



UNIVERSITY OF
BIRMINGHAM

Birmingham Life Sciences Park

Insight, invention, innovation



In association with
Birmingham Health Partners
Collaboration. Innovation. Application.


The opportunity

AN INTRODUCTION

A proven centre for translational medicine and data-enabled clinical testing and evaluation, Birmingham is a destination of choice for originating and validating healthcare innovations, working in partnership with businesses, academics, clinicians and patients.

Sitting at the heart of a large, diverse and stable West Midlands population of nearly 6 million, our Birmingham-led health partnership provides a unique healthcare ecosystem – one which is already harnessing the power of existing NHS, academic, citizen and industrial partnerships to deliver innovation in therapies, diagnostics and devices at pace and scale.

We are a thriving cluster of health excellence, infrastructure, technical leadership and entrepreneurial skills, able to deliver key elements of the government's Life Sciences Industrial Strategy including the mission to 'transform the prevention, early diagnosis and treatment of diseases like cancer, diabetes, heart disease and dementia by 2030'.

Increasingly, the use of data and new technologies is enabling patient stratification and improved targeting of healthcare interventions, in turn allowing innovations from across sectors to be applied to the patient. With businesses seeking novel approaches, the need to de-risk innovations – in diagnostics, software, devices or new therapies – through testing and evaluation in a relevant real-world environment is critical for the successful commercialisation and rapid

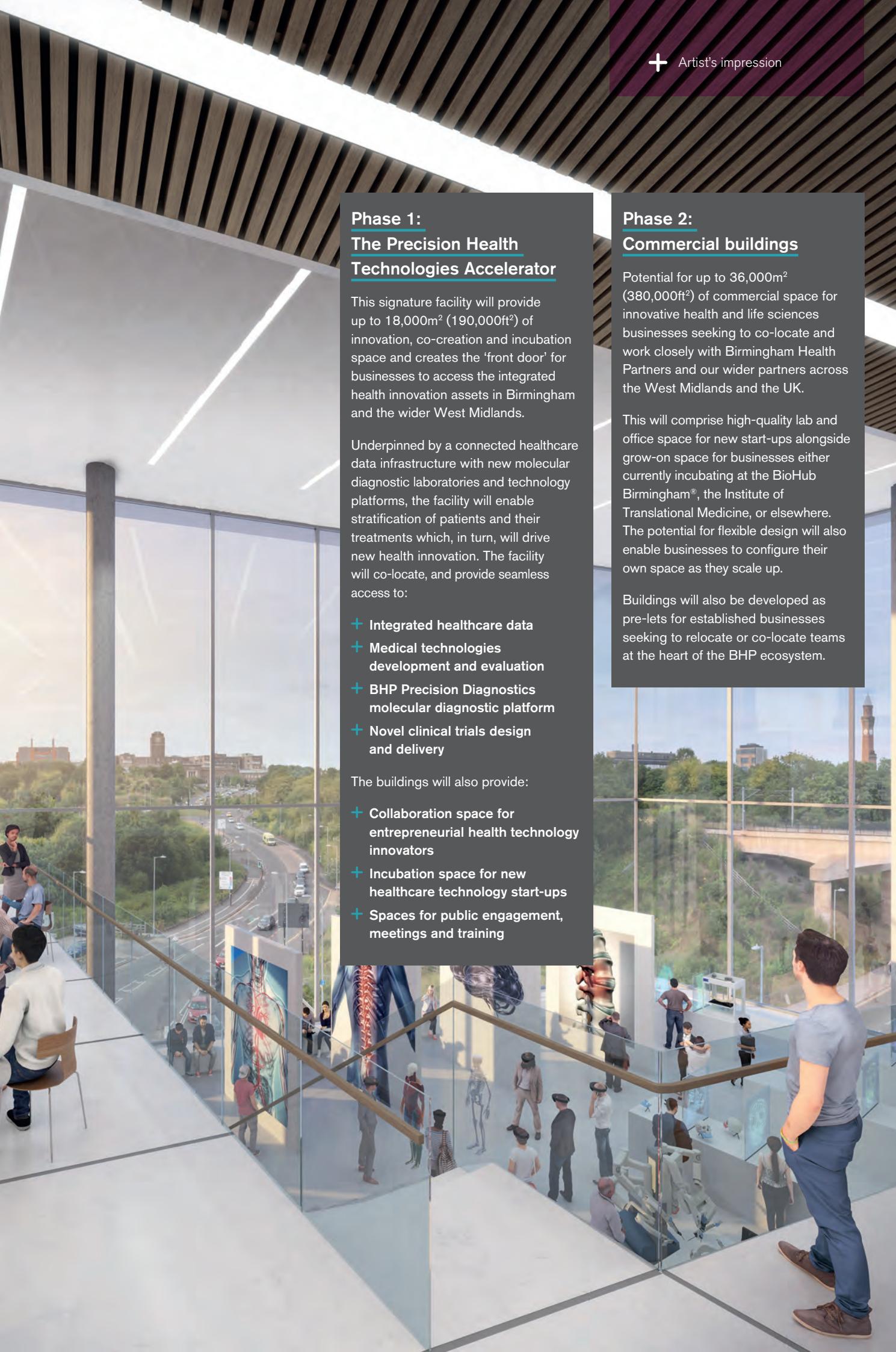
adoption of new technologies.

Now, through the creation of Birmingham Life Sciences Park (BLSP), we are building on our nationally recognised strengths in healthcare **data**, genomics medicine and **diagnostics**, medical **technologies** and clinical **trials** to develop cutting-edge innovation facilities. This will provide a bespoke physical home for collaborative research and data-enabled healthcare innovation, alongside high-quality commercial co-location space for businesses. Our open and inclusive partnership culture, infrastructure and expertise will build an environment in which health and life sciences companies will thrive.

Within these pages, we describe a unique opportunity to access the expertise of key academic and clinical opinion leaders, and the input and feedback from patient groups. We will introduce a Park where residents can access a full range of support to develop their healthcare innovation **from concept to clinical evaluation** in a data-rich, real-world setting, accelerating adoption into

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Through the creation of Birmingham Life Sciences Park (BLSP), we will develop **cutting-edge facilities** to provide a bespoke physical home for collaborative research and **data-enabled healthcare innovation:** a place where **life sciences businesses can thrive.** **”**





Phase 1: The Precision Health Technologies Accelerator

This signature facility will provide up to 18,000m² (190,000ft²) of innovation, co-creation and incubation space and creates the 'front door' for businesses to access the integrated health innovation assets in Birmingham and the wider West Midlands.

Underpinned by a connected healthcare data infrastructure with new molecular diagnostic laboratories and technology platforms, the facility will enable stratification of patients and their treatments which, in turn, will drive new health innovation. The facility will co-locate, and provide seamless access to:

- + Integrated healthcare data
- + Medical technologies development and evaluation
- + BHP Precision Diagnostics molecular diagnostic platform
- + Novel clinical trials design and delivery

The buildings will also provide:

- + Collaboration space for entrepreneurial health technology innovators
- + Incubation space for new healthcare technology start-ups
- + Spaces for public engagement, meetings and training

Phase 2: Commercial buildings

Potential for up to 36,000m² (380,000ft²) of commercial space for innovative health and life sciences businesses seeking to co-locate and work closely with Birmingham Health Partners and our wider partners across the West Midlands and the UK.

This will comprise high-quality lab and office space for new start-ups alongside grow-on space for businesses either currently incubating at the BioHub Birmingham®, the Institute of Translational Medicine, or elsewhere. The potential for flexible design will also enable businesses to configure their own space as they scale up.

Buildings will also be developed as pre-lets for established businesses seeking to relocate or co-locate teams at the heart of the BHP ecosystem.

Introducing BIRMINGHAM HEALTH PARTNERS

Birmingham Health Partners (BHP) is a strategic alliance between the University of Birmingham and two renowned NHS Foundation Trusts: University Hospitals Birmingham (UHB) and Birmingham Women's and Children's.

Co-located on a single health campus in the heart of England, BHP delivers national and international leadership in key areas of healthcare innovation, including:

+ Health Data

Building on University Hospital Birmingham's status as a Global Digital Exemplar, and as one of six Health Data Research UK sites, BHP transforms local and national capabilities in medical informatics and helps address major health research challenges.

+ Genomics

Through collaboration with the regional Academic Health Sciences Network – incorporating all 17 West Midlands NHS Trusts – we have established the leading Genomic Medicine Centre in the country. Based at Birmingham Women's and Children's Trust, it is the largest regional genetics lab in the country and has made us the leading contributor to the nationwide 100,000 Genomes Project.

+ Translational Research Excellence

Over many years, we have built strong academic and clinical partnerships through our Clinical Research Facility and Institute of Translational Medicine.

Together, we facilitate delivery of transformative experimental medicine in areas such as immunology and inflammation (including our arthritis therapy acceleration programme with the University of Oxford) and in new cell therapies (by leading one of only three national Advanced Therapy Treatment Centres).

+ Clinical Trials Innovation

We couple one of the largest clinical trial portfolios in Europe with immediate access to both state-of-the-art facilities for experimental medicine and world-leading academic expertise. All this supports the rapid verification of new healthcare innovations in our population; and in partnership with industry, the design and delivery of world-leading and world-first trials, including the National Lung Matrix Trial.

+ Medical Technologies

Our Medical Devices Testing and Evaluation Centre (MD-TEC) provides a dedicated state-of-the-art test facility for medical technology companies to validate new devices and diagnostic technologies. Housing purpose-built replicas of clinical areas (such as a ward bay and operating theatre), the Centre brings together the multidisciplinary academic and clinical expertise needed for small- and medium-sized life sciences businesses to evaluate products in a real-world environment, accelerating products to market.



+ Delivering precision medicine



BHP already supports a thriving community of spin-outs and entrepreneurial life sciences businesses within existing incubation facilities at the BioHub Birmingham, and accelerates new scientific discoveries to the clinic through health innovation programmes delivered through our Institute of Translational Medicine.

These form part of a wider community of around 550 life sciences businesses across the West Midlands with a turnover of £5.4 billion.

And in terms of skills, more than 10,000 skilled life sciences graduates are trained in Birmingham every year – with 48%¹ of the University of Birmingham's graduates staying to further their careers in the city of Birmingham.

The ambitious next stage in developing the capabilities of Birmingham Health Partners and our West Midlands life sciences offering is through our Birmingham Life Sciences Park, leveraging our integrated campus and data-enabled translational environment to drive innovation, economic growth and better health outcomes for patients.

WE ARE WORKING WITH

200 INDUSTRY PARTNERS

WE DELIVER

LIFE SCIENCES EDUCATION PROGRAMMES TO OVER **7,000** STUDENTS EACH YEAR

WE HAVE

£400 MILLION LIVE FUNDING FOR LIFE SCIENCES RESEARCH

ONE OF THE LARGEST LIFE SCIENCES CAMPUSES IN THE UK, IDEAL FOR

WORK, LEISURE AND STUDY

BIRMINGHAM HEALTH PARTNERS' REACH IN WEST MIDLANDS

£94 BILLION

REGIONAL ECONOMY – MAJOR ENGINE OF UK GROWTH OUTSIDE LONDON

REGIONAL POPULATION OF OVER

5 MILLION

550

REGIONAL COMPANIES INVOLVED IN THE

FAST-GROWING LIFE SCIENCES ECONOMY

40%

INCREASE SINCE 2005

80

HOSPITALS AND SPECIALIST CARE CENTRES



LARGEST MEDICAL DEVICES CLUSTER IN THE UK



In detail

BIRMINGHAM'S PROPOSITION

Crucially, the offer and expertise available in Birmingham and the wider West Midlands are complementary and distinctive to other UK clusters in providing:

- + A co-located translational environment and access to a diverse population through 17 regional NHS Trusts, the West Midlands Genomic Medicine Centre and connected data systems, with the ability to scale to in excess of 20 million through our national collaborative programmes in data, genomics and clinical trials
- + The ability to offer a real-world and diverse environment for testing healthcare innovations with world-leading regulatory and clinical trials support – ensuring wider relevance and the ability to scale to national and international markets
- + A comprehensive source of the technical leadership and entrepreneurial skills needed to deliver innovations into clinic – enabled through BHP's prestigious NHS and academic institutions working with industry and other partners
- + Access to the world-class research base, facilities and key academic/clinical opinion leaders from across our BHP campus

Of the city, for the region, with reach beyond

UK and beyond



Midlands region



City




The Park provides a rare opportunity to expand this thriving ecosystem.

By leveraging our translational infrastructure and expertise across the region, the West Midlands will further strengthen its position as a flagship location for the development, validation and real-world testing to adoption of healthcare innovation. And, with national and global firms already benefitting from the Midlands' commercial opportunities by locating their businesses here, both supply chains and business support networks will further develop – allowing innovators to flourish.

By collaborating with us and locating on the park, businesses will benefit from access to our world-class, integrated academic and clinical partnerships, including:

- + World-leading clinical trials design and delivery, including national leadership for paediatric clinical trials and one of the largest active surgical trials portfolios in the world
- + Track record of pioneering healthcare technology advancements
- + Access to teams delivering national and international policy changes and regulatory and clinical improvements
- + World-leading centre for patient-reported outcomes
- + Leading innovation in the use of new molecular diagnostics and 'omics technologies
- + Internationally recognised expertise in varied, specialist fields – including cancer immunology, inflammation and rare diseases
- + World-leading hospital informatics systems and data platforms

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BLSP is the entry point for businesses to access the Birmingham Health Partners and wider West Midlands life sciences ecosystem, and the easiest place in the UK to accelerate new innovation into the clinic.”



+ MAP KEY

- 1 Advanced Therapies Facility and Human Biomaterials Resource Centre
- 2 Barberry Centre
- 3 BioHub Birmingham (Research Park)
- 4 Birmingham Dental Hospital and School of Dentistry
- 5 Birmingham Clinical Trials Unit
- 6 Birmingham Life Sciences Park
- 7 Birmingham University Imaging Centre (BUIC)
- 8 Centre for Clinical Haematology
- 9 Centre for Computational Biology
- 10 Centre for Human Brain Health (under construction)
- 11 Centre for Rare Diseases
- 12 Centre for Translational Inflammation Research (including MRC/Arthritis Research UK Centre for Musculoskeletal Ageing Research)
- 13 Clinical Immunology Service
- 14 CRUK Clinical Trials Unit
- 15 Health Services Management Centre
- 16 Henry Wellcome Nuclear Magnetic Resonance Facility



17 Institute of Translational Medicine (ITM)

18 University of Birmingham Schools of Chemical and Mechanical Engineering Buildings

19 NHS Blood and Transplant Service

20 NIHR Biomedical Research Centre in Inflammatory Diseases

21 NIHR Experimental Cancer Medicine Centre

22 NIHR Liver Biomedical Research Unit

23 NIHR Surgical Reconstruction and Microbiology Research Centre

24 NIHR Trauma Management Healthcare Technology Co-operative

25 NIHR/Wellcome Trust Birmingham Clinical Research Facility

26 Oleaster Centre

27 Phenome Centre Birmingham

28 Selly Oak Rail Station

29 Selly Oak Shopping Park

30 Tommy's National Centre for Miscarriage Research

31 University of Birmingham Medical School

32 University rail station

33 West Midlands Regional Genetics Laboratory

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A SINGLE-SITE ESCALATOR FOR INDUSTRY

Birmingham Health Partners is creating a single-site escalator for industry – within an integrated clinical/academic ecosystem.

We are aligning academic, NHS and industry capabilities based on a shared mission:

- + To transform the health of our citizens by accelerating the development and adoption of healthcare innovations, making Birmingham the go-to place for research and innovation that impacts on health**

Across our ecosystem we will deliver the full range of facilities and expertise needed for the development, validation and real-world testing of new healthcare innovations.

Our infrastructure will provide the environment and physical spaces to support business and the commercialisation of innovations, with differing spaces and levels of support available depending on the size and stage of each business. Building from our early-stage, fully serviced incubation at the Biohub Birmingham® and acceleration support at the Institute of Translational Medicine, through to a range of incubation, grow-on and pre-let spaces on Birmingham Life Sciences Park, we deliver the necessary spaces and services to support successful business development and growth.



A UNIVERSITY OF BIRMINGHAM (UOB)



B QUEEN ELIZABETH HOSPITAL BIRMINGHAM (QEHB)



C BIRMINGHAM CHILDREN'S HOSPITAL



D BIRMINGHAM WOMEN'S HOSPITAL



Institute of
Translational
Medicine
Birmingham



The BioHub®
BIRMINGHAM



**BIRMINGHAM
LIFE SCIENCES PARK**



INCREASING SCALE OF INCUBATION SPACE NEEDED

In detail

PRECISION HEALTH TECHNOLOGIES ACCELERATOR

Working in partnership to shape the future of healthcare innovation

The focal point of Birmingham Life Sciences Park, and the ‘front door’ to access the full BHP ecosystem, is the planned Precision Health Technologies Accelerator (PHTA).

Offering up to 18,000m² of highest-quality, collaborative lab and office space, the PHTA will be a flagship UK accelerator site for data-enabled healthcare innovation and its adoption. Drawing on our existing integrated and connected translational ecosystem and large, diverse population, the PHTA will enable industry to de-risk and commercialise innovation.

To achieve this, our partnership will build upon four key, complementary anchor capabilities:



+ Data: connecting the patient context

Delivering safe and secure access to, and detailed analysis of, integrated, well-curated, real-world healthcare data from across – and where appropriate beyond – our region, enabling a detailed understanding at patient and population level.

+ Diagnostics: understanding the disease

Bringing together leading regional genomics and immunodiagnostic research and services to deliver precision medicine, validation of new therapies and development of sophisticated diagnostics for faster and more accurate diagnosis.

+ Healthcare technologies: developing the solutions

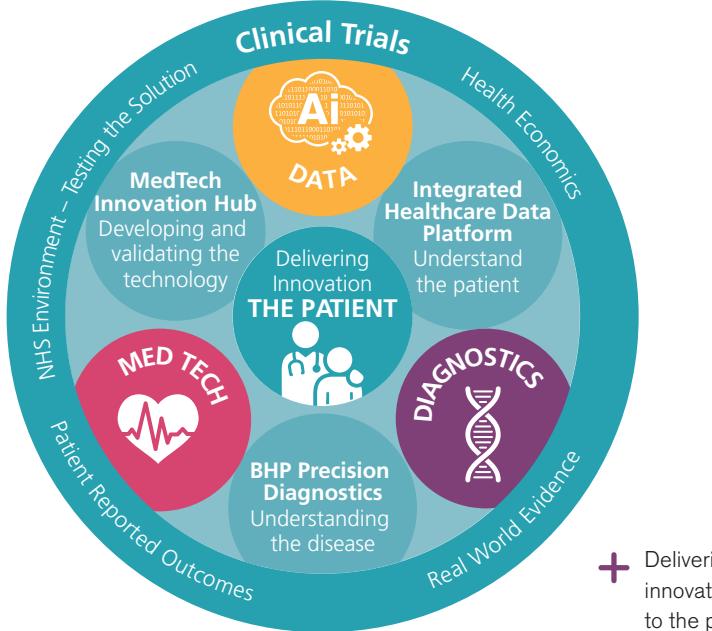
Rapidly develop, test and adopt new technologies and tools, providing facilities and expertise to undertake early-stage research, product development and validation, and prototype manufacture, alongside pre-clinical and clinical evaluation.

+ Clinical trials and implementation: deploying real-world innovation

Recognised leadership in novel clinical trials design and delivery together with leading expertise in patient-reported outcomes measures, health economics and whole-systems thinking across and beyond supply chains to help partners deliver accelerated trials and demonstrate value.

By putting the patient at the heart of all our activity, we will focus on the innovations that address prevalent health burdens in our region’s population – with the ultimate aim of scaling these solutions to the rest of the UK and potentially wider world.

Our integrated, real-world datasets will provide a data ‘safe haven’, where authorised researchers can stratify patient cohorts and use novel NHS platforms to test and evolve AI in real-world settings.



The new **BHP Precision Diagnostics**

Platform will be integral to development within the Precision Health Technologies Accelerator (PHTA), building on existing strengths across BHP and co-locating both University and NHS capability including sample collection, molecular pathology, metabolomics, immune phenotyping and the largest NHSE Genomics Laboratory Hub in the UK. It is set to become an integrated multi-'omics platform for precision medicine, enabling the development of new diagnostic tests by enhancing our understanding of disease, and finally validating tests for service and accelerating adoption into the clinic.

We will also bring our knowledge and experience in patient-reported outcomes (PROs) to demonstrate the value of diagnostic, pharmaceutical and other medical technology innovations.

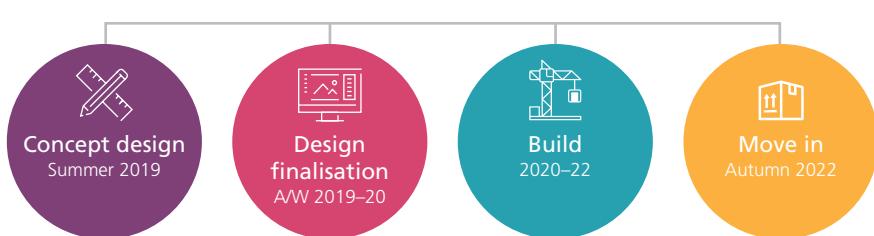
Our Centre for Patient Reported Outcomes Research is already internationally recognised for leading research into best practice for PROs in clinical trials and, across all BHP members, facilitates ePRO development and the uptake of PRO methodology in cutting-edge translational research. Optimising the use of PROs will enable businesses working with us to improve service delivery, enhance patient care and

outcomes, and ensure that the patient perspective is at the heart of health research.

Businesses and entrepreneurs working with the PHTA will also benefit from being part of a vibrant and collaborative community, centred on communal and training spaces:

- ✚ Café and breakout areas
- ✚ Co-creation 'makerspace'
- ✚ Events space
- ✚ Meeting rooms

Indicative timeline:



For further information on Birmingham Life Sciences Park, please contact blsp@contacts.bham.ac.uk or visit www.blsp.co.uk

