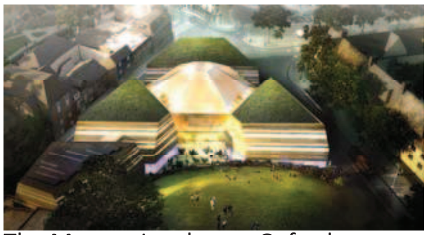
# OXFORD AND OXFORDSHIRE CITY DEAL

## Transformational Growth Through a World Class Knowledge Economy

## Submission

## January 2013


The Magnet Incubator, Oxford


The BioEscalator, Churchill Hospital


Diamond Synchrotron, Harwell


Sadler Building, Oxford Science Park

www.oxford.gov.uk OXFORD CITY COUNCIL

OXFORDSHIRE COUNTY COUNCIL

Oxfordshire Local Enterprise Partnership
Creating new private sector jobs for Oxfordshire

UNIVERSITY OF OXFORD

South Oxfordshire District Council
Listening Learning Leading

WEST OXFORDSHIRE DISTRICT COUNCIL

OXFORD BROOKES UNIVERSITY

Oxford University Hospitals NHS Trust

Vale of White Horse District Council

Cherwell District Council North Oxfordshire

Homes & Communities Agency

Science & Technology Facilities Council

**SCIENCE AND ENTERPRISE SUPPORT: OXFORD AND OXFORDSHIRE CITY DEAL**

| |
|---|
| **Professor Andrew Hamilton FRS, Vice Chancellor, University of Oxford**<br>*I am pleased to confirm the University of Oxford's strong support for the Oxford and Oxfordshire City Deal. The University welcomes the opportunity that this will provide to work in partnership with the City, County and District Councils and the Local Enterprise Partnership to promote economic growth and to develop the resources of our knowledge economy.* |
| **Adrian Shooter, Chairman of West Midlands and Oxfordshire Region, Confederation of British Industry**<br>*'The CBI strongly supports the Oxford and Oxfordshire City Deal because it can see a clear route to growing successful enterprises, employment and economic growth both for the regional and national economy.'* |
| **Professor John Womersley, Chief Executive, Science and Technology Facilities Council**<br>*'STFC gives strong support to the City Deal and welcomes the opportunity to participate more fully in the revitalisation of the region's and the UK's economy. Our Harwell Campus is already recognised nationally and internationally as a preferred location for "Big Science" –for national scale investments in major science capabilities like the Diamond Light Source.'* |
| **Steve Cowley, United Kingdom Atomic Energy Authority**<br>'*A key science and technology centre for over 40 years, Culham science centre is looking forward to an exciting future, continuing its leading role in fusion research and technology but also providing for knowledge based employment growth supported by onsite centres of excellence for technologies that are critical for the growth of the UK's advanced manufacturing capability.'* |
| **Sir Paul Nurse, President of the Royal Society**<br>*'Inspiring the next generation to take an interest in science is critical to maintaining and growing our position at the forefront of research. The Magnet development will play a key role and I fully support this exciting project.'* |
| **Professor Andrew Hamilton FRS, Vice Chancellor, University of Oxford**<br>*'The Bio-Escalator will support innovative spin-outs to become sustainable bioscience and medical businesses and attract growing firms, investors and entrepreneurs – generating economic growth from our research base and boosting the UK life sciences cluster.'* |
| **Professor Sir Michael Brady FR S Freng Fmedsci, Founder of Mirada**<br>*''As someone who has been involved in the high-tech entrepreneurial community, I vouch for the importance of The Magnet innovation centre and can wholeheartedly support this important project.'* |
| **Ian Wenman, Past Chair, Oxfordshire Institute of Directors**<br>*'I can vouch for the importance of the Oxford and Oxfordshire City Deal to bring all parties together to harness our outstanding potential in the knowledge economy for the benefit of the city region and the country.'* |

## Section A: Summary information

### A1. Proposal title. Oxford and Oxfordshire City Deal:

### Transformational Growth Through a World Class Knowledge Economy

The Oxford city region is a national economic asset and the focus of a world-class knowledge economy[1] with one of the most substantial, diverse and important concentrations of research-based, high-value business activities in Europe[2]. The city region is at the heart of the science and **knowledge-based economy** that Government identifies as the centrepiece of national economic recovery[3], as well as one of the UK's highest SME concentrations identified for growth[4]. The leading clusters in the city region's knowledge-based economy - biosciences and medical research, space and satellite technologies, cryogenics, advanced automotive engineering - are poised to grow substantially in coming years. There are additional strengths in the breadth of our knowledge economy: digital information management, cyber-security, publishing, green construction, professional and business services, and culture/creative industries.

The combination of our two world-class universities and 'Big Science' at our internationally recognised centres for investment at Culham research centre and Harwell Laboratories is unique in its breadth and diversity. These are pre-eminent in UK technology transfer and key to our future prosperity, both in domestic and export markets. We need to create **a new partnership across all levels of government, with our universities, international research laboratories and industry**, to deliver transformational change at a scale that matches the opportunity and addresses the barriers to growth, taking joint working to a new level. This is an essential catalyst for growth, and with Oxford's global profile provide an outstanding environment for inward investment and businesses to spin out and grow in high quality business locations across the region: Oxford, Bicester, Science Vale, the Enterprise Zone, and beyond; providing the opportunities for local enterprise to compete globally.

Our City Deal is a partnership of business, research institutions, the Local Authorities and the LEP. It sets a new benchmark in our collaboration and will accelerate the growth of the city region's knowledge based economy by creating a **new 'knowledge economy spine'**, based on a network of centres supported by new enterprise and innovation centres and development in the city region's principal economic nodes; Oxford City, Bicester, Science Vale, and our Enterprise Zone.

These centres will transform the scale and pace of growth in the knowledge based economy, creating new connections to our universities and research institutions, and across sectors, and act as a catalyst for 'open source' knowledge and business support. The centres will build on the success of our science and business parks, spreading economic success across the city region. **Connectivity will be key** and the hubs will be supported by first class infrastructure; ultra-fast broadband, simplified planning, A34/A40 road and rail investment. Our vision uses the Bespoke Offer to leverage our knowledge economy, supported by the Core Offer to add value through skills, inward investment, infrastructure and housing.

### A2. Key partners involved in the proposal.

| | | |
|---|---|---|
| Oxford City Council | Oxfordshire County Council | Oxfordshire LEP |
| Cherwell DC | South Oxfordshire DC | University of Oxford |
| Vale of White Horse DC | West Oxfordshire DC | Oxford Brookes University |
| OU Hospitals NHS Trust | HCA, CBI, IOD, ChoCom, ProOxford | STFC, Harwell; UKAEA, Culham |

**A3. Local point of contact:** David Edwards, Executive Director, Oxford City Council, Town Hall, St Aldates, Oxford OX1 1BX T: 01865 252394 |M: 07768 216755| F: 01865 252394

[1] Oxford City alone contributes £4.7bn to national output: Centre for Cities (2009)
[2] Glasson, Chadwick, Lawton Smith *Defining, Explaining and Managing High-tech Growth: The Case of Oxfordshire* (1990, 2003, 2012).
[3] See for example BIS (2012) "*BIS Industrial Strategy UK Sector Analysis*", BIS Economics Paper No. 18
[4] BIS (2012) "*BIS Industrial Strategy UK Sector Analysis*", BIS Economics Paper No. 18

**Section B: Problem definition**

**B1. What is the single economic challenge or opportunity that you want to address through a city deal? Why has this been chosen as the focus of your proposal?**

The Oxford City Region has the largest concentration of research and development in Europe and is a global brand: two world-class universities, international research centres and technology enterprises and 'Big Science' at Culham research centre and Harwell Laboratories spanning globally significant sectors, and where the UK has greatest potential for exports[5], including: life sciences, cryogenics, fusion, space technology, advanced motorsport engineering. There are local concentrations of the highest levels of employment growth, employment in the knowledge sectors, business formation and entrepreneurship[6].

Yet to date the Oxford City Region has **underperformed compared with other high-tech areas**. Oxfordshire's GVA per capita has followed the UK average (1980-2006), while Cambridgeshire grew at 2½ times the national rate. Oxfordshire's hi-tech sector is similar in scale, but more broadly based, with greater spin-out activity, a 90% survival rate and in a better strategic location. But Cambridgeshire's hi-tech sector is focused in two major locations. Oxfordshire's research centres are scattered (Oxford/Culham/Harwell), and its high tech clusters widely dispersed, without the essential infrastructure and employment sites[7]. It lacks connectivity, networks and critical mass to support growth, services and investment; without these it is much more difficult to grow and retain firms and attract Foreign Direct Investment. Only 3% of South East FDI jobs located in Oxfordshire (1999-2010), compared with Berkshire (13%), Surrey (16%), Hampshire (13%) and Bucks (15%). By global standards our high-tech clusters remain small [8].

Delivering connectivity through new networks, accommodation and infrastructure for hi-technology growth is the focus of our Bespoke Offer. But the Core Offer flexibilities are important to enable us to address wider issues and add value, including: enhanced skills training, inward investment, and new housing development.

There is scope to increase rapidly the pace of enterprise growth and innovation in the knowledge based economy, for the city region and the UK as a whole, by **connecting our world class innovation activity and regional knowledge economy using a new 'knowledge economy spine'**, using enterprise and innovation centres, networks, development and infrastructure to drive the potential in Oxford, Science Vale, Bicester and beyond. We can **transform enterprise growth here**, establish greater critical mass and a magnet for international investment, create fusion between sectors, services, and infrastructure, with a synergy which make these interactions more responsive and increases collaboration across sectors and institutions.

**Barriers to Growth**

Our barriers to growth arise through weak connectivity: dispersed networks and enterprise, with limited accommodation and infrastructure capacity to support and retain growth, and a need for combined leadership.

**Knowledge Networks:** our *knowledge economy* relies on **dispersed, informal, collaborative networks and enterprises, which is fundamentally different from other locations** and is a barrier to growth[9]. Our information and exchange networks and hubs need greater focus, connectivity, scale and reach across the region and internationally, linked with the universities, national research laboratories, research centres, incubator accommodation, business support and finance.

---

[5] Key sectors where UK has Revealed Comparative Advantage (% exports) and Technological Advantage (patents); see Reference 3

[6] ONS (2011) Business Register and Employment Survey and ONS (2011) Mid-Year Population Estimates

[7] 'Oxfordshire lacks an absolute concentration of companies in one spot..here it is not as well concentrated or as well organised.' Mark Whittaker, Evotec, drug discovery firm *Financial Times* 22.4.12

[8] Hi-tech spin outs: Oxford 114, Cambridge 109, Stanford 1200, Gothenburg 350 (Rowen and Sheehan 2002 and others)

[9] Glasson, Chadwick, Lawton Smith *Defining, Explaining and Managing high tech growth: The case of Oxfordshire* (1990, 2003, 2012)

**Accommodation:** there is a shortage of accommodation for our knowledge based enterprises. A recent Oxford business survey evidenced the **lack of suitable business premises as the biggest barrier to location/relocation** to Oxford[10]. Our incubator centres are full (and have waiting lists), including: Oxford Innovation (4 centres: c10,000m$^2$), Diagnox (the only commercial incubator laboratory: 450m$^2$), and the University (10,000m$^2$) and Magdalen (3,000m$^2$) Science Parks. Only limited development capacity remains for larger enterprises at Magdalen (25,000m$^2$), and there are major highway constraints (A34/A40) affecting the Enterprise Zone and Bicester. We need to promote new capacity through private sector investment in accommodation and employment land for our knowledge based enterprises: to start, grow and attract inward investment.

**Infrastructure:** we need capacity to **access development and employment areas**, to open the new Northern Gateway science park and support the Science Vale Enterprise Zone, including: the A40 between Witney and Headington and the A34 especially between Didcot and the M40, and capitalising on investments in new rail investment and services to London, and Super-connected Cities broadband. The current LEP survey shows businesses across the city region are significantly affected by congestion on the A34 (70%) and the A40 (53%).

The Bespoke Offer will address these barriers to enterprise through a new 'knowledge economy spine': creating hubs, hosted in enterprise and incubator centres with a regional hi-tech network linked with our universities and institutes, and supported by hi-tech development and infrastructure. The Core Offer will enable us also to tackle the wider barriers to growth, working with Government. Oxfordshire employers report **shortages in technical skills** in the STEM sectors; but surveys suggest many would take on apprentices if they could input to courses[11]. Using our international brand, with our leading companies and institutes, we will **raise inward investment performance**. We will increase housing delivery where some of our **housing is the least affordable in the UK**[12], and is a barrier to recruitment and retention.

**B2. Why can't this be taken forward by the private sector or through existing policy tools?**
The private sector and existing policy tools are important, but they are not sufficient.

**Knowledge Networks:** our universities and research centres are some of the most successful in UK knowledge transfer, but they now need support to work on a larger scale with private sector enterprise across the region to increase access to research and increase specialist business services for start ups and growing enterprises, such as 'business angels' and venture capital.

**Accommodation:** the enterprise hubs will be private sector operated, with already £10m raised, but require initial capital co-funding through Local Authorities and partners. Developers, such as MEPC, are investing in the EZ, but need infrastructure support. The Local Authorities are bringing forward new development sites, but need Government powers though simplified planning (extending Local Development Orders), to flex controls and respond rapidly to growth opportunities.

**Infrastructure:** we have made a major investment in public transport; our park and ride networks have the highest penetration in the UK and the private sector is committing £120m in new rail infrastructure. But we need to invest in our strategic highway capacity for new development. The Local Authorities and the private sector are already co-investing in ultra-fast broadband with BDUK.

---

[10] 53% of respondents saw the lack of suitable business premises as the greatest barrier to location/relocation to Oxford: Business Barometer (Commercial Property Focus), Withy King, July 2012
[11] Only 32% of firms surveyed in the EZ employed apprentices, but 72% would be more likely to, if they had input into the courses offered.
[12] CLG (2011) Median House Prices based on Land Registry Data and ONS (2011) Annual Survey of Hours and Earnings

**Section C: Broad approach**

**C1. What broad approach do you intend to take to addressing the challenge or opportunity identified above?**

Our Bespoke Proposal is focused on the delivery of our ambitious '**knowledge economy spine'** which directly addresses the barriers to enterprise and innovation: a transformational network of hubs, creating an ecosystem where research, innovation, investment and enterprise meet, and linking support services, incubation accommodation and grow on development at the regional scale. The centres will take two forms, supported by our universities and research institutions: incubation space (**'escalator hubs'**) that will provide for over 1,000 new businesses and entrepreneurs in the first decade, and new **science and business park development**. In piloting this approach in the UK, we draw from the successful MIT experience and others in North America, and proposals in Europe, such as at Leiden University.

Our **'Escalator Hubs'** will be unique: hosted by world class institutions and offering 'open source' access, a network located in the growth centres where creative design and a fusion of ideas can spark across sectors. Each hub will have a **special focus, but share a common network,** building on the breadth of our uniquely diverse knowledge economy. We have proposals for the Oxford Magnet, the UK's first integrated science and innovation centre (incubator space for 50 firms and 30,000 education visits a year), the BioEcalator for life sciences at Oxford hospitals campus, and 'Big Science' innovation centres at Harwell, Culham and Bicester. These are transformational in scale and reach, and **a step change in relationships, with world class research partnering enterprise.** The Local Authorities will co-fund the capital investment with LEP/institutional and private sector funding and management, and top up with existing EZ rates re-cycling. In addition we would look to **co-fund a Higher Education Innovation and SME fund: Oxfund** for business innovation and spin out enterprises with devolved Technology Strategy Board funding**.** In actively working with UKTI to raise the ambition on FDI, we will agree a programme with our world leading research and business ambassadors, but seek Lead City status in key sectors: Life Sciences, Cryogenics and Space.

Action: Government enables Local Authorities to invest on a risk-reward basis
Government devolves funding from Technology Strategy Board
Offer: Private sector hub management will fund operational costs
Universities/institutes input research management and resources.
Private institutional capital co-investment.
Oxfund: co-funding for Higher Education Innovation and SME development

**Science and Business Park development:** to deliver the growth of knowledge based enterprises and inward investment we will bring forward strategic sites and infrastructure, at Northern Gateway and the Churchill campus, enabling growth on the University Science Park campus, Harwell, Milton Park, Didcot A and Culham, and releasing Graven Hill for development. Following this, extensions to the University Science Park and Magdalen Science Park will be considered once they attain 80% completion. Simplified planning zones for selected sites will promote private sector development. Infrastructure investment will be required to unblock the A40 through Oxford, with Northern Gateway as a first step, and A34 (Chilton and Milton interchanges) to support development.

Action: Government regulation for simplified planning and risk-reward re-investment.
Government tailors support for hi-tech high value exports
Government releases MoD Graven Hill to Local Authority for development.
Offer: LA's will partner institutional landowners to release development land.
Institutional land ownership and support.

**C2 How can this approach 'do more with less' by delivering greater efficiency in public spend?**

Our approach takes research, enterprise, public policy and funding into a new alignment to leverage existing resources, remove barriers and transform outcomes and delivery at scale. A risk-reward model would allow Local Authorities to fund borrowing or release reserves.

**Enterprise and Innovation Hubs**

- A transformational increase in working between, and across, research and enterprise
- Integrated public sector investment at regional scale and pace to drive the knowledge economy with private sector investment in enterprise and development
- Public and private sector co-investment in innovation and SME's, including LEP funds
- Use of public sector property assets to enable hub development

**Science and Business Park Development**

- Public sector investment for infrastructure prioritised for knowledge economy growth
- Enabling works through CIL, re-cycled business rates, land receipts and the private sector.
- Releasing public sector land for development at MoD Graven Hill, and accelerating investment and development through simplified planning, as at Northern Gateway

We will draw support from the Core Offer: investing in transport, bringing greater focus to skills and inward investment, raising housing delivery.

**C3 What local resources do you expect to invest in addressing this problem and what resources can be leveraged from the private sector?**

We identify significant local resources and leverage from the private sector. The Bespoke Offer assumes initially potential for up to £20m LA gap funding/borrowing/investment matched by LEP single pot, with £100m institutional/private investment and generating over £240m Gross Value Added. The Core Offer will enable a very significant increase in additional LA and private sector investment, for example the potential to accelerate the delivery of over 8,000 new homes over the period.

**Enterprise and Innovation Hubs**

- Private sector investment: management, property development and venture capital.
- Access to major institutional and donor sponsorship
- Local Authorities borrowing and LEP single pot co-investment and funding
- Universities and research institutes will host and input technical resource
- Public sector development land assets (Local Authority, Universities, Institutes)
- Employers, universities and colleges resources for skills and enterprise development
- Science education outreach with private sponsorship and public funding

**Science and Business Park Development**

- Private sector investment: development and investment partnership
- Surplus public sector development land assets (MoD, Local Authority)
- Institutional development land assets (Universities, Institutes and Hospital Trust)
- Recycling of existing EZ rates, CIL, and LEP single pot funding.
- Universities and research institutes technical resources and sponsorship

**Infrastructure**

- Advance infrastructure contributions (Local Authority and developers)
- CIL and options for New Homes Bonus reinvestment
- Use of Local Authority prudential borrowing/PWLB preferential rate funding
- Commercial investment in extended city fibre network linked to ultra-fast broadband
- Cross-subsidy from additional new homes development into infrastructure
- Major commercial development linked to rail station re-development and new services
- Bring forward the delivery of new homes and release surplus public sector land
- Scale up new housing delivery: private sector infrastructure investment and self-build

## Section D: Expected benefits

**D1 How do you expect your proposal to have an impact on local jobs and growth, and at what scale?**

Our vision brings together transformational growth in our knowledge economy, linked with higher skills attainment, improved inward investment, stronger infrastructure and increased housing delivery. Whilst to date **the Oxford city region has not realised its potential and scale,** it has shown the opportunity that exists as the fastest growing location in the UK for high-tech employment for services and manufacturing over the last decade. With this engine for growth our proposals build on the research and enterprise resource, remove the barriers to development and infrastructure, and will deliver further significant economic growth.

**Employment:** the Enterprise and Innovation hubs will have catalytic economic impact as high value employment and enterprise spins out of these centres, and there are wider impacts through the virtual links with established business and networks, and post-graduate and research retention. Four escalator hubs alone accommodate around 200 new businesses, plus serving a wider enterprise network, with demands for services, finance and wider research, creating a virtuous circle.

**Economic Benefits:** increased gross value added through salaries and new employment, profits, private investment and finance will grow both the regional and national economy, in both high value export and domestic markets with multiplier effects on the city region's business and service sectors. Much of the economic activity will be matched with improvements to our skills and education provision, so all our community can access opportunities for a wide range of employment. The 'knowledge spine' provides an essential platform for our universities and science institutes to engage with enterprise and for cross sector exchange across the region-a step change in policy and delivered at regional scale. Our escalator hubs will generate over a billion pounds of new investment in the hi-technology sector[13].

**Wider Social Benefits:** successful research and enterprise attracts additional public and institutional funding. Research connectivity and scale drive further knowledge benefits, such as intellectual property, healthcare improvements and an enterprise culture. Employment opportunities will be targeted at our regeneration areas. The Magnet hub in Oxford will in addition act as a UK science portal with 30,000 educational visits and 150,000 visitors pa[14].

**Development:** the expansion and development of our science and business parks provides the essential locations to retain and grow our enterprises and prestige locations for inward investment. With university and research support we can create communities and environments for growth in enterprise, employment, inward investment and knowledge capital. Supported by the global Oxford brand and strong inward investment promotion we have a compelling offer in the competitive environment of the high value knowledge sector.

**Infrastructure:** our strategic road communications are a significant constraint on business and deter investment. With certainty on investment and programmed improvements to the A40 and A34, businesses can plan, growing knowledge sector businesses will be retained and new development will be brought forward. Matched with the investment planned and committed in strategic rail infrastructure, the local economy has the national connections and links to international air services essential to support global research, development and enterprise.

[13] The Bioescaltor is forecast to deliver £275m investment alone. Draft business plan Segal Quince Wickstead 2012
[14] The Magnet Oxford business plan: Morris Hargreaves McIntyre 2012

**Section E: Governance**

**E1. Over what geographical area will you address this problem? Why?**


**Oxford City Region has a Travel to Work Area encompassing the focus of the knowledge based economy** including the major economic growth centres identified in the LEP Business Plan: Oxford, Bicester, Science Vale and the EZ (Harwell Oxford and Milton Park). The economic area links with employment areas further along the A40, such as Witney and Carterton. The region's strategic communications provide direct connections with London, Thames Valley and the Midlands.

**E2. What governance structures will ensure effective, binding and strategic decision-making across the relevant economic area?**

We recognise that a step change and **effective governance is central to the delivery of our proposals**. We have brought together the key partner organisations and business into a dedicated senior level board and organisation to deliver this programme.

| | |
|---|---|
| Oxfordshire LEP (Chair) | Oxford City Council |
| Oxfordshire Skills Board | Oxfordshire County Council |
| IOD/CBI | Cherwell District Council |
| University of Oxford | South Oxfordshire District Council |
| Oxford Brookes University | Vale of White Horse District Council |
| STFC Harwell /UKEA Culham | West Oxfordshire District Council |

The Board will be a **Joint Statutory Committee.** This is a legally constituted body with Council Leaders and co-opted senior stakeholders, and has the power **to take binding decisions** across the Local Authorities, **with full public scrutiny**. The Committee will develop formal arrangements with the LEP, business, and the universities/national research laboratories. Oxford City Council will be the Accountable Body with an independent secretariat.

**E3. How will you generate momentum in developing a workable city deal proposal?**

The City Deal Board will work closely with our LEP Board and the Local Authorities' Strategic Planning and Infrastructure Partnership (SPIP). Together, we will drive forward the implementation of our proposals and ensure that the City Deal programme is truly connected with our partnerships and focused on delivery. **The secretariat will be hosted by the universities, supported by business and partners' secondment on a project basis**. An immediate task for the secretariat is **to prepare a delivery plan,** with initial business plans already in place for two escalator hubs (The Magnet and Bio-escalator). This plan will be incorporated in individual partner's strategic plans and the LEP's wider growth strategy. The secretariat will design, develop and move forward agreements on pooled funding, the alignment of LEP funding and the preparation of joint investment programmes.

This page is intentionally left blank