

UNIVERCITIES

THE KNOWLEDGE TO POWER UK METROS

OCTOBER 2014

ABOUT THE CITY GROWTH COMMISSION

Chaired by economist Jim O'Neill, the City Growth Commission was established in October 2013 to understand:

- How we can achieve complementary growth between London and our other cities.
- What fiscal powers and governance arrangements are needed to deliver this.
- How public service reform can start to make cities more fiscally sustainable.

The ultimate objective of the Commission is to lay the foundations for a stronger UK economy through a significant power shift away from the centre and towards cities, and to show the next government, of whichever party, why this is needed and how it can be achieved. Our recommendations will set out a road map for change; the Commission will seek to influence all political parties in the run up to the 2015 UK general election, and make the case for cities to take a new role in our political economy.

The Secretariat is hosted and run by the RSA, an organisation committed to finding innovative and practical solutions to today's social challenges through

its ideas, research and 27,000-strong Fellowship.

The City Growth Commission is funded by the Mayor of London, London Councils, the Core Cities Group and the Local Government Association. Our partners include New Economy Manchester, the British Private Equity & Venture Capital Association (BVCA), Universities UK and the Joseph Rowntree Foundation.

ABOUT THIS REPORT

This report is designed as a provocation paper, outlining policy recommendations which focus on the relationship between universities and cities. These will need to be developed in greater detail, both to model costs and potential impacts. We are eager for universities or groups of universities to pilot their implementation, and the RSA will pursue further work to support the contribution of universities to the city growth agenda.

This research project has been generously supported by Universities UK and the British Venture Capital Association. It is testament to the speed, momentum and breadth of the city growth agenda that these distinct organisations have come together to foster understanding of how universities can maximise their contribution to city growth.

The British Private Equity & Venture Capital Association (BVCA) is the industry body and public policy advocate for the private equity and venture capital industry in the UK.

Universities UK is the definitive voice for universities in the UK. Universities UK provides high quality leadership and support to its members, to promote a successful and diverse higher education sector.

This report is based on evidence received and research undertaken by the City Growth Commission. This includes evidence submitted in an open Call for Evidence and presented at evidence hearings. We have reviewed data collated by the UK Commission on Employment and Skills, the Higher Education Statistics Authority and Universities UK.

Our analysis has been informed by interviews with over 30 people with local experience in Bristol, Cardiff and the Tyne and Wear metro; an expert roundtable in Newcastle drawing on a range of experienced policymakers, employers and educators across the North East, and a focus group with graduate entrepreneurs from across the North East.

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The practitioners and policymakers who we have consulted in this project are too extensive to mention here. We are grateful to individuals and organisations in Bristol, Cardiff and Tyne and Wear for their insight and for being generous with their time in granting interviews. We have been particularly supported with assistance from NE1, Newcastle City Council, and Northumbria University. Thanks go to those who participated in the expert roundtable and focus group in Newcastle.

Written evidence submitted to the Commission is available to view online at: www.citygrowthcommission.com

FOREWORD BY JIM O'NEILL

One of the most striking things that has repeatedly influenced me since the Commission launched last October, 2013 has been the importance of our universities. Even before we started our evidence hearings around the country, a conversation with the BVCA team that is one of our generous sponsors (alongside Universities UK) made me focus on the fact that while London dominates the UK's economic clout, we have a wide geographical spread among our universities.

Of course, as recent respected league tables have shown, London is actually regarded as the single top metro area in the world for having so many top class universities, but others around the country are also recognised as being in the top echelons on a global basis, in all parts of the UK. Two specific things caught my attention from our first evidence hearing in Manchester, and both remained a feature of all the other visits I have made in my role as Chair.

Firstly, the sheer scale of our universities in our leading cities – these things are so much bigger than in my student days of the late 1970s. In several metros, the university students, teachers and related population make up around 10 percent of the residents.

Any visit to a number of cities cannot fail to pick up some of the energy these people generate.

The second thing is the relatively low numbers of graduates that stay in the cities where they graduate, with many either disappearing back overseas or down to London to employ the fruits of their enhanced minds elsewhere. Surely it would be sensible to consider pursuing a number of initiatives to either help or encourage graduates to stay in the metro areas where they graduate, as a key ingredient to helping these cities prosper? We feel it would certainly help to deliver on the Commission's goal of trying to recommend interventions that raise the economic activity of all metro areas, thereby boosting the long term growth potential of the UK.

There are some cities that have high retention rates, one of the most striking is Bristol, which also just happens to be one of the few metros outside of London that has a gross value added (GVA) above the national average. This could just be a coincidence, but we doubt it. It would be pretty good if the same development started to occur in many other of our finest metro areas, and this report recommends some specific steps to help us get there.

INTRODUCTION

The City Growth Commission has examined how businesses and government can enable stronger growth in the UK's 15 largest metros,¹ driving the long-term investment, job creation and output of the overall economy. In equipping UK metros to fulfil their economic potential in an era of increasingly global, knowledge-based competition, it is important to maximise the contribution made by the key institutions of the knowledge economy: universities.

As the UK considers the devolution of powers over public expenditure to nations and metros, it is crucial to consider other ways of securing best value from public investment to maximise growth. The higher education sector is annually in receipt of upwards of £7bn in public funds from central government (not counting student loans) – there is potential to enhance this return by considering the impact of all higher education expenditure on local economic growth.

With six universities ranked among the top 20 globally, the UK has the best public system of higher education in the world. World-class higher education is well-

distributed among the UK's largest metros. Of 123 universities in the UK, 72 are in the UK's 15 largest metros.² Higher education is precisely the kind of knowledge industry that benefits from, and contributes to, the agglomeration economies that drive the logic of metro growth. Universities are key economic assets in every major UK city: our objective should be that their global competitiveness is reinforced through their metro contribution.

The role of universities in metro growth

University education is a substantial economic activity within metros, and employs 320,000 staff directly, nationwide. University education and research have been among the UK's largest and fastest growing industries in recent decades. The higher education sector generated an estimated £10.7bn of export earnings for the UK in 2011-12³ and attracts 100,000 new overseas students annually to study in the UK. However, the impact of universities on metro economies is much broader, and there is a long historic precedent. Many universities were indeed founded with the mission to contribute to their local economy.⁴

In all metros, continuing economic restructuring will mean growing demand for knowledge-intensive work, often requiring graduate-level skills. This holds for traditional economic sectors such as manufacturing and consumer services, as well as emerging sectors such as creative and digital. **Producing graduates on your doorstep, rather than seeking to attract them following graduation, is an opportunity for metros.** Jobs in higher level occupations,⁵ in which graduates skills are most in demand,⁶ account for 43 percent of the current workforce nationally, but higher occupations are forecast to represent 54 percent of recruitment in the next decade.⁷ In terms of net change, which takes into account 'replacement demand' (generated by people leaving the workforce), this represents 2.3m net additional jobs, compared to a loss of 500,000 jobs in middle and lower-order occupations. Graduates are a foundation of the UK's economic competitiveness: at least a third of the increase in UK labour productivity between 1994 and 2005 came from the rising number of people with a university degree.⁸

Innovation is a key long-term driver of competitiveness and productivity. Universities are central to 'innovation ecosystems' – the networks of institutions in the public and private sectors whose activities and interactions initiate, import,

conducted in the Russell Group Universities', 2012

5 Defined as Standard Occupational Classifications 1-3

6 Warwick Institute of Employment Research, 'Classifying graduate occupations for the knowledge society', 2013

7 UKCES, 'Working Futures 2012-2022', 2014

8 BIS, 'Graduates and economic growth across countries', 2013

modify and diffuse new technologies. Due to the effect of agglomeration and networks within metros, these networks result in higher economic productivity. Universities also spur stronger economic growth through fostering innovation in several ways, including research partnerships with businesses, technology transfer, spin-off companies, and the entrepreneurial pursuits of students, graduates and faculty. Many venture capital firms have close links with technology transfer units at UK universities.

In the UK, universities including Oxford and Cambridge have spawned locally-based clusters in fields such as bio-technology and medical devices. Hull School of Art and Design has fuelled the growth of creative industries in the city, while the University of Lincoln is working with Siemens in growing its new engineering department. The University of Bristol has made joint part-time appointments with Toshiba, accelerating knowledge transfer. In the US, industrial clusters with a technology focus have been fed by research, graduates and spin-outs, most notably around Boston and Raleigh-Durham.

The availability of finance, particularly private equity and venture capital, is crucial, and finance will follow the locational decisions of people and firms with the most promising and lucrative ideas.⁹ Venture capital makes a distinct contribution in the development of thriving metro economies through focusing on innovative companies, and transferring expertise as well as providing investment for growth. Significantly, however, the further

1 ONS-defined built-up areas including city centres, and surrounding settlements with total resident population over 500,000 residents

2 With the exception of Falmouth University, all major sites of HE provision (over 1,000 annual entrants) are within 100 miles of a major (top 15) metro in England and Wales

3 Universities UK, 'The impact of universities on the UK economy', 2014

4 A Torrens and A Thompson, 'The social impact of research

development of this key component of the innovation ecosystem is dependent on a number of other drivers including a skilled labour force, strong infrastructure and supportive business networks.

Importantly, universities often have deep historic links with the places in which they are located, whereas other resources for economic growth – such as residents, workers, firms and investors – are more mobile; no UK university has ever relocated out of a metro. Because of this rootedness, the scale of their operations, and related impacts on local economies, universities are often termed ‘anchor institutions’. Metros can be confident of the long-term commitment of universities, and the mutual benefits of success. In attracting people, businesses and investment, metros benefit from strong universities and universities benefit when their metro economy prospers and offers an attractive quality of life.¹⁰ Universities are often fundamental to the national and international brand of a metro. They are globally connected through the mobility of staff and students, and the pursuit of transnational programmes of research; their international competitiveness represents a foundation on which to build stronger international trade and investment.

Despite the world-class performance of UK universities, barriers to their continued contribution to UK businesses have been identified. These include low levels of investment in research and development (R&D) across much of the UK economy; poor access to (long-term)

10 Three of the top four factors which were influential in determining where multinational companies located their enterprises related to the university sector (BIS 2009)

finance; and below-average management skills in UK businesses.¹¹ While globally competitive, the UK university system has unique characteristics, including significant domestic mobility to pursue studies, and a strong tradition of single subject specialisation with relatively weak links between area of employment and field of study.¹²

Together, these characteristics mean that UK universities need to be understood in policy terms as institutions with unique attributes when considered alongside their international competitors.

As in other aspects of public spending, there has been increased pressure in recent years to account for value-for-money and return on investment.¹³ Initiatives like the Research Excellence Framework (replacing the Research Assessment Exercise) are a contested area, subject to debate within the academic community.¹⁴ As **recipients of significant public investment**, accountability demands that this spending must be assessed for its economic growth benefits. Many of the benefits of individual higher education institutions are visible in the economy at a national scale, but because universities are place-based, local impacts are felt acutely; public investment in universities is inherently also a tool of spatial economic development.

11 BIS, ‘Smart Specialisation in England’, 2014

12 50 percent of the UK workforce is in employment in a field different to that which they studied – the highest in Europe (OECD, ‘Right for the Job: over-qualified or under-skilled’, 2011)

13 S Head, ‘The Grim Threat to British Universities’, 2011

14 M. Warner, ‘Diary’, 2014

Policy Context

Universities contribute to growth in many ways, and this is increasingly acknowledged across different areas of public policy. Sir Andrew Witty’s recent review of higher education institutions (HEIs) concluded that universities in the UK should be assuming more responsibility for stimulating economic growth. He referred to this as embracing an ‘enhanced Third Mission’, which could include winning international markets to partners with innovating local small and medium enterprises (SMEs).¹⁵ Lord Young’s review on enterprise education raised the expectations placed on universities regarding how they support entrepreneurialism. There is growing energy for enterprise education on campuses up and down the country, supported by the National Association of College and University Entrepreneurs (NACUE) and the National Centre for Entrepreneurship in Education (NCEE).

Several recent initiatives from government and partners have addressed business collaboration, and enterprise, specifically. The UK Partnership Investment Fund set up in 2012 has sought to support joint university and business investment in large-scale capital research projects, while Higher Education Funding Council for England (HEFCE) has allocated funds to HEIs for innovation (through the Higher Education Innovation Fund (HEIF) since 2001. £45m of HEFCE Catalyst funding is also focused on collaborations between HEIs and wider partners, supported by

15 A Witty, ‘Encouraging a British Invention Revolution: Sir Andrew Witty’s Review of Universities and Growth’, 2013

member bodies such as the National Centre for Universities and Business (NCUB), which works to build and communicate the evidence base on productive university-business collaborations. Recently, think tanks such as Centre for Cities, and McKinsey & Co. have concurred that *‘universities need to strengthen their contribution to their local businesses through commercialising their research more proactively, and need to be further incentivised to do so.’*¹⁶

As the new funding system for university study settles, universities will increasingly be compelled by students to focus on employability. With funding increasingly dependent on attracting students, universities have to be run more like businesses. Students, in turn, are closer to becoming customers of education. Now is therefore a crucial time to consider how universities can thrive in the new funding environment.

“Many redbrick institutions didn’t see the need to invest in employability – it wasn’t the business they were in, and their graduates are employable anyway. But now students increasingly feel that they are getting employability as an outcome. A bad employability offer will reduce their satisfaction which will reduce their league table scores and will reduce the ability of the university to attract students.”

Graduate recruitment programme manager

16 Centre for Cities and McKinsey & Co., ‘Industrial Revolutions’, 2014

Examples are numerous of universities pioneering progressive practices that enhance economic impact. Specific initiatives include:

- The University of Manchester and the University of the West of England (UWE) have consistently won awards recognising their innovative work on employability, boosting skills among their students through links with local employers.
- The University of Manchester has integrated its approach to careers services and community engagement, and focused its intellectual property efforts (UMIP) on creating a pipeline of companies for venture capital firms to take to the next stage, thus building a new funding ladder.
- UWE has given particular support and flexibilities in the curriculum to students pursuing enterprise and self-employment.
- The University of Sheffield has invested in the Advanced Manufacturing and Research Centre (AMRC). Over 70 companies pay an annual fee to access the AMRC's resources and expertise, which helps determine its research programme. The AMRC is home to a government-funded Catapult centre and works with local SMEs as well as global multinationals. In parallel, and working in partnership with Sheffield City Council and Sheffield Hallam University, the RISE scheme has an impressive track record of graduate placements in Sheffield, stimulating demand for graduate skills among SMEs.

Most attention from national policymakers has addressed the university sector as a whole, at a national scale. Our focus in this report matches the remit of the City Growth Commission in looking at the metro scale, but universities outside metros make equally vital contributions to their local economy. HEFCE's current call for expressions of interest to the Catalyst fund looks to demonstrate the anchor institution role that universities play.¹⁷ In evidencing meeting government priorities through delivering value in a defined spatial area, this call will no doubt address both urban and more remote settings.

Responsibilities to power metro growth

A new focus on economic impact is part of a longer-term cultural change, raising questions about what universities are 'for'. While it is beyond the scope of this inquiry to resolve these, we endorse calls to assess the role of universities in a devolved political economy.¹⁸

We have sought to emphasise that universities already have a civic duty and responsibility to realise public benefit. In becoming what some have termed a 'civic university',¹⁹ huge economic dividends can be realised through the co-ordination and focusing of existing university activities.

We argue that in meeting a higher level of scrutiny universities can fulfil their duty

to the public to maximise return on their investment. In order to do this, however, the consensus gathered through our interviews and roundtables was that universities often need to **coordinate better across their wide scope of activities to contribute to metro growth strategies**. The challenge for the higher education sector in the UK is to secure and build on their existing strengths, while working towards greater alignment with local and regional economic development priorities.

Universities can achieve excellence in research and teaching through coordinating these core activities with opportunities oriented to metro growth priorities. Just as excellence in teaching and research are understood as being mutually reinforcing, rather than competing priorities,²⁰ so teaching and research and the metro economy support one another. Using the opportunities in the metro economy can be fundamental to excelling in the primary mission of a university. There is wide evidence for this in teaching²¹ and research.²²

To realise this will require leadership and a different system of incentives to reward contribution to economic and social impact in the locality of a university. Our policy recommendations are made with attention to the power of the system of incentives within which universities act.

We know there are barriers to

universities strengthening their metro growth role – coordination within and between universities is often difficult. At a time of transition and insecurity, universities will be mindful not to imperil the success they have built, but in moving towards self-reliance in funding – rather than drawing from a national pot – the relationship between universities and their local economy will be a stronger concern.

To overcome these barriers to change we need to appreciate who 'owns' those barriers, and the wider responsibilities of other agencies and bodies in supporting universities' potential in strategic spatial economic development.

Maximising the growth potential of universities requires looking at the relationships between universities, the wider innovation ecosystem and labour market flows. International examples illustrate this.

17 HEFCE, 'Catalyst Fund: Call for expressions of interest in three areas,' 2014

18 J Goddard, 'Local issues will need very close attention' in Times Higher Education, 2014

19 J Goddard, 'Reinventing the Civic University', 2009

20 H Marsh and J Hattie, 'The relation between research productivity and teaching effectiveness: Complementary, Antagonistic, or Independent Constructs?', 2002

21 R Bringle and J Hatcher, 'Implementing service learning in higher education', 1996

22 National Centre for Universities and Business, 'Growing value: business-university collaboration for the 21st Century', 2012

Investing in innovation: international case studies

In Finland, government policy demands that the nation's 24 Universities of Applied Science develop programmes that specifically support Regional Economic Policy and Plans - including employment and employability issues. Several universities are being converted to companies in which the City Council will own a majority stake (in return for commitment to investment in management and future resourcing, rather than cash); other shareholders will own the rest. The university Principal becomes CEO. This gives Finnish universities a different orientation and line of accountability, focused on economic development.

In Germany, the Fraunhofer Society has established 67 research institutes since 1973, each in different fields of applied science. They each earn about 70 percent of their income through contract research and 30 percent through state funding, blending early-stage and commercialised research. The institutes are located

across German states, but concentrated in industrial city-regions. Employing 23,000 people today, this model shows the scale which can be achieved through a nationally coordinated system of research specialisms.

In Cleveland, in-migration of talented workers, focusing on university graduates, has been a key aspect of economic development. This 'Boomerang Initiative' used data analysis which established patterns and flows in return migration through tax records. Such approaches can greatly help to target recruitment initiatives, based on marketing to those who moved away from the metro. US statistics show 37 percent of in-migration to metro counties is return migration.²³ Links to metros, made at and through university, are an asset to incentivise graduates returning later in their careers.

23 R Smith, 'Global Cleveland seeks to boost a successful import and attract more boomerangers', 2012

Developing UniverCities

Universities are integral to helping the UK maintain competitive advantage in a world where a knowledge economy is going to be dominant. This is not just about what happens in lecture halls and laboratories. Our findings are structured around three core responsibilities, each of which should be fulfilled through global excellence. This is about expanding the popular definition of 'excellence' to mean competing globally, and contributing locally.

In each metro, HEIs are important anchor institutions for the economy, supported through national public funding. This report suggests incentives and policies to maximise the contribution of universities to metro growth, but this will play out differently at different universities.

The institutional diversity of universities is vast, both nationally and within many metros. Different cities are starting in different places, in terms of the role that their local HEIs play. HEIs themselves hugely vary between one another – in focus, resources, outlook, leadership and capacity to **coordinate internally and collaborate externally**.

As momentum builds for new devolved powers for metros, the capacity to harness the potential of HEIs, and the ability to provide place-based opportunities to expand on the contribution of HEIs to a growth strategy, will differ. As one interviewee put it:

"In a brave new world, areas shape their competitive advantage. HEIs therefore

need to be 'for' something different in different places. To do this, we need to make sure that incentives are in the right place."

It follows that universities need a funding and policy framework that allows them to exercise flexibility. We argue for a range of policies that support universities to strategically coordinate internally, and collaborate with other universities and partners externally where this provides 'critical mass' across a metro or region. These policies could spur universities to:

- Optimise teaching and research for metro growth.
- Increase graduate retention and utilisation in their metro.
- Encourage enterprising students, graduates and faculty.

The UK university system is already world-leading; we can continue to be through being metro-focused, drawing on the opportunities which our great cities bring to universities, their students and faculties. Fulfilling the three core responsibilities, which organise the structure of this report, will bring greater investment and growth to the UK's metros.

OPTIMISING RESEARCH AND TEACHING FOR METRO GROWTH

The UK higher education (HE) sector hosts a significant concentration of the world's leading teaching and research. In a global survey by the World Economic Forum, executives ranked the UK as second best in the world (to Switzerland) in quality of science research institutions. Substantial public investment – over £7bn annually – is made to maintain the quality and competitiveness of teaching and research in the UK.

In university-industry collaboration, the World Economic Forum ranked the UK fourth (behind Finland, the US and Switzerland). Public expenditure on HE also has an important secondary function as a tool for economic development, but to realise this potential, it needs to be allocated with sensitivity as to how its impact will differ between the places in which it is spent.

There is a presumption that the products of universities (principally graduates and research) are globally mobile commodities. In reality, proximity between people and economic activity matters more than ever in productivity for the knowledge economy, as places exploit agglomeration benefits such as informal research-based exchanges between academics and industry. According to research from the CBI, businesses think

location is equally important to area of expertise in selecting an Higher Education Institution (HEI) partnership.¹ **As one of our interviewees told us**, “Except for the largest blue chip multi-nationals, for most firms ‘agile and just around the corner’ is preferable to ‘best in class but inaccessible.’”

In the most successful innovation ecosystems, in the UK and abroad, universities play a central role in economic growth as students, graduates and faculties commercialise research and generate spin-off activity within the local economy. However, as the House of Commons Science and Technology Committee found, the UK currently under-performs in capturing the economic benefits in the domestic economy from its world-class science base – ‘the valley of death in the commercialisation of research’.² Among several contributing factors, the Committee found that a lack of locally relevant information and advice hindered the effectiveness of the innovation ecosystem.

Notably, most of the financial and performance incentives that universities are governed by are largely agnostic to the location of the impacts HEIs create, and to the geography of the outcomes created.³ HEIs don't have strong external

1 CBI, 'Changing the pace: CBI/Pearson education and skills survey 2013', 2013
 2 House of Commons Science and Technology Committee, 'Bridging the valley of death: improving the commercialisation of research', 2013
 3 The Research Excellence Framework stipulates that “impacts

incentives to orient the content of teaching and research – the core activities of all universities – to the demands of the metro economies in which they are located.

A successful response to new incentives is likely to require investment in coordination within and between HEIs. Only a few regions, including London, have networking and umbrella bodies for the sector. The challenge clearly relates to ‘institutional architecture’:⁴ universities operate through different faculties, schools and departments, and between the different functions of teaching, research, careers advice, enterprise support and engagement with businesses which may be local, national or global.

Difficulties in navigating the offer of universities is particularly prohibitive for small and medium enterprises (SMEs).⁵ Certain metros, such as Bristol and Edinburgh, are more reliant on SMEs to drive economic growth.⁶ The engagement of SMEs in HEI activities can be hindered in part because the SMEs tend to find it more difficult to predict future needs, raise investment capital or commission research which forms the economic base in many UK metros. Successful commercialisation of products and services depends as much on the level of available funding as it does on the access to skills and expertise.⁷ Research

will be assessed in terms of their ‘reach and significance’ regardless of the geographic location in which they occurred, whether locally, regionally, nationally or internationally.”

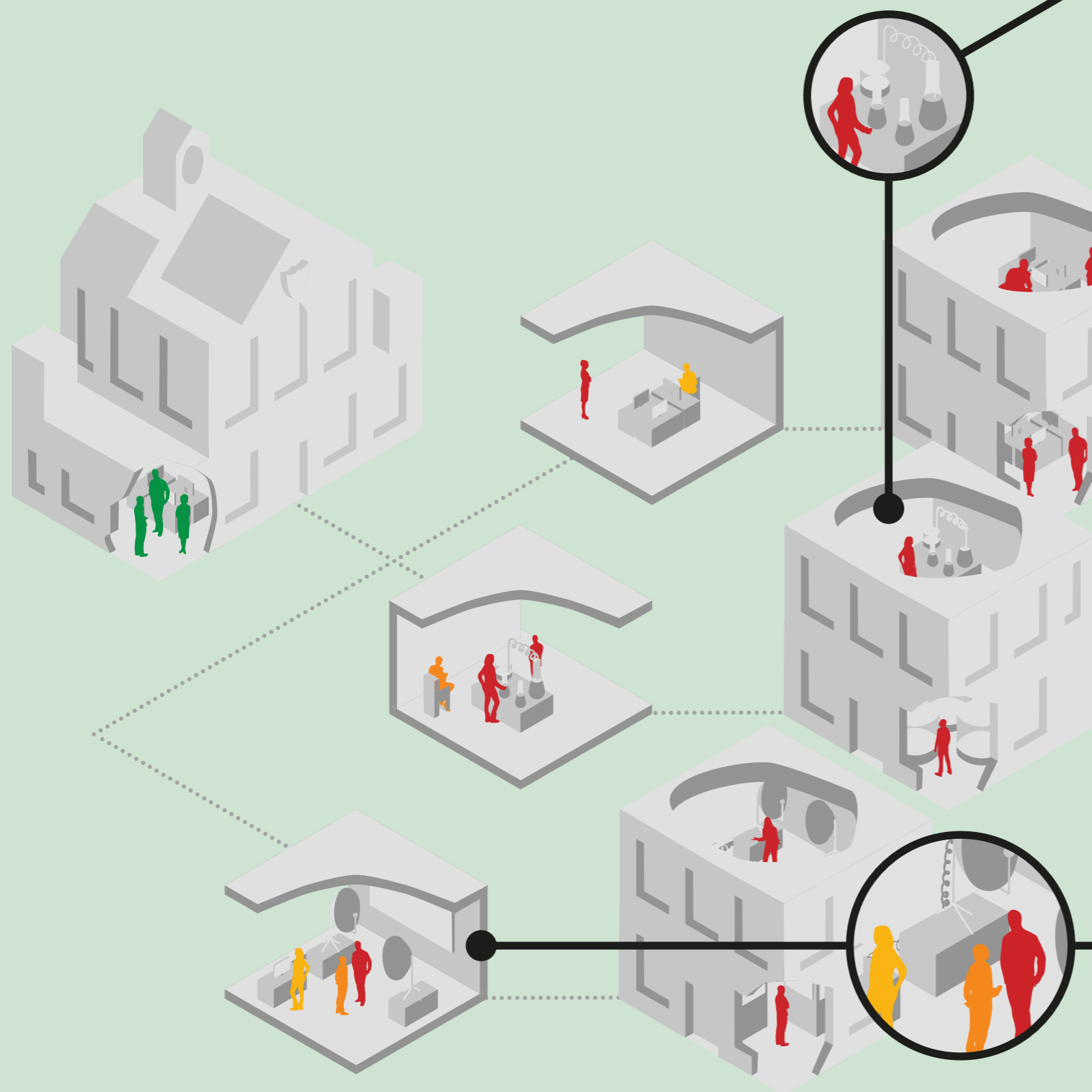
4 J Goddard and P Vallance, 'University and the City', 2013
 5 House of Commons Select Committee concluded that engagement opportunities were ‘fragmented and confusing’. Place-based services platforms such as OpenSME in London are preferable
 6 Centre for Cities, 'Small Business Outlook 2013', 2013
 7 Nesta, 'From funding gaps to thin markets', 2009

from the Judge Institute at the University of Cambridge shows that businesses value exposure to academics, and the awareness that brings, as much as the intellectual property that comes from university collaboration.⁸ While SMEs benefit from consultancy and access to skilled graduates, only 1,000 SMEs have collaborated with Research Councils UK (RCUK)⁹ – out of 1.2m SMEs estimated to innovate annually on products or processes.¹⁰



8 A Cosh and A Hughes (eds.), 'Enterprise challenged: policy and performance in the British SME sector 1999-2002', 2003
 9 Research Councils UK, 'Impact Report 2013', 2013
 10 Data from the 2008 Community Innovation Survey, quoted in J Love and S Roper, 'SME innovation, exporting and growth', 2013

OPTIMISING RESEARCH AND TEACHING FOR METRO GROWTH



Metros should use new freedoms and flexibilities for metros to establish Metro Investment Funds for Higher Education (MIFHE)

...from their devolved skills budgets to provide additional funds for research and teaching within their metro area that impacts on local growth.

Teaching provision should address identified graduate skills shortages and forecast skills demands locally. Research programmes should be relevant to industrial clusters and identified growth industries in the metro.

£7bn

of public investment goes to teaching and research annually, from the funding councils and Research Councils UK.

Adopting a metro approach to funding would encourage collaboration between HEIs

...and the MIFHE could aggregate small-scale investments from philanthropic funds or businesses.

In the long term, the MIFHE could channel funding to widen participation among metro residents.

“Except for the largest blue chip multi-nationals, for most firms ‘agile and just around the corner’ is preferable to ‘best in class but inaccessible’.”

Head of Business Development, Russell Group university

Recommendation 1



Metro authorities use new freedoms and flexibilities to establish Metro Investment Funds for Higher Education (MIFHE) within their metro area to fund research and teaching which deliver an impact on local growth.

Given the importance of tertiary education and the global standing of our leading universities, mainstream funding for HEIs should continue to be based on standards of excellence for research and teaching. To respond to growth opportunities related to workforce skills and industrial innovation within the local metro area, we recommend that Metro authorities use new freedoms and flexibilities to establish Metro Investment Funds for Higher Education (MIFHE) within their metro area. The objective of this fund should be to fund research and

teaching which deliver an impact on local growth. This will usually be delivered by HEIs physically located within the metro. This would top up the funding provided by the funding councils and RCUK which is oriented towards excellence with reference to global standards.

Primary impacts on growth are likely to come, firstly, through additional teaching provision which addresses identified graduate skills shortages and forecast skills demands in the metro; and, secondly, through research programmes

which produce actionable outputs for firms in industrial clusters and identified growth industries in the metro.

Metro authorities would be free to invest non-ringfenced funding in the MIFHE, such as devolved adult skills budgets which the Commission proposed in the Human Capitals report. Where LEP boundaries and metro governance are aligned, LEPs could use the MIFHE to distribute European funds as part of smart specialisation economic investment strategies to foster innovation. MIFHEs could also raise capital through planning contributions (such as Section 106) associated with large-scale development.

Adopting a metro approach to funding would encourage collaboration between HEIs where they can achieve critical mass and economies of scale in responding to metro needs. It could also encourage collaboration between funders: the MIFHE could aggregate small-scale investments from philanthropic funds or businesses which have a specific interest in a local pipeline of young talent or locally-based research. By acting as a broker, the MIFHE can reduce the risks and transaction costs of unilateral relationships between smaller businesses and single HEIs (or individual university departments).

In the long term, funding councils could channel specific funding streams through MIFHEs, such as resources to widen participation among metro residents.

To complement MIFHEs, we encourage local authorities, LEPs, and HEIs to invest in a portfolio of proven and emerging models which engage SMEs in university partnerships.

We encourage local authorities, LEPs, and HEIs to invest in a portfolio of proven and emerging models which engage SMEs in university partnerships.

Examples of models which engage SMEs in university partnerships:

- Knowledge Economy Skills Scholarships: an EU-funded programme in Wales which has supported 400 postgraduate placements, focusing research on issues relevant to the business. Placements aligned with four priority research and development (R&D) sectors identified in the Welsh Assembly Government's Economic Renewal Plan.
- Eulergy: a new web-based service which aims to match a specific business need for research with a postgraduate student or academic. Students and academics can also propose research projects in order to attract funding and collaboration.

PROMOTING GRADUATE RETENTION AND UTILISATION

A core business activity of universities is teaching students on degree programmes, and this is their most important contribution to metro labour markets. However, efforts to integrate graduating students into the labour market vary greatly. Labour markets function at a metro scale; few recruiters or job hunters engage in searches at the national scale. When universities align to a local economic cluster, private investors are spurred to create new institutions to retain and train graduates – as with the Hull Centre for Digital Industries opening in 2015. In other places, support for graduates needs to extend beyond the classroom, linking their success with the ambitions of the city and its business, including SMEs.

In a recent survey of HEIs, just one in seven identified that their HEI as a whole made a significant contribution to economic development through graduate retention.¹ There are strong labour market migration flows following graduation, which present a challenge to matching supply and demand for graduate labour. Indicators include

¹ Respondents were prompted to select answers from a prescribed list: In which three areas do you see your HEI as a whole making the greatest contribution to economic development? (HEFCE, 'Higher Education – Business and Community Interaction survey', 2014)

the proportionate flows of graduates to and from London and the varying degrees to which graduates are able to secure professional employment in their local labour markets.

Longitudinal data from the Higher Education Statistics Agency (HESA) shows that retention rates of graduates differ by metro, but that some parts of the UK are much weaker than others at holding onto their share.

It is probable that many of those who do leave for the capital are driven by the concentration of graduate-level jobs in the private sector in London.² In general between 2009 and 2012, 35 percent of all jobs in London were graduate-level jobs whereas this figure stood at 26 percent for the other large cities in the UK. Twenty-two percent of London employers recruited a university leaver in 2010-13, compared to 16 percent of Bristol employers and 12 percent of North East employers.³

The relative lack of graduates who stay on in private sector employment within the region they studied in has led several institutions to promote interventions which acquaint graduates with local businesses in the area during their studies,⁴ as well

² Centre for Cities, Cities Outlook 2014, 2014

³ UKCES, 'National Employer Skills Survey,' 2013. Data is for LEP areas

⁴ Engagement with an employer during studies is proven to be a predictor of stronger employment outcomes; 41 percent of 2014 graduates had done an internship or vacation work with a graduate employer whilst at university (High Fliers Research 2014)

as successful models to improve the recruitment capabilities of SMEs (such as RISE in Sheffield). Following the recession and cuts to the public sector, the proportion of graduates entering local government in the North East has halved since 2008; as public sector recruitment wanes, graduates will depend increasingly on the private sector for employment. Retail has been the main beneficiary (up from 12.2 percent of graduate employment for 2007/2008 to 15.4 percent for 2011/2012) of this shift. In short, the quality of graduate employment – in particular progression over time – is not commonly featured within the metrics used for graduate retention.

Data from the Association of Graduate Recruiters (AGR), estimates that nationwide there are 84 graduate applications rejected per every graduate appointed. Candidates who are unsuccessful in their applications may be more suitable for other employers in the area, some of which might be SMEs, but may find it challenging to identify these alternative opportunities without a broker. It is imperative that more graduates are utilised in the sectors identified by the metro as key to growth, which is why greater intervention is needed to guide graduate destinations, supporting better matching. As the Commission has previously argued, skills utilisation and progression are as important to long-term productivity as headline measures of employment.



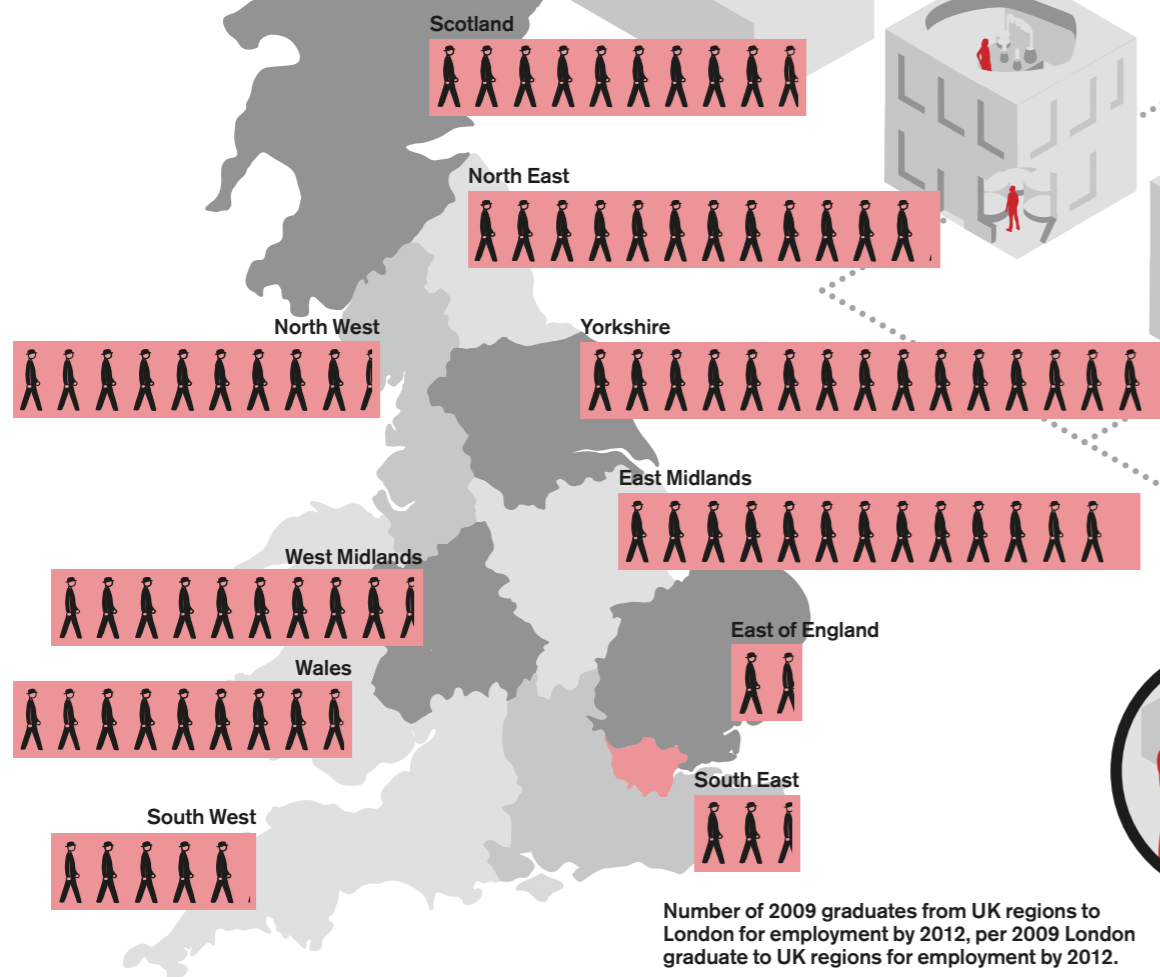
PROMOTING GRADUATE RETENTION AND UTILISATION

ReFreshers Week

Local authorities and agencies could run a concentrated campaign with universities to help focus graduates on extending their roots in their place of study in the key weeks and months before and after graduation.

Flows of graduates between regions and London

For every graduate that moves to a region from London, how many graduates leave that region for the capital?



Number of 2009 graduates from UK regions to London for employment by 2012, per 2009 London graduate to UK regions for employment by 2012.

Source: HESA / DLHE

Nationwide there are

84

graduate applications rejected per every graduate appointed.

In a recent survey of HEIs, just

1 in 7

identified that their HEI as a whole made a significant contribution to economic development through graduate retention.

Graduate Clearing

Metros should develop a centralised system which pools rejected graduate recruitment applications and recycles them to local firms with vacancies.

Local business investment scheme to reward loyalty

Employers should be helped to pool resources to enable 'golden handcuffs' arrangements which span industries, sectors and supply chains, rewarding medium-term (three to five year) commitment from graduates to working locally.

Recommendation 2a



ReFreshers Week

Local authorities and agencies could run a concentrated campaign with universities to help focus graduates on extending their roots in their place of study in the key weeks and months before and after graduation.

ReFreshers weeks should support graduates in making the transition from studying to working in the local area by offering advice, matching them to employment and volunteering opportunities, and helping them find housing for example.

Recommendation 2b



Graduate Clearing

Metros should develop a centralised system which pools rejected graduate recruitment applications and recycles them to local firms with vacancies.

This scheme would be similar to the UCAS clearing scheme; graduates who have not found a place in corporate schemes would be connected to other firms, including SMEs, looking to recruit. Such a model could build on infrastructure that already exists (eg the government's Graduate Talent Pool portal), and has the potential to be commercialised after initial public investment. Originally suggested by UKCES, one local economic development agency is now scoping a pilot project within a combined authority setting.

Recommendation 2c



Local business investment scheme to reward loyalty

Employers should be helped to pool resources to enable 'golden handcuffs' arrangements which span industries, sectors and supply chains, rewarding medium-term (three to five year) commitment from graduates to working locally.

Industry associations, start-up incubators, or university careers services could attract subscriptions from firms to support a student loan repayment bonus, made after a loyalty period ends. Eligibility for this scheme should require continuous (or near-continuous) employment in identified industries and sectors. This should be prioritised for industries or sectors with identified skills shortages or growth potential, and should extend to cover individuals who go on to start-up firms within the loyalty period, subject to the participation of these start-up firms as new subscribers to the scheme for their graduate recruits. Other criteria could be added based on local conditions.

ENTERPRISING STUDENTS, GRADUATES AND FACULTY

There is broad support among universities, businesses and government authorities to encourage entrepreneurial culture and activity in the UK. Universities are a key breeding ground for innovative growth companies and start-ups. Those in the largest metros are part of high productivity environments, bringing together in close proximity people, resources, finance and expertise.

There are fantastic examples which highlight the potential universities have to support entrepreneurialism among faculty, students and graduates. In the Bristol metro, we found evidence of leading practice: innovation partnership Set Squared Bristol have recently anchored the new Engine Shed redevelopment. The University of the West of England (UWE) also generated 241 businesses among students at graduation in 2013/14; many of these recruited other students on placements.

The strongest ‘innovation ecosystems’ recycle the products (expertise and profits) of their own entrepreneurs. The retention of Sage – one of the major PLCs home-grown in Newcastle – is crucial because of the reinvestment and mentorship of founders and senior executives.

However, the ability of staff and

students at universities to fully realise their potential contribution to economic growth through enterprise is limited in several ways. Many interviewees refer to prevailing cultural factors: faculty “being fearful of being seen to back something that isn’t a winner” and articulating that “discussing business applications cheapens the theory” of what they teach. There is consensus from our interviewees that a stigma still surrounds enterprise – students see it as a “minority sport” compared to employment. Yet studies have shown that ‘innovation-active’ enterprises employ higher proportions of graduates¹ and that those educated to degree-level are twice as likely to become high-value entrepreneurs.² In effect, enterprise education is about improving the employability of graduates overall and preparing them to compete in a more dynamic future labour market. Entrepreneurial mindsets will need to be mainstream in the future workplace.³

Enterprise education is best understood as “a process which develops individuals” mindsets, behaviours, skills and capabilities...applied to create value in a range of contexts and environments’.⁴

1 D Bosworth, C Lyonette, R Wilson, M Bayliss and S Fathers, ‘The Supply of and Demand for High-Level STEM Skills,’ 2013

2 Social Market Foundation, ‘Venturing Forth: Increasing high-value entrepreneurship’, 2014

3 UKCES, ‘The Future of Work, Jobs and Skills in 2030’, 2014

4 K Herrmann, P Hannon, J Cox and P Ternouth, ‘Developing Entrepreneurial Graduates: Putting entrepreneurship at the centre of higher education’, 2008

Many universities are already ahead of Lord Young’s recommendations, taking initiative to foster enterprise. Durham University offers an Enterprise Certificate for students who elect enterprise as a module in each year of their studies. Hull School of Art and Design has designed a Creative Futures core module featuring live briefs, work experience and mentorship, cutting across all courses.

Graduate enterprises often struggle to attract capital to grow, but in our research we heard from graduate entrepreneurs that it was the social capital that mattered alongside finance: they most valued mentoring, support and access to networks of customers and suppliers (as offered by many accelerator programmes). For example, CampusNorth, run by Ignite in Newcastle, was described as “a real catalyst: sends a message. Important because somewhere to visit, and it’s becoming a hub for the jobs market. There’s a strong alumni network through the programme providing skills and mentorship.”

Reinforcing previous research from BVCA,⁵ investors told us, “the biggest challenge to growth is, without any doubt, having requisite skills on the ground. Anything that could improve access to graduate skills helps.” The consensus among investors was that there was “massive room for improvement” in how universities engage with start-ups and high growth firms. Many felt the clear opportunity was creating a buzz around buildings: providing a physical focus to

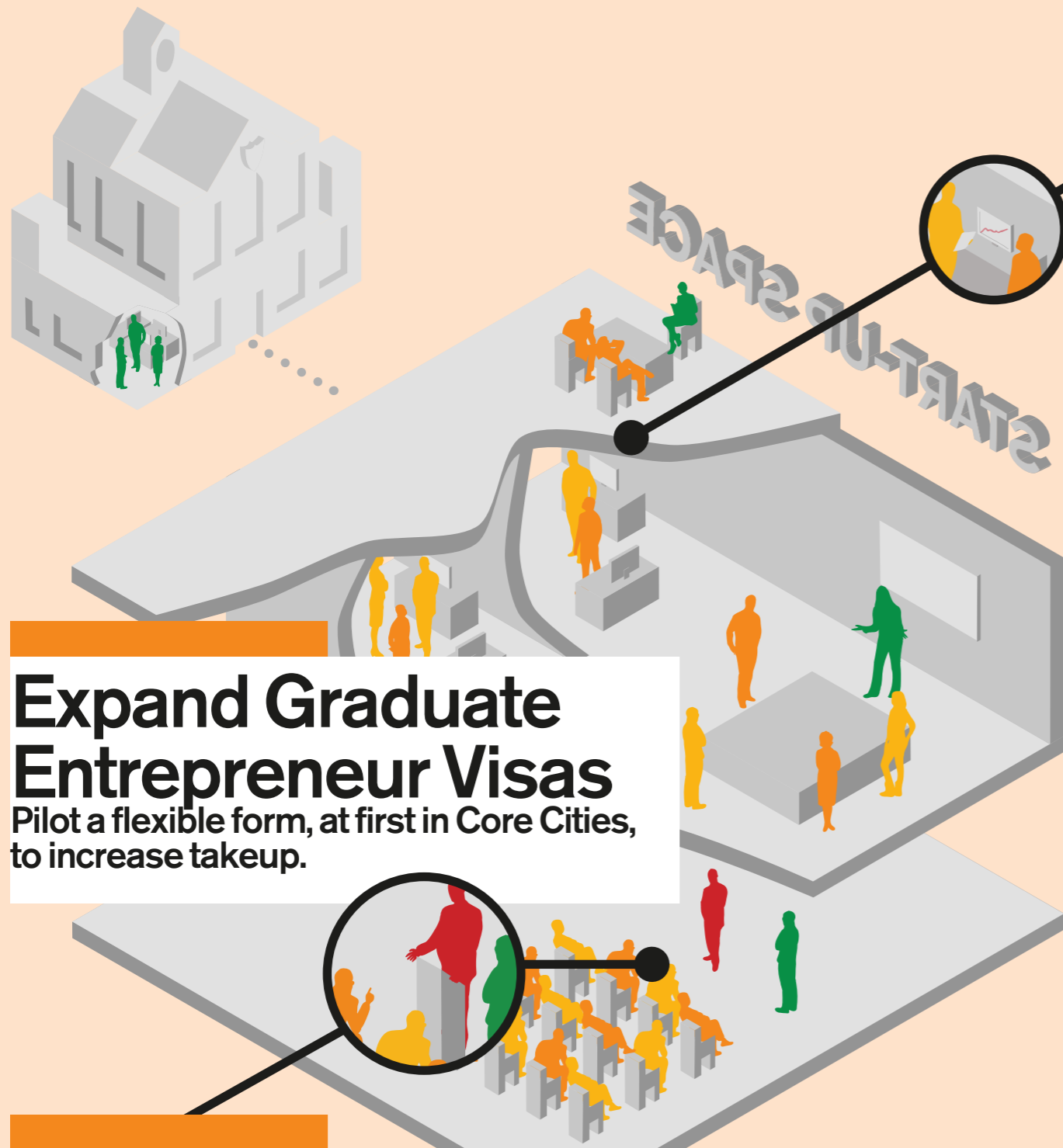
5 BVCA, ‘Tech Country 2013,’ 2013

start-up, commercialisation and spin-off activity.

Ultimately, ‘money flows where ideas flow’. In this regard, sending international students home immediately after completion of their studies after years of training them is clearly a wasted opportunity. Many of these international students could put their talents to use within the UK, particularly those that are entrepreneurial and looking to start a business locally following graduation. In recognition of this, the Home Office has created a ‘Graduate Entrepreneur’ visa, but take-up is low: only 174 graduates were granted the opportunity in 2013 in spite of 1,000 visas being made available.



ENTERPRISING STUDENTS, GRADUATES AND FACULTY



Expand Graduate Entrepreneur Visas

Pilot a flexible form, at first in Core Cities, to increase takeup.

Support start-up incubation and acceleration space located in innovative urban districts

HEIs should co-invest with BIDs and industry partners, investing a fraction of their endowment, reserves, or pension funds.

Embed entrepreneurialism at university

University courses should by default allow sandwich years for employment and enterprise. Modular courses allow flexibility for short-term placements at shorter notice. Enterprise modules should be available to all students.

9,836

Generated revenue:

£3bn+

Number of spin-offs from UK universities in mid-2013, employing

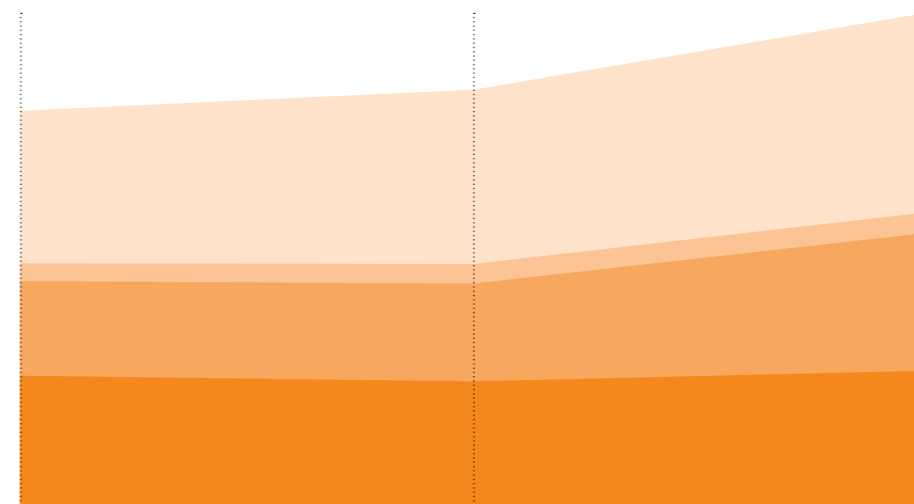
38,982

attracting

£740m

of external investment

Spin-off Activity of UK HEIs



2012/13: 38,982 total current employment

2010/11 2011/12 2012/13

Estimated current employment of all active firms (FTE)

- Graduate Startups
- Staff Startups
- Formal spin-offs (not HEI owned)
- Spin-offs with some HEI ownership

“Ultimately, money flows where ideas flow”

Venture capital fund manager

Recommendation 3a



Build networks through cross-fertilisation between people and institutions

Partner with business networks across the metro. HEIs should co-invest with BIDs and industry partners to support start-up incubation and acceleration space located in innovative urban districts, following successful models such as Engine Shed (Bristol), Northern Design Centre (Gateshead), C4DI (Hull), Collective (Camden, London) and the Hatchery (UCL, London). HEIs in the UK's major metros should consider investing a fraction of their endowment, reserves, or pension funds, in such schemes (as suggested in Recommendation 2 in the House of Commons Science and Technology Committee report into 'The valley of death in the commercialisation of research').¹

Leverage the finance and expertise of university resources.

Universities and alumni can provide investment in spin-off enterprise through their own funds. However, more importantly, HEIF funding rounds should support initiatives which link students and graduates with mentorship among staff, alumni and business partners.

Expand Graduate Entrepreneur Visas.

Allow the UK's 'Core Cities' to pilot a flexible form of the visa which would extend the eligible time period of students who have left the UK to apply from one year to five. Their plans would need to specify that their businesses would be active in the core city in which they attended university in order for the HEI or local UKTI outpost to make an endorsement. If successful in increasing take-up, this flexible form of visa should be rolled out across the UK.

¹ House of Commons Science and Technology Committee, 'Bridging the valley of death: improving the commercialisation of research', 2013

Recommendation 3b



Embed entrepreneurialism at university

Universities should invest in the Entrepreneur First (EF) model of seed investment programmes, selecting on the basis of technical talent in STEM subjects, usually before they have a team or a start-up idea. EF helps build technology start-ups, inspiring cultural change on campus.²

Expand flexible course provision.

University courses should, by default, allow sandwich years for employment and enterprise and have access to an enterprise module as suggested by the Young Review. Tuition fees for these years should be strictly controlled. Modular courses, offered in several terms through the year, should be encouraged where possible and affordable, because they allow more flexibility for short-term placements at shorter notice. Parallel efforts could be funded through public budgets for economic development, supporting demand for graduate placements among businesses, emphasising the entrepreneurial skills available.

² More details on this scheme at www.joinef.com.



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