The Investment Plan

Oxfordshire's Local Industrial Strategy

August 2020

HM Government

OxLEP
driving economic growth

This Investment Plan is part of a suite of documents which underpin the Oxfordshire Local Industrial Strategy including: a detailed assessment of the region's economy; an analysis of global megatrends and competing international innovation ecosystems; and the strategy document which was jointly published with the UK Government.

They are available on the OxLEP website at **www.oxfordshirelep.com/lis**

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The LIS Investment Plan: Our Guiding Principles

Invest in Oxfordshire, Deliver for the UK

As one of the three net contributors to the Exchequer, Oxfordshire will deliver economic growth, employment, supply chain growth and collaboration opportunitie for the rest of the UK.

Oxfordshire – The UK's Innovation Engine

Oxfordshire has a world-class innovation ecosystem with a concentration of global assets and strengths. We can power the development of new products and services for the UK which will transform lives for societal benefit.

Global Oxfordshire, Global Britain

Many of Oxfordshire's industries already compete on a global basis and in new emerging markets. Investing in Oxfordshire will support the UK in achieving our international potential and winning market share in the technologies of the future.

Foreword

Oxfordshire is making a major contribution to 'building back' better and levelling-up our national economy. We are making a difference to local communities and the UK, and we have the appetite and leadership to do more.

I am continually amazed by Oxfordshire's energy, its pioneering spirit of discovery and innovation, and its ability to respond to the challenges we face locally, nationally and globally.

As I write, our scientists, businesses and researchers are stepping-up to tackle some of the most difficult issues facing our nation, including the search for a vaccine to tackle the COVID-19 global pandemic, and the long-term societal challenges created by climate change. Alongside this, the vision and dynamism of our innovators and entrepreneurs is harnessing the opportunities created by exciting new transformative technologies in space applications, life sciences, connected and autonomous systems, quantum computing, and more. They are driving the next generation of businesses, products and services which will create new and long-term employment opportunities for Oxfordshire's young people and local communities, ensuring we build a resilient, clean and inclusive economy for the future.

These exciting developments will also be crucial to the country – R&D and product development in Oxfordshire are fostering supply chains, manufacturing capabilities, collaboration opportunities and job creation in every part of the UK.

Oxfordshire is making a major contribution to 'building back' better and levelling-up our national economy. We are making a difference to local communities and the UK, and we have the appetite and leadership to do more.

Against this background, the Oxfordshire Local Industrial Strategy, published jointly with the UK Government, sets out an ambitious vision for Oxfordshire to become one of the top three innovation ecosystems in the world by 2040. Since its launch last year, we have worked with our partners in industry, science and technology, local government and academia to translate the ideas and ambitions within the Strategy into a long-term programme of investment and delivery.

The result of this work, this Investment Plan, drives the Strategy forward with an integrated set of proposals to develop the physical, digital, financial and knowledge infrastructures of Oxfordshire. It is focussed on building a world-leading innovation ecosystem, which competes successfully for the UK at a global level against our rival international hubs, and creates employment and an inclusive, prosperous economy at home.

It sets out a portfolio of exciting, distinct, and transformative initiatives which are investible and ready to deliver at pace. Our proposals will create breakthrough solutions in energy and climate change, accelerate the commercialisation of pioneering research and development into dynamic new businesses, and harness emerging technologies for societal benefit. Everyone has a role to play in making this Investment Plan successful, real, and relevant – government, communities, investors, educators, entrepreneurs, innovators and more.

We invite you to join us on this exciting journey, and work with us to seize the opportunities which lie ahead of us.

Jeremy Long

Chair of the Oxfordshire
Local Enterprise Partnership

1. Introduction

The Oxfordshire Local Industrial Strategy (LIS) sets out a bold and ambitious vision for the region to be one of the top three global innovation ecosystems by 2040. Published jointly with the Government in July 2019, the LIS is a powerful and recognised statement of Oxfordshire's leadership role in the UK's economy, and the responsibility it holds in driving forward the nation's success on the global stage.

Oxfordshire's Leadership Role

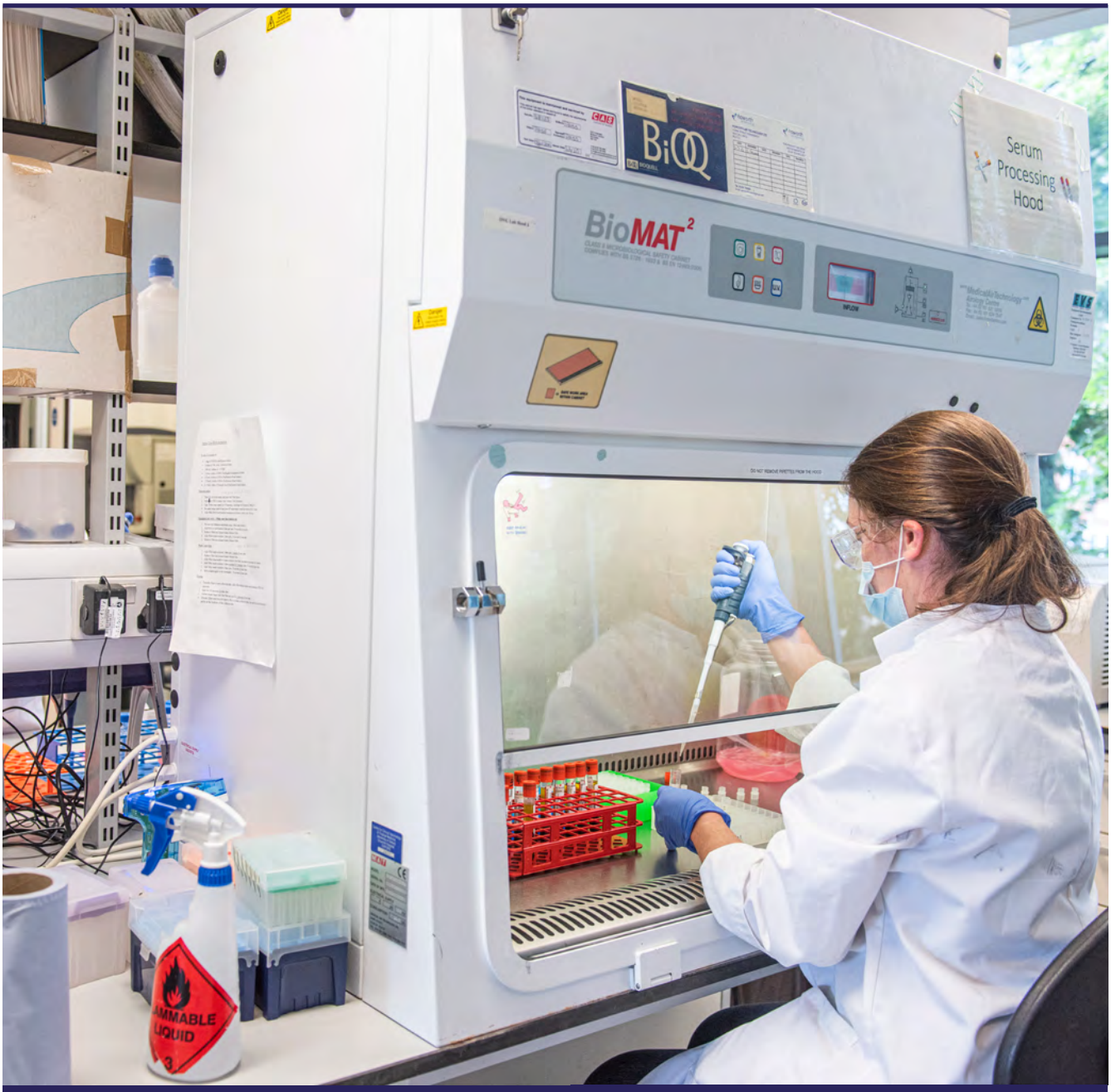
Oxfordshire is the UK's innovation engine. It is home to world-leading science and technology companies, institutes, and universities which together form a hive of knowledge-intensive activities, and anchor the area's strengths in 'breakthrough' sectors. Groundbreaking R&D is driving the creation of new, dynamic businesses hungry to grow and scale-up; cutting edge products and services are solving the challenges in healthcare, mobility, energy, data and artificial intelligence; and commercialisation of these new ideas is delivering manufacturing and supply chain opportunities across the length and breadth of our country providing a platform for levelling-up other regions.

Oxfordshire's and the UK's success are truly interdependent – each is 'mission critical' to the success of the other. That is why our place matters.

This Investment Plan

This Investment Plan uses Oxfordshire's pioneering spirit of discovery and innovation to take forward the ambitions set out in the LIS, translating its policy ideas and commitments into a transformational programme for action and delivery. Since the Strategy's publication, Oxfordshire partners from across the public, private and have academic sectors have worked together to build investment-ready business cases and taken forward exciting plans to deliver on our vision to be a world-leading innovation ecosystem. They form the basis of this document and our call for Government, businesses, and investors to join us in this bold and ambitious journey.

The Investment Plan sits alongside other critical strategies which are in development, including: the Oxfordshire Infrastructure Strategy, Oxfordshire Plan 2050 joint statutory spatial plan, the Oxfordshire Energy Strategy Delivery Plan, a new Local Skills Plan, and the emerging Oxfordshire Economic Recovery Plan. Together, these plans provide the coherence and strategic alignment between Oxfordshire's long term economic, spatial and infrastructure priorities, giving confidence to Government and investors on their deliverability and implementation.



A Pioneering Spirit of Discovery and Innovation: COVID-19 Response

Today, 85 years on from the discovery of Penicillin by Oxford scientists, Oxfordshire is again at the vanguard of human discovery. Our scientists, businesses and researchers are leading the national and international response to tackle the COVID-19 global pandemic, using pioneering approaches to vaccine discovery, diagnostics, and treatments.

This commitment and ingenuity is fostering global collaboration, new partnerships with private industry and the creation of exciting and commercial market possibilities. The response to COVID-19 demonstrates the centrality, dynamism and opportunity which the Oxfordshire Innovation Ecosystem offers to UK plc.

Importantly, this Investment Plan responds to the economic challenges which COVID-19 is creating for businesses, supply chains and the workforce, and the need to build an inclusive economy for all communities. The urgency of the climate change emergency and the need to foster clean growth are additional key imperatives that this Plan works to respond to. It will drive R&D and innovation across the region as a pioneering contributor to the Government's R&D Roadmap and the target for national spending on R&D to reach 2.4% of GDP by 2027 (and 3% thereafter), in so doing accelerating private sector investment and the creation of high value jobs.

This Plan encompasses a programme of activity for the next ten years, initially to 2030, with further longer-term projects in development for the period on to 2040.

The aggregate value of the Investment Plan, initially to 2030, exceeds £4.3bn. It includes groundbreaking projects in health and life sciences, space technologies, energy and clean growth, and connected and autonomous systems which will power UK leadership in new global markets. It will harness the dynamic potential of our science and technology innovation for the benefit of local residents to deliver sustainable development and flourishing communities; and create skills and employment pathways for Oxfordshire residents to have a prosperous stake in the future economy.

This comprehensive Investment Plan will deliver benefits across Oxfordshire, the Oxford-Cambridge Arc, and the UK as a whole. It will also deliver a world-leading innovation ecosystem which will enable the UK to compete successfully with international locations across the globe. As we set out on our journey to achieving our 2040 vision, the portfolio will provide Oxfordshire's investment agenda for the first decade of working with Government and public sector and commercial partners.

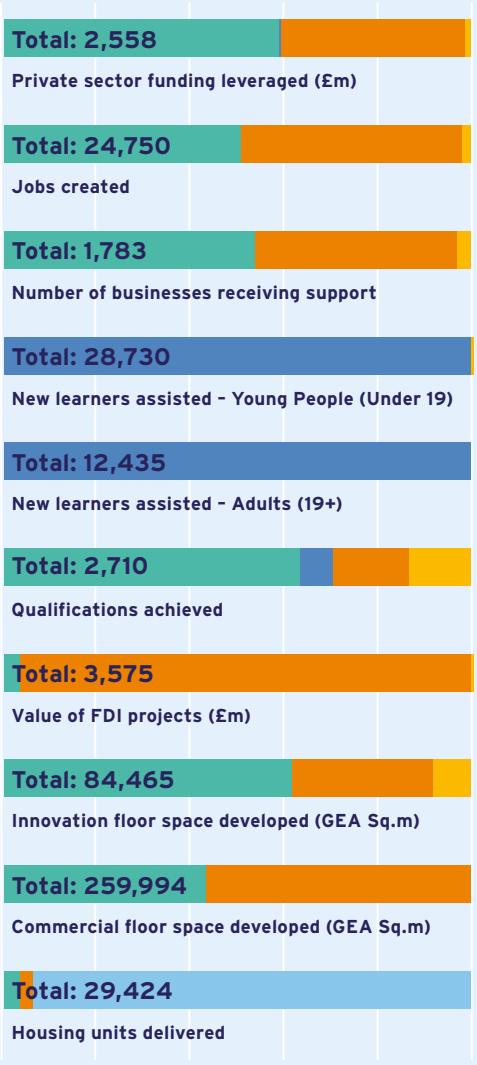
Structure of this Investment Plan

The following sections set out in more detail our proposals under this Investment Plan:

- **Section 2: The Investment Opportunity** including a description of the Oxfordshire economy, its unique assets and the potential for accelerated growth across transformative technologies, sectors, and clusters including Health and Life Sciences, Space, Connected and Autonomous Vehicles (CAV) and Clean Growth, underpinning the area's importance to the UK in terms of driving innovation, high value jobs and attracting investment (foreign and domestic), businesses, talent and private capital;
- **Section 3: The Investment Portfolio** providing an overview of the entire investment programme, including the breadth of investment-ready projects, what they will deliver and their impact, the total project cost and the level of private sector investment they will leverage. There are also summaries of those projects which are in development for later, phased delivery under the programme with the potential to be accelerated where opportunities allow. The projects are organised under the Industrial Strategy's Pillars of *Ideas, People, Business Environment, Infrastructure* and *Place*, so aligning with the published LIS strategy document. **A full compendium of the investment-ready projects, in Strategic Outline Case form, is set out as a separate, supporting document to this Plan**;
- **Section 4: Our Governance, Monitoring, and Evaluation Plan** enabling the ongoing, periodic monitoring of this Investment Plan against delivery commitments made in the Local Industrial Strategy. The Section also identifies and describes the key indicators to monitor, at individual project and overall Plan levels, as well as a framework to track our progress in achieving our ambition to be a top-three innovation ecosystem by 2040; and
- **Section 5: Ready Now to Deliver at Pace** highlighting Oxfordshire's readiness to lead and work at pace to advance our investment programme and building an ambitious working relationship with business and with government which can unlock the energy and potential of our innovation ecosystem and drive prosperity.

Figure 1.1: Oxfordshire's Investment Plan Project Portfolio, 2020-30

Delivering (2020 - 2030):



Projects:

Ideas

- ID1 The Energy Systems Accelerator
- ID2 Global Life Sciences Cluster
- ID2A Clinical Biomanufacturing Facility
- ID2B BioEscalator 2, Headington
- ID3 Harwell International Space Cluster
- ID3A Gateway to the UK Space Sector
- ID3B Disruptive Innovation in Space Centre Phase 3
- ID3C Space AI and Autonomy Lab
- ID4 Oxford - Singapore AI and Human-Machine Collaboration Institute
- ID5 Locate Oxford: Global Innovation Campus
- ID6 The Institute for Fusion Materials, Culham
- ID7 Global Quantum Computing Centre
- ID8 Oxford Science Park Quarter
- ID9 Innovation Lab, Williams Technology Campus, Grove

People

- P1 Careers Innovation Gateway
- P2 T-Level Programme
- P3 OxLIFE
- P4 Oxfordshire's Inclusive Economy Commission
- P5 RAF Brize Norton's Technology Hub
- P6 High Flyers Programme

Infrastructure

- IN Oxford City Science Area Sectors
- IN Culham Science Park
- IN Harwell Campus
- IN Living Labs Testbed
- IN LO:GIC at Begbroke Science Park

Business Environment

- B1 Internationalisation Plan
- B2 West's End Global Innovation District
- B3 Creative and Cultural Industries Hub
- B4 Facility for Industrial Scale-Up Support
- B5 The Recovery and Investment of the Visitor Economy
- B6 The Business Scale-up Programme - creating a world class scale-up community
- B7 Finance and Investment Plan
- B8 International Conference Centre
- B9 'Connecting Global' Platform
- B10 The Oxfordshire Study
- B11 Entrepreneurship Hub
- B12 Digital Investment Plan

Place

- PL1 Living Oxford (Oxfordshire's Living Labs)
- PL2 Howbery Park Centre of Excellence in Climate Change
- PL3 Culham-to-Harwell Mobility Corridor
- PL4 Global Energy-Technical Living Lab
- PL5 Milton Park Mobility and Cycle Hub
- PL6 Creative City, Heyford
- PL7 Bicester Eco Zone & Corporate HQ Hub
- PL8 West Oxfordshire Garden Village Science Park, Eynsham
- PL9 Banbury Industrial Zone

Project

Project under development

...together, delivering an additional £1.2 billion GVA annually, to the Oxfordshire economy, from 2030

Source: OxLEP, 2020

2. The Investment Opportunity

Oxfordshire is the UK's innovation engine

Groundbreaking R&D is creating cutting edge products and services that address today's and tomorrow's most pressing challenges, including COVID-19, climate change, automation, the future of work, and human-machine collaboration. These innovations are powering whole new industries and markets whilst also revolutionising existing sectors in aerospace, manufacturing, tourism and logistics to create new jobs and opportunities for supply chains and their workforce across the country.

Oxfordshire has one of the highest concentration of innovation assets in the world with universities, and science, technology and business parks at the forefront of global innovation in transformative technologies and sectors such as Fusion Technology, Autonomous Vehicles, Quantum Computing, Cryogenics, Space, Life Sciences, and Digital Health. Together, they provide a rich and economically critical network of employment, R&D and creative nodes which offer significant opportunities to scale-up, develop new products and services, so enabling the UK to compete on the international stage in new exciting markets (See Figure 2.1).

Case Study: Latent Logic and Waymo/ Alphabet – making Oxfordshire and the UK a magnet for innovators and pioneers

Oxfordshire-based Latent Logic specialises in AI 'imitation learning,' teaching machines how to act by showing them examples of humans doing the same actions. Founded in 2017, the company was acquired at the end of 2019 by Waymo, the autonomous vehicle division of Alphabet (parent company to Google).

Latent Logic's pioneering technology extracts real human behaviour from raw video data collected from traffic cameras, and trains its 'virtual humans' to behave just like real humans do using a machine learning technology called 'Imitation Learning'. The result is realistic virtual humans, providing automated vehicles with a simulated environment in which to train, making it safer to develop automated vehicles and enabling autonomous vehicle certification and eventual large-scale public launches.

Waymo, the Alphabet subsidiary, is intending to use its new base in Oxford to build a second pool of AI talent outside its headquarters in Mountain View, California. As Drago Anguelov, Waymo's Principal Scientist and Head of Research, said: '*We see an exciting opportunity in Europe, not only in continuing to build our partnerships with major automakers but also in benefitting from the world-class technology and engineering capabilities in Oxford and beyond.*'

Figure 2.1: Oxfordshire's Critical Economic Sectors, Assets, and Growth Opportunities

1 Begbroke Science Park

Key sectors: advanced engineering, medical tech

- 60+ world leading research & technology companies employing 900+ staff
- Begbroke Innovation Escalator spin out hub
- Proposed 4000 homes as part of wider A44 corridor vision to double capacity at Begbroke including new station & linking to Oxford Airport & Oxford Parkway

2 Living Labs Testbed

Undertake smart living pilots at scale using emerging technologies integrated into major housing development to tackle Grand Challenges:

- Bicester Garden Town 13000 homes(inc healthy town and EcoTown)
- Didcot Garden Town 15000 homes
- Oxfordshire Cotswolds Garden Village 2200 homes

3 Harwell Campus

Key sectors: Health Sciences (med tech, life sciences, digital health), Space Applications, Energy

- 200+ world leading research & technology companies on site employing c6,000 people
- Designated UK Space Agency gateway with UK largest space cluster of 100 growth companies
- Location of critical UK strategic assets including Diamond Light Synchrotron, Medical Research Council, Public Health England
- EZ1 development site of 93ha
- Proposed 1000 new homes as part of Harwell Innovation Village to pioneer solutions for grand challenges focused on clean growth & mobility

4 Motorsport Valley

Key sectors: advanced engineering, battery technology, high performance motorsport technologies

5 Upper Heyford Creative City

Key sectors: creative industries inc international film & tv studio complex

6 Williams Innovation & Technology Campus

Key sectors: advanced engineering inc new high-performance technology campus cluster

7 Milton Park / Didcot Garden Town

Key sectors: Life Sciences, Creative Industries

- 250+ high technology companies employing 9000+ people, encompassing leading life sciences cluster
- EZ1 package of 9 separate development sites totalling 21ha
- Adjacent to EZ2 Didcot Growth Accelerator offering grow on space across 102ha of land
- Testing of new forms of mobility via Autonomous Vehicles pilot linked to Didcot Garden Town
- International Film & TV Studios Hub anchored around Rebellion Studios development

8 Oxford City Science Area

Key sectors: Life Sciences, AI Technologies, Digital Health, Quantum Computing, Global CBD

- Oxford BioEscalator
- Old Road Campus – Jenner Institute & Medical Research Centre
- John Radcliffe, Nuffield & Churchill Hospitals Quarter
- Centre for Applied Semi-Conductivity
- Oxford Science Park
- Oxford Business Park
- Oxford North
- Oxford Station & Global Innovation District

9 Culham Science Park

Key sectors: Fusion Energy, Robotics & Autonomous Systems

- Over 2000+ world-leading scientists on site working with UK strategic assets
- Centre for Fusion Energy & Supply Chain Cluster
- Remote Applications in Challenging Environment Centre (RACE)
- 3500 homes proposed at adjacent Culham Smart Village providing testbed for new mobility solutions (linking with Harwell & Culham), digital health & smart technologies to deliver improved public service outcomes

Source: OxLEP, 2020

Figure 2.1: Continued

Source: OxLEP, 2020

Case Study: Connected and Autonomous Vehicles (CAV) – shaping the Future of Mobility

The dynamic and flourishing CAV cluster in Oxfordshire, has grown around strong collaboration and foresight between innovators, local government, academics and private industry to accelerate a new approach to mobility and human communications. The supportive environment fostered by Oxfordshire County Council, allied to the convening power of future thinking organisations such as Living Oxford and MoBox, testing capability at RACE in Culham Science Park and global research strengths of the University of Oxford and Oxford Brookes University has attracted investment and partnerships with technology developers such as Arrival, Dyniym, FiveAI, Oxbotica and StreetDrone along with related capabilities in fields such as cyber security (Nominet, Sophos, Chilton Computing) and simulation (Waymo) to advance new commercialised solutions in autonomous vehicles and reshaping how we travel.

This cluster sits at the heart of a network of major projects and industry collaborations across the UK taking forward pioneering advances in mobility such as:

- The **MCTEE** (Millbrook-Culham Test and Evaluation Environment) project, which confirmed RACE as a key element within the UK CAV testing ecosystem, at the hub of a network of test sites in Bedfordshire, London, West Midlands, Warwickshire and Cambridgeshire.
- **DRIVEN** (led by Oxbotica) in which a fleet of CAVs performed a pioneering an end-to-end journey from Oxford to London. The project strengthened

collaborations between the CAV cluster and multinationals such as Axa XL and Telefonica, and UK entities such as Cicero Group, Transport for London, TRL, and the Catapult network.

- **MULTICAV**, an Oxfordshire County Council initiative and the first ever CAV demonstrator led by a public transport provider (First Group), involving work with MEPC, Nova Modus, UWE, and Zipabout.
- **OMNICAV** was initiated in Oxfordshire and brings together Admiral Insurance, Aimsun (part of Siemens), Alchera, Arcadis, Ordnance Survey, XPI Simulation (part of Thales), Thatcham Research, and Warwick Manufacturing Group to develop real world validated simulation testing and certification of autonomous vehicles in the UK.
- **PAVE** (People in Autonomous Vehicles in Urban Environments) programme involved a groundbreaking collaboration involving Amey, Arup, Bosch, WS Atkins, Siemens and Westbourne Communications which confirmed the position of the Culham Science Park as a pre-eminent location for the testing of UK CAV programmes.

The diversity, depth and integration of Oxfordshire's sectors powers a resilient economy, with the proven ability to commercialise ideas and channel these to drive new opportunities for growth and employment . With a dynamic and flourishing business base, we continue to be one of the UK's key economies and are a net contributor to the UK Exchequer, (Figure 2.2). A high proportion of our companies are technology-based businesses at the forefront of global innovation, with the potential to give market leadership to the UK in new and emerging sectors.

Figure 2.2: Key components of Oxfordshire's economy at a glance

50,000
new jobs created since 2011/12

£23bn
GVA generated in real terms each year

51%
of the working age population qualified to degree level or above

3.9%
GVA growth in nominal term year-on-year since 2006

#1
Oxford University ranked number globally

1 of 3
County areas which are net contributors to the UK exchequer

£600m
largest fund for university spinouts in Europe: Oxford Sciences Innovation

$1bn
track record of growing businesses with market value of over US$1bn

Source: OxLEP, 2020

Case Study: Oxis Energy Ltd – Oxfordshire R&D driving UK and International Energy Manufacturing and Supply Chain Growth

Oxis Energy is an R&D intensive Oxfordshire based business located on the Culham Science Park and pioneering next generation battery technology. Culham is home to the original Lithium-Ion battery technology, and where they were first developed and prototyped.

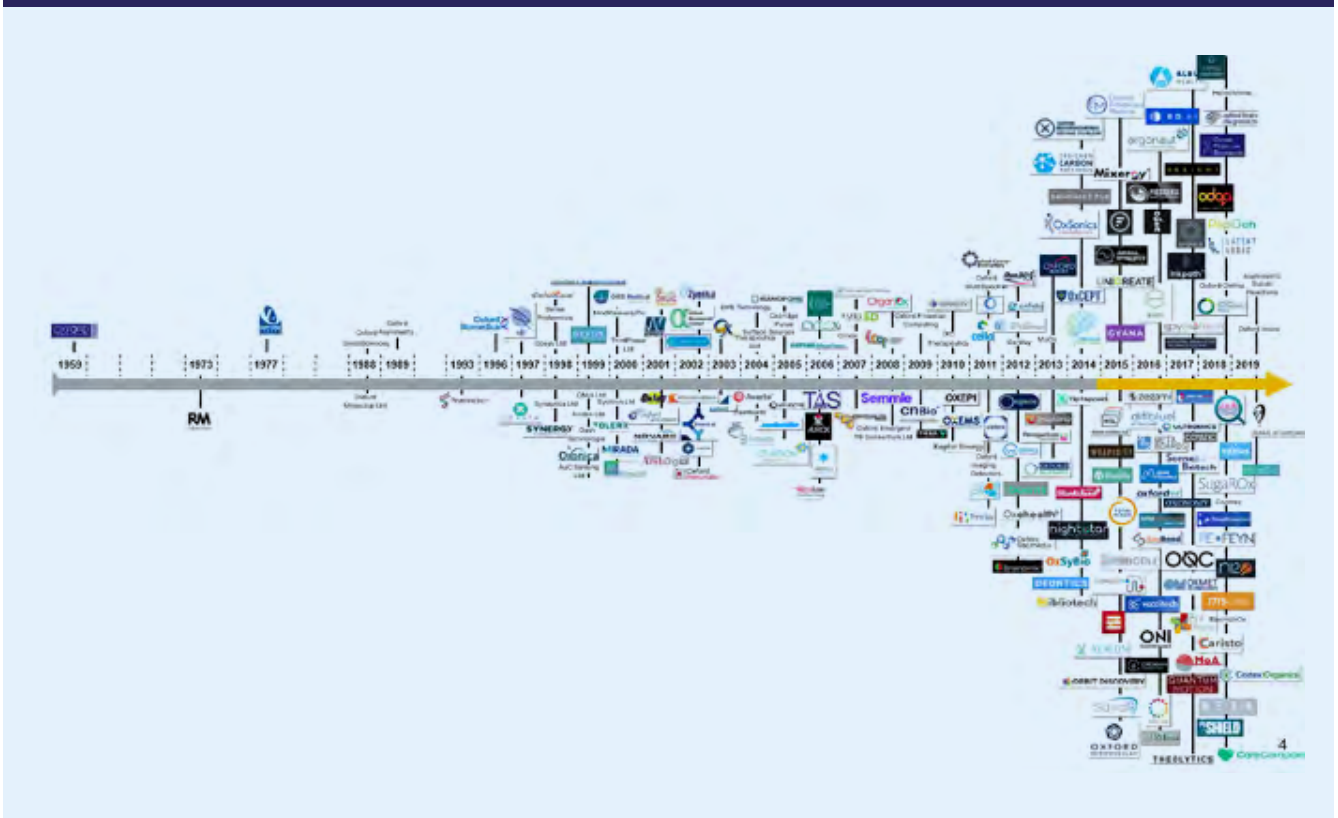
Building on this heritage, Oxis focuses on the development of world-leading Li-S chemistry that can be used in many battery applications. The unique technology (41 patent families with 198 patents granted and 110 pending) is based on sulphur-based cathode materials, highly stable electrolyte systems, and anodes made of Lithium metal and intercalation materials. Oxis has well equipped laboratories at Culham, with state-of-the-art equipment and large dry room facilities, providing the vital R&D infrastructure to innovate new products and designs.

To drive its growth, Oxis is establishing a manufacturing plant in Port Talbot, South Wales, to produce component parts for batteries to power buses and trucks, as well as drones and submarines. The company plans to export to Brazil to make rechargeable lithium sulphur batteries, using the new Welsh plant to accelerate production, create several hundred new jobs over the next decade, and contribute to a highly skilled local workforce.

Allied to this is Oxfordshire's ability to combine and commercialise its research strengths with the highest intensity of university spin-out companies in the country. The University of Oxford continues to generate more spin-outs than any other University in the UK – there are currently over 150 active start-ups and spin-outs focused in a number of pioneering technologies and sectors, with the ambition to harness the wider innovation ecosystem to deepen commercialisation of R&D and significantly accelerate the production of new businesses in coming years (see Figure 2.3).

The potential of each firm for rapid and exponential growth, coupled with Oxfordshire's ability to generate 'unicorn' firms such as Oxford Nanopore Technologies Ltd (businesses achieving a market valuation of US$1bn), provides the foundation for accelerated scaling-up of the innovation ecosystem to compete at globally, the creation of significant employment and attraction of investment into the UK, and supporting demonstrably the objectives of the UK's recently-released R&D Roadmap.

Figure 2.3: Oxford University's history of spinouts



Source: OxLEP, 2020

Case Study: Harwell Space Cluster – attracting international opportunities for the UK

The Harwell Space Cluster at Harwell Science and Innovation Campus is home to the largest space cluster in Europe with over 100 space organisations located onsite and also encompassing major assets of national and international significance including STFC-RAL Space, the European Space Agency, the Satellite Applications Catapult and the new National Satellite Testing Facility expected to be operational in 2021. Building on these assets and working with the UK Space Agency, has established Harwell Space Cluster as the prime gateway into the UK space sector.

Companies within the cluster range from start-ups through early stage companies commercialising new technology and applications, to multinationals, such as Airbus and Lockheed Martin, keen to engage with the innovation taking place across campus and also collaborate with other leading Health and Energy clusters located across the site.

This world-leading hub for innovation acts as a showcase for inward investors to the UK to understand the latest developments in technology and applications across the space sector and the opportunities it offers to grow pioneering businesses and drive exports. For example, Spanish start-up, Open Cosmos, established its business at Harwell in 2016 with help from the European Space Agency Business Incubation Centre and now employs 70 people, utilising STFC testing facilities and the Satellite Applications Catapult Disruptive Innovation for Space Centre.

Similarly, Orbital Micro Systems (OMS) decided the UK was the best place to establish its business in 2017 and was attracted to the unique ecosystem at Harwell Campus. Using the connections through the cluster, OMS identified the academic capabilities that it needed to develop its business and has subsequently established a presence in Edinburgh, highlighting the wider impact of the cluster to the UK. As William Hosack, CEO of OMS said 'we could have gone anywhere, but for us the UK is the centre of gravity.'

The Local Industrial Strategy, published jointly with Government, sets out Oxfordshire's vision to become one of the top three global innovation ecosystems by 2040. It recognises the challenge posed by competitor innovation hubs in North America, the Far East, and Europe and identifies the ingredients that make successful innovation ecosystems: a flourishing environment for innovation and business creation; world-leading experts in knowledge and technology development; and a dynamic, agile, and skilled workforce. It is clear that Oxfordshire has many of these attributes, with the potential to go further and faster by developing and strengthening its world-leading capabilities and nurturing emerging opportunities and innovation.

This ambitious Investment Plan will see Oxfordshire prioritise investment in these key drivers to propel the region into the leading group of global innovation ecosystems, focusing on today's solutions and tomorrow's technologies, scaling up our leading assets and business infrastructure, build on the area's international presence to secure further FDI into the UK, and deliver transformative growth for its local communities which is clean, sustainable and inclusive.

The Investment Plan provides investors, business leaders and Government with a clear and ambitious roadmap for delivery for Oxfordshire over the coming decade and its centrality to the success of the UK economy. It gives the confidence needed to plan and invest, and see the opportunities they have across the region to work with Oxfordshire partners to achieve lasting impact and return on investment. Over the coming sections, we set out in more detail each of the activities underpinning this Plan and the investment potential they will deliver.

Case Study: Penlon – leading the UK industry's response to the COVID-19 Ventilator Challenge

At the onset of the COVID-19 pandemic in mid-March, the Prime Minister invited industrial, technology and engineering businesses from across the UK's Aerospace, Automotive and Medical Sectors under its Ventilator Challenge to step forward with innovative plans to design and quickly manufacture thousands of ventilators to meet anticipated hospital demand.

One of the companies to heed the call was Abingdon-based Penlon, a medical device company established in 1943, with extensive experience primarily in the development and manufacture of Anaesthesia products, including a historical collaboration with Oxford's Nuffield Department of Anaesthesia.

Inspired by the PM's challenge and recognising the urgent national need, Penlon assembled a 'Proof of Concept' for a Minimum Viable product by re-engineering their existing anaesthesia ventilator platform. This device was approved for development within four days by a team of experts drawn from the MHRA, UK Cabinet Office, the NHS, and product engineering specialists.

Penlon had the first working prototype of its 'ESO2' ventilator ready three days later and, following testing and review, secured the formal go-ahead to proceed to full manufacture on 29th March.

Thanks to a dedicated and skilled Oxfordshire workforce, a process that might have taken years had been shortened to just two weeks. Together with consortium partners Ford and McLaren, the company was able to scale-up to 24/7 production and the sourcing of over 470 separate parts from around the world. Penlon recruited over 400 skilled people, manufacturing 20 year's worth of devices in just 12 weeks.

With ventilators now being shipped around the world, including a large consignment to Bangladesh. Guru Krishnamoorthy, Chief Executive of Penlon, attributes the company's ability to meet the challenge to the unique Oxford ecosystem. 'There is energy in Oxford – you only need to walk around the city to get a sense of it. For us, it is a dream location, people from around the world want to come here to study and work.

3. The Investment Programme

This Investment Plan sets out a transformational portfolio of integrated initiatives, aimed at powering Oxfordshire to be a top three global innovation ecosystem. With a total programme value (to 2030) of over £4.3bn[1], the Plan includes a public sector investment ask of £1.1bn which, in turn, will lever almost £2.6bn of private sector funding into its projects alongside committed public sector infrastructure funding of £0.7bn.

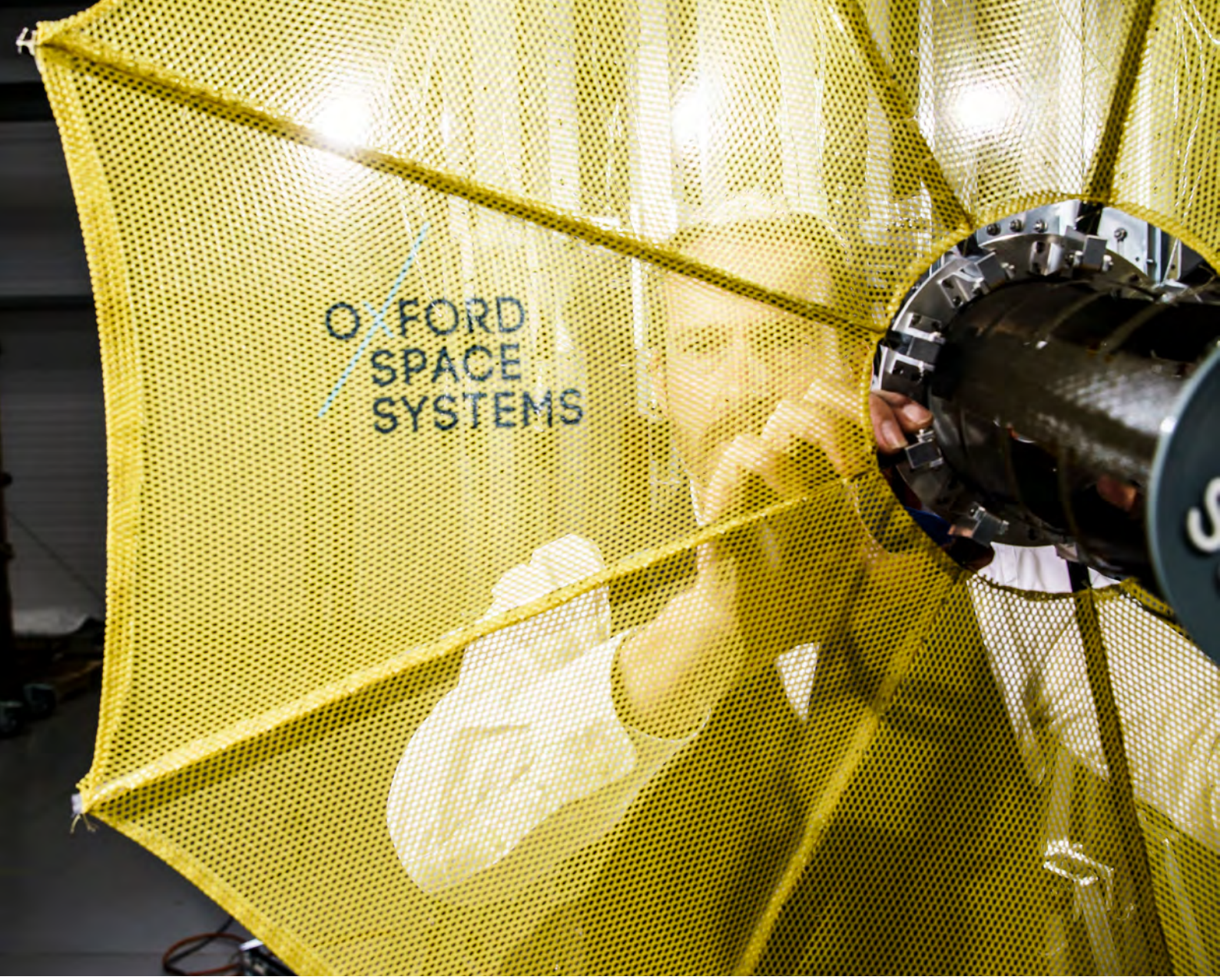
Introduction

The portfolio comprises twenty investment-ready projects, in addition to proposed projects under the Infrastructure Pillar, with an initial delivery horizon to 2030. This portfolio is underpinned with a further nineteen proposals of equal importance which are at development stage, and planned for later phased delivery with the potential for acceleration where opportunity allows. In summation, the portfolio will secure Oxfordshire's position on the international stage in breakthrough technologies, accelerate the commercialisation of pioneering research and ideas into new products and services, and catalyse significant private sector investment in R&D and wider commercial activity. Clean, sustainable, and inclusive economic growth are our long term outcomes.

By 2030, the portfolio will deliver at least 24,500 new jobs (gross full-time equivalents), 344,400m² of new commercial and innovation floorspace, 29,400 new homes[2], 2,700 qualifications (NVQ4+ and Apprenticeships), and support for over 41,000 adult and young learners. Delivering the projects will collectively lever over £2.6bn in domestic and foreign private sector investment. More widely, the portfolio will secure a total of £3.6bn of Foreign Direct Investment, and produce GVA of £1.2 bn/year from 2030 (based on average GVA per £52,300 job)[1].

[1] This Plan's total investment is initially for the period to 2030, with further projects in development for the period between 2030 to 2040

[2] Part of the committed new homes to be delivered by 2031 as agreed in the Oxfordshire Housing and Growth Deal and which are recognised in Local Plans



The Investment Plan will enable innovative companies and researchers in sectors and technologies such as Health and Life Sciences, Space, Clean Growth and Energy Systems to tackle today's challenges and future priorities, ranging from COVID-19 to climate change and mobility. It will advance new technologies in AI and Quantum Computing, which underpin innovation across all sectors, and which will revolutionise the delivery of public services and outcomes for local people and consumers. Additionally, it will deliver on the ambitions within the LIS to make a step-change in available innovation and commercial floorspace across the County with new innovation districts, R&D Hubs and science campuses to meet the demand from growing businesses, spin-out companies and investors keen to remain or locate within Oxfordshire.

The Plan's portfolio also includes key initiatives focused on maximising the opportunities for the UK to lead in international trade and investment in technologies and markets, with projects to attract international R&D business investment and venture capital, and to extend manufacturing and supply chains linkages, once landed, across the UK.

Crucially, the Investment Plan emphasises the vital importance of investing in skills, talent and people to deliver on our

commitment to an inclusive economy. Our goal will be to ensure that Oxfordshire's workforce and its young people are supported to build and develop the skills needed to access the new employment opportunities being created and ensure they have a prosperous stake in the future economy. The Investment Plan maximises the engagement of Oxfordshire's businesses, innovators and entrepreneurs within the skills and education system under a new '*Social Contract*' to inspire and invest in the next generation connecting them to mentors, business coaches and influencers across the innovation ecosystem to develop new ideas and access exciting career pathways.

This Investment Plan has a 20-year time horizon for realising our ambition for Oxfordshire to be one of the world's 'top three innovation ecosystems by 2040'. The portfolio encompasses projects which vary in length and delivery time in order to achieve their objectives and outcomes, recognising the runways needed to deliver key development or regeneration schemes. Others aim to provide early and critical momentum to accelerate business growth or building new education, training and skills interventions for Oxfordshire's young people and workforce.

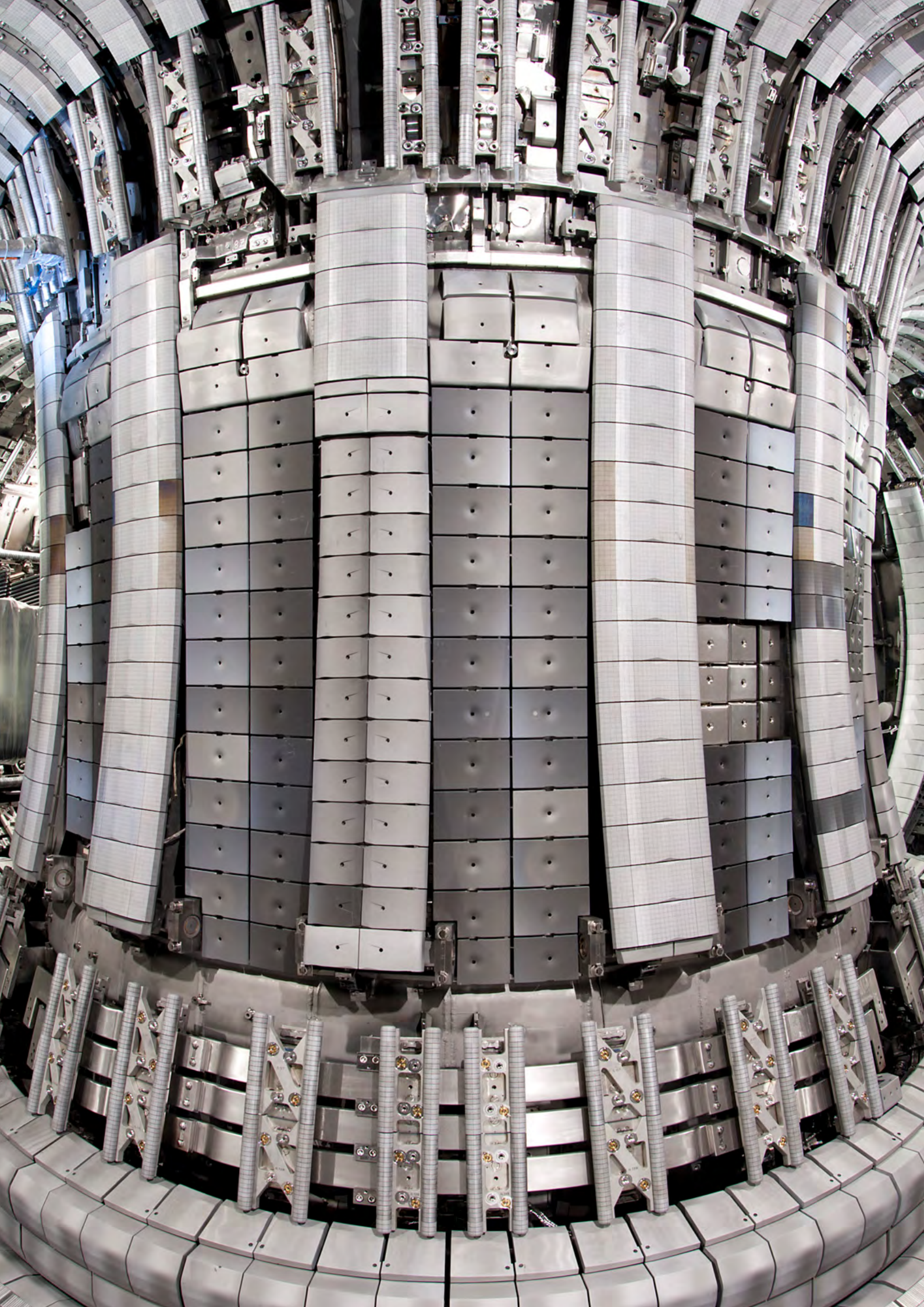
The portfolio, therefore, focuses in the main, on what we will do for the first 10 years of our journey, from 2020 through 2030. We will be reviewing and evaluating performance regularly to make sure our project interventions remain aligned with the context, rationale, and objectives of our 2040 journey and preparing the groundwork for the later phase of activity between 2030 and 2040. This is set out in Section 4 of this document '*Our Governance, Monitoring & Evaluation Plan*'.

Presenting the Project Portfolio

Oxfordshire's Local Industrial Strategy is built around the five pillars of Ideas, People, Business Environment, Infrastructure, and Place; this Investment Plan follows this same structure.

Oxfordshire's approach under each pillar is distinctive, designed to leverage the region's unique strengths and assets, and ensure ongoing scientific, technological, and economic leadership for the UK. Specifically:

- **The Ideas Pillar** projects will deliver clinical biomanufacturing facilities, accelerators and support for start-ups/ scale-ups in Life Sciences and Space; critical research, innovation and corporate premises; and nation-to-nation R&D collaborations on AI and Robotics, among others. Projects under development will deliver breakthrough solutions and commercial opportunities in fusion, quantum computing, automotive, and advanced manufacturing;
- **The People Pillar** projects are organised under Oxfordshire's '*Social Contract*', an innovative programme (with relevance for other areas of the UK) anchored in 'levelling-up' economic engagement and career opportunities and building an inclusive economy. Investment-ready projects here will establish a new delivery model to engage employers with schools, Apprenticeship and T-Level initiatives and support existing workers in the labour market to retrain, adapt and flex to changing skills demands and market needs and connect to employment in the future economy. Projects under development also include an *Inclusive Economy Commission* which will aim to increase the number of businesses committing to the Oxford Living Wage; a *High Flyers Programme* supporting women and BAME researchers and entrepreneurs



to translate ideas into new business opportunities; and support for military personnel at RAF Brize Norton to harness their highly developed skills for careers within the innovation ecosystem as they transition to civilian life;

- **The Business Environment Pillar** projects address the 'engine room' of the innovation ecosystem including financing, international reach, scale-up support, and physical premises essential to success. Investment-ready projects include a collaborative project with The Department of International Trade (a pilot for the Oxford-Cambridge Arc) to expand the County's global brand, trade and investment opportunities; a flagship *Global Innovation District* alongside the national rail hub at Oxford Station; a state of the art building for Oxfordshire's dynamic Cultural and Creative Industries; and a flagship facility to support and drive the growth of scale-up companies across the ecosystem. Under development for later phased delivery are projects to expand capacity for entrepreneurship activity across the region as part of a wider plan to deepen business creation; diversify the range and breadth of financing and investment available within the innovation ecosystem; and increasing collaboration and connectivity with other global innovation ecosystems to raise the profile of Oxfordshire as a location for talent, investment and ideas;
- **The Infrastructure Pillar** proposals set out the 'enabling projects' which will provide the connectivity between the innovation ecosystem encompassing road, train and mobility schemes. These initiatives are integral to the delivery of the Investment Plan and are being advanced under the *Oxfordshire Infrastructure Strategy* and taken forward by the Oxfordshire Growth Board and Oxfordshire County Council. Investment-ready infrastructure projects include strategic rail service enhancements, new rapid transit corridors, healthy active travel schemes and green infrastructure corridors which will provide the basis for a zero carbon, connected innovation ecosystem; and
- **The Place Pillar** projects provide the 'connective tissue' across the ecosystem which includes new locations and hubs for employment as part of wider place planning and the development of new settlements within Oxfordshire. They will also form the network of 'living labs' to test next-generation technologies and their applications in real time as part of bringing forward innovation in contemporary living and design. The investment-ready Place projects include pan-*Oxfordshire Living Labs* projects, a new climate change centre of excellence and an autonomous vehicle mobility shuttle connecting world-leading science parks in the south of the County to aid greater collaboration and connectivity. Under development for later, phased delivery are major new commercial centres that extend Oxfordshire's and the UK's offer into the creative sector and clean growth and a new science park as part of the West Oxfordshire Garden Village development at Eynsham.

For ease of reference, each Pillar over the following pages is prefaced with an overview of the investment-ready projects, a summary of outputs, the total projects cost, and the public sector 'investment ask.' They are followed by a precis of those projects which are under development and planned for in later, phased delivery under the programme but are of equal importance and have the potential to be accelerated where opportunity allows.

The Ideas Pillar

The eight developed projects within the 'Ideas' Pillar will be largely delivered to an overall time horizon to 2030, with individual initiatives working to specific start and end dates to meet their objectives.

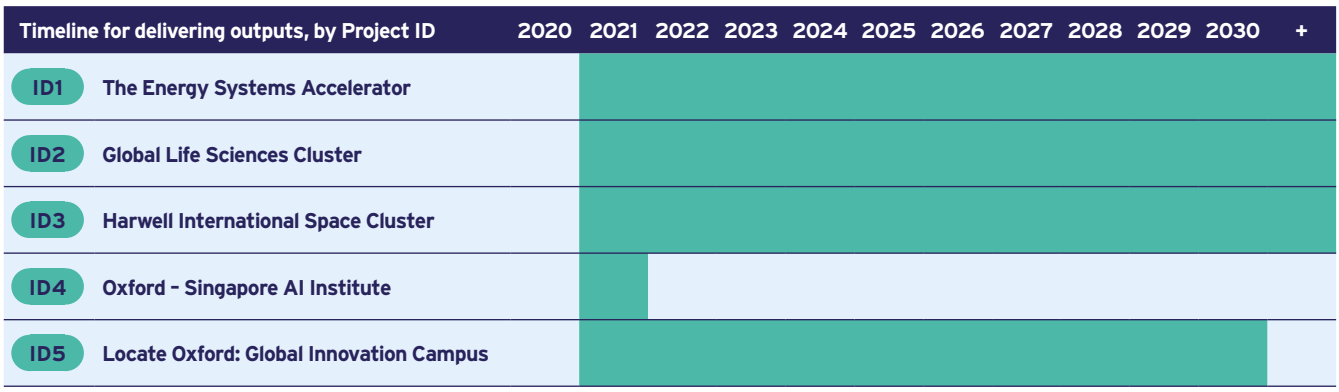
On this basis, the minimum headline outputs anticipated under this Pillar will comprise:

- Total value: £1.9bn;
- Public Sector Ask: £390m;
- Lever £1.5bn of private investment (public:private leverage ratio of 1:5);
- Create 12,500 jobs (and a further 2,600 jobs by 2040);
- Deliver 53,500m2 of innovation floorspace (and a further 5,000m2 by 2040);
- £330m public sector capital investment in new, high quality R&D floorspace;
- Support 950 innovation businesses (and support a further 375 businesses by 2040);
- Enable and support the delivery of 1,000 housing units in line with agreed Local Plans and the Oxfordshire Housing and Growth Deal included within the new homes target for the County set for 2031 (with a further 1,000 houses to be delivered by 2040);
- Attract £128m in Foreign Direct Investment (and an additional £103m by 2040); and
- Generate over 1,700 qualifications through apprenticeships and other professional qualifications (followed by 1,400 further qualifications by 2040).

Oxfordshire has a reputation as a global centre for innovation, with thriving start-ups, scale-ups and R&D groups focussed on current and future challenges. However, Oxfordshire's ability to accommodate rising business and investor demand requires investment to add premises, accelerators, programmes and support structures in order to compete with rival innovation ecosystems on the global stage.

The investment-ready projects under this pillar deliver new world-leading clinical biomanufacturing facilities, accelerators and support for start-ups/scale-ups in life sciences and space, critical research, innovation and corporate premises, and nation-to-nation R&D collaboration on AI and Robotics, among others. These initiatives will generate opportunities for further employment across the UK, as technologies and expertise are dispersed and adopted throughout the national economy.

Projects under development will deliver breakthrough solutions and commercial opportunities in Fusion, Quantum Computing, Automotive, and Advanced Manufacturing technologies and sectors.



Developed Projects

ID1 The Energy Systems Accelerator (TESA)

The Energy Systems Accelerator (TESA) project creates a pioneering hub to bring together leading academics, innovators, industry R&D teams and public service providers across the region into a dedicated facility to collaborate, innovate, develop and scale-up new net zero carbon system products, solutions and services. It will uniquely operate across energy vectors (electricity, mobility, heat and gases), supply chains and technology development cycles. This will provide a powerful cluster of world-leading expertise which will showcase Oxfordshire's leadership in clean growth and drive inward investment into the country, whilst underpinning the UK's energy transition, creating new innovative companies and jobs in the zero-carbon sector.

The project features the development of the 10,000m2, purpose-built, net carbon negative hub within the proposed Global Innovation District in central Oxford providing an inspiring setting to house this critical mass of diverse specialists. It will be equipped with research laboratories, offices, teaching and knowledge-sharing spaces.

Total Project Cost = £172 million

Total Public Sector Funding Requirement = £96 million

Enabling... a global hub for knowledge sharing and collaboration in net zero carbon energy systems, positioning Oxfordshire and the UK as a global leader in net zero carbon energy systems, through stimulating and trialling cross-disciplinary innovation at scale. In 2030, TESA will have delivered an increase of 12,450 new ongoing jobs: 3,450 in Oxfordshire and 9,000 in the rest of the UK.

ID2 Global Health & Life Sciences Cluster

The Global Health & Life Sciences Cluster programme is a package of two projects located in the heart of the Headington area of East Oxford comprising the University of Oxford's Old Road Campus, Oxford University Hospitals Trust and pioneering research hubs such as the Jenner Institute. It will deliver a world-leading Clinical Biomanufacturing Facility and the expansion of a new BioEscalator incubator for spin-out and R&D business collaborations such as with Novo Nordisk, building on the successful facility developed under the Life Sciences Sector Deal.

ID2A *Clinical Biomanufacturing Facility (CBF)*

Oxfordshire leads the UK in development of many new vaccines and immunotherapies. The current CBF located at the University of Oxford is no longer capable of meeting the significant demand for services which far outstrips capacity for Good Manufacturing Practice (GMP) standard manufacture facilities, resulting presently in the outsourcing of manufacturing abroad adding cost and time to processes.

The recent COVID-19 outbreak has highlighted the need for national manufacturing facilities. CBF has risen to this challenge but, due to its limited scale, that response has been at the expense of all other manufacturing projects that use the facility at this time, impacting on important research and clinical trials work. This project will expand the CBF to create a facility which can support SMEs in performing small scale manufacture of innovative experimental medicines and vaccines and provide much needed UK biomanufacturing capacity, allied to the world-leading life sciences capability within the cluster at Headington.

Total Project Cost = £16 million

Total Public Sector Funding Requirement = £14.4 million

Enabling... the construction of a 500m^2 extension to the CBF to: create two new GMP suites; refurbish the existing 20-year old facility; engage other project partners to develop manufacturing processes for novel immunotherapies including personalised cancer vaccines; and to create a local centre of excellence in this therapeutic area.

ID2B *BioEscalator 2, Headington, Oxford*

A central component of the Global Health and Life Sciences Cluster development is BioEscalator 2, which builds on the success of the existing accelerator, which was a key component of the Oxford & Oxfordshire City Deal. BioEscalator 2 will provide expansion space for spin-outs and SMEs in order to further support medical science start-ups in Oxfordshire, in alignment with the Life Sciences Sector Deal.

University-owned land, now being prepared, will be available for BioEscalator 2 by 2023/4. To support the ecosystem in the near-term and maintain momentum, the first part of this project will be to build a 2,500m2 BioEscalator extension to the current facility to accommodate significant demand for innovation and lab space from pioneering life sciences companies and researchers.

Total Project Cost = £70 million

Total Public Sector Funding Requirement = £32.18 million

Enabling... larger, longer-term space for more early-stage medical science companies and pharma collaborators, the strengthening of medical science research and innovation in Oxfordshire, and the attraction of additional companies into the wider Oxfordshire ecosystem whilst delivering an estimate of 300 jobs at any one time.

ID3 Harwell International Space Cluster

As a globally recognised hub, the Harwell International Space Cluster attracts investment, supports exports, and drives innovation across the satellite industry. Following strong growth over the last five years, the hub comprises 105 organisations which collectively employ over 1,100 space professionals, making it the most concentrated group of space companies in Europe.

The *International Space Cluster* programme is a package of three projects that will expand the Harwell Space Cluster into one of the world's leading locations for space technologies and downstream services.

The projects will enable a Space Gateway to engage industry, a disruptive innovation and scale-up facility (DISC), and a groundbreaking research and translation capability (Space AI and Autonomy Lab).

ID3A *Gateway to the UK Space Sector*

The *'Gateway to the UK Space Sector'* proposal will enable the Cluster to build on its strong platform to increase exports, attract inward investors, and help global challenge holders find innovative solutions. The flagship building will be a compelling front door through which innovators, investors and global businesses can connect to the whole of the UK space sector. This will enable the Cluster to support the Government's levelling-up agenda and help the UK space sector to reach its target of 10% of the global space sector by 2030.

Total Project Cost = £80 million

Total Public Sector Funding Requirement = £60 million

Enabling... a new 15,300m^2 Space Gateway complex including User Centred Design Lab, Business Launch Pad, Space Showcase, operations centre, skills and training centre, Support Hub as well as flexible lab and office accommodation for space related SMEs (700 people) and Catapult/public bodies (350 people). This will create over 500 new jobs by 2030, support over £10m of export opportunities and £15m of inward investment projects.

ID3B *Disruptive Innovation in Space Centre (DISC) Phase 3*

Disruptive Innovation in Space Centre (DISC) Phase 3 builds on the success of the existing DISC by providing industry with open access to specialist facilities and equipment in precision, high-skilled manufacturing solutions that speeds-up prototyping, collaboration and innovation, and removes barriers to entry. Phase 3 builds a larger (3,500 sqm) centre, with dedicated 'upstream' assets (rockets, satellites) and 'downstream' applications (in Health, Energy, Transport, Agri-Tech and Maritime) facilities. It will provide a blueprint for other regions to emulate, enabling the creation of national end-to-end Space sector capability.

Total Project Cost = £22.5 million

Total Public Sector Funding Requirement = £15 million

Enabling... 615 jobs, overcoming barriers companies face in concept-to-prototype development, skills and networking opportunities.

ID3C *Space AI and Autonomy Lab (SAILAB)*

The *Space Artificial Intelligence and Autonomy Lab* (SAILAB) will transform the satellite value chain from operations in space, including enhanced data acquisition, processing and in-orbit satellite servicing, through to provision of decision intelligence to customers across a wide range of sectors on earth such as Agri-forestry and financial services. The University of Oxford, a world-leader in AI and autonomy, working in partnership with the Satellite Applications Catapult, is taking a mission-led approach to developing, translating and deploying solutions, working with companies from the Harwell Space Cluster and catalysing growth across the UK. It will draw on co-investment from tech companies and will work closely with UK and European Space Agencies.

Total Project Cost = £120 million

Total Public Sector Funding Requirement = £50 million

Enabling... new technologies and platforms (hardware and software) to deploy in space and downstream systems, supported by patents and businesses established by a new generation of space entrepreneurs and technical leaders, with £610m investment into UK businesses and £650m projected GVA increase with 350 new jobs created and 25 spin-out companies.

ID4 Oxford – Singapore AI and Human-Machine Collaboration Institute

A joint UK-Singapore industry-academic hub to accelerate development and commercialisation of AI and machine learning technologies. The *Singapore Human-Machine Collaboration Initiative* (HMC) is a collaboration of the University of Oxford and the Singapore Agency for Science, Technology and Research (A*STAR) and the Singapore Infocomm Media Development Authority (IMDA).

The project revolutionises the approach to world-leading research, education, innovation and commercialisation in AI and robotics. The Institute provides a digital innovation centre to serve as the platform for large-scale, international research-innovation-venture collaborations, and engages leading tech corporations and local SMEs to produce c. 50 proof of concepts, leading to increases in the commercialisation of ideas and the number of spin-outs in AI and machine learning across the UK.

Total Project Cost = £35 million

Total Public Sector Funding Requirement = £7 million

Enabling... 200 SMEs to benefit from the digital platform and creation of advanced solutions in AI and robotics, and a new generation of highly trained people working in high-value, transformational AI and human-machine collaboration technologies.

ID5 Locate Oxford: Global Innovation Campus (LO:GIC)

LO:GIC is the largest development in the University's 900-year history – a £2bn programme to deliver a 400-acre innovation district as part of the expansion of the Begbroke science campus, north of Oxford, providing housing alongside academic and commercial R&D space for University departments, spin-outs, SMEs and international corporates – all collaborating to address the most pressing technology challenges of the modern era. The programme will be majority private sector funded.

Globally significant, *LO:GIC* will co-locate University engineering, physical and life sciences research directly with industry to develop new technologies and companies, with resultant societal and economic benefit; integrated with a new residential community including key worker housing and schools, all connected locally, nationally and internationally. The ambition is to deliver by 2032 an exemplar innovation campus for the UK competing with the best globally.

Total Project Cost = £1.25 billion

Total Public Sector Funding Requirement = £90 million

Enabling... 8,600 jobs in start-ups, commercial and academic R&D; 2,000 dwellings (50% affordable) to address Oxfordshire's significant housing needs; 185,000m^2 of new academic and commercial R&D space – a launchpad for Oxford knowledge and innovation to support the manufacturing bases in the midlands and north and connecting with the emerging Oxford-Cambridge Arc.

Projects Under Development

A pipeline of further projects under the Ideas Pillar are being developed for later, phased delivery. These will build on Oxfordshire's globally leading assets and sector specialisms as well as investing to expand the capacity of existing science and technology hubs to meet the demand from across the innovation ecosystem.

ID6 The Institute for Fusion Materials, Culham

This project will be a partnership between leading fusion scientists at the University of Oxford, UKAEA, fusion companies, and the wider UK academic community. It will create a national centre of excellence (*Institute of Fusion Materials* – IFM) to design, prepare, characterise and, eventually, to help validate the advanced materials which will be needed for the harnessing of fusion energy, and so address future global demand for clean, safe and reliable energy.

UKAEA (at Culham Science Park) has recently embarked on Tranche-1 of the 'STEP' programme to build the first energy producing fusion reactor. A central technical risk for fusion energy is that the uniquely hostile environment of the reactor can restrict the performance, and lifetime, of key components, and so have a severe effect on future reactor reliability. *IFM* will establish the capabilities to build the scientific understanding of these effects to mitigate materials-related issues and provide the design teams with evidence-based materials solutions, providing the basis for translational research with pioneering companies within the fusion supply chain.

ID7 Global Quantum Computing Centre

This project aims to cement Oxfordshire as the UK's hub for Quantum Computing, and create a thriving ecosystem through strengthening existing links in the field between leading academics and innovators and establishing new interventions to support further advancement of opportunities for greater collaboration, commercialisation of advanced research activity and market development based on quantum technology. It will involve the creation of three 'quantum innovation nodes' (QuINs) for, targeted investment in *Entrepreneurship, Skills* and *Innovation*.

The *Entrepreneurship Node* will link more than 200 quantum researchers at the University of Oxford with those in other sectors such as Space, Healthcare, Energy, Ai, Big-Data, and wider industry and funders, to exploit the world-class ideas that this will generate. The *Skills Node* will develop facilities to train the quantum engineers, apprentices and technicians required, as well as helping to enable start-ups through access to equipment. Complementing this, the *Innovation Node* will focus on growing the wider ecosystem and accelerate collaboration through technology convergence, which Quantum Computing will power.

The Centre will build links between regional and national facilities, including the National Quantum Computing Centre at Harwell, to create a comprehensive set of capabilities in quantum technologies, as well as building a wider National and International network. These Quantum Innovation Nodes are complementary to, and will leverage, the activities of the UK National Quantum Technologies Programme

ID8 Oxford Science Park Quarter

Oxford Science Park (OSP) is one of the UK's most influential science, technology and business environments, and a central component of the Oxfordshire innovation ecosystem. It has 2,700 people working across 130 companies, creating an environment which inspires creativity and upholds the region's global reputation as a centre of excellence in R&D. Nearly 700 jobs at the Oxford Science Park have been created in the last two-to-three years alone, and the demand for further innovation space is outstripping availability.

Under this investment project, OSP will see major expansion over two phases which will aim to create over 3,000 jobs, plus another 2,000 construction related jobs on the site and in the supply chain. There are ambitious plans to create an additional 99,000m2. of office and laboratory space on the remaining 10+ acres of land over the next three-to-five years, with further phases to follow, subject to new site allocation and opportunities to accelerate development, providing critical additional capacity within the innovation ecosystem to continue to develop, nurture and scale-up businesses whilst also attracting major new international investors.

ID9 Innovation Lab, Williams Technology Campus, Grove

This project will deliver a new *Innovation Lab* at Grove Technology Campus, led by Williams Advanced Engineering (WAE). It will be focussed on developing disruptive low carbon technologies and applications flowing from Formula 1 innovations, including lightweight structures and new energy technologies as industries globally transition to zero carbon.

The Lab will be highly collaborative, working with research institutes and businesses across the Oxfordshire innovation ecosystem and wider UK, acting as an engine for rapid advanced technology development. It will bring new technology, skills, and investment into the region leveraging the extensive industry relationships and performance heritage at Williams. The Lab will also drive a range of new exploitation models for the technologies developed; these including licensing, manufacturing, and technology spin-outs as part of the wider redevelopment of the Technology Campus.


SWL 500kg

The People Pillar

The three developed projects within the 'People' Pillar will be fully delivered to an overall time horizon to 2030. This is based on an initial five-year delivery period, and subject to outcome of a Gateway Review of progress, being rolled forwards for a further five years.

On this basis, the minimum headline outputs anticipated under this Pillar will comprise:

- Total value: £102m;
- Public sector ask: £72m;
- Leverage of minimum private sector contribution of £30m;
- Support 28,590 young learners (including through work experience placements additional to the 5,000 work experience placements delivered by OxLEP annually) and over 12,400 adults; and
- Deliver 185 qualifications (namely, 125 Careers Leaders Achieving 3 standard units of L6 Careers Leader Training and 60 apprenticeships).

Central to the success of Oxfordshire's innovation ecosystem is the need to develop a more responsive skills system which can provide the talent which businesses need to thrive and grow, whilst creating new and exciting career and employment pathways for young people and the wider community. It is at the heart of this Investment Plan's commitment to deliver a genuinely inclusive economy across Oxfordshire.

As mature industries recover from the economic impact of COVID-19 and businesses are forced to remodel or, worse, close it is vital that the skills and talents within the Oxfordshire workforce are not lost and have the opportunity to rebuild and connect with the opportunities being created in the future economy. Further investment is required to capitalise on the area's highly skilled work force, connect individuals to innovation ecosystem jobs, and create an escalator of local talent through skills interventions at every stage along the career pathway.

The People pillar is structured around the Oxfordshire '*Social Contract*', an innovative programme (with relevance for other areas of the UK) anchored in inclusive growth and levelling-up economic opportunities across the County. Projects will bring forward a new delivery model to deepen engagement between employers and schools to connect young people with opportunities across the innovation ecosystem; apprenticeship and T-level initiatives to expand provision and the take up of vocational learning in the County; and support for existing workers to retrain, adapt and flex to changing skills demands and market needs.

Projects under development feature an *Inclusive Economy Commission*; the *High Flyers Programme* backing women and BAME researchers and entrepreneurs to commercialise their ideas into new businesses; and support for military personnel at *RAF Brize Norton* through a new *Technology Hub* as part of anchoring the skills at the UK's most significant station within the wider innovation ecosystem.

Timeline for delivering outputs, by Project ID	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	+
P1 Careers Innovation Gateway												
P2 T-Level Programme												
P3 OxLIFE												

Assumes project continuation past formal Gateway Review

Developed Projects

P1 Oxfordshire Social Contract, Careers Innovation Gateway (CIG)

The CIG is a transformative programme focused on driving social mobility and long-term career opportunities for young people across Oxfordshire including those in receipt of pupil premium funding in the County's most deprived communities through improving and deepening employer engagement in schools and connecting pupils, educators and governing bodies with leading mentors, coaches and influencers across the innovation ecosystem. Specifically, the project involves the expansion of the pilot *Careers Hub*; investment in a new network of *School Career Leaders*, utilising the University of Oxford's Litmus Careers Survey, and running the *Primary Pupil, Parent/Carer Mentoring Programme* to raise aspirations and open pathways into the new technologies and sectors which form the dynamism of the future economy. Project

Total Project Cost = £18.3 million

Total Public Sector Funding Requirement = £17.1 million

Enabling... 95% Oxfordshire's schools and colleges to be regularly engaged with businesses and 14,000 total students engaged in the Primary Pupil Mentoring Programme. In turn, raising aspirations, employer engagements and the development of a more responsive skills ecosystem, creating better opportunities for all.

P2 Oxfordshire Social Contract, T-Level Programme

This project focuses on working with FE colleges, private providers and business in expanding T-Level provision across the innovation ecosystem to offer a broader range of qualifications for young people covering Oxfordshire's key technology sectors. Allied to this, it will aim to increase the overall number of learners within the skills system taking up these qualifications, and support employers through a new Account Management system to navigate and understand requirements under Apprenticeship Levy, new T-Levels and Apprenticeship Standards in creating new vocational opportunities across the education landscape in Oxfordshire.

Total Project Cost = £12.2 million

Total Public Sector Funding Requirement = £3.3 million

Enabling... 440 SMEs to be beneficiary to Levy transfer, number of apprenticeship starts raising by 15%, supporting 200 employers to navigate skills landscape and 800 additional work experience/industrial placements.

P3 Oxfordshire Social Contract, OxLIFE

OxLIFE provides a comprehensive skills programme to support Oxfordshire's workforce to rebuild their skills capability and connect with opportunities in the future economy being created across the innovation ecosystem to support people to have longer and more flexible careers as demand for skills change. The programme includes a *Skills Pathway Service* to upskill employees including connecting to opportunities being created in adjacent sectors of the economy where skills can be transferable; and *Skills Progression Support* working with deprived communities to improve social mobility and employability, paired with a *Progression Support Fund* to cover costs of barriers to employment, which will build career pathways into new sectors of the economy.

Total Project Cost = £8.1 million

Total Public Sector Funding Requirement = £8 million

Enabling... tailored support for employers, helping them navigate the Skills Provider landscape, invest in staff training at all levels, and ensure 5,000 people to have the skills support needed to access post-pandemic opportunities.

Projects Under Development

Further projects under this pillar which are at the early stage of development to support Oxfordshire's programme of skills development and inclusive growth include:

P4 Oxfordshire's Inclusive Economy Commission

Oxfordshire is one of the strongest economies of the UK, which has been growing annually faster than the UK and the South East since 2006. However, it is also ranked as the second most unequal city in the UK. Significant numbers of people in Oxford and Oxfordshire are earning below the national living wage of £9 p/h (10.3% and 14.6% respectively). There are also inequalities around housing affordability, education attainment, health outcomes, and food poverty. This disparity is expected to increase as a result of COVID-19.

Building on a robust inclusive economy seminar series during 2019 that engaged leaders in higher education, the private and

public sectors, and non-profits and social enterprises, this project will establish an *Inclusive Economy Commission* to address these challenges. Initiatives will include increased local procurement, which will aim to increase the number of businesses committing to the Oxford Living Wage, place-based programmes of investment to reduce deprivation, targeted skills and infrastructure investments, and provision of affordable housing and workspace. It will also align with broader policies such as Early Years education initiatives, growing apprenticeship opportunities, and investments across the Oxford-Cambridge Arc.

P5 RAF Brize Norton's Technology Hub, Carterton

Carterton is the second largest town in West Oxfordshire, home to RAF Brize Norton (the UK's largest air force base), and with a significant military services community. Whilst the town has pockets of many small businesses with specialisms in high-tech manufacturing and engineering, there is an imbalance of jobs to workers, leading to around 60% out-commuting for jobs for local residents and young people, indicating both need and opportunity to diversify the local economy and create a more sustainable local living / working community

RAF Brize Norton provides Carterton, and the wider UK, with untapped economic potential. The proposed *Technology Hub* aims to make best use of the highly skilled and motivated personnel leaving the RAF by integrating these skills into key market areas of growth within the innovation ecosystem. The project also focuses on unleashing the wider economic potential of Carterton including the opportunities set out under the R&D Roadmap to maximise innovation potential through greater collaboration between the UK's Defence/Security Sectors and military-focussed R&D investment. The world-leading potential of the Oxfordshire innovation ecosystem offers significant scope to accelerate these opportunities through an exciting new approach at Brize. The new *Technology Hub* will also have a catalysing effect and power wider regeneration of Carterton, stimulating new business space, jobs and opportunities within the town.

P6 High Flyers Programme

Central to our ambition to develop Oxfordshire into one of the top three global innovation ecosystems by 2040 is the need to maximise the natural talent which resides across the region, and connect them to opportunities which are being created. The creation and scaling-up of high-growth knowledge-intensive businesses by harnessing the spirit of discovery and innovation within our researchers and scientists and innovators is crucial, but we need to do more to accelerate their journey to translate these ideas into successful companies. These skills sets need to be supplemented by a greater degree of knowledge and support to commercialise ideas, develop strong business skills and connect with like-minded entrepreneurs.

The *High Flyers Programme* will focus on creating a dynamic pathway of support for early stage researchers to test their proposals through proof of concept and market validation activities alongside mentoring and peer support from across the innovation ecosystem, to help accelerate their ideas towards full commercialisation. Building on recent empirical research led by Oxford Brookes University, a key element of the programme will be to improve access to support and backing for women and BAME researchers and innovators, who are under-represented in the enterprise community and have experienced barriers in bringing forward proposals for investment and market testing, which are critical to enabling progress towards full commercialisation of their ideas. *High Flyers* will aim to increase and widen the pool of entrepreneurial talent through an inclusive approach, in line with the ambitions of the R&D Roadmap by also extending support and mentoring to BAME entrepreneurs beyond the immediate region, and connecting them into the assets and resources of the innovation ecosystem.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The Business Environment Pillar

The five schemes in the 'Business Environment' Pillar will be largely delivered to an overall time horizon to 2030, with individual initiatives working to specific start and end dates to meet their objectives.

On this basis, the minimum headline outputs anticipated under this Pillar at this stage will comprise:

- Total value: £1.6 billion
- Public sector ask: £117million;
- Private:Public sector leverage generated ratio of 10:1;
- Create 11,800 jobs (with a further 4,500 jobs by 2040);
- Leverage £1bn private sector investment (with an additional £488m to follow by 2040);
- Deliver 145,000m2 of commercial floorspace (with a further 68,500m2 to follow by 2040) and 24,000m2 of innovation floorspace (with a further 9,200m2 by 2040);
- Attract £3.4bn Foreign Direct Investment (with a further £20m FDI secured by 2040), this pillar being the major source of FDI in the portfolio;
- Directly support 765 businesses (with a further 1,400 businesses being supported across the other pillars);
- Support learners to attain 450 qualifications; and
- Enable and support the delivery of 800 housing units, in line with agreed Local Plans and the Oxfordshire Housing and Growth Deal included within the new homes target for the County set for 2031 (with a further 345 houses unlocked by 2040).

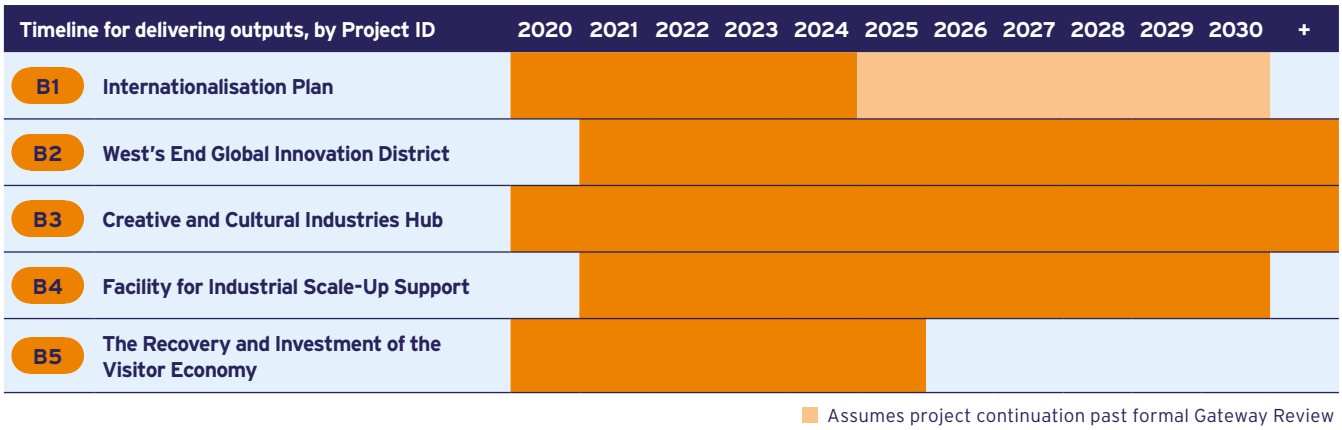
Alongside the new jobs directly created by these projects, there will also be a substantial number of indirect jobs safeguarded in the Oxfordshire visitor economy through the THRIVE initiative (outlined below).

The Business Environment Pillar addresses the engine room of the innovation ecosystem and puts in place programmes which will aim to provide businesses with the support structures and facilities needed to thrive and compete globally.

Investment-ready projects include a groundbreaking initiative with the Department of International Trade (a forerunner programme for the Oxford-Cambridge Arc) to expand the County's global brand and trade and investment opportunities to catalyse investment into the UK; a flagship *Global Innovation District* in central Oxford which will act as a gateway development into the innovation ecosystem offering new A-grade R&D and corporate premises for international businesses and investors; and a state of the art scale-up hub for high growth technology companies which will foster multi-disciplinary R&D, collaboration and joint ventures.

The pillar also includes strategic programmes to support Oxfordshire's dynamic creative industries and internationally recognised tourism sector to recover, build resilience and flourish coming out of the COVID-19 pandemic.

Projects under development will address accelerating wider scale-up and entrepreneurship support across the business base; diversifying the breadth and access to financing and investment within the ecosystem; powering a significant increase in full fibre and gigabit digital connectivity; and increasing collaboration and connectivity with other global innovation ecosystems to raise the profile of Oxfordshire as a location for talent, investment and ideas.



Developed Projects

B1 The Oxfordshire Internationalisation Plan

This is an integrated programme with the Department for International Trade to deliver the Oxfordshire Internationalisation Plan (a forerunner programme for the Oxford-Cambridge Arc) to expand the County's global brand and attract trade and investment opportunities that support business growth, job creation, recovery and renewal and prosperity for Oxfordshire and the UK.

The Plan sets out phases of activities focussed on the three pillars of internationalisation work and international relationship building: a proactive approach to securing foreign direct investment (FDI); increasing international trade and exporting success; and securing increased capital investment to support infrastructure development and growth capital for scalable hi-tech companies.

Total Project Cost = £2.2 million

Total Public Sector Funding Requirement = £1.8 million

Enabling... accelerated economic recovery, increased Foreign Direct Investment (FDI), international trade and capital investment (£1.5bn) in Oxfordshire, and the creation and safeguarding of 2,650 jobs, supporting 235 businesses to invest and export over five years. Supporting critical sectors to stimulate economic recovery and responses to global challenges around climate change, energy, health and wellbeing.

B1 Oxford West's End Global Innovation District (GID)

The *Oxford West End Global Innovation District* (GID) will provide a flagship, gateway development into the innovation ecosystem, providing a new district for business growth and innovation as an extension of Oxford's city centre encompassing A-Grade office space and R&D HQ facilities for spin-out companies and inward investment across multiple sites, so forming the largest-scale mixed use development project in generations. This project is focussed on delivering a sustainable, integrated and connected district encompassing Osney Mead, Oxford National Railway Hub and Station, Oxpens, and other development sites with retail, hotel, university, lab and office, and residential spaces.

The *GID* will be realised through the coordination of local landowners and partners, and the facilitation of infrastructure investment across key development sites. Together, the sites account for 350,000m^2, to be brought forward over 15 years with £1.5bn of largely private sector investment.

Total Project Cost = £1.53 billion

Total Public Sector Funding Requirement = £46 million

Enabling... city-centre and adjacent A Grade premises to house 13,500 jobs, 300 apprenticeships, 500 additional research posts, and support 900 businesses within 350,000m^2 of space.

B3 The Creative and Cultural Industries Hub

This project comprises the development of a purpose-built creative industries hub near the city centre of Oxford that provides a mix of lower-cost affordable workspace, and incubators which are critically required to sustain the continued growth in small and micro entrepreneurs in the sector in Oxfordshire.

The Hub will provide a focus for the region's dynamic creative industries and support a wide range of ventures and multidisciplinary collaborations from digital and immersive technologies to graphic design and artistic ventures, and provide needed support to drive recovery from the impact of COVID-19. The Hub will also work to support concepts emerging from the newly established Cultural Renewal Taskforce and in expanding 'CreaTech' in Oxfordshire focusing on forging connections across creative and tech sectors.

Total Project Cost = £9.5 million

Total Public Sector Funding Requirement = £8.8 million

Enabling... the application of digital technology, design and immersive technologies and support the creative industries post-COVID-19 bringing forward 6,000m^2,of creative workspace and 100 jobs.

B4 Facility for Industrial Scale-Up Support (FISUS), Harwell

FISUS is a unique, multi-faceted initiative to support technology-based businesses to successfully scale-up, drive multi-disciplinary and cross-sector collaboration and accelerate business recovery post-COVID-19 through significant job creation and enhanced manufacturing capability. Located on the Harwell Campus, a state-of-the-art facility will accommodate over 50 SMEs with high growth potential. Training programmes, use of shared laboratories and sector-specific equipment, and access to funding schemes and finance at key milestones, will enable companies to de-risk their business strategies and efficiently develop and validate their products to cultivate prosperous and robust companies.

The project delivers a new 7,005m^2 centre with open interactive networking spaces and offices, wet and dry lab accommodation in variety of sizes so companies can transition across their growth journey. Flexible office space will also be offered to companies across the UK and internationally to provide a temporary soft landing and facilitate more virtual working. Businesses will benefit from being co-located with industry leaders and access to world-leading national facilities in healthcare, space technologies and energy systems across the Campus to test, evaluate and commercialise R&D and new product innovation at pace.

Total Project Cost = £52.1 million

Total Public Sector Funding Requirement = £47.1 million

Enabling... a kick-start of UK Plc recovery and helping to retain innovative technologies and manufacturing in the UK and supporting over 400 businesses.

B5 The Recovery and Investment of the Visitor Economy (THRIVE)

THRIVE will work to provide a suite of deliverable projects, to aid the economic recovery of the Visitor Economy in Oxfordshire which contributes over £2.3bn per annum to the region's economy and attracts over 30 million visitors each year. As one of England's top five visitor destinations, the rebuilding of the sector is vital to Oxfordshire's wider international profile and business markets, which in turn will be crucial to the wider recovery of the UK economy post COVID-19.

The four key areas of focus are supporting business recovery and survival; improving business competitiveness; strengthening the resilience and capacity of Oxfordshire's Destination Management Organisation (DMO); and providing leadership, support, and coordination to rebuild market share across international markets.

Total Project Cost = £4.05 million

Total Public Sector Funding Requirement = £4.05 million

Enabling... Oxfordshire to support the Visitor Economy sector, generating and safeguarding 10,000 jobs and supporting over 1,000 businesses.

Projects Under Development

Additional projects under this Pillar, which are at an earlier stage of development, include proposals to diversify the breadth and access to finance and investment options available within the ecosystem and investment in the digital infrastructure of the ecosystem to world-leading standards. Additionally, a new International Conference Centre to rebuild Oxfordshire's critical visitor economy and business conferencing market share.

B6 The Business Scale-Up Programme – creating a world class scale-up community

With one of the fastest growing communities of high growth scale-up businesses nationally, our ambition is to maximise the huge potential of our entrepreneurs and dynamic businesses to drive high value economic growth and prosperity. Research by the Scale-Up institute (2020) reports that Oxfordshire's business leaders highlight access to talent, international markets, access to equity finance, and access to infrastructure/premises and broadband as key issues.

The *Business Scale-Up Programme* will be developed with entrepreneurs, innovators and business leaders within the innovation ecosystem experienced in taking pioneering young companies and shaping them into flourishing, market leading operations. It will also draw on successful programmes operating in other global innovation ecosystems to ensure that the programme is credible and relevant. We aim to create a long term, sustainable and co-ordinated programme harnessing support from across the scale-up 'family' including Universities, Innovate UK, business and science parks ensuring that it is integrated into the DNA of the innovation ecosystem and provides easy to access, easy to navigate and high value support for high growth businesses to thrive.

B7 Oxfordshire's Finance and Investment Plan

The COVID-19 pandemic has had an increasing impact on the availability and accessibility of financing to sustain growth trajectories for small and start-up companies, particularly those firms which are younger, early-stage companies seeking to attract investment in the short to medium term, and where they are raising investment for the first time. These companies are also the businesses that fall outside the eligibility for the range of Government lending measures introduced during the pandemic such as the Future Fund. As a result, a diversified approach may be needed to encourage and incentivise seed and early-stage investment into these businesses which provide the future innovators and scale-up companies that are a critical component of the Oxfordshire innovation ecosystem

Working with key advisory firms and business leaders the Plan will aim to diversify the range of finance options and funders for high growth potential companies, increase knowledge and awareness of finance networks and provide access to alternative sources of finance including patient capital, venture and angel funding.

B8 Oxfordshire's International Conference Centre

Oxford is a key global brand, supporting a vibrant Oxfordshire tourism economy which also drives high value visitor spend into the rest of the UK. An Oxford Brookes University study set out how business conferencing has been a major driver for growth in rival innovation ecosystems across the globe. There has been significant demand from conference organisers to grow and expand opportunities for major events in Oxfordshire, which build on the established academic circuit within the County and extends into set piece sector events for business investors and arts and cultural exhibitions.

As a flagship development, this project will help promote Oxfordshire and accelerate the growth of the international business conference market as the sector rebuilds following the COVID-19 pandemic. Over the long term, attracting a minimum of 6,000 visitors, with future plans for modular growth to 20,000 visitors, the multi-purpose medium sized convention and event facility will meet current demands for this size facility whilst strengthening the Oxfordshire visitor economy and a key business destination as part of the wider innovation ecosystem.

B9 'Connecting Global' Platform

Connecting Global is an integrated digital platform promoting Oxfordshire as a major global hub for investors and innovators with a unique partnering network linking other world-leading innovation ecosystems. The platform will showcase successes and share opportunities for investment and trade, with promotional activities across online and social media such as mapping the Oxfordshire Cluster's high tech companies and spin-outs; engaging and compelling content on cutting-edge research and breakthrough sectors to drive interest; supporting the recruitment of high-tech and R&D talent; and providing new touchpoints to engage international investors.

Leveraging Oxfordshire's international brand and positioning the region as a global innovation ecosystem, Connecting Global will partner existing networks and organisations within the world's most prominent technology centres and tech cities (e.g. Silicon Valley, Quantum Valley Boston, and Silicon Wadi), creating a digital environment for knowledge exchange and collaborative dialogue, alongside an ambitious programme of trade missions, sponsor visits, interactive sessions and virtual events.

B10 The Oxfordshire Study

Oxford is a compact research and innovation focused historic city located in a geographical rurality with innovation assets (e.g. science parks and business incubation centres) spread across the County. In contrast, many of the comparator global ecosystems are younger, of a different scale and they sit in very different sub-regions of their countries. As a result, it is not immediately obvious how Oxfordshire, as a city region, performs relative to these other innovation ecosystems. Equally, there has been limited work undertaken to capture and measure the progress of global innovation ecosystems and their specific characteristics which can be drawn upon and learned from.

Working in conjunction with the universities, national research partners, businesses and Government *The Oxfordshire Study* will be commissioned as a major analysis to investigate the innovation ecosystem, against the top ranked ecosystems of the world. The study will also explore the impact of related and critical public policy measures such as housing, transport, education and skills interventions which are central to an ecosystem flourishing.

B11 Oxfordshire's Entrepreneurship Hub

The *Entrepreneurship Hub* will aim to foster and deepen a strong commercial culture across the innovation ecosystem, extending the support available to people with ideas who are keen to start up and develop a business but sit outside those networks traditionally engaged through Oxfordshire's universities and research hubs. It aims to leverage existing resources and key partnerships, to bring together the rich networks that already exist in the ecosystem and connect them to wider cohorts of social and community entrepreneurs.

Initially the Hub will provide cross-sector support for early stage entrepreneurs, start-ups, and small businesses, from across the County to better connect with public and privately funded services across the ecosystem and deepen collaboration, action learning and scale-up opportunities. It will also create a community of connectors, an online portal of shared content, and a network of partner organisations providing support including digital resources, peer to peer support, and identifying and developing initiatives that fulfil specific support gaps within the ecosystem. Moving forward, it will extend the offer to include support for later stage growth businesses, sector-specific resources and specialised advisory services.

B12 Oxfordshire's Digital Investment Plan

The *Digital Infrastructure Plan* intends to increase Oxfordshire's pace of rolling out gigabit broadband and 5G infrastructure across the County. It will cover digital connectivity (both fixed and mobile), thereby enabling digital delivery, and making commercial investment at scale easier.

Led by Oxfordshire County Council, in partnership with OxLEP, City and District Councils, it will involve working with HMG through *Bringing Digital UK* (BDUK), plus strong engagement with commercial operators to secure investment in Oxfordshire. The benefits will include increased innovation, better health management, improved asset management, reduced vehicle use, sustainable economic growth and it will enable the development of a 'smart County'.

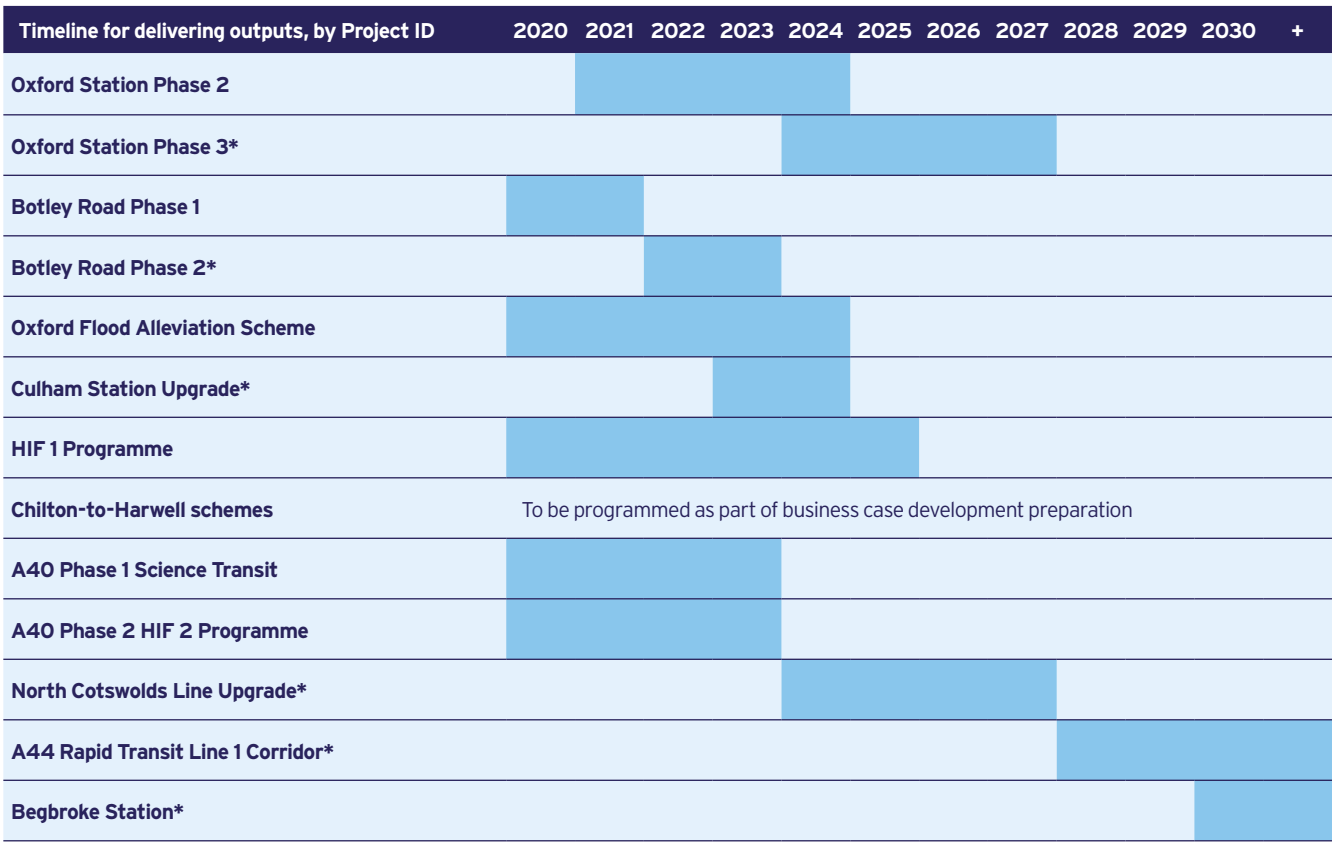
The Infrastructure Pillar

Five overarching investment schemes under the 'Infrastructure' Pillar will be delivered to an overall time horizon to 2040, with individual initiatives working to specific start and end dates to meet their objectives.

These projects and their investments, part of Oxfordshire's wider infrastructure objectives, will play a critical enabling role for the activities in this Investment Plan which is being brought forward alongside the Oxfordshire Infrastructure Strategy (OxIS) - led by Oxfordshire County Council and the Oxfordshire Growth Board, with Government and investors. The overall cost of Investment Pillar activity is £1.1 bn, of which £708 million of public sector investment is in place, leaving an 'ask' of £409 million.

Against this background, the minimum headline outcomes anticipated under this Pillar at this stage will comprise:

- Over 27,600 new houses, all of which are already recognised in Local Plans;
- A range of rail service improvements – service frequency, journey times, and reliability – for the County;
- Reduced travel congestion, and the introduction of new active travel modes; and
- Targeted flood alleviation investments.



* Indicates current proposed programme, subject to confirmation

Oxfordshire has adopted a strategic, prioritised approach to infrastructure provision which supports and enables growth and economic development across the County. This has been taken forward by the Oxfordshire Growth Board, and is encompassed in the Oxfordshire Infrastructure Strategy (OxIS).

Accordingly, some components of the Infrastructure Strategy, proposed, planned, or being delivered, provide targeted support to key interventions identified in this Investment Plan. Partners from Oxfordshire's Planning Authorities, together with the County Council as the statutory lead for infrastructure, have given careful consideration to the spatial distribution of *Ideas, People, Business Environment*, and *Place* activities proposed in this document.

Table 3.4 identifies the critical packages of enabling infrastructure which will be brought forward to support the ambitions within this Investment Plan, enabling the advancement of the portfolio of projects detailed. These infrastructure schemes include strategic rail service enhancements, enhanced digital connectivity and energy provision, carbon reduction initiatives and green infrastructure corridors. Funding for many of these is either in place, or being secured, from national programmes, including the Oxfordshire Housing and Growth Deal and the Housing Infrastructure Fund.

Additional OxIS initiatives with wide ranging and complementary impacts and benefits across Oxfordshire to these schemes include:

- Strategic Rail projects, required to meet service enhancements identified in the Oxfordshire Rail Corridor Study;
- A programme of enhanced digital connectivity across the County, as outlined in the Oxfordshire Digital Strategy and Work Programme;
- Energy requirements set out in the Oxfordshire Energy Strategy; and
- Emerging infrastructure programmes focused in carbon reduction and enhancing green infrastructure and corridors.

Most of the strategic infrastructure projects identified in Table 3.4 are transport schemes, which are developed and will be delivered by Oxfordshire County Council. The Council has a capital programme governance process in place, which develops schemes from Inception to Delivery through a number of Gateway stages. This is overseen by the Programme Management Office and requires business cases to be submitted at each scheme stage, ensuring robust project and financial management is in place at all times. Where funding from government is provided, for example the Housing Infrastructure Fund (HIF), business cases also need to align with central government requirements as set out in the Green Book and associated guidance.

In a broader context, OxIS also ensures that identified projects have been through a robust prioritisation process against policy priorities. The first OxIS produced in 2017 was a key component in supporting the Oxfordshire Growth Deal and ensuring that infrastructure funding and delivery has aligned with planned growth. The planned OxIS refresh will ensure that infrastructure priorities are up to date and support delivery of the new *Oxfordshire Plan 2050*.

In line with the Monitoring and Evaluation framework set out under Section 4 of this Investment Plan, a formal evaluation of the Portfolio's impact and process will be undertaken at the end of Plan Year 8 (Summer 2028), to assess formally how the forthcoming 10 years of Plan activity (from 2030 through to 2040) should be best designed and configured. This review will be especially vital for the Infrastructure Pillar, given the inclusion of major regeneration, land/property and infrastructure schemes, which we anticipate for the Plan's 2030-2040 period and central to activity under the Infrastructure/Place pillars.

Table 3.4: Infrastructure projects in Oxfordshire critical to this Investment Plan

Investment Plan 'bundle'	Project / Description	Strategic Infrastructure Requirements	Cost and Funding	Outcomes[3]
Oxford City Science Area Sectors	› Expansion of the Global Health & Life Sciences Headington Quarter including BioEscalator 2 and Clinical Bio Manufacturing Centre › Oxford West End Global Innovation District (GID). New central business and innovation district focusing on A Grade office space and R&D HQ facilities › The Energy Systems Accelerator (TESA) located within the Osney area of the West End	› Upgrade of rail corridor and capacity through Oxford including **Oxford Station redevelopment** and National Rail Hub – new station and multi-mode transport interchange (Phases 2 and 3 of Oxford Station Programme)	› **Total estimated cost £291m** › Phase 2: £162m (funded, subject to HMG final approval) › Phase 3: Estimated £129m (unfunded – public sector ask)	› 70% increase in rail services through Oxfordshire by 2033 › Doubling of train services through Oxford station by 2028 › Significantly enhanced connectivity, more than doubling the current level of direct connections between priority stations in Oxfordshire, reducing overall journey times
		› **Botley Road Corridor (2 Phases)** – strategic arterial route upgrade into Oxford (West End) including: › Healthy active travel schemes with additional cycling and walking routes › improvements on Oxpens section to Osney Mead Bridge to deliver enhanced access to Osney development site	› **Total estimated cost – £23.5m** › Phase 1 (funded/ construction underway) – £9.1m › Phase 2 (unfunded public sector ask) – £8.4m › Oxpens Bridge (unfunded – public sector ask) – £6m	› Supports the opportunities for growth to the west of the city centre in line with policies SP1 and SP2 of the Adopted 2036 Oxford City Local Plan including housing and employment sites at Osney
		› **Oxford Flood Alleviation Scheme** providing flood resilience to City Centre and key West End development sites	› **Total estimated cost – £150m** (funded)	› The Oxford Flood Alleviation scheme will help to convey water away from development infrastructure and reduce flooding in the most at risk areas. It will reduce the risk of flooding to homes, businesses, major roads and the railway.
Culham Science Park	› Institute for Fusion Materials – Development of cluster for fusion technologies	› **Culham Station Update** to a multi-mode hub as part of the Oxfordshire Rail Corridor Study delivering enhanced connecting and services into Oxford and potential extension of East West Rail connectivity through Culham and into Didcot	› **Total estimated cost – £21m** (unfunded – public sector ask)	› Supports delivery of the South Oxon and Vale of White Horse Local Plans, including expansion of Culham Science Centre and 3,500 new homes adjacent to Culham Station › Significant increase in rail services to 2 trains per hour in each direction, with direct connections through Oxford to Bicester and East West Rail
	› Culham-to-Harwell Mobility Corridor – expansion of pioneering autonomous systems hub connecting critical science hubs across Culham-Harwell-Milton Park	› Housing Infrastructure Fund Programme/Projects (HIF1) projects including Didcot-Culham strategic link road	› **Total estimated cost -: £234m** (funded)	› The HIF 1 scheme is forecast to directly unlock 11,711 homes in the Didcot Garden Town area, and support delivery of the science-based research and knowledge clusters at Harwell (space sector, energy, health), Culham (robotics, CAV, nuclear fusion) and Milton Park (life sciences)

Table 3.4: Continued

Investment Plan 'bundle'	Project / Description	Strategic Infrastructure Requirements	Cost and Funding	Outcomes[3]
Harwell Campus	› International Space Cluster › Global Energy-Technical Living Lab › Global Quantum Computing Centre	› **HIF Programme/Projects** including Didcot-Culham Strategic Link road	› As above	› As above
		› Highway upgrades between Chilton Interchange and Harwell Campus **('Chilton-to-Harwell schemes)'**	› Unfunded – cost to be identified as part of business case development	› Supports delivery of Harwell Science & Innovation Campus
Living Labs Testbed	› Oxfordshire Cotswold Garden Village	› **A40 Stage 1 Science Transit scheme and Housing Infrastructure Fund Programme/Projects (HIF2)** including: › New rapid transit corridor and Park and Ride › Enhancements as part of Connecting Oxford programme linking strategic corridors to the west and east of Oxford	› **Total estimated cost – £153m** (funded)	› The HIF 2 scheme will directly unlock 4,813 homes (including 2,222 affordable homes) and support 10,000 homes in the West Oxon area. › Helps resolve current severe congestion on the A40 corridor, significantly improving transport connectivity between Witney and Oxford
		› **North Cotswold Line Upgrades** – including enhanced Hanborough 'Hub' Station and improved services into West Midlands	› **Total estimated cost – £199m** (unfunded – public sector ask)	› Directly supports strategic housing sites including Cotswold Garden Village (2,200 homes) and West of Eynsham (1,000 homes) via direct Active Travel and other connections › Up to 4 trains an hour connecting Oxford to Hanborough and other destinations › Enhanced long distance service frequency (2 trains per hour in each direction), reduced journey times and increased service reliability
LO:GIC at Begbroke Science Park	› LO:GIC – development of the Begbroke Campus as a major innovation quarter for UK and international collaboration and commercialised R&D	› **A44 Rapid Transit Line 1 Corridor**	› **Total estimated cost – £36m** (unfunded – public sector ask)	› Supports delivery of the sites in the Cherwell Local Plan Partial Review including around 4,400 homes and Begbroke Campus development
		› Development of new **Begbroke Station**, as part of Oxfordshire Rail Corridor Study, to serve the innovation campus and wider growth along the corridor	› **Total estimated cost – £10m** (unfunded – public sector ask)	› As above, providing additional longer term rail connectivity opportunities
Total estimated cost £1,117.5 million				
Of which, funded is... £708.1 million				
Unfunded is... £409.4 million				

Source: OxLEP, 2020

[3] All housing numbers are based on existing agreed Local Plans prepared by Oxfordshire's local authorities, recognising that these have varying plan periods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The Place Pillar

The four developed projects within the 'Place' Pillar will all be delivered to an overall time horizon to 2030, with individual initiatives working to specific start and end dates to meet their objectives.

On this basis, the minimum headline outputs anticipated under this Pillar will comprise:

- Total value: £107 million;
- Public sector ask: £66 million;
- Deliver 7,190m2 of innovation floorspace;
- Support 60 businesses (with a further 2,100 businesses in total across the other pillars);
- Create an additional 420 jobs; and
- Assist 140 young learners and generate 360 qualifications.

Across the Plan's portfolio as a whole, projects will collectively deliver over 29,400 new housing units, making an important contribution to expanding and diversifying Oxfordshire's housing offer.

The Investment Plan anticipates the delivery of significant additional new floorspace, employment and private sector investment leveraged to these initial outputs as longer-term, mixed-use schemes are brought forward for development. There is considerable potential for accelerated delivery where opportunities arise.

Oxfordshire spans a large physical geography with companies, rural and urban innovation / science parks and hubs sitting within the wider landscape of homes and long-established local communities. Its attractive location, heritage and natural assets makes Oxfordshire a place where people want to live and businesses want to locate, and means demand for housing is high. The Oxfordshire Housing and Growth Deal between Government and the County's local authorities and OxLEP will manage the delivery of new homes by 2031, together with a new statutory joint spatial plan – *Oxfordshire Plan 2050* – to guide future development and ensure it is sustainable and carefully managed.

Working hand in hand with these objectives, the LIS highlighted the importance of 'place' within the ecosystem. Imagined through a polycentric network of innovation clusters creating workplace and housing communities across the County which are contemporary by design and deliver new innovations in place shaping and sustainable communities. They harness the pioneering technologies within the ecosystem in health, mobility and clean growth for the benefit of Oxfordshire residents delivering improved public service outcomes alongside creating new employment opportunities in these locations.

Timeline for delivering outputs, by Project ID	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	+
PL1 Living Oxford (Oxfordshire's Living Labs)												
PL2 Howbery Park Centre of Excellence in Climate Change												
PL3 Culham-to-Harwell Mobility Corridor												
PL4 Global Energy-Technical Living Lab												

The Place Pillar takes forward these objectives through projects which include a network of 'Living Labs' under the *Living Oxford* programme; a new world-leading *climate change centre of excellence at Howbery Park* focusing on flood resilience and housing design; and a pioneering autonomous *vehicle shuttle link* between Culham and Harwell science parks. Projects being developed for later, phased delivery include pilots to develop alternative travel modalities at Milton Park, home to over 10000 staff at one of the ecosystem's most important innovation assets. Additionally, the Plan will bring forward the delivery of new commercial centres of employment as part of wider strategic mixed use schemes that extend and enhances capacity across Oxfordshire's innovation ecosystem: *Creative City* in Heyford with a major studio hub for Film and TV; a new *Eco Zone and Hub* in Bicester building on the ambitions of the Eco Town; an exciting Science Park for pioneering companies in West Oxfordshire as part of the Garden Village development; and regeneration of the *Banbury Industrial Zone* along the M40 corridor.

Developed Projects

PL1 Living Oxford (Oxfordshire's Living Labs)

Total Project Cost = £2.18 million

Total Public Sector Funding Requirement = £1.45 million

Enabling... a focused and dynamic response to the evolution of the Living Labs approach across Oxfordshire connecting communities, innovators and developers to deliver improved public service outcomes across the County through pioneering collaborations.

Building on Oxfordshire's success in piloting the living lab concept under local transport policy initiatives across the County, in concert with Oxfordshire County Council, this is an ambitious programme which aims to apply and scale-up the potential to create a network of 'living labs' across identified locations and pilot areas set out under the LIS encompassing wider opportunities to bring forward solutions in mobility, healthcare and energy.

Living Oxford will create a visible community-focused, independent organisation acting as the fulcrum for the development of 'living labs' in Oxfordshire. It will operate at the intersection of the public, private and community sectors of Oxfordshire whilst leveraging and connecting people, places, organisations and projects to deliver better solutions to existing and new real-world problems. It will also enable the sharing of best practice including analysis from past, existing and new living lab type projects both in the County and wider to ensure the delivery of better outcomes under each lab developed. *Living Oxford* will also provide the interface for businesses, innovators and place makers to engage with Oxfordshire in introducing, testing and commercialising new products and services within in real-time settings, working with planning authorities, public service providers and communities in Oxfordshire advancing new approaches and solutions to sustainable development and contemporary living.

PL2 Howbery Park Centre of Excellence in Climate Change

The new Centre of Excellence will draw on the world-leading capability located at Howbery Park and create a hive of new facilities to research, innovate and commercialise new products and services to in response to the challenges presented by climate change.

The project will create a further 7,185m^2 of new and innovative facilities and will include dedicated space for collaborative water resilience and water security research, innovation, education, training and space to support start-ups and early stage businesses. Further, the River Thames flood plain at Howbery Park will be used as a natural laboratory to research, innovate and demonstrate development excellence on flood plains, including an exemplar flood resilient and water efficient building.

Total Project Cost = £22.4 million

Total Public Sector Funding Requirement = £8.4 million

Enabling... a world-leading Centre of Excellence for Water Resilience and Water Security, where private, public and NGO organisations can collaborate to deliver outstanding research, education, innovation and commercialisation outcomes, creating 327 high value jobs, SME support, training opportunities and flood risk management cost reduction across the UK.

PL3 Culham-to-Harwell Mobility Corridor (CHARM)

CHARM will pilot an autonomous vehicle shuttle link between world-leading science parks and a public transport hub in the south of the County, piloting groundbreaking deployment, technology maturation, public engagement, and long-term monitoring of next generation driverless mobility services, with the potential to be tested and deployed across the UK.

This project will be delivered in three phases: the *Concept Design Study*; the *Culham Mobility Service*; and overlapping with this, the *Didcot Mobility Interchange* linking Culham to Harwell delivering modern mobility services across Oxfordshire using connected autonomous vehicles and 5G infrastructure alongside other multimodal services. A key focus of this project is to facilitate the demonstration of mobility solutions that are capable of meeting the needs of local users in a safe and reliable fashion, and in so doing, becoming a default choice for local businesses and residents and hence a pilot for national rollout and global exports.

Total Project Cost = £27.8 million

Total Public Sector Funding Requirement = £27.8 million

Enabling... a platform that will showcase emerging green mobility technologies to provide sustainable mobility solution in a key growth corridor in Oxfordshire. The project supports the UK's Net Zero target through enabling increased connectivity in the local area whilst changing mobility habits and creating a cleaner less congested environment.

PL4 Global Energy-Technical Living Lab, Harwell

The *Harwell Net Zero Technical Living Laboratory* will enable the testing and evaluation of novel energy systems in a real-world environment, with the advantage of colocation in a world-class technical knowledge base.

Providing a testbed for investors to develop pioneering services in energy consumption, storage and testing by utilising the global assets of the Harwell campus will assist businesses to bring innovative products to market and address a broad spectrum of future challenges.

The three central components of the Energy Living Lab will be: a Harwell-wide *Smart Energy System; demonstrator platforms and shared labs* which will be accessed by stakeholders across academia and industry to pilot in Oxfordshire and trial solutions; and the expansion of the *proof-of-concept and demonstration programme*.

Total Project Cost = £55 million

Total Public Sector Funding Requirement = £27.5 million

Enabling... accelerated adoption and accessibility of pioneering energy technology solutions including connected and autonomous energy systems whilst creating 65 jobs and supporting 30 businesses.

Projects Under Development

As part of the longer term ambitions under the Investment Plan, work is being progressed in the delivery of major new commercial centres of employment as under wider strategic mixed use schemes which will focus on sustainability and healthy-place shaping, whilst also enhancing capacity across Oxfordshire's innovation ecosystem.

PL5 Milton Park Mobility and Cycle Hub

This project aims to increase sustainable modes of transport across a strategically significant science and technology hub within Oxfordshire's innovation ecosystem. Projections suggest that, by 2040, the working population at Milton Park across its 250 business on site will have doubled to 20,000.

Through a new Mobility and Cycle Hub, the aim is to grow the cycling mode share to 30% by 2040, with an interim target of 20% by 2025, led by the establishment of a network of mobility social enterprises and services which will facilitate modal shift and create up to 120 jobs. It will also complement improvements planned and being delivered in the Science Vale Cycle Network, including upgrades to the cycle route between Milton Park and Didcot Parkway station.

PL6 Creative City, Heyford

This is an ambitious plan to create a large media hub in Northern Oxfordshire allowing companies within the film, tv, tech and gaming industries to cluster, creating a dedicated new environment for the industry and meeting significant domestic and international demand.

The site already has a strong track record of filming on the historic airfield and this new development will allow wider filming opportunities and use of post-production facilities on site. The development will provide 1,500 new jobs, on a 43,000m^2 footprint providing sound stages, studios, offices and production spaces, along with acres of backlot/external set-build space.

PL7 Bicester Eco Zone & Corporate HQ Hub

This proposal is for an *Eco Zone and Corporate HQ Hub* at Bicester Business Park on strategic employment land close to the national motorway and rail network. It aims to deepen its position as a location for clean growth businesses and builds on the zero carbon ambitions set out under the Bicester Eco Town vision at North West Bicester, which has seen significant net zero housing development and the *Bicester EcoBusiness Centre* – one of the first net zero commercial business facilities in the country. In addition, there is significant potential for Bicester to become a vital strategic interchange for East-West Rail and the Oxford-London Marylebone Line, as part of the wider development and connectivity across the Oxford–Cambridge Arc.

The project also encompasses wider regeneration activity under the Bicester Garden Town scheme building on the transformation of Bicester from a traditional Oxfordshire County market town, to a dynamic and vibrant community comprising the global retail offer at Bicester Village and the centre of motorsport heritage at Bicester Motion. These proposals will weave and embed Bicester more directly into the Oxfordshire innovation ecosystem, expanding the town centre as part of the renewal of the area to create jobs, increase productivity and drive growth locally.

PL8 West Oxfordshire Garden Village Science Park, Eynsham

The West Oxfordshire Garden Village, known as *Salt Cross*, is one of the national programme of Garden Communities and is part of a holistically planned new settlement which enhances the natural environment. It will offer locally accessible work and high-quality affordable housing in beautiful, healthy and sociable communities, adhering to nationally accepted Garden Village (City) principles.

The Science and Technology Park will provide much needed move-on space for innovative businesses with high growth potential, complementing existing science parks such as Begbroke with the opportunity for greater technology collaboration and connectivity for businesses and high growth companies across the western arc of Oxfordshire. It will also complement a natural cluster of advanced manufacturing business already in the Eynsham area, providing space for their growth and supply chain development. In doing so, the science and technology park will provide a huge range of employment opportunities for the new community of *Salt Cross*.

PL9 Banbury Industrial Zone

This project intends to build on Banbury's long and proud industrial heritage to create the second largest urban centre and industrial powerhouse of the region. Banbury provides the gateway to the North and pivots at the centre of the country on the strategic corridor between London and Birmingham, connecting Oxfordshire with the economies of the Midlands and further afield.

The *Industrial Zone* will be at the strategically employment land site at Banbury, adjacent to the M40, which has significant untapped potential and offers considerable scope for regeneration and sustainable development. The Zone will benefit from accessibility to the national motorway and rail network with excellent connections to Oxford and the Ox-Cam Arc, making it attractive to investors across service, manufacturing and logistics sectors, and scope, therefore, to raise productivity levels and deliver transformational growth across local communities.

4. Our Governance, Monitoring & Evaluation Plan

Governance

Successful delivery of this Investment Plan is the responsibility of everyone – Oxfordshire partners, project sponsors, investors, and government – and will only be achieved with the commitment to collaborate, co-invest, and mobilise delivery resources which drive forward our overall ambition for Oxfordshire and the UK.

The OxLEP Board will be responsible for overseeing the implementation of this Investment Plan, and its progress towards its objectives and outcomes. The Board will build on the robust and Government-assured processes which have ensured the successful implementation of recent investment programmes using City Deal, Local Growth, EU, and other funding streams. The Board will receive quarterly reports on Plan progress, advise on adjustments to the Plan and its actions to achieve the objectives of the LIS overall, and give strategic direction on the use of funds. OxLEP's Annual Report and Annual Meeting will provide a formal opportunity to share wider detail on Plan progress achieved in the preceding 12 months.

Management and liaison with partners and project sponsors will be led by a dedicated Programme Management Office (PMO) within the LEP's Strategy and Programmes Team. This will be overseen by a Senior Director from OxLEP's Corporate Leadership Team, who will act as The Senior Responsible Officer.

Regular reporting arrangements to the Forward Plan of the Oxfordshire Growth Board will be established, to ensure timely reporting, valued scrutiny, and alignment between this Plan and wider growth aspirations, such as those in the Oxfordshire Housing and Growth Deal. At all point, this Plan's style and reporting of progress will be transparent, tied back to the LIS' core objectives, and focused relentlessly on real-time optimisation.

In relation to the Infrastructure Pillar of this Plan, the Oxfordshire Strategic Transport Forum will work closely with Oxfordshire County Council and the Growth Board's Infrastructure Sub-Group to inform and support the implementation of actions, drawing on the multimodal expertise of the Forum and its members.

Monitoring and evaluating this Investment Plan

A framework for Monitoring

Real-time tactical oversight of the Plan's performance will be led by the OxLEP Programme Sub-Group, an advisory group of the OxLEP Board with delegated powers for Monitoring and Evaluation. Chaired by a senior Board Director, the Group meets quarterly, and comprises a Deputy Chair, Local Authority and Private Sector Board Directors, and two co-opted representatives from the business community with experience in large scale, complex programme management and delivery.

This Investment Plan constitutes a significant proportion of the forward activities of OxLEP and the Oxfordshire Growth Board. As such it will be subject to a robust Monitoring and Evaluation framework, which measures progress against the key metrics which form the core of the Plan. These are detailed in the table below, and categorised by indicator type. The high-level sources and periodicity of each indicator is also given.

Table 4.1: Oxfordshire's Local Industrial Strategy: The Investment Plan – Core Monitoring and Evaluation Indicators

Indicator	Indicator type	Unit	Source	Periodicity
Value of private investment levered	Outcome	£m	Tracking Portfolio Projects	Bi-annual recommended
No. of business directly receiving enterprise/growth support	Outcome	Nominal	Tracking Portfolio Projects	Bi-annual recommended
Value of FDI projects	Outcome	£m	Department for International Trade	Annual
NVQ 4+ qualifications – including PhDs	Outcome	Percentage change	EMSI/Office for National Statistics	Annual
New Learners Assisted – Young People (Under 19) – covering non-formal qualifications including careers advice	Output	Nominal	Tracking Portfolio Projects	Bi-annual recommended
Number of New Learners Assisted – Adults (19+) – covering non-formal qualifications including redundancy support	Output	Nominal	Tracking Portfolio Projects	Bi-annual recommended
Innovation Floor Space – covering specialist floorspace (Gross External Area – GEA) including incubators, accelerators and test-beds	Output	Sqm	Valuation Office Agency	Annual
Commercial Floor Space – covering general commercial uses (GEA) including retail, office and industrial floorspace	Output	Sqm	Valuation Office Agency	Annual
Number of businesses deploying Oxford Living Wage	Output	Nominal	Oxford City Council	Annually
Weekly wages (inc. for lowest 10%)	Impact	£	Office for National Statistics	Quarterly
Economic Inclusion Score	Impact	Nominal	Inclusive Growth Monitor (produced by Universities of Manchester and Sheffield)	Single model to be updated by inclusion indicators (incl. income, living costs, labour market, output etc.)

Table 4.1: Continued

Indicator	Indicator type	Unit	Source	Periodicity
Jobs safeguarded	Impact	FTE equivalent	Tracking Portfolio Projects	Bi-annual recommended
Jobs created	Impact	FTE equivalent	Tracking Portfolio Projects	Bi-annual recommended
Additional Gross Value Added (net)	Impact	£m	Office for National Statistics	Annual

Source: OxLEP, 2020

Milestones for Evaluation

Whilst monitoring will track Plan progress in real time, this will be augmented with three discrete evaluation activities through which wider assessments of achievement, focus, and impact will be made. These evaluation activities will be as follows:

- An interim evaluation of Plan implementation at the end of Plan Year 2 (i.e. Summer 2022);
- A formal evaluation of Portfolio impact and process at the end of Plan Year 5 (i.e. Summer 2025); and
- A second evaluation of Portfolio impact and process at the end of Plan Year 8 (i.e. Summer 2028), to assess formally how the forthcoming 10 years of Plan activity (from 2030 through to 2040) should be best designed and configured. This review will be vital in driving early preparatory work on those major land/property and infrastructure schemes, which we anticipate will be critical elements of the Plan's 2030-2040 period.

In line with best practice, we will earmark up to 1.5 percent of the cost of each project in this Plan (to an agreed cap) to support the costs of these evaluation activities. This resource will ensure that evaluation activity is funded - viably and appropriately - at all stages in the Plan's implementation and execution.

Measuring progress towards our wider goal

As an integral part of this Plan, in addition to Plan-specific monitoring and evaluation, we will progress an important initiative – The Oxfordshire Study. Led by Oxford University, this aims to forge a deeper understanding of the Oxfordshire innovation ecosystem, its current status against top-ranked ecosystems globally, and help shape those public policy measures – housing, transport, innovation. skills/education etc – which are central to an ecosystem's growth. The study will result in sets of metrics which will enable Oxfordshire as a whole to track progress against its aspiration to be a 'top three global innovation ecosystem by 2040'. We anticipate this study will attract interest from Research England and Government in providing an important empirical analysis to deepen understanding of the vital ingredients necessary for innovation ecosystems growth. As such, we will be interested in exploring joint commission opportunities with them and other partners to take forward this exciting initiative.

5. Ready Now to Deliver at Pace

In times of the uncertainty created by COVID-19, the challenges of climate change, and the new chapter forged for our country as we leave the European Union, it is vital for leaders to step forward and show ambition and vision. Oxfordshire partners recognise their responsibilities, not only to our local communities, but also the leadership role we have within the UK economy.

This Investment Plan has set the pathway to Oxfordshire's ambition to be a 'top three global innovation ecosystem by 2040'. It sets out a clear projection of where we wish to be, and the interventions we are proposing to power us on this journey.

We are determined to move at pace, and use the levers and powers available across Oxfordshire for the accelerated delivery of proposals – investment ready and designed to hit the ground running – which will deliver real, tangible economic benefits across the County and UK. We are committed to pursuing a collaborative and proactive approach, which will be focused on solutions, hungry for innovate, and committed to new ways of thinking. And we are ready to work with investors to build and progress those strategic business relationships and projects which will deliver on everyones' aspirations for success.

Whilst these are vital ingredients, we know that alone these will not be enough. Further public funding and investment are crucial, this in the sure knowledge that these will provide in Oxfordshire the catalysing effect in leveraging significant private sector activity and unlock further investment into our country.

Equally, it needs a 'new deal' and an ambitious working relationship with Government and its agencies to co-work with Oxfordshire in framing distinct policies and interventions which unlock the energy of our place, the vibrancy of our innovators, and the entrepreneurial spirit of our communities . We are open fully to piloting new approaches and to live with managed risk to drive innovation and prosperity for our County and more widely. Similarly, we are looking to business to play a still stronger and more active role in vital areas such as skills development and by investing in Oxfordshire's most precious and natural talent – its young people, its dynamic workforce, and resilient communities – to ensure that they have a prosperous stake in the future economy we will create.

Case Study: Oxford Quantum Circuits (OQC) – how Oxfordshire is supporting the next generation of innovation leaders to solve the unsolvable

Quantum computing is delivering a paradigm shift in computer architectures, equivalent to '*moving from a candle to the lightbulb.*' It employs new physics principles and novel ways for hardware to interact with data with applications ranging from drug discovery to materials design.

OQC is one of a number pioneering start-ups in Oxfordshire's innovation ecosystem which is focused on harnessing the transformative power of quantum technology. The business' vision is to put the quantum in the hands of humanity to solve the world's most pressing challenges, including addressing new ways to accelerate responses to climate change, accelerating diagnostics and drug discovery in healthcare, and creating applications for artificial intelligence which can be deployed for societal benefit. What were previously mysteries, like the production of man-made fertilisers from leaves, at room temperature and with 100% efficiency, can now be modelled and reproduced to support the rapid growth of human populations, with a positive impact on the world.

The firm has already delivered the UK's most advanced quantum computer, which is now available commercially. Next year will see the launch of OQC's wider service offer and the opening of new labs, with an expanded team to accelerate R&D around quantum computing. A Series-A funding round is expected to close by the end of the year.

OQC is thriving by being located in a dynamic business environment, which has the potential to nurture innovators and entrepreneurs and attract further global talent into the UK. As its visionary Founding CEO, Illana Wisby says: '*We are supporting a growing ecosystem in a way that's quite unique... and we understand that it's better to be collaborating and working together – you don't always get that in other places. There's so much momentum that's waiting to be unlocked.*'

This Investment Plan has been shaped by Oxfordshire partners who are organised, aligned with our vision, and excited to collaborate (see Figure 5 1). It provides investors, business leaders and Government with the confidence needed to plan and invest, and see the opportunities they have across the region and to work with Oxfordshire partners to achieve lasting impact and return on investment.

We urge you now to seize the opportunity in working with us to build our new future.

Figure 5.1: Partners to this Plan (non-exhaustive)

Source: OxLEP, 2020


Resourceful
Impactful
Fresh
Inclusive

HM Government

OxLEP
driving economic growth