



Charnwood Campus:
A Life Sciences Opportunity Zone



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Foreword

The UK has one of the strongest, most dynamic and globally competitive Life Science industries in the world, contributing not only to prosperity but also to improved healthcare for all. The sector is a key part of Government’s industrial strategy, critical to the UK’s export ambitions and identified as a priority sector for growth by the Midlands Engine.

To thrive, life sciences businesses need flexible space to start and grow. They need access to skilled workers and a strong pipeline of future talent, centres of research excellence and an infrastructure to support the development of products from concept to commercialisation. Charnwood Campus has the opportunity to offer all of this.

Set within a 70 acre life sciences technology-park situated in Loughborough, Leicestershire, Charnwood Campus is a legacy biopharmaceutical site created by AstraZeneca.

Following securing the investment of Almac and Apical to the site, a Life Sciences Ministerial Roundtable was held in March 2016, hosted by the minister for Life Sciences, George Freeman. Recognising the site’s potential to support the growth of the UK Life Sciences industry; George Freeman launched ‘Transforming UK Life Sciences: A toolkit for action’, inviting a proposal to government for Charnwood Campus to become the UK’s first Life Science Opportunity Zone.

In response to this challenge, the Leicester and Leicestershire Enterprise Partnership (LLEP), brought together a partnership of industry, academia and government to develop this document, which sets out a vision to develop Charnwood Campus into ‘a key part of the UK’s Life Sciences Infrastructure and an environment, to inspire discovery, encourage collaboration and accelerate business growth for the Med-Tech and Biopharma community.’

As a partnership we recognise that we cannot achieve our ambitious vision alone. Government cooperation is now required to help the Campus to be developed and its full potential reached, as a part of the next generation of life science sites in the UK within a global market.

To symbolise that commitment, this proposal is seeking Government recognition and endorsement of Charnwood Campus as a key life sciences asset and the UK’s first Life Science Opportunity Zone.

Nicky Morgan

Rt Hon. Nicky Morgan, MP Loughborough

Nick Pulley

Nick Pulley, LLEP Chair

Executive Summary

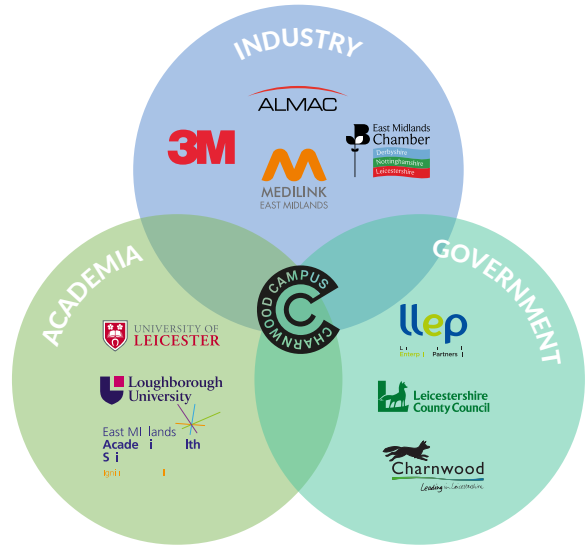
Charnwood Campus a Life Sciences Technology Park situated in Loughborough, Leicestershire, at the heart of the Midlands Engine. It offers *an environment to inspire discovery, encourage collaboration and accelerate business growth for the Med-Tech and Biopharma community.*

The campus is a legacy biopharma site vacated by AstraZeneca in 2011. It covers 70 acres comprising development land alongside high quality, modern laboratories and production plants, designed as a fully integrated drug discovery and development capability to support drug development projects, from target identification through to late-phase development and registration.

Building on the success in attracting over £20m of investment on site from two successful life sciences companies, Almac and Apical, a consortium of partners from industry, academia and government from across the region was formed to plan how to work together to realise the campus' potential; support the growth of the UK Life Sciences industry; develop Charnwood Campus as a key regional asset within the UK Life Sciences infrastructure; and become the UK's first Life Science Opportunity Zone.

As a Life Sciences Opportunity Zone (LSOZ), Charnwood Campus will foster an eco-system of local business, leading research institutes and government organisations; to promote business growth by simplifying access to support and accelerating the pathway from concept to commercialisation in the Med-Tech and Biopharma sectors.

To achieve the partnership's vision, commitment is required by both Government and LSOZ Partners.



Government commitment to:

- Endorse Charnwood Campus as the UK's first Life Science Opportunity Zone
- Host a Life Sciences roundtable at Charnwood Campus in the Autumn
- Provide a Ministerial Foreword for a site marketing document
- Support Charnwood Campus as the preferred site for the regional NHS Pathology service (EMPATh) delivering accelerated access
- Support close relationships with Innovate UK and Catapult Centres
- Raise the site profile across Government departments
- Develop an enhanced site proposal through the Department for International Trade
- Explore establishing a programme of Life Science specific support schemes

LSOZ Partners commitment to:

- Establish the Charnwood Campus Innovation Centre
- Create a priority access route for planning for companies on Campus
- Develop marketing materials to promote the site worldwide
- Undertake market research to target global companies for investment
- Develop a coordinated business support offer to support company growth
- Explore opportunities to develop Life Science specific support schemes
- Facilitate networking opportunities for peer to peer learning across sectors
- Establish delivery of specialist training on site through a partnership of academia and industry

The Life Sciences Opportunity Zone will deliver benefits to businesses, healthcare systems, patients and Higher Education Institutions (HEIs) and enhance employability in the region. It will provide the opportunity to:



Generate greater collaborative life sciences R&D & Innovations



Create an eco-system that supports growing talent and giving opportunities for existing and incoming companies to collaborate and cooperate



Grow the size of Midlands Med-Tech and life science companies by creating more growth space for small medium and start-up companies



Help existing companies realise their potential by facilitating Scale-Up



Attract new life science companies to the area



Attract more investment in life sciences to the area



Increase employment in life sciences within the region by attracting and retaining highly skilled graduates and apprentices



Capitalising on local and regional strengths in the areas of precision medicine, clinical trials as a 'living lab' offered by the area's diverse population, and development of devices for trauma rehabilitation, assisted living and wearable technologies, Charnwood Campus will deliver an environment to inspire discovery, encourage collaboration and accelerate business growth in the UK Life Sciences industry.

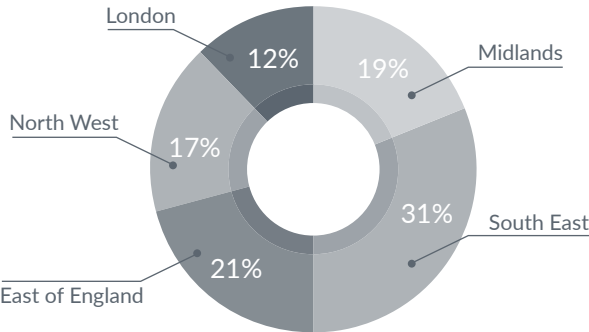
Strength of the Midlands

The UK is at the leading edge of the global Life Sciences sector, employing c222,000 people and generating approx. £60.7bn of turnover, growing between 2-3% per annum. A sub-sector driving this growth is Medical Technologies (Med-Tech), for which the Midlands has been identified by the department for Business Energy and Industrial Strategy (BEIS) as the region where growth is at its strongest.

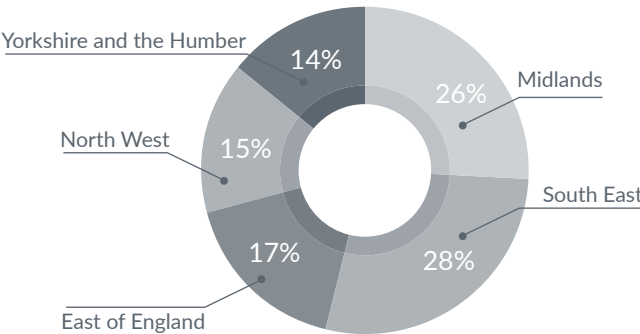
The **Midlands Engine** for Growth identifies Life Sciences as one of its key priority sectors. To support the delivery of the UK's Smart Specialisation Strategy the Midlands Engine **Science and Innovation Audit (SIA)** has identified specific fields of focus where existing and growing research excellence is coupled with established and emerging innovation strength to inform future investment. The development and manufacture of medical devices (Med-Tech), specifically related to rehabilitation and assisted living as well as Pharmaceuticals and Digital Technology have emerged as thematic priorities. Charnwood Campus is ideally situated in close proximity to these centres of research and industrial excellence to support growth within these thematic priorities.



Proportion of UK employment in Life Sciences - Top 5 area



Proportion of UK employment in Med-Tech - Top 5 area



30,565
employees in Life Sciences
across the Midlands.

Charnwood Campus, as a key part of the Midlands Life Sciences offer, has excellent connectivity to the other centres of life science excellence in the UK - the Northern Powerhouse and the Golden Triangle, and sits at the core of the national network of catapult innovation centres.

Locational Benefits

- Adjacent to a cluster of existing Life Sciences companies and a number of centres of excellence.
- A stable and diverse population perfect for clinical studies relevant to existing western, and developing Asian markets.
- Access to a wide and experienced labour pool - Leicester and Leicestershire alone has a working population of 442,100, with 13.8% of that being in Professional, Scientific & Technical roles, a further 9.9% in Production.
- 3 of the top UK Universities training STEM graduates and postgraduates in the East Midlands.
- High quality of life, compared to other life science clusters in the UK (e.g. London, Cambridge, Oxford), with average house prices 36% below those of the South East, offering a 'release valve' for overheating markets.
- Leicester is one of the top 10 cities in the country in quality of life, and nearby villages are identified as the 3rd best place in the UK to raise a family.

Research Excellence

Companies require access to patients to test new technologies. Discussions are advanced to locate a shared NHS Pathology Service (EMPATh) on campus serving the hospitals of Leicester, Nottingham and Loughborough, which would provide a route for diagnostic and therapeutic companies to access the knowledge and technology requirements for implementation within the health sector. This model would also foster interactions with the *Innovate Catapults* in the areas of Discovery Medicine, Precision Medicine and Advanced Cell Therapies.

This aligns with the agendas of the Universities and NHS in the region including the *University of Leicester's Precision Medicine Institute* (LPMI; a collaborative venture between the University of Leicester and the University Hospitals of Leicester NHS Trust). The University Hospitals of Leicester, Nottingham University Hospitals, Lincolnshire University Hospital and Derby Teaching Hospitals all have Clinical Research Facilities and NIHR and NHS R&D centres within the East Midlands. *The East Midlands Academic Health Services Network (EMAHSN)* is an LSOZ partner and can provide access to these organisations.

In addition to drug and diagnostics development, the Midlands houses a large concentration of medical device companies with further potential to develop in this area by leveraging the wider technical design and manufacturing heritage of the region. The establishment of the *Defence and National Rehabilitation Centre (DNRC)* at Stanford Hall and the University of Loughborough's *National Centre for Sports & Exercise Medicine (NCSEM-EM)* makes the Charnwood site uniquely placed to support a Med-Tech cluster developing devices for trauma rehabilitation, assisted living and wearable technologies, an area of considerable future economic growth for the UK.



Clinical Research Facilities in the Region

- National Institute for Health Research (NIHR) BioMedical Research Units:
 - Leicester Cardiovascular
 - Loughborough Diet, Lifestyle and Physical Activity
 - Leicester Respiratory
 - Nottingham Digestive Diseases
 - Nottingham Hearing
- NIHR East Midlands Collaboration for Leadership in Applied Health Research and Care (CLAHRC – Nottingham and Leicester)
- NIHR MindTech Healthcare Technology Co-operative, Nottingham
- East of England Genomic Medicines Centre
- East Midlands Breathomics Pathology Node (EMBER)
- University Hospitals Leicester (UHL) Experimental Cancer Medicines Centre
- National Centre for Sports and Exercise Medicine - East Midlands, Loughborough
- UHL / University of Leicester Leicester Diabetes Centre
- Nottingham University Hospital (NUH) Health Science Partners
- Cell Therapy and Precision Medicine Catapults

Industry Excellence

Charnwood Campus benefits from close proximity to existing companies including contract research and manufacturing organisations, suppliers of consumables and reagents for R&D facilities, providers of specialist analytical, regulatory, legal, IT, recruitment and logistics services. These include rapidly growing contract research companies such as Quotient Clinical, Sygnature Discovery, Charnwood Molecular, Aesica, Xenogenesis and the Binding Site, alongside established multinationals including 3M, Parexel, Clinigen Group, Worldwide Clinical Trials, Walgreens Boots Alliance, as well as the world's leading supplier of laboratory and scientific equipment, ThermoFisher Scientific which has a development and distribution site adjacent to Charnwood Campus.

This provides the region with an exceptional opportunity to support the entire supply chain for research and development of new therapeutics and medical devices.

The broad diversity of companies in the region is a magnet to attract and retain high paid, qualified staff through broader career opportunities, with concomitant benefits to the regional economy. The diversity of companies also provides sustainability in the sector as it is not dependent on one principal company, and thus prevents susceptibility to further downfalls in regional economy as was observed with the loss of AstraZeneca from the region.



A partnership to deliver growth

As the business model of the Life Sciences industry focuses more on supply chain based delivery, the drivers of innovation and growth within the sector are the small and innovative enterprises, with great ideas but need support to help them take these from concept to commercialisation.

For innovative businesses to prosper they require the healthy presence of clusters of relevant companies of all sizes within their geography, ready availability and supply of suitable flexible modern space and infrastructure, an excellent science base, a ready supply of qualified workforce and access to investors. Charnwood Campus, as a Life Sciences Opportunity Zone, can offer this environment.

Charnwood Campus – a proud part of history

Charnwood Campus is a 70 acre Life Sciences Technology Park situated in Loughborough, Leicestershire, the result of a £200 million investment by AstraZeneca in pharmaceutical Research and Development facilities. The facility comprises high quality, modern laboratories and production plants that were designed as a fully integrated drug discovery and development capability to support drug development projects, from target identification through to late-phase development and registration.

Unlike other site closures by pharmaceutical companies, and their conversion to Technology parks e.g. Discovery Park in Kent and Alderley Park in Cheshire, AstraZeneca wished to retain and redeploy their Charnwood-based staff; the site was therefore sold in a straight property deal, with no legacy arrangements for site development or continuity of occupation. The Charnwood Campus laboratory facilities were decommissioned at the end of 2011 but have been kept in good condition ready for rapid recommissioning.



Charnwood Campus - creating the future

Significant investment has been made to regenerate and re-purpose the site for multiple tenants to meet the growing demand for life science facilities within the UK. Retaining the high quality laboratories whilst removing the older buildings has created an idyllic campus environment for companies to locate as well as opportunities for businesses to expand and grow on site. As a result Charnwood Campus has been successful in attracting the pharmaceutical contract organisation Almac to site as well as the IT company Apical (recently acquired by ARM), who are a global leader in imaging and embedded computer vision intellectual property.

Whilst Charnwood Campus is well equipped to accommodate enquiries from larger companies to re-instate whole buildings, the resources needed to support smaller SMEs is currently not available. Demand for small scale space across the East Midlands is significant. With existing regional incubators BioCity and MediCity running at ~90% occupancy, more space suitable for Life Sciences SMEs is required to ensure it is not a barrier to growth for the sector.

Charnwood Campus is in the rare position of being able to provide a ladder of high-quality accommodation on one site. With existing buildings alongside development land, the site could service enquiries throughout every stage of a business' growth. The missing element, critical to the partnership's vision, is an Innovation Centre offering SMEs the space and support they need to start up and grow.

Innovation Centre

– creating space for a community to grow

To exploit the opportunity for growth, the Taskforce, taking into account the demand from SMEs and excellent life sciences assets in the area, have identified the development of an Innovation Centre as an essential element of the Life Sciences Opportunity Zone plan to both align and unite the regional and national agendas on this site.

The Innovation Centre will refurbish one of the existing high-quality laboratory buildings with co-located office space to create small scale, flexible space perfect for Life Sciences SMEs to start, develop and grow. The Centre will make use of the laboratories, providing tenants access to high specification infrastructure and machinery, re-instating these legacy assets for the benefit of future growth. The renovation of these assets is a key strength for the site as not only does it allow for rapid re-commissioning saving time but also lower cost compared to a new-build.

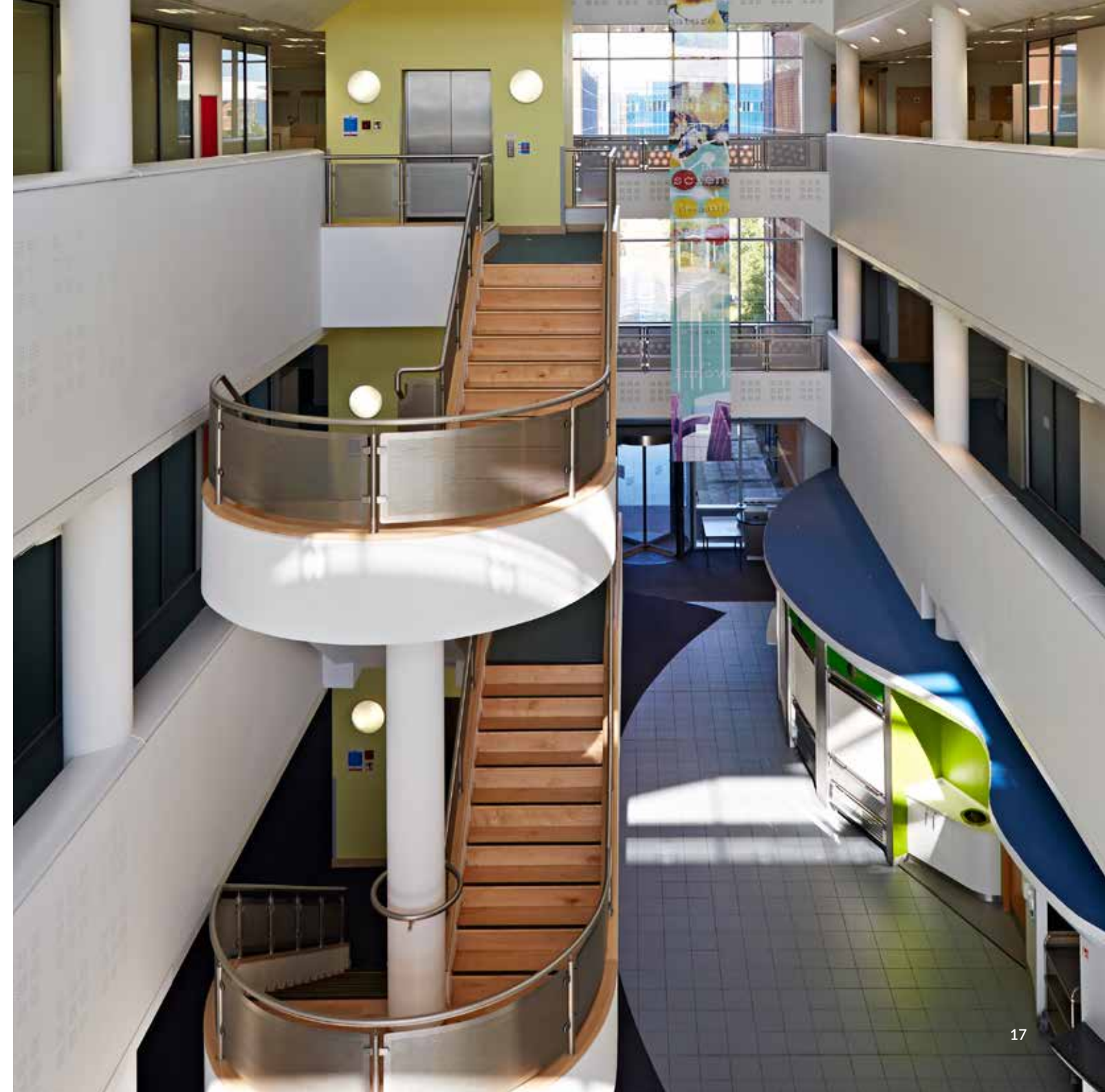
Charnwood Campus Innovation Centre

The Life Sciences Innovation Centre will be a managed centre providing:

- Fully serviced professional business space (office and laboratories) on flexible lease arrangements.
- Individual workstations and networking spaces.
- A main reception with phone answering and mail service.
- 24 hour building access and security.
- Access to specialist business support.
- Facilitated networking opportunities with a growing cluster of life science businesses across the area to create opportunities for collaboration.

Tenants will also benefit from wider site amenities including:

- 24/7 site security.
- Access to event and conferencing facilities.
- Café and catering facilities.
- Ample parking with designated disabled parking.
- A HGV Delivery/Courier friendly site.
- Excellent public transport access – bus, rail and cycle.





Fostering a Life Sciences Eco-System

The journey from concept to commercialisation in the Life Sciences sectors is fraught with pitfalls, with companies requiring more than just space to help them prosper and grow.

Charnwood Campus will not only provide high-quality space it will also act as a focal point for the delivery of support infrastructure from government, HEI, and local larger companies to support the Life Sciences sector across the region.

Training

The Innovation Centre will provide space for a training hub on the site to support the interchange between business and research and catalyse knowledge transfer activities. Fostering of partnerships between companies and HEIs, FE Colleges and Schools would provide mutually supportive project placements, internships and work experience to train the next generation of scientists required to keep the UK position as leaders in healthcare innovation. The facilities on the site (lecture theatre, meeting rooms, laboratories suitable for training), and within the estate of the neighbouring companies, provides ideal infrastructure to deliver this training.

The **Universities of Leicester and Loughborough** are engaged in discussion to develop **innovation training on site**, working with the existing tenants and neighbouring companies. In addition to this, global companies **3M and Almac and Medilink EM** are committed to offering opportunities to SMEs for additional training and mentoring to aid in their growth process.

Accelerated Access

Access to relevant clinical samples and patients and accelerated uptake into the NHS are areas which have been identified as challenges to industry by Office of Life Sciences and Innovate UK. The pre-existing clinical research infrastructure in the region, including the NIHR Biomedical Research Centres, will be able to provide support to companies for clinical validation and the local NHS East Midlands Academic Health Science Network will help to accelerate adoption.

The **locating of a shared NHS Pathology Service (EMPATh)** on campus and the concurrent fostering of interactions with the Innovate Catapults in the areas of Discovery Medicine, Precision Medicine and Advanced Cell Therapies, would provide an accelerated route to market for company innovations.

Making the most of our Diversity – a “living lab”

The region has a large, stable and ethnically diverse population that provides excellent opportunities for clinical studies and trials that are relevant not only to the West but to developing markets in Asia. This provides a potential springboard for companies to scale up and diversify into new and rapidly growing markets with population-relevant data. We will celebrate the area’s diversity and the benefits this brings to clinical trials as a unique selling point, working with colleagues at **Department for International Trade and Office for Life Sciences**.

Encouraging Business Diversity

To create a sustainable eco-system, diversity of companies is needed; from large to SME, from med-tech to digital, from pharma to support services, including IP lawyers and accountants. We are looking to foster a Life Sciences eco-system; one where each member derives benefit. Our local partnership will **facilitate a diverse network of life sciences companies, providing opportunities for learning, coordination and collaboration** to help them thrive.

Cross-sector collaboration

Charnwood Campus is one part of an Enterprise Zone (EZ) bid to government in 2016. If successful, this would create a 4 strong network of EZ sites across Leicestershire; with different specialisms targeted at regional areas of strengths:



The network of Enterprise Zones across Leicestershire will provide a fantastic opportunity for the cross-fertilisation of ideas and the transfer of knowledge and skills cross sector. The LSOZ partners will develop a series of **peer to peer networking opportunities** and create the potential to inspire new ideas, collaborations and business growth.

Inward Investment

To build a sustainable Life Sciences community, diverse mix of large and small companies is needed. Whilst the UK has a strong starting point for attracting investment from overseas, local provision is required to enhance the offer in order to compete in a global market. The current investment infrastructure such as the availability of grants compares unfavourably with other countries, and factors like this play a key part in Boardroom decisions over where to invest. It is critical that as a partnership we help businesses to make the case to decision makers to choose to locate in the UK at Charnwood.

As a partnership we will:

- Work closely with the Department of International trade to **enhance the site proposal and raise the market profile of Charnwood Campus with Investors overseas and as a key investment site for Life Sciences in the Midlands Engine.**
- **Develop a soft landing package** for investors and help businesses to build the business case to encourage investment.
- **Facilitate access to the Midlands Engine Financial Instruments** to provide access to funding to support businesses investment.

Business Support

As a partnership we are committed to providing a coordinated business support offer to not only attract business to the site but also to help indigenous businesses to grow and create a vibrant Life Sciences community.

The partnership, through the Growth Hub (LLEP Business Gateway) and support organisations like Medilink, are committed to offering a **coordinated package of business support**, utilising existing provision including: access to finance and investment networks e.g. MERCIA, regulatory support, supply chain development, recruitment support and access to business training.

The partnership are committed to promoting ease of access to available business support, however in order to accelerate the growth of Life Sciences SMEs partners are keen to **explore with government the establishment of specific support schemes and financial instruments** targeted at growing the Life Sciences sector in the UK.

Governance

In producing this document, strong partnerships have been built across organisations from international companies, the NHS, HEIs, local and national government. These partners are committed to seeing the vision of Charnwood Campus as a leading site in the UK life sciences infrastructure, become a reality.

As we move into the next phase, the governance of the LSOZ partnership will change to reflect emerging priorities and align with the advent of the Enterprise Zone Network structure.

The LSOZ Taskforce established to oversee the development of this document will be replaced by a small Executive overseeing the delivery of an action plan. The action plan will align with the Charnwood Campus Enterprise Zone Investment Strategy. In order to take this work forward the partnership will seek a chair for the LSOZ Executive who can best represent the industry and research strengths to champion the development of the Life Sciences sector at Charnwood and act as a link with the Charnwood Campus Enterprise Zone Steering group. The wider partnership will continue in an advisory role with task and finish groups established as required overseen by the LSOZ Executive.





Realising the Opportunity

In order to achieve the ambitious vision for Charnwood Campus to be developed and recognised as one of the next generation of life sciences sites in the UK and part of the global market, commitment at both local and national level is required.

The LSOZ partners are seeking Government commitment to:

- Endorse Charnwood Campus as the UK's first Life Science Opportunity Zone.
- Host a roundtable event for the Life Sciences at Charnwood campus in the Autumn.
- Provide a Ministerial Foreword for a Charnwood Campus Marketing document, raising support and profile of the site with industry.
- Support Charnwood as the preferred site to locate EMPATH, delivering accelerated access to market for company innovations.
- Raise the profile of the Campus across Government departments to understand the potential and opportunity for growth.
- Develop an enhanced site proposal and raise the market profile of Charnwood Campus with advisors, investors overseas, and within the Life Sciences offer of the Midlands Engine, through the Department for International Trade.
- Explore with LSOZ partners establishing Life Science specific business and financial support schemes to accelerate the growth of Life Sciences sector.
- Support close relationships with Innovate UK and the Life Sciences Catapults.

The LSOZ partners are committed to:

- Establish an Innovation Centre to support SMEs, developing the business case for investment, exploring potential funding streams and prioritising it for investment within strategic plans.
- Create a priority access route to speed up planning applications for companies locating onto the Campus.
- Develop a set of marketing materials to promote the site to a global market including an enhanced site proposal working with the Department for International Trade to raise the market profile of Charnwood Campus with Investors overseas and as a key investment site for Life Sciences in the Midlands Engine.
- Undertake market research of potential global companies to precision target marketing efforts to attract greater numbers of businesses to the site who will contribute to the sustainability and vitality of the local Life Sciences eco-system.
- Offer coordinated access to the business support offer and financial assistance (e.g. Midlands Engine Financial Instruments, MERCIA) for companies moving onto site, including a 'soft-landing' package for large inward investors.
- Explore opportunities for the establishment of Life Sciences sector specific support schemes covering access to finance, innovation and commercialisation, and support University spin-outs by identifying and commercialising University and Hospital Intellectual Property.
- Facilitate networking for Life Sciences companies within and across sectors making use of the Enterprise Zone network and sector representative organisations such as Medilink to provide opportunities for peer to peer learning, coordination and collaboration.
- Establish delivery of specialist training on site through a partnership of academia and industry, developing mutually compatible innovation, training, working with site tenants and surrounding companies.



The **Life Sciences Opportunity Zone** will deliver benefits not just to businesses but also healthcare systems, universities and patients, and enhance employability in the region. In striving to achieve the partnership's vision we will **create an environment to inspire discovery, encourage collaboration and accelerate business growth**, and help contribute to the Midlands and the UK's continued growth at the cutting edge of the Life Science industry.



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