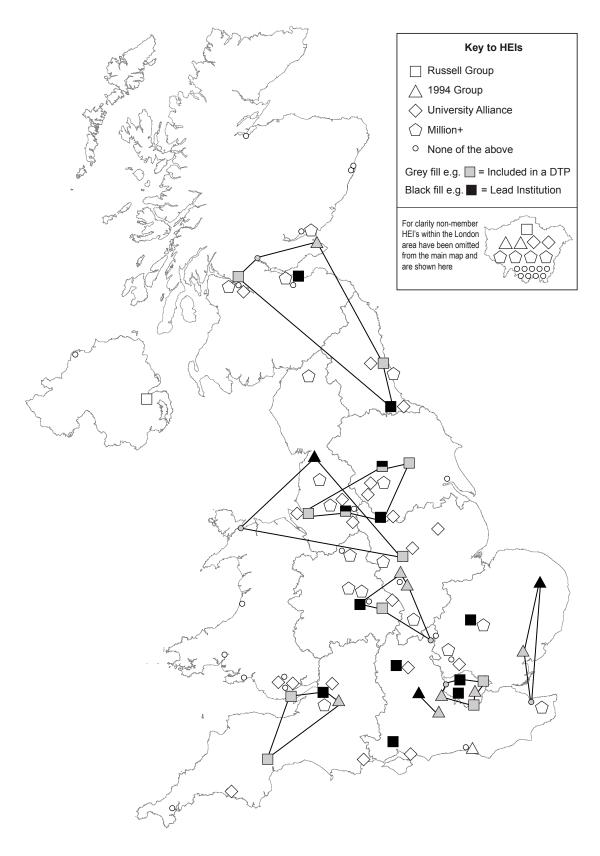


Figure 7: The geography of NERC doctoral training provision through DTCs

4

Factors
enabling/
constraining
collaboration

4. Factors enabling/constraining collaboration

The study found considerable support for the concept of collaboration between universities. In particular, the research revealed a number of key actors are crucial in the development and understanding of research and equipment sharing consortia and DTC/DTPs:

4.1 Drivers for collaboration

- Sharing knowledge, skills and expertise between universities and different sectors of society contributes to local, regional and national development.
- Improving the scale, range and quality of research and/or improving the range and quality of training for postgraduate researchers.
- Developing links and relationships with large corporations and firms drives economic growth by generating income, jobs and new businesses.
- Rationalisation and limiting the wastage of finite resources maximises ease and
 efficiency. Capital budgets can therefore be utilised more effectively, primarily through
 creating clusters of excellence and sharing equipment.
- Maximizing the success of bids/winning funding (particularly in an environment of funding cutbacks, utilisation and cost-efficiencies) is crucial. HEIs must now 'play the funding game' - "if there's a cost advantage to collaborate, universities – just like any other business – will collaborate".
- Creating a new and competitive edge places universities at the forefront nationally, but internationally: enhances reputation, prestige and brand in a competitive global marketplace.²⁰ As Colin Riordan, Vice Chancellor at Cardiff University, explains, regional collaboration is essential if universities want to compete:

"We want to enhance Cardiff's world-leading research and reputation by creating a critical mass of research excellence with other UK universities. In a competitive higher education sector, we need to find new ways for Wales to compete for research income. Working in collaboration with fellow Russell Group and research-intensive universities will help us to succeed ... Critical mass is the key to success and the combined research excellence of Bath, Bristol, and Exeter will give Cardiff – and Wales – a new and competitive edge that will place us at the forefront not only in the UK, but internationally."²¹

²⁰ Kitagawa, 2009, 2010

²¹ GW4, 2013

- Universities are now seeking to capitalize on the same competitive advantages of 'critical mass' as business and industry (spillovers, knowledge exchange, economies of scale) to succeed in today's hardened national and international competitive climate for higher education.
- Strengthening market position acting to prevent competitors seizing a particular opportunity.
- Promoting of 'role-models' used to support the rhetoric of collaboration: the White Rose Consortium (formed in 1997) is promoted as an exemplar of how added value can be achieved by combining the research strengths of institutions within regions²², and the N8 Research Partnership is presented as a model for others to adopt²³.
- Political figures promoting collaboration: for example, former Minister of State for Universities and Science, David Willetts, stated the capital cuts would force universities to "learn to share and pool more"²⁴ and that he "welcome(s) the growth of regional collaborative networks. One advantage of these is that they can save significant sums of money by sharing expensive equipment."²⁵ Likewise, Sir Alan Langlands, former Chief Executive of HEFCE, said "I congratulate the N8 universities on coming together on this innovative proposal ... using our Higher Education Innovation funding most effectively in working together."²⁶

4.2 Barriers to collaboration

- Concerns about surrendering control and/or fears of being dominated by a larger university.
- A lack of trust between key members about who the power-broker was in discussions, and whether establishing the research or doctoral training consortium was about one group looking to centralise power.
- Squabbles over funding, ownership, kudos and distribution of credit.
- Impracticalities; in research consortia, this centred on equipment sharing, meetings, logistical barriers and travel. For doctoral training provision this centred on joint-/cross-supervision of students based at different institutions, distance and staff transfers.

²² DfES, 2003; HEFCE 2012

²³ BIS, 2011

²⁴ Times Higher Education, 2010

²⁵ HEPI Conference Speech (15/5/2013)

²⁶ N8 Industry Innovation Forum launch (31/01/2012)

- A belief that the collaboration would be unsuccessful because pitting groups
 of universities against each other for funding will breed a climate of intense
 rivalry and competition similar, if not more acute, than existed between individual
 HEIs already.
- Inherently territorial and competitive some HEI see prestige/strength accruing from remaining independent.
- Increased administration and increased/higher costs associated with insurance, maintenance of equipment, training staff, office/lab space etc.

Therefore, the research identified **four key reasons** why universities are collaborating:

- 1. The hardened national and international competitiveness agenda;
- 2. UK Government championing research excellence as critical to its wider strategy for improving productivity and innovation performance due to the perceived shortfall in research and development and innovation performance in the UK;
- 3. Research Councils UK encouraging collaboration by favouring consortia and critical mass bids in their appraisal of how best to allocate resource; and
- 4. The legacy of territorial regionalism in the UK (especially England).

5

Building new alliances - deciding who to collaborate with

Building new alliances deciding who to collaborate with

The question facing many HEIs is not whether to participate in new 'regional' research and training consortia, but deciding who to collaborate with, what to collaborate on, and how to collaborate.

The study reveals a number of contributing factors to the inclusion and exclusion of universities in research and equipment sharing consortia and DTC/DTPs:

5.1 Prestige

- Universities that are (or were) Russell Group and 1994 Group members dominate research and equipment sharing consortia, and doctoral training provision (see Figures 8 and 9).
- High ranking in national university league tables and being 'research intensive' impacts on membership to consortia and as part of DTCs and DTPs. This is particularly important in terms of creating a 'brand' and enabling research quality to become more visible.
- Universities that can invest their own money, alongside public funding, increase
 the likelihood of inclusion. For example, the process of 'match-funding' where
 universities leverage their own funding to 'top-up' the number of studentships in the
 DTC/DTP makes a university a more attractive proposition.
- Funding thresholds mean that only a select number of universities have the financial 'clout' to win DTC/DTP funding as an individual institution (and therefore do not need to create or be part of an alliance).
- The most prestigious institutions (Russell Group or 1994 Group members; highly ranked; research intensive; ability to invest their own money) join with similar universities in order to out-do other alliances – there is strength in numbers.
 There is competition to be the most powerful and prestigious alliance and to maximise funding.

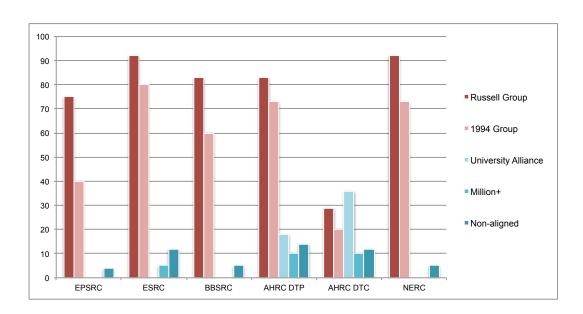


Figure 8: National 'mission' group universities included in DTCs and DTPs (%)

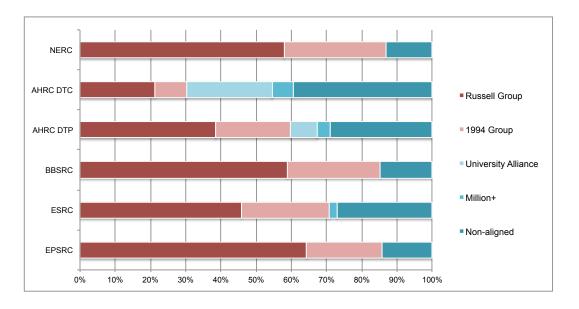


Figure 9: Type of universities included in DTCs and DTPs (%)

Key statistics: research and equipment sharing consortia

• 93% of consortia members are either Russell Group or 1994 Group universities (see Figure 10).

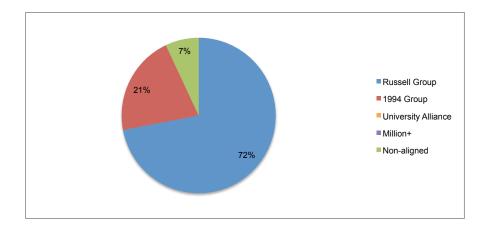


Figure 10: Research and equipment sharing consortia members by National University 'Mission' Groupings

• In 67% of consortia, at least one member is ranked in the top 10. All consortia have at least one member ranked in the top 20. All members of consortia are ranked in the top 40.

Key statistics: collaborative DTC/DTPs

- 33% of all collaborative DTC/DTPs are Russell Group only. 2% of all collaborative DTC/DTPs are 1994 Group only. 7% of all collaborative DTC/DTPs are a combination of Russell Group and 1994 Group only. No collaborative DTCs or DTPs are University Alliance only, Million+ only or non-aligned universities only. 42% of all collaborative DTC/DTPs are Russell Group/1994 Group only.
- 60% of all collaborative DTC/DTPs have at least one Russell Group member;
 35% of all collaborative DTC/DTPs have at least one 1994 Group member; 14% of all collaborative DTC/DTPs have at least one University Alliance member; 12% of all collaborative DTC/DTPs have at least one Million+ member; 51% of all collaborative DTC/DTPs have at least one non-aligned university member. 93% of all collaborative DTC/DTPs have at least one Russell Group or 1994 Group member.
- 93% of all collaborative DTC/DTPs are led by either Russell Group or 1994 Group universities (see Figure 11).

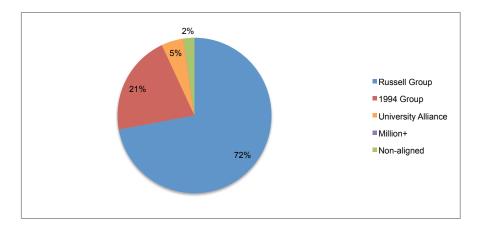


Figure 11: Leadership of collaborative DTCs and DTPs by National University Groupings (%)

- In 44% of all collaborative DTC/DTPs, all members are ranked in the top 25. In 81% of all collaborative DTC/DTPs, at least one member is ranked in the top 20. In 65% of all collaborative DTC/DTPs, all members are ranked in the top 50.
- 92% of all individual DTC/DTPs are Russell Group/1994 Group (see Figure 12).

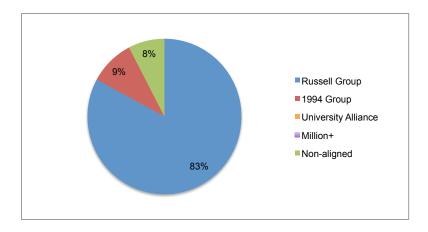


Figure 12: Individual DTC/DTP members by National University Groupings (%)

In 41% of individual DTC/DTPs, the university is ranked in the top 10. In 71% of individual DTC/DTPs, the university is ranked in the top 20. In 83% of individual DTC/DTPs, the university is ranked in the top 25. In 98% of individual DTC/DTPs, the university is ranked in the top 50.

Key statistics: collaborative DTC/DTPs

- 76% of all DTC/DTPs have at least one Russell Group member. 17% of all DTC/DTPs have at least one 1994 Group member. 4% and 3% of all DTC/DTPs have at least one University Alliance and Million+ university respectively. 20% of all DTC/DTPs have at least one non-aligned member. Therefore, 93% of all DTC/DTPs have at least one Russell Group or 1994 Group member.
- 93% of all DTC/DTPs are led by either a Russell Group or a 1994 Group university (see Figure 13).

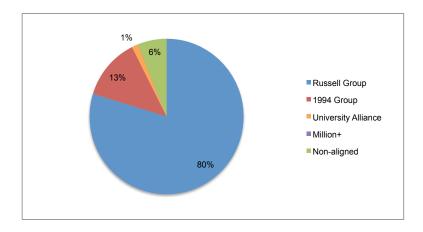


Figure 13: Leadership of DTC/DTPs by National University Groupings (%)

- In 80% of all DTC/DTPs, the highest ranked university leads.
- In 42% of all DTC/DTPs, at least one member is ranked in the top 10. In 74% of all DTC/DTPs, at least one member is ranked in the top 20.

5.2 University type (age/history)

 Universities that were founded pre-1992 dominate research and equipment sharing consortia and DTC/DTPs (see Figures 14 and 15).

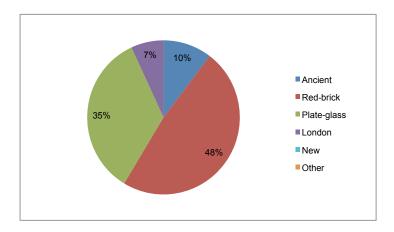


Figure 14: Research and equipment sharing consortia members by age of university (%)

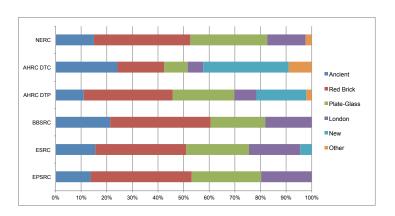


Figure 15: The type of universities included in Research Council DTC/DTPs (%)

5.3 Historically embedded academic relationships

- Research and equipment-sharing consortia and DTC/DTPs provide new infrastructures for historic/long-term partnerships.
- Universities are more likely to collaborate and engage with universities with which they currently have (or had) other projects, partnerships and relationships.
- Personal relationships between Vice-Chancellors, academic and research staff are the foundations upon which the majority of collaborations are built.
- It is natural that universities will first contact the universities/people they have long-standing relationships with when a call for funding/projects comes about (particularly as calls often come out with a short timescale). This is, therefore, reinforcing sticking to what (and who) you know.

• Trust is crucial in collaboration and in the establishment of research and equipment sharing consortia and DTC/DTPs. According to Trevor McMillan, Chair of the N8 Management Board, the "real value" of university consortia "comes when there is well-embedded trust at senior levels – and this does not come quickly or easily".²⁷

5.4 Geographical proximity

- Proximity, distance and travel time between collaborating institutions is important for the success of the collaboration.
- Institutions need to be close enough to share/borrow equipment, use facilities, transfer staff, hold meetings. Being within an acceptable distance to travel to partner universities (approximately 1.5 hours travel-time) increases likelihood of partnership/collaboration.
- For consortia, this is primarily around equipment sharing and usage, as well as holding meetings.
- For DTC/DTPs, geographical proximity is particularly important for joint-supervision, conferences, and students being to access facilities at more than one campus.
- 58% of DTC/DTPs are named after geographical areas/regions.

5.5 Complementary specialism

- Combining the strengths of universities. For example, if two or more institutions are
 particularly strong in a research area they could create a "super-strength alliance".
 This is clearly the case with SES who have colonised expertise to form a superstrength alliance in science and engineering:
 - "[SES] represent the most powerful cluster of research intensive universities in the world... [The group] hold more than 1,400 EPSRC awards worth £1 billion, representing more than a quarter of all EPSRC projects by number and 30% by amount of the entire national commitment in this area. Similarly, the group's Science and Technology Facilities Council portfolio is worth roughly £150 million, representing a third of the national commitment." 28
- Professor David Price, Vice-Provost (Research) at University College London, argues the need for collaboration to compete better globally meant "total dominance" in science and engineering makes SES a "no-brainer".

²⁷ Jump, 2013

²⁸ University of Southampton, 2013

- In contrast, universities may choose to align to complement with other institutions. For example, one university particularly strong in engineering but weak in social sciences may partner with a university that is strong in social science but weak in engineering to create a 'strong-across-the-board' alliance.
- Subject specialism and expertise can outweigh geographical proximity in DTC/DTPs if it is considered 'worth it' or 'a benefit' for the student.

5.6 Size

- Once reaching what is considered to be a 'workable capacity', consortia and DTC/ DTPs are unlikely to be open to including new members to the collaboration.
- For consortia, the average size is 4-5 members, for DTC/DTPs the average size is 3-5 members. The inclusion of too many institutions in the collaboration is considered to be less effective and more difficult.
- With each round of DTC/DTP funding, it becomes less and less likely that universities will seek to add new partners to the alliance size is likely to stay the same.
 Alliances become committed to the idea/members. For a discussion of the institutionalisation of collaborations, see Section 2.2.5.

5.7 Interesting anomalies

In addition, the research also revealed a number of anomalies which are critical to understanding how research and equipment sharing consortia and DTC/DTPs developed:

- Aston ranked 27th in Complete University Guide 2014 (UK) league table, is a member of M5 (included after the initial five), but is not included in any DTC/DTPs.
- Hull ranked 53th in the Complete University Guide 2014 (UK) league table, is not included in any DTPs/DTCs or research and equipment sharing consortia.
 Interestingly, Hull was included in the Northern Way but is not part of N8, while Lancaster, included in N8, was not formally part of the Northern Way.
- City University London ranked 42nd in Complete University Guide 2014 (UK) league table, is only included in DTPs/DTCs as a constituent of the University of London.
- Glamorgan ranked 91st in Complete University Guide 2014 (UK) league table, is included in the St David's Day Group, but is not included in any DTC/DTPs (even all-Welsh collaborations, such as the ESRC DTC).

5.8 Reactions to, and consequences of, inclusion/exclusion

- It is difficult for a university to go from being 'out'/excluded from consortia and/or DTC/DTPs to being 'in'/included. Over time, these positions become embedded.
- If universities are not included in a DTC/DTP in the current round of funding, their chances of being included in the next round/in the future are limited. The funding system means that, if an institution is not in a DTC/DTP currently, you will be out for up to 5 years these universities face long-term exclusion.
- Very few consortia and/or DTC/DTPs suggest that they are open to adding more members or extend the existing alliance – there will be little change to current collaborations.
- Those that are open to adding to the collaboration will be looking to universities that can contribute to an alliance in the areas highlighted in points 1-5. Similarly, those considering adding new members will do so in an attempt to guarantee funding and to compete with other established consortia and DTC/DTPs.
- It is argued by some interviewees that there is 'bad' research included within those prestigious universities and departments, and that funder's need to look at specific expertise, with the quality of research being the driver rather than the institutional setting. This is the source of much debate among key actors, with the Russell Group claiming "a more efficient research base could be achieved by concentrating the funding of research into the most research-intensive" universities while the University Alliance argues "the UK should continue to selectively fund excellent research wherever it exists." 31

³⁰ Russell Group, 2010

³¹ University Alliance, 2011

6

Regional institutionalisation

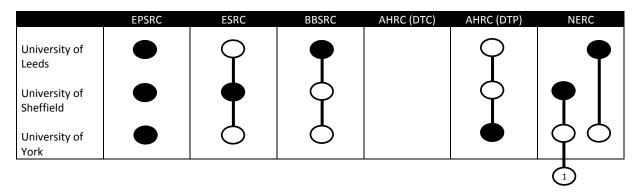
Key

- A white circle indicates that the university is a member of a DTC/DTP.
- A filled-in black circle indicates that the university is the lead institution in a DTC/DTP.
- Black lines indicate connections between universities in the DTC/DTP.
- A dotted line indicates traditional regional boundaries.
- Circles outside the table indicate universities included in DTC/DTPs, but that are not members of the consortium in question.

6. Regional institutionalisation

Most interviewees reflected on the embeddedness or institutionalisation of research equipment sharing consortia and DTC/DTPs. With each round of funding, grants and/or investment, it is noticeable that the same universities are included, and that there is growing layered stability to these collaborations. This is shown in Figures 16-22.

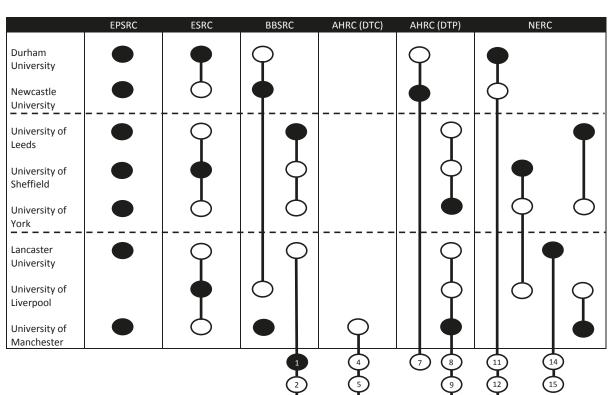
6.1 White Rose Consortium



1 = University of Liverpool

Figure 16: The institutionalisation of White Rose Consortium

- Inclusion/institutionalisation: The White Rose Consortium is the longest-established
 of the consortia and is also the most fully-institutionalised, with Leeds, Sheffield
 and York included in all Research Council DTC/DTPs. WRC institutions have 100%
 inclusion across the 5 research councils.
- Legacy of regions: There is clearly evidence of a regional legacy, with only one connection outside the Yorkshire & Humberside region.
- Leadership: Leeds and Sheffield lead 3 DTC/DTPs whilst York leads in 2. The White Rose Universities share the lead (up until NERC DTC).
- External links: White Rose Consortium members include one other university in one DTC collaboration Liverpool.



6.2 N8 Research Partnership

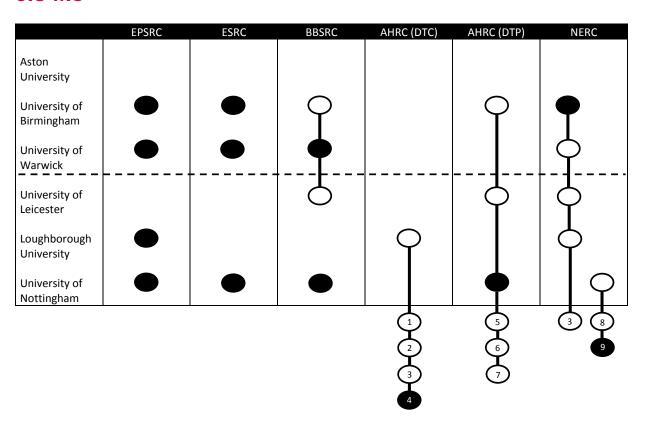
1 = University of Reading, 2= University of Southampton, 3 = University of Surrey, 4 = University of Cambridge, 5 = University of Oxford, 6 = University College London, 7 = Queen's University, Belfast, 8 = Keele University, 9 = Manchester Metropolitan University, 10 = University of Salford, 11 = University of Glasgow, 12 = University of St Andrews, 13 = University of Stirling, 14 = Bangor University, 15 = University of Nottingham

Figure 17: The institutionalisation of N8 Research Partnership

- **Inclusion/institutionalisation:** N8 universities have a presence in every research council programme except EPSRC where the University of Liverpool is not present. N8 institutions have **97.5% inclusion** across the 5 research councils.
- Legacy of regions: this is clearly evident in the construction of DTC/DTPs.

- There are only 2 connections (BBSRC Durham, Newcastle, Liverpool; NERC –
 Sheffield, York, Liverpool) that link N8 institutions located in one northern region,
 with another N8 institution in another northern region. N8 institutions in one
 northern region generally look beyond the N8 for external partners.
- Durham and Newcastle are paired together as the North East members of N8 in all partnerships in which they are present.
- In the case of ESRC DTCs, the partnerships are all embedded within their administrative region.
- **Leadership:** Manchester leads 4; Durham, Newcastle, Leeds and Sheffield lead 3; York and Lancaster lead 2; Liverpool leads 1. Universities share the lead and are happy to be supporting members/collaborators.
- **External links:** There are links with 15 external institutions, all coming after the initial EPSRC/ESRC particularly in the most recently established rounds of DTC/DTPs.
- **Others:** Only the University of Liverpool is missing from the EPSRC DTCs, otherwise the N8 would be fully institutionalised for those DTC/DTPs established in 2009/10 and the Conservative-led Coalition Government.

6.3 M5



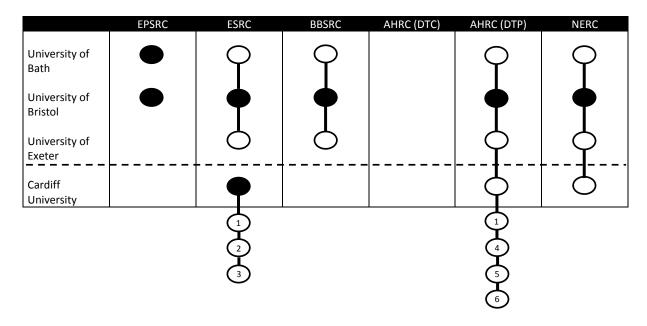
^{1 =} University of Brighton, 2 = Goldsmiths, University of London, 3 = The Open University, 4 = University of Reading, 5 = Birmingham City University, 6 = De Montfort University, 7 = Nottingham Trent University, 8 = Bangor University, 9 = Lancaster University

Figure 18: The institutionalisation of M5

- **Inclusion/institutionalisation:** M5 universities are present in every research council programme, but there are several gaps. M5 institutions have **67% inclusion** across the 5 research councils.
- Legacy of regions: M5 universities are less likely to stick to traditional East Midlands and West Midlands boundaries for collaboration. There are some cross-regional links between East and West Midlands, but M5 members have been increasingly seeking external partners.

- **Leadership:** The Russell Group Universities (Nottingham, Birmingham and Warwick) have the most involvement in (5/5/4, respectively), and leadership (4/3/3, respectively) of DTC/DTPs, compared to the non-Russell Group members of M5 (Aston, Leicester and Loughborough) that are involved in 0/3/3, DTC/DTPs and lead 0/0/1, respectively. The result is a clear 2-tier structure emerging within M5.
- **External links:** There were no external links until after the Coalition Government signalled the abolition of the region tier in 2010. Currently M5 institutions link to 9 external institutions.
- **Others:** Aston (the most recent addition to the consortia) is not included in any DTC/DTPs.

6.4 GW4

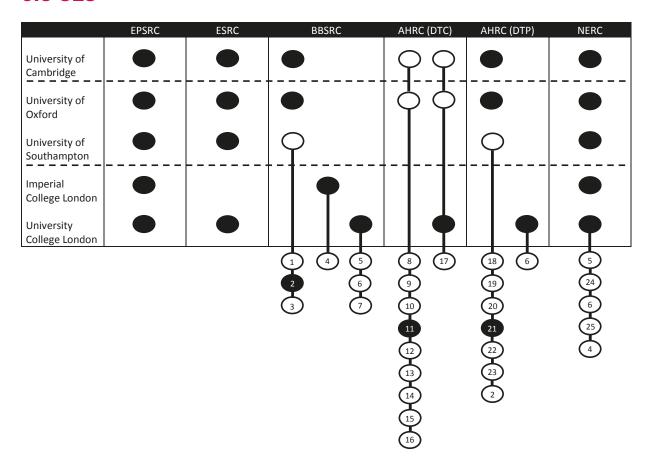


1 = Aberystwyth University, 2 = Bangor University, 3 = Swansea University, 4 = Bath Spa University, 5 = University of Reading, 6 = University of Southampton

Figure 19: The institutionalisation of GW4

- Inclusion/institutionalisation: GW4 universities are present in every research council programme, but there are several gaps. GW4 institutions have **85% inclusion** across the five research councils.
- Legacy of regions: this is clearly evident in the construction of DTC/DTPs:
 - Bath, Bristol and Exeter are paired together as the South West members of GW4
 in all partnerships in which they are present (they have a presence in every
 research council programme except EPSRC where the University of Exeter is
 not present).
 - In the time between the ESRC DTC and AHRC DTP, Wales and the South West have conjoined. Cardiff does seek alliances within Wales, but in the most recent rounds of DTC/DTPs Cardiff is included as a partner with the three South West institutions.
- **Leadership:** Bristol leads every DTC/DTP it is involved in, Bath leads one and Cardiff leads one (Welsh collaboration).
- **External links:** There are links with 6 external institutions.
- Others: Aberystwyth is an external partner in two DTC/DTPs: ESRC DTC and AHRC DTP.

6.5 SES

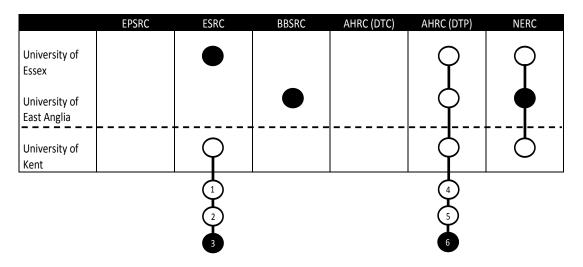


1 = Lancaster University, 2 = University of Reading, 3 = University of Surrey, 4 = Royal Holloway, University of London, 5 = Birkbeck, University of London, 6 = King's College London, 7 = London School of Hygiene and Tropical Medicine, 8 = University of Aberdeen, 9 = Bangor University, 10 = University of Edinburgh, 11 = University of Glasgow, 12 = University of the Highlands and Islands, 13 = Queen's University, Belfast, 14 = Swansea University, 15 = University of Ulster, 16 = University of Wales Trinity Saint David, 17 = University of Manchester, 18 = Aberystwyth University, 19 = University of Bath, 20 = Bath Spa University, 21 = University of Bristol, 22 = Cardiff University, 23 = University of Exeter, 24 = Brunel University, 25 = Queen Mary, University of London

Figure 20: The institutionalisation of SES

- Inclusion/institutionalisation: SES universities are present in every research council programme, but there are gaps in ESRC and AHRC (Imperial). SES institutions have
 92% inclusion across the 5 research councils.
- **Legacy of regions:** There is no legacy of regional collaboration. Moreover, of 32 links, only 3 links are between SES members.
- **Leadership:** Of the 28 DTC/DTPs SES members are involved in, 22 are as leaders (79%). UCL leads every DTC/DTP it is involved in.
- External links: SES members link with 25 external institutions.
- **Others:** King's College is an external partner in three DTC/DTPs, whilst Birkbeck and Reading are members of two DTC/DTPs.

6.6 Eastern ARC



1 = University of Reading, 2 = Royal Holloway, University of London, 3 = University of Surrey, 4 = Goldsmiths, University of London 5 = The Open University, 6 = University of Sussex

Figure 21: The institutionalisation of Eastern ARC

- Inclusion/institutionalisation: Eastern ARC is the newest-established of the consortia and is also the least institutionalised, with Essex, UEA and Kent, absent in many Research Council DTC/DTPs. Eastern ARC institutions have 60% inclusion across the 5 major research councils. Nevertheless, there are signs of institutionalisation emerging. Following a very patchy start, which saw Eastern ARC institutions only achieve an inclusion score of 33%, after Eastern ARC formed in September 2013, only the NERC DTC announcement proceeded this and we can see that for NERC (and AHRC DTP which was the one immediately preceding the official formation of Eastern ARC) that the 3 institutions are showing signs of becoming more institutionalised.
- Legacy of regions: There is no evidence of a regional legacy in Eastern ARC.
- Leadership: There is no Eastern ARC leadership in alliances involving external partners.
- External links: Eastern ARC members link with 6 external institutions.

6.7 Summary

	WRC	N8	M5 GW4		SES	E. ARC
Institutionalisation 100% / inclusion		97.5%	67%	85%	92%	60%
Legacy of regions	Very Strong	Strong	Weak Strong		None	None
% of leadership within /outside of group	100% / 0%	91% / 9%	85% / 15%	100% / 0%	88% / 12%	60% / 40%
Number of UK internal links	13	31	10	14	4	6
Number of UK 1 external links		15	10	7	30	6
% of Russell Group members in the group	1 100% 87%		50% 75%		100%	0%
% of Russell Group members as other external partners	100%	47%	0% 14%		37%	0%
Summary	Full coverage Full co Very strongly Strong institutionalised institu		Partial coverage Weakly institutionalised Neither internal nor external- looking	Full coverage Strongly institutionalised Insular	Full coverage Very weakly institutionalised Outward- looking	Partial coverage Weakly institutionalised Neither internal not external- looking

Figure 22: The institutionalisation of research and equipment sharing consortia with doctoral training provision across 5 UK Research Councils (AHRC, BBSRC, EPSRC, ESRC, NERC)

New regions and the legacy of 'old' regions

Regions and their extant structures remain important in the establishment of consortia and DTC/DTPs. The starkest observation is that research and equipment-sharing consortia have gone cross-regional more than they have broken free of regions per se, whilst many DTC/DTPs keep to traditional regional boundaries. This is evidenced by:

- Of the 6 major research and equipment-sharing consortia, 4 (N8; M5; SES; Eastern ARC) have a core geography identifying them as cross-regional and 1 (GW4) as cross-national (England and Wales). Only White Rose Consortium remains within the standard regional boundary of Yorkshire & Humberside.
- There are 105 individual institution DTC/DTPs. There are 43 collaborative DTC/DTPs, whilst 24 of these remain within traditional regional boundaries. 19 DTC/DTPs have a core geography identifying them as cross-regional.

The study reveals a number of **contributing factors** for the continuing legacy and impact of regions and regional structures on higher education:

- There is the continued presence of so many constructs that still look like the 'old world' of regions. These have taken time to dismantle, illustrated in the early-rounds of DTC/DTP awards where there are more regionally embedded multi-institution consortia, but following the abolition of RDAs the legacy of regions appears to be weakening rapidly in the formation of new DTC/DTPs.
- Relationships built during the era of HERAs and RDAs mean universities often look to those institutions within the same region. There was a reluctance to give up regional/ sub-regional structures because over the years they had "grown accustomed to" and "had a history" working with these institutions and within these partnership arrangements.
- Most research consortia and DTC/DTPs build on pre-existing partnership working (e.g. relationships built in HERAs). For this reason many expressed little surprise that the resulting geography stuck, primarily, to traditional regions. Allied to this, geographical proximity does still matter.
- HEIs are reluctant to start from scratch with a completely new set of partners/ universities – with many tending to prefer to stick to what they know.
- It can be difficult to commit to establishing a cross-regional DTC/DTP given short notice to put together a coherent, evidence-based, proposal to Research Councils. What we are seeing in the later rounds of DTC/DTP awards is certain geographical alliances (e.g. GW4, Eastern ARC) becoming stronger, while others (e.g. N8, WRC) are becoming less clear cut.
- The experience of consortia and DTC/DTPs which have been working cross-regionally is that it requires (i) a lot of time, effort, and resources; (ii) the right type of personalities (i.e. the people in the key positions to be open, not closed, to new ways of working); (iii) a common agenda for working together, for the partnership to be beneficial.

8

Preliminary
findings on the
impact of HEI
inclusion/exclusion
from research
consortia

8. Preliminary findings on the impact of HEI inclusion/exclusion from research consortia

Speaking about the new HE landscape for doctoral training, Professor Steve Smith (Vice Chancellor at Exeter University and President of Universities UK 2009-2011) made it quite clear for universities who find themselves 'off the map' the consequences are quite stark:

"If you've not got a doctoral training centre you're in real trouble. It's not the money so much – it's the kitemark. It's like musical chairs. The chair gets pulled away and if you've got nowhere to sit what happens?"³²

Furthermore, research on international alliances reveals universities belonging to an alliance perform "significantly better".³³

To this end our research examined the performance of HEIs in university rankings over the period of consortia DTC/DTP formation. We focused on the Complete University Guide which provided us with data from 2007-2015.

Our research suggests that the overall performance of members has improved markedly since the formation of research consortia, particularly when compared to non-member institutions (Figures 23 and 24). Institutions which are part of consortia have seen their ranking increase by an average of 3.5 places, while non-member institutions have seen their ranking decrease by an average of 4.0 places.

³² Fazackerley, 2012

³³ Gunn and Mintrom, 2013

		2008	2009	2010	2011	2012	2013	2014	2015	Change (inclusion in consortia - 2015)
	Leeds	37	32	29	27	32	34	32	23	14
	Sheffield	25	26	22	25	26	26	26	26	-1
	York	14	11	10	10	12	12	12	14	0
N8	Newcastle	23	27	24	29	24	23	22	20	3
INO	Durham	10	6	5	4	5	5	5	5	5
	Lancaster	19	10	12	8	9	9	11	11	8
	Liverpool	41	42	34	32	30	30	38	31	10
	Manchester	31	28	28	31	29	29	25	28	3
	Aston	12	23	14	17	25	34	27	27	7
	Birmingham	31	24	27	23	22	23	17	17	5
M5	Warwick	8	5	6	7	8	6	8	7	1
Wis	Leicester	20	12	20	22	23	20	16	19	4
	Loughborough	11	13	18	21	19	14	14	13	6
	Nottingham	14	16	19	18	17	19	24	23	-6
	Bath	9	14	9	12	10	10	9	8	2
GW4	Bristol	7	18	16	16	11	11	15	18	-7
GW4	Exeter	17	19	21	24	25	13	10	10	3
	Cardiff	27	37	36	41	37	36	35	23	13
	Cambridge	1	2	2	2	1	1	1	1	0
	Oxford	2	1	1	1	2	3	2	2	1
SES	Southampton	20	20	13	14	14	15	20	16	-1
	Imperial	3	4	3	3	3	4	4	6	-2
	UCL	6	8	8	9	7	8	7	9	-1
	Essex	34	25	30	37	38	39	39	39	0
Eastern ARC	UEA	20	33	32	28	27	27	20	15	12
	Kent	36	35	35	38	34	33	28	22	11
	Total	478	491	474	499	490	484	467	433	90
									Average	3.461538462

Figure 23: Universities included in research and equipment sharing consortia and their performance in the Complete University Guide

¹⁹ Harrison et al., 2014

Hull			2008	2009	2010	2011	2012	2013	2014	2015	Change (year of formation - 2015)
Huddersfield 91			39	48	52	56	62	56	53	66	
Braefford 49 50 57 61 73 71 82 77 -38		Sheffield Hallam	78	80	69	68	62	72	76	66	12
Leeds Met		Huddersfield	91	105	84	67	58	57	63	70	21
Northumbris		Bradford	49	50	57	61	73	71	82	77	-28
New York Province		Leeds Met	95	98	97	85	95	95	101	102	-7
Manufacter Met September Manufacter Met Man		Northumbria	75	73	58	64	60	54	64	58	17
Sunderland		Teesside	99	102	92	105	90	97	97	96	3
LMU 90 100 104 102 101 90 82 81 9	INS	Sunderland	87	79	93	93	91	89	110	108	-21
Salford 62 72 76 96 97 78 78 84 22		Manchester Met	98	88	83	89	93	86	88	73	25
Salford 62 72 76 96 97 78 78 84 22		LJMU	90	100	104	102	101	90	82	81	9
Central Lancashire		Salford	62	72	76	96	97	78	78	84	
Bolton		Central Lancashire	63	63	79	72	65	69	92	90	
Cumbria 104 104 108 81 86 98 112 112 112 83											
Total											
Seele So 40											-83
Keele											
Missage											
Birmingham City 67 69 59 58 66 63 66 82 3 36		Keele	50	40	42	43	44	46	45	43	1
Birmingham City		Coventry	81	85	85	75	72	65	58	51	21
MS		Birmingham City	67	69	59	58	66	63	66	82	-16
Nottingham Frent 56	DAE .		80	81	80	80	99	108	113	105	-6
Northampton 95	IVID	Nottingham Trent	56	53	46	49	55	62	61	52	3
Derby 102 103 101 104 108 98 103 87 21		Lincoln	109	99	78	71	67	53	52	55	12
Vest of England		Northampton	95	94	105	100	105	101	62	73	32
West of England 77 66 61 68 61 58 56 53 5		Derby	102	103	101	104	108	98	103	87	21
West of England		Total	640	624	596	580	616	596	560	548	68
Bournemouth 66 57 54 55 62 61 59 65 -4 Bath Spa 70 75 82 83 85 75 79 69 65 Pymouth 57 70 67 65 53 63 71 79 -16 Bournemouth 57 70 67 65 53 63 71 79 -16 Bournemouth 57 70 67 65 53 63 71 79 -16 Bournemouth 57 70 67 65 53 63 71 79 -16 Bournemouth 57 70 67 65 53 63 71 79 -16 Bournemouth 57 70 67 65 53 63 71 79 -16 Bournemouth 57 70 67 65 53 63 71 79 -16 Bournemouth 43 45 55 47 49 58 70 87 -299 Bangor 46 56 64 63 78 66 64 64 2 Cardiff Met 74 65 66 59 68 79 96 98 -19 Total 548 564 599 586 593 600 634 657 -57 Average -5333333333 London School of E 4 3 3 4 5 7 7 7 7 7 9 9 -2 King's College Lond 17 15 17 13 16 18 19 28 -10 Royal Holloway 13 22 23 30 33 3 3 3 -7 SOAS 24 9 9 15 15 18 30 33 35 5-5 SOAS 24 9 9 15 15 18 30 33 35 5-5 City University Lon 48 46 44 47 41 38 42 40 -2 Birkbeck no ranking no r										Average	8.5
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Bath Spa		-	77	66	61	68	61	58	56		5
Plymouth 57 70 67 65 53 63 71 79 16 74 74 75 66 60 54 49 48 42 7 75 70 87 29 88 87 29 88 89 7 7 7 7 9 96 98 19 10 10 10 10 10 10 10		Bournemouth	66	57	54	55	62	61	59	65	-4
Swanse		Bath Spa	70	75	82	83	85	75	79	69	6
Aberystwyth		Plymouth	57	70	67	65	53	63	71	79	-16
Bangor 46 56 64 63 78 66 64 64 2	GW4	Swansea	47	47	56	60	54	49	48	42	7
Clamorgan/Univer: 68		Aberystwyth	43	45	55	47	49	58	70	87	-29
Cardiff Met		Bangor	46	56	64	63	78	66	64	64	2
Total		Glamorgan/Univers	68	83	94	86	83	91	91	100	-9
London School of E		Cardiff Met	74	65	66	59	68	79	96	98	-19
London School of E 4 3 4 5 4 2 3 3 -1 UCL		Total	548	564	599	586	593	600	634	657	-57
UCL 66 8 8 8 9 7 7 7 9 -2										Average	-6.33333333
UCL 66 8 8 8 9 7 7 7 9 -2		1								1	
King's College Lond 17											
Royal Holloway 13 22 23 30 33 26 30 33 35 -5											
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Anglia Ruskin 104 109 no ranking 106 110 106 105 116 -10 Bedfordshire 86 86 74 101 103 82 107 117 -35 Total 1339 1285 1148 1460 1420 1381 1479 1535 -149		Canterbury Christol	85	91	107	106	100	87	99	103	-16
Bedfordshire 86 86 74 101 103 82 107 117 -35 Total 1339 1285 1148 1460 1420 1381 1479 1535 -149		Hertfordshire	94			41	48	47	53	60	-13
Total 1339 1285 1148 1460 1420 1381 1479 1535 -149		Anglia Ruskin	104	109	no ranking	106	110	106	105	116	-10
		Bedfordshire	86	86	74	101	103	82	107	117	-35
Average -6.208333333		Total	1339	1285	1148	1460	1420	1381	1479	1535	
										Average	-6.208333333

Figure 24: Universities excluded from research and equipment sharing consortia and their performance in the Complete University Guide

Our research also suggests some noticeable regional variations in performance. The most noticeable variation is that whereas non-member institutions in the areas covered by the N8, GW4, SES and Eastern ARC research consortia have all seen an average decrease in their ranking of approximately 6 places, in the Midlands where the M5 consortia operates non-member institutions have actually seen their ranking increase by an average of 8 places.

Our research finds no significant increase/decrease in the performance of UK universities in the CUG rankings relating to the formation of DTC/DTPs and whether institutions were members/non-members.

9

Key findings

9. Key findings

Our research is revealing the new regional geographies of higher education praxis as they emerge in the UK. Our focus has been to examine the geographical basis of these regionally-scaled collaborations between HEIs and to explore some of the consequences resulting from their formation.

Geography

Research consortia

- The formation of multi-institution research consortia has produced a new regional geography of HE praxis in England and Wales, archipelagic in character and covering each region to greater or lesser extent.
- The geography of research consortia bears a very close resemblance to the new relationally inspired maps of English city-regionalism from the mid-2000s.

Research training centres

- Since the establishment of the first DTC/DTPs in 2009 the trend has been a move away from single institutions towards more multi-institution DTC/DTPs.
- Unlike the archipelagic nature of research consortia, the geography of research training provision is characterised by overlaps and increasingly stretched extra-regional connections between institutions.

Reasons for collaboration

Four main reasons are identified:

- 1. The hardened national and international competitiveness agenda;
- 2. UK Government championing research excellence as critical to its wider strategy for improving productivity and innovation performance due to the perceived shortfall in research and development and innovation performance in the UK;
- 3. Research Councils UK encouraging collaboration by favouring collaboration, consortia and critical mass bids in their appraisal of how to allocated resource; and
- 4. The legacy of territorial regionalism in the UK (and especially England).

Making decisions on which institutions to collaborate with and why

Our research revealed six main considerations for choosing who to collaborate with: (i) prestige; (ii) university type (age/history); (iii) legacy; (iv) geographical proximity; (v) research complementarity and specialism; and (vi) size.

Institutionalisation of research and research training

Our research has revealed the separation of 'research' from 'research training' in the new geographical landscape of higher education. Alongside this, the research shows that within the latter, there is now clear separation between how doctoral training provision is being institutionalised by each of the major research councils. This is clearly evident in the distinct 'regional' geographies made visible for the first time in Figures 2-7. The result is the regional geographies of higher education are becoming more obviously multi-layered, less coherent, and increasingly complex.

Added to this, our research has revealed that this dual separation – of research from research training, and between the different research councils – has important consequences for the institutionalisation of England's six research and equipment sharing consortia. Only the White Rose Consortium can boast that all of its constituent HEIs have access to doctoral provision across the five research councils, with the remaining five having varying degrees of access.

Impact

- Inclusion in/exclusion from research consortia appears to have a significant positive/ negative impact on the ranking of a university in national university league tables.
- Inclusion in/exclusion from DTC/DTPs does not appear to have a significant positive/ negative impact on the ranking of a university in national university league tables.

10

Conclusions

10. Conclusions

Our project aims to advance understandings of the changing institutional geographies of higher education. The study finds that the regionalisation of higher education represents the 'missing middle' in emerging debates centred on uneven geographies of higher education at global and local scales³⁴. That said, the spatial reorganisation of HEIs into regionally-scaled consortia for research and research training appeared to be a 'silent revolution', with little or no effort made to analyse their emergence and formation, their geographical basis, and the impacts for universities entering collaborative arrangements.

This report therefore seeks to provide the first analysis of this new regionalisation of higher education as it was unfolded in the UK, interpreting the spatial extent of these new regional geographies of higher education, as well as examining the motives, aspirations and mechanisms which have led to their formation. It represents an attempt to place the region in wider debates about uneven geographies of higher education. In this final section, we revisit some broader questions which the study provides fresh insight to:

10.1 In what sense a 'new' regional geography of higher education?

The study clearly reveals a distinctly new regional geography of higher education has been emerging in the first part of the 21st century. Moreover, it is currently unfolding at an accelerated pace as the major research councils in the UK implement their new doctoral training centre/partnership arrangements. Nonetheless, what our research reveals are several important dimensions to this unfolding process.

The starting point for our study was evidence that the 'old' regional geography of nine territorially-embedded HERA operating across England's Standard Regions was being challenged, and ultimately replaced, by the formation of a 'new' regional geography comprising six regionally-scaled research and equipment sharing consortia. One important observation about the spatial construction of these regionally-scaled research and equipment sharing consortia is how they map very closely with the new spatial geographies of city-regionalism which emerged in the mid-2000s.

The second dimension to this unfolding process of regionalisation is that the new regional geography is, in fact, constitutive of new regional geographies. At one level, there is a singular new regional geography of research and equipment sharing consortia operating pan-regionally. At another level, there is a plurality of new regional spaces emerging as the major UK research councils each embed their new institutional frameworks for research training. Our research reveals that the research councils are each producing their own unique new regional geography, characterised by a plurality of new regionally-scaled consortia, each operating across different geographies, at different spatial scales (from local to panregional), and according to different imperatives.

³⁴ Harrison et al., 2014

All in all, this study reveals the new regionalisation of higher education to have produced a multi-layered landscape for orchestrating university research and training going forward. It reveals this multi-layered landscape of regionally-scaled consortia to be more complex, fragmented and messy than the relatively uniform pattern of 'standard' regional spaces established in the late-1990s with HERA.

In the light of our research, two important questions arise:

1. How fixed and stable is the current configuration of more networked regional geographies of higher education?

This question will be important because although the research consortia are likely to remain fairly stable in their membership and spatial reach, the nature of how research councils award DTCs to institutions/consortia means they are only fixed for a number of years before they are then the subject to a process of renewal.

2. With universities playing an important – and being challenged to play an increasing – role in local and regional economic development, how will these new regionally-scaled HE consortia operate alongside other subnational institutional frameworks?

This question is significant because the unique geography of the these new regional configurations of higher education means other subnational institutions (most notably the 39 Local Enterprise Partnerships) operate across very different geographies, one which commonly remain rooted in territorial-bounded politico-administrative units. Our previous work has also revealed that when networked regional spaces have been constructed, the interaction between newly constructed regional spaces and extant territorial structures has seen the former become more territorially-fixed over time.³⁵

10.2 A regional legacy: does geography and territory still matter?

Our research is revealing that while geography still matters, as the regionalisation of higher education had unfolded to this point it is becoming less significant as a determining factor in how regionally-scaled consortia are constructed. For the six research and equipment sharing consortia they all retain a clear geographical (and standard regional) focus. The White Rose Consortium is rooted in Yorkshire & Humberside, N8 across the three northern regions (North East, North West, and Yorkshire & Humberside), M5 across East and West Midlands, GW4 in the South West, with SES and Eastern ARC covering the South East and East of England. In contrast, the maps of DTC/DTPs reveal a move away from research training being territorially-embedded. The first two research councils to establish DTCs – the EPSRC in 2009 and ESRC in 2010 – both have geographies which are territorially-embedded; all DTCs are self-contained, that is, located within a Standard Region. The result is there are no overlaps, and very little stretching of relations beyond proximate HEIs.

³⁵ Harrison, 2010, 2012, 2013

Those research councils which established their national network of doctoral training after 2010 – and the election of a Conservative-Liberal Democrat Coalition Government who immediately announced the abolition of the regional tier of governance – have geographies which are more detached from regions and territory. As revealed by the maps, their geographies are increasingly overlapping, reflect increasingly stretched relations between different HEIs, and can therefore be much larger in their spatial reach and the number of institutional partners involved in each consortium. Moreover, we begin to see institutions being present not only in one multi-institution consortium but as many as three DTCs for one research council.

That said, many of these partnerships are not as new as they might first appear. As noted, many consortia remain defined by the legacy of regions and the collaboration fostered through Labour's post-1997 programme of territorial regionalism. Likewise the new trans-regional consortia are often building on embryonic collaborative relationships in a particular area of research, but which are now being formalised as part of this brave new world of multi-institution research consortia and DTC/DTPs. Illustrating this point, Professor Philip Nelson, Pro Vice-Chancellor at the University of Southampton, recently explained the process of establishing SES as the mechanism by which to "formalise links with the UK institutions with whom we already collaborate most in science and engineering research." What this reveals is that although the regionalisation of higher education may appear to be bringing about a new institutional landscape, the foundations on which these maps are constructed are more often than not historically embedded. There is certainly no *tabula rasa* on which a new regional geography is unfolding: geography, history, territory and politics all matter.

10.3 'Pulling up the drawbridge': from spatial inclusivity to spatial selectivity?

Perhaps the most politically contentious issue raised by the new regional maps of university research and doctoral research training is the bound up with the transition away from a spatial inclusive map of how HE was organised regionally in the UK when HERA operated, toward this new regional geography which is clearly spatially selective of who is included and who is excluded.

What our research points towards is the dominance of research intensive universities, that is, current members of the Russell Group of large research intensive universities or former members of the recently disbanded 1994 Group of smaller research intensive universities. This is evident in their dominance of research and equipment sharing consortia (93% of those included are, or were, Russell Group or 1994 Group members) and DTC/DTPs (76% include at least one Russell Group university). This point is further reinforced by our research highlighting that all universities which are members of consortia being ranked in the top 40 of the CUG 2014, and 74% of all DTC/DTPs having at least one member ranked in the top 20.

³⁶ Jump, 2013

Our research is therefore showing that not only are the larger research-intensive universities likely to gain most from the new regionalisation of higher education, they are the only ones likely to gain significantly from it. Other universities are not excluded from this new institutional framework but what our study reveals is that once these institutional structures become embedded the perception among stakeholders is that funding and resources will be increasingly channelled through these multi-institution consortia. This is because it is hard not to suspect that the competitive advantages perceived to be held by institutions partaking in research and equipment sharing consortia will see a smaller number of larger research intensive universities competing at the top table in UK higher education.

10.4 'Thick or thin'? The importance of 'institutionally thick' research consortia

The 2003 DfES White Paper *The Future of Higher Education* signalled the potential separation of 'research' from 'research training' in UK higher education. Our research reveals how this has had important consequences for the emergence of new regional geographies which are different in their construction for both research and research training. What it has also led to is a situation whereby the divergence between research and research training is markedly different in different parts of the UK.

At one extreme is the White Rose Consortium. Created in 1997 as the first research and equipment sharing consortia, the White Rose Consortium was established before the first research councils began to form their new institutional arrangements for doctoral research training. What has happened in the case of the White Rose Consortium, and to a lesser extent the N8 Research Partnership which also existed prior to the formation of DTC/DTPs, is the creation of institutionally thick regional spaces. In each case, their consistent universities have full coverage of doctorial training provisions across the five research councils studied, have a large number of internal links, and can be considered fully institutionalised regional spaces of higher education praxis. In other words, there is very little divergence between research and doctoral research training across the north of England. This cannot be said for the remainder of England.

The closest to White Rose Consortium and N8 for institutionalising research and doctoral research training across a single spatial geography is GW4 – particularly following the inclusion of Cardiff. Elsewhere in England, in the Midlands, the M5 institutions can only offer two-thirds coverage on doctoral training on behalf of the five research councils. In the South East, SES boasts full coverage of doctoral training provision across the five research councils, but it is very weakly institutionalised by virtue of only having 4 internal collaborative links between its five constituent members. Finally, Eastern ARC can point to 60% coverage of doctoral training provision across the five research councils, but with few internal or external links this consortia remains weakly institutionalised.

Looking ahead, one important aspect that arises from this research is the degree of advantage held by those areas (e.g. White Rose Consortium, N8) where research and

research training are institutionalised across a single spatial geography vis-à-vis those areas where it is not. This will arguably become more important over time given that both GW4 and Eastern ARC are showing signs that in the most recent rounds of DTCs they are trying to create institutionally thick consortia where their doctoral training provision across research councils maps research training on to their research and equipment sharing consortia.

Glossary

Arts and Humanities Council (AHRC) is the major Government agency for research and training funding in the arts and humanities. AHRC's budget totals more than £100million a year.

Biotechnology and Biological Sciences Research Council (BBSRC) is the major Government agency for research and training funding in bioscience. BBSRC's budget for 2012/13 was £467million.

Complete University Guide (CUG) is compiled by Mayfield University Consultants and ranks UK universities based on nine criteria (academic services spend; completion; entry standards; facilities spend; good honours; graduate prospects; research assessment/quality; student satisfaction; and, student: staff ratio).

Doctoral Training Centre (DTC)/ Doctoral Training Partnership (DTP) are institutional arrangements for managing PhD-funded degrees in the UK. A DTC/DTP involves a UK university (or a small number of universities) to deliver doctoral training programmes to a significant number of PhD students. Each Centre targets a specific area of research, and transferable skills training.

Economic and Social Research Council (ESRC) is the major Government agency for research and training funding in economic and social issues. ESRC's budget for 2013/14 was £212million.

Engineering and Physical Sciences Research Council (EPSRC) is the major Government agency for research and training funding in engineering and the physical sciences. EPSRC invests more than £800million a year.

Higher Education Funding Council for England (HEFCE) is a body of the Department for Business, Innovation and Skills which has distributed public money for higher education to universities and colleges in England since 1992. HEFCE's annual budget is approximately £7billion a year.

Higher Education Regional Associations (HERA) were created at the same time as Regional Development Agencies (RDA) to foster collaboration between HEIs, and build partnerships between higher education and other local organizations. Originally there were 9 HERAs across 9 regions: (Association of Universities in the East of England (AUEE); East Midlands Universities Association (EMUA); Higher Education Regional Development Agency South West (HERDA-SW); Higher Education South East (HESE); London Higher; North West Universities Association (NWUA); Universities for the North East (Unis4NE); West Midlands Higher Education Association (WMHEA); and Yorkshire Universities. Two HERAs ceased operation in 2012 – NWUA and Unis4NE.

Million+ (formally Campaign for Mainstream Universities) is a university think-tank of 22 universities seeking to solve complex problems in higher education and is involved in the political debate surrounding the role of universities in the economy and society. Member

institutions include: University of Abertay Dundee, Anglia Ruskin University, Bath Spa University, University of Bedfordshire, Birmingham City University, University of Bolton, Canterbury Christ Church University, University of Central Lancashire, University of Cumbria, University of Derby, University of East London, Edinburgh Napier University, University of Greenwich, Leeds Metropolitan University, London Metropolitan University, Middlesex University, University of Northampton, Staffordshire University, University of Sunderland, University of West London, University of the West of Scotland, and University of Wolverhampton.

Natural Environment Research Council (NERC) is the major Government agency for research and training funding in the environmental sciences. NERC's budget totals approximately £400million a year.

Research Councils UK (RCUK) is a strategic partnership of the UK Research Councils established in 2002. RCUK are responsible for investing public money in research in the UK to advance knowledge and generate new ideas, particularly in research, training and knowledge transfer. RCUK supports over 50,000 researchers including 19,000 doctoral students, around 14,000 research staff. The UK's 7 Research Councils annually invest around £3 billion in research.

Russell Group represents 24 research-intensive UK universities. The main aims of the group are to lead research efforts in the UK, maximise income, attract the best staff and students, and identify ways to co-operate to exploit the universities' collaborative advantage. Member institutions are: University of Birmingham, University of Bristol, University of Cambridge, Cardiff University, Durham University, University of Edinburgh, University of Exeter, University of Glasgow, Imperial College London, King's College London, University of Leeds, University of Liverpool, London School of Economics and Political Science, University of Manchester, Newcastle University, University of Nottingham, University of Oxford, Queen Mary University of London, Queen's University Belfast, University of Sheffield, University of Southampton, University College London, University of Warwick, and University of York.

Types of university: Ancient refers to medieval and renaissance universities founded pre-1800s; **Red Brick** refers to universities granted a charter between 1900 and 1962; **Plate-Glass** refers to universities granted a charter between 1963 and 1992 (but particularly in the 1960s); **London** refers to those colleges who are members of the University of London; **New** refers to institutions that were previously classed as Polytechnics but have now been granted University status (post-1992); **Other** universities do not fit into any of the categories above.

Universities UK provides a voice for universities in the UK. The aim of the group is to achieve an autonomous university sector in the United Kingdom that, through excellence in teaching, research, and knowledge exploitation, raises aspirations and develops an international reputation for innovation. It aims also to contribute to the wider economy and society; the advocacy organisation has 134 member universities and colleges.

University Alliance is a group of 22 business-engaged UK universities. The main aim of the group is to bring together universities with government and business to create innovative solutions to social and economic challenges. Member institutions include: Bournemouth University, University of Bradford, Cardiff Metropolitan University, Coventry University, Glasgow Caledonian University, University of Greenwich, University of Hertfordshire, University of Huddersfield, Kingston University, University of Lincoln, Liverpool John Moores University, Manchester Metropolitan University, Northumbria University, Nottingham Trent University, Oxford Brookes University, Plymouth University, University of Portsmouth, University of Salford, Sheffield Hallam University, University of South Wales, Teesside University, University of the West of England.

1994 Group was a coalition of smaller research-intensive UK universities. The main aim of the group was to represent the views of its members to government, funding bodies and other higher education groups. The Group originally represented 19 institutions, rising to 17 before dropping to 11. Member institutions included: University of Bath, Birkbeck University of London, Durham University, university of East Anglia, University of Essex, University of Exeter, Goldsmiths University of London, Institute of Education University of London, University of Lancaster, University of Leicester, London School of Economics, Loughborough University, University of Manchester Institute of Science and technology (UMIST), Queen Mary University of London, University of Reading, Royal Holloway University of London, University of St. Andrews, SOAS University of London, University of Surrey, University of Sussex, University of Warwick, and University of York. In 2012, Durham, Exeter, York and Queen Mary University of London left to join the Russell Group. Bath, St. Andrews, Surrey and Reading departed in 2012/13 to become non-aligned institutions. The 1994 Group dissolved in November 2013.

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