# West Midlands Health Tech Innovation Accelerator (WMHTIA) Pathfinder Report

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Locally-led Innovation Accelerators delivered in partnership with DSIT, Innovate UK and City Regions

Department for Science, Innovation, & Technology

UKRI Innovate UK

West Midlands Combined Authority

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# Summary

**This report summarises the achievements of the West Midlands Health Tech Innovation Accelerator (WMHTIA) and learning for supporting the commercialisation of promising health technologies.**

This pathfinder commenced in April 2023 with £14.5m funding from Innovate UK, on behalf of UKRI and DSIT and ran until March 2025. **The WMHTIA was established to improve coordination and strategic planning amongst the region's various innovation and commercialisation initiatives** as well as between the anchor organisations of the region's HealthTech ecosystem.

A consortium of 21 partners was convened to achieve this, including four West Midlands universities, three regional network organisations, a Research and Technology Organisation, professional services, GP Partnership and an NHS Trust. The programme was extended to March 2026 through a second funding award of £4.0m.

A key strength of the consortium was that collectively partners had the expertise to provide the full spectrum of support through a single point of access to a range of bespoke services required by heath technology entrepreneurs for commercialisation of their innovation.

This included intellectual property and regulatory advice, product design, electronics, software development, and data analysis expertise, patient testing and clinical trials support, medical device prototyping and manufacturing, as well as business development and fundraising support, simplifying and accelerating the commercialisation journeys of local innovators based in the West Midlands and attractiveness to those outside the region wishing to scale their business.

The WMHTIA model has been well received by both HealthTech enterprises and delivery partners. Consortium members highlighted the unprecedented range of the group's combined support services, the improvement in their mutual understanding and willingness to collaborate both within and without the programme, and the demonstrable contribution of the programme to organisational and NHS priorities. Partners favoured further joint working as well as a transition to a longer-term, more predictable funding model.

**The WMHTIA not only supported promising enterprises in the region but also worked with five NHS Trusts and Integrated Care Boards to address specific challenges** through the West Midlands Health & Wellbeing Innovation Network. They supported the development and procurement of innovative technology solutions that addressed specific challenges within the region.

By 31st March 2025, the WMHTIA had:

**Supported 269 enterprises, 114 of which received personalised intensive support packages**. This includes Cytecom, creators of a novel rapid diagnostic test to ensure targeted antibiotic therapy for bloodstream infections and sepsis; LBN Innovations, who have designed an improved cervical screening tool that will help to address health inequalities; and Garland Surgical, developing a new hip implant with extended lifetime durability. These medical devices and digital health products are now closer to deployment because of WMHTIA support. The de-risking effect of this support is evidenced by the success that supported enterprises have had in securing new funding to further develop their technologies and business models.

**Leveraged a further £67m public and private co-investment** to more than quintuple the effect of the original grant. During the two-year pathfinder, supported enterprises raised over £36m from private investors as well as over £10m from public bodies, exceeding the programme's lifetime co-investment targets during the delivery phase alone.

**Contributed to wider economy of the West Midlands**. An early assessment of the potential economic impact of the WMHTIA programme has estimated an uplift of **£38.3m in regional GVA** and a £45.0m uplift in national GVA, based on £42.3m R&D activity taking place within WMHTIA partners and businesses between 2023/24 and 2026/27.

The long-term economic and health impacts of supporting such a large group of innovators to bring new HealthTech products to market remains to be assessed.

The success of the programme, and the collaborative advantage secured through its novel governance and management arrangements, has strengthened the West Midlands' innovation capabilities and has helped to create the conditions for growth in the region's HealthTech and life science sector. As well as being a central pillar of the West Midlands Growth Strategy, health tech has a crucial role in delivering the Life Sciences Sector Plan, wider Industrial Strategy and 10 Year Health Plan for England.

**Building on the successful legacy of the Innovation Accelerator programme and the collaborative ecosystem that now exists in the West Midlands will be a vital means of achieving innovation-led regional growth, of addressing the unmet health needs of the region's population, and of improving the productivity of NHS partners.**

# List of abbreviations

| | |
|---|---|
| **AI** | Artificial Intelligence |
| **AMR** | Antimicrobial Resistance |
| **BCU** | Birmingham City University |
| **BHIC** | Birmingham Health Innovation Campus |
| **BHP** | Birmingham Health Partnership |
| **DHSC** | Department of Health and Social Care |
| **DSIT** | Department for Science, Innovation and Technology |
| **EoI** | Expression of Interest |
| **ESG** | Environmental, Social and Governance |
| **GVA** | Gross Value Added |
| **HIWM** | Health Innovation West Midlands |
| **ICB** | Integrated Care Board |
| **IP** | Intellectual Property |
| **LSSP** | Life Sciences Sector Plan |
| **MD-TEC** | Medical Devices Testing and Evaluation Centre |
| **MIT** | Massachusetts Institute of Technology |
| **MTC** | Manufacturing Technology Centre |
| **NIHR** | National Institute of Health Research |
| **OHP/PCA** | Our Health Partnership/Primary Care Accelerator |
| **R&D** | Research and Development |
| **RD&I** | Research Development and Innovation |
| **SMEs** | Small and Medium Sized Enterprises |
| **STEM** | Science Technology Engineering and Maths |
| **TSC** | Technology Supply Chain |
| **UKRI** | UK Research and Innovation |
| **UHB** | University Hospital Birmingham |
| **UHCW** | University Hospitals Coventry & Warwickshire |
| **UoB** | University of Birmingham |
| **UoW** | University of Warwick |
| **WMCA** | West Midlands Combined Authority |
| **WMG** | Warwick Manufacturing Group |
| **WMGC** | West Midlands Growth Company |
| **WMHTIA** | West Midlands Health Technology Innovation Accelerator |
| **WMHWIN** | West Midlands Health and Wellbeing Innovation Network |

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**Tables**

# Introduction

**This report summarises the achievements of the West Midlands Health Tech Innovation Accelerator (WMHTIA) and learning for supporting the commercialisation of promising health technologies**[a]. It describes the:

- Context and why the WMHTIA was needed
- Design and implementation of the WMHTIA
- Benefits for enterprises, the region, life science sector and partners
- Health technology enterprises engaged and supported
- Type of support provided and their impacts

## Context

The 'Levelling Up the United Kingdom' White Paper[1] announced £100 million for three Innovation Accelerators (IAs) pathfinders in the West Midlands, Glasgow, and Greater Manchester. IAs are public-private-academic partnerships aimed at catalysing innovation clusters modelled after Stanford-Silicon Valley and MIT-Greater Boston.

The IAs are specialised vehicles that bring together public sector stakeholders, private sector stakeholders, and leading research institutions. The goal was to align public and private investment to fund local research, development and innovation (RD&I) projects that generate wider public benefits[b] in addition to those accrued by programme beneficiaries.

The inclusion of the West Midlands was based on the following **regional strengths that can attract greater technology investment and expansion.**

**Research assets**

Major university centres offering R&D collaboration and product development opportunities

**Manufacturing base**

Deep advanced manufacturing expertise transferable from the automotive industry

**Market access**

Central UK location enabling national distribution and global connectivity

**Networks & supply chains**

Well-developed engineering ecosystems and material/component supply chains facilitating cluster development

**Infrastructure**

Biomedical parks and hubs with land, lab space, and incubation facilities

**Investment promotion**

WMCA's coordinated efforts around investment attraction, skills programming, and business support

**Financial incentives**

Tax incentives, grants, loans and other support funds for investors and companies

**Talent pipeline**

40,000 annual science graduates and specialised training programmes

**Affordability**

Operating costs averaging 15-20% below those in London and the Southeast

**Connectivity**

Major infrastructure projects that will enhance logistics and access

**In the West Midlands, IAs represented a joint commitment by Innovate UK and WMCA to support inclusive and sustainable growth within the region** as set out in a joint action plan published in 2023[2].

[a] Health tech is a broader term than Medtech. Medtech is used by medical professionals in clinical settings for diagnosis, treatment, and patient care, while Health Tech includes technologies that also improve healthcare delivery and access.
[b] For example, reduced pollution and congestion, lower energy bills and improved healthcare access.

# Why the WMHTIA was and is needed

### 1. To increase the contribution of the HealthTech sector to the national economy and supporting in inclusive growth at the national level.

- At the national level, the size of the healthcare and medical technology sectors generates £17 billion in economic activity annually. The market is projected to reach £21 billion by 2027.

- In terms of employment, the HealthTech sector alone employs 145,700 people across 4,300 companies, with a combined turnover of £30 billion. Life sciences contribute £64 billion in turnover and support over 233,000 jobs. Regulatory hurdles cause up to 20% of products to exit the UK market within five years. The MedTech sector accounts for around 40% of life sciences employment. The sector comprises over 2,150 core MedTech companies (excluding digital) in England, generating £16.8 billion in turnover.

### 2. The HealthTech sector is strategically important for the West Midlands economy and faces many challenges affecting its ability to grow.

- In the West Midlands Plan for Growth[3], HealthTech and MedTech were identified as a sector with a **medium level of strength compared to the national average**, and with high growth potential, offering significant opportunities and comparative advantages that could be leveraged for a step change in performance. Additional growth opportunities include a further **£400m to £430m of output and 5,300 to 5,900 jobs** by matching the growth trajectory of leading UK regions for similar clusters.

- The report also highlighted some of the **challenges for the life science sector in the region**, including regulatory changes, supply chain redevelopment, skill demands for new growth sectors, and securing finance.

- The Medilink members' survey also specifically identifies challenges specific to the region, which fall into four broad groupings: regulatory changes resulting from leaving the European common market, supply chain redevelopment, skills, and finance.

**WMCA Business Support Review** - The WMHTIA addresses the review's findings that business support in the region:

- Is too fragmented and not sufficiently user focused
- Is an inconsistent offer, businesses find it difficult to navigate and is not being effectively supported in areas like growth, scaling up
- Needs to be more integrated providing a more coherent customer journey built around the needs of the user and not the provider
- Needs a new approach to account management and premium support products aimed at specific sectors, supply chains and issues across the region

### 3. The need to provide a more fit for purpose joined-up support ecosystem for the sector in the region.

- **Prior to the WMHTIA, the support ecosystem for HealthTech companies was complex, fragmented, and difficult to navigate**. While numerous longstanding innovation support initiatives operated across the region, these programmes tended to run independently with minimal coordination. There was no shared oversight or strategy to ensure coordinated regional business assistance and maximise collective impact. Support frequently operated through short-term funded projects rather than sustained platforms. The MIT REAP analysis identified 80 broader programmes that regional businesses could access, plus 13 Life Sciences/HealthTech-specific initiatives – seven of which were delivered independently by the WMHTIA partners. An analysis of university involvement in ERDF funded business support programmes identified 32-relevant and seven sector-specific schemes to HealthTech enterprises[4].

- **The lack of collaboration and long-term alignment undermined cohesion and consistency for local health technology businesses seeking assistance in navigating research, product development, commercialisation, talent development, regulation, and other essential domains for growth.**

- **Redundancies, gaps, and misalignment hindered the ecosystem's overall productivity and dynamism**. Fostering greater coordination and strategic connectivity between disconnected assets and programmes may better empower sustainable business support ecosystems. Exploring shared platforms, standards, and incentives can help overcome fragmentation and more effectively catalyse health technology innovation and commercialisation across the West Midlands.

- **There was a need for the development of a premium offer that supported high growth businesses to secure investment and scale to deliver the WMCA's objectives around improved business support within the region.**

**In summary there was and still is a strong economic rationale for public funding to build on the legacy of the WMHTIA that is much broader than cluster development**. It encompasses firm-level performance, location-specific externalities, the potential to create linkages, fostering social embeddedness, labour pooling, addressing coordination failures in the provision of advice and support for the sector, and the development of collaborative advantage by bringing together key economic actors within the region to transform the innovation support ecosystem for the sector.

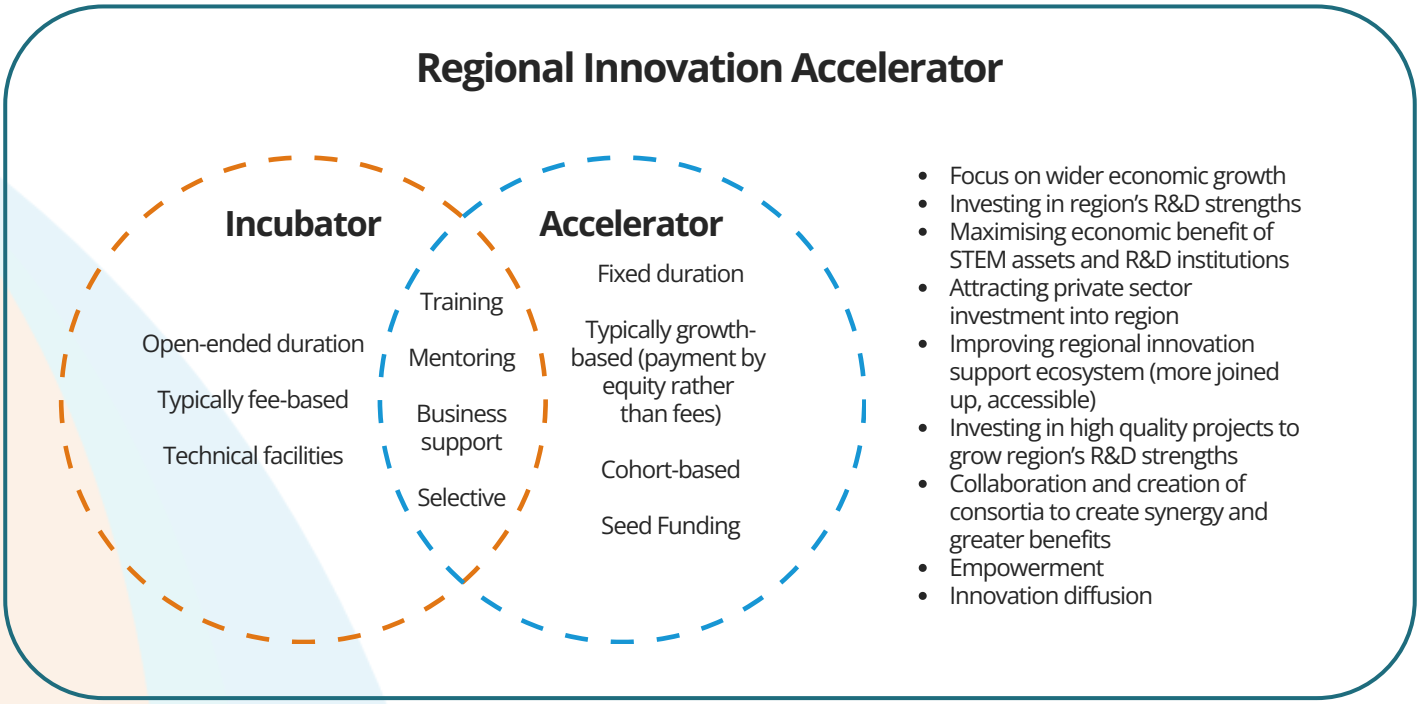
Richard Parker, Mayor of the West Midlands (left), takes part in a technology demonstration by WMHTIA-supported innovators from Fallouh Healthcare.

# The WMHTIA programme

**The West Midlands Health Tech Innovation Accelerator is a unique consortium that brings together diverse providers of support for the health technology sector**, especially to overcome the multiple challenges to reach commercialisation. Unlike traditional innovation accelerators that focus primarily on preparing startups for external investment, the WMHTIA has a broader mission, including:

- Single access point for bespoke support to HealthTech companies at various stages of development
- Transforming the regional innovation ecosystem
- Establishing the West Midlands as a preferred location for medical technology entrepreneurs

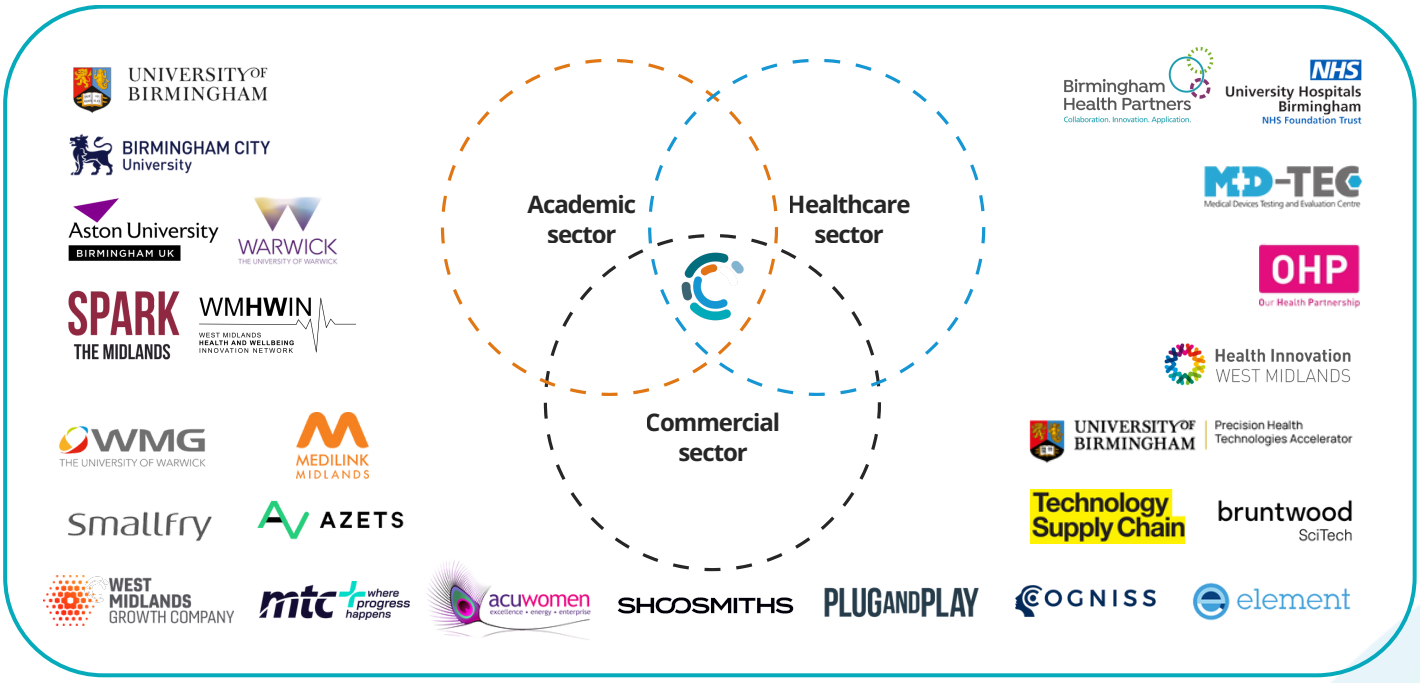
**The WMHTIA was expected to advance the aims of the UK's Science and Technology Framework**, which takes a systemic approach to developing the science and technology base. It combined elements of both incubators and accelerators within a wider remit focused on systematically transforming an entire regional innovation ecosystem. This extended beyond supporting individual startups to advance systemic goals around economic growth including scaling, levelling up, and health technology cluster development.




The WMHTIA is best described as a "regional innovation accelerator" due to its broader ambitions to transform the West Midlands' entire innovation ecosystem for health technologies, rather than just supporting select startups to secure funding.

# The partners

The WMHTIA brought together 21 partners from the academic, commercial and health care sectors into an agile consortium capable of covering the full spectrum of support required by HealthTech enterprises.




Through **academic partners** including Aston University, Birmingham City University, University of Birmingham and University of Warwick, HealthTech enterprises were able to access:

- NHS commissioners through the West Midlands Health and Wellbeing Innovation Network which supports procurement of innovations in response to identified needs in the region
- Warwick Manufacturing Group
- SPARK The Midlands
- Support with regulations, cybersecurity and prototyping
- Clinical Immunology Service, Healthcare Technologies Institute, Chemical Engineering, Electrical Engineering, HealthTech AI Hub (Genomics) and City Regional Economic Development Institute (City-REDI)

Through **healthcare partners** including University Hospitals Birmingham NHS Foundation Trust, Health Innovation West Midlands, and Our Health Partnership/Primary Care Accelerator[c], enterprises have also been able to access:

- Medical Devices Testing and Evaluation Centre (MD-TEC), access to Birmingham Health Partners (BHP) including NHS Trusts, BHP Centre for Regulatory Science and Innovation, NIHR Health Technology Research Centre (Devices, Digital and Robotics)
- Clinicians, potential collaborators (in primary and secondary care) and commissioning support at all stages of their commercialisation journey

The WMHTIA was able to provide demand-led holistic and integrated business support required by the sector through the inclusion of **commercial and third sector partners**. Partners in the pathfinder included Acuwomen, Azets, Bruntwood SciTech/Birmingham Health Innovation Campus, Precision Health Technologies Accelerator, Cogniss, Element Materials Technology, Forresters, Medilink Midlands, Manufacturing Technology Centre, Plug and Play UK, Shoosmiths, Smallfry, and Technology Supply Chain who provided information and bespoke support covering intellectual property (IP), regulation, access to finance including introductions to investors, design, prototyping, manufacturing, inward investment and international markets, supply chain development, app development and business strategy and premises. **An overview of partners is provided in Appendix A**.

[c] Our Health Partnership accelerator activity is now being delivered under the Primary Care Accelerator brand name.

## Support provided to the businesses

The partnership model behind the WMHTIA programme provided the capability to support enterprises in the following core support areas (and associated key capabilities):

- **Regulatory and clinical support**: clinical evidence, patient acceptance, end-user acceptance and regulatory strategy; implementation; procurement
- **Organisational developmental support**: team structure, organisation, partnership and networking
- **Intellectual Property (IP), legal, venture capital (VC) and clinical R&D support**: Patent advice and distribution agreements, investment pitching, investor relationships, VC funding, clinical and R&D funding; bid writing
- **Business support**: business model, market opportunity, customer, value proposition
- **Technology support**: external contract manufacturing, software development, data analysis, cybersecurity, AI integration, supply chain development
- **Product development**: prototyping and product design; diversification
- **Internationalisation**: collaborations and export market opportunities

The WMHTIA also provided three types of grants. These included:

- Integrated grant within the SPARK programme
- Grants for companies selected to develop a solution in an innovation challenge with the WMHWIN programme
- A competitive secondary grant scheme open to all registered businesses

## Eligibility criteria

The only requirement to participate in the programme was to be a West Midlands-based innovator or for the innovation to directly contribute to the region's growth, either by establishing a business or supply chains here. Whether the company was a startup, SME, or an established firm, as long as its operations benefited the West Midlands, the business was encouraged to participate in the development of the region's HealthTech landscape. Whilst the support focused on driving rapid innovation development and business impact from technology readiness levels (TRLs) 3-7, the programme was open to innovators of all readiness levels.

# The benefits of the programme

Enterprises that engaged with the WMHTIA benefited from:

- Bespoke support for product development, including prototyping and trials
- Assistance with product commercialisation
- Access to mentorship and expertise
- Insights and support for collaborative work
- Peer-to-peer learning opportunities
- Exposure to broader academic capabilities
- Help in diversifying market reach and identifying new partners or investment opportunities

The WMHTIA has evolved beyond a time-limited programme into a collective endeavour where partners collaborate to build a sustainable healthcare innovation ecosystem.

**For the partners involved in the WMHTIA, they have benefited from:**

- Data and knowledge sharing
- Expanded base for future collaborations – the WMHTIA aims to promote inclusive growth in the health tech sector, increase the region's visibility, and position the West Midlands as a centre of excellence for health technology on an international scale
- More collaborations within the region to support the development and application of health technologies

The programme also anticipates delivering **longer-term benefits to the regional NHS and health services**, as well as **improved patient outcomes**, through the testing and deployment of new innovations and technologies in the region. This is expected to include:

- Benefitting the local populace, as the healthy life expectancy across the WMCA area lags behind the national average by more than two years for both males and females, with disadvantaged and deprived communities experiencing worse outcomes. **New tests, treatments and technologies reaching West Midlands patients faster** could improve regional health inequalities and lead to an associated productivity impact as rates of economic inactivity due to illness are reduced and people lead healthier, more productive lives

- Reduction in front-door pressures on regional NHS sites and Local Authority challenges in social care. Through targeted challenge-led innovation, enabling new ways of working and the leverage of major Department of Health and Social Care (DHSC) programmes for innovation, e.g. Community Diagnostic Hubs

The programme will also lead to, or leverage, a significant number of additional **benefits to the region**, including:

- Future additional investment, including both public and private sources, to support further innovation and business development
- Leveraging capital assets, which include the current development of the BHIC, which could attract up to £200m of capital investment as new phases of the site are developed and additional foreign or inward investment is secured
- The development of new products and services will open new markets
- By attracting further investment and the co-location of businesses and other institutions into the region's growing life sciences clusters, the WMHTIA will create positive spillovers in labour markets and innovation activity, enhancing productivity

> **The programme anticipates delivering longer-term benefits to the regional NHS and health services, as well as improved patient outcomes**

- Through the creation of higher value, higher-skilled jobs in R&D and the life sciences/health technology sectors, but also through general improvements to health and wellbeing from R&D outcomes
- Building supply chain capability within the region by helping existing manufacturers diversify and pivot towards health and medical technologies
- Developing investor awareness in the region, alongside enhancing the investment readiness of enterprises
- Growth in facilities and services to support the development of the ecosystem. This could include demonstrating demand for lab space and clean rooms, as well as securing investment in their provision (both commercial and public sector), and growing the presence of professional business service firms with the necessary specialised expertise required by the sector
- Talent development, including the retention of graduates trained in the region and increasing awareness amongst a diverse young population of the career pathways in the sector (thereby contributing to the achievement of the Joint Innovate UK WMCA Action Plan)
- Developing international linkages (e.g. SPARK with preclinical technologies)
- Mobilising and developing the region's STEM assets

# Programme delivery

## Type of support (Intensive vs Core)

The defining feature of the WMHTIA compared to many other prior accelerator models was its ability to provide intensive support to health tech enterprises.

**Intensive support** was defined as an in-depth interaction with at least one of the WMHTIA delivery partners to provide a **bespoke offer** of development support.

For the remaining companies in the overall cohort, they were still able to benefit from attending networking events and workshops designed in response to common development needs identified within the cohort.

This was referred to as **'core support'** as the intention was that everyone who had engaged with the WMHTIA would have the opportunity to benefit from the expertise, but to differing extents.

## Recruitment and onboarding onto the WMHTIA

**The single front-door approach** adopted by the WMHTIA overcame the issue that health technology businesses were confused and frustrated with multiple accelerators and support providers in the region approaching them with competing offers of support. Its effectiveness was validated by both the number of and feedback from businesses. Interested businesses could apply quickly using a shortened Expression of Interest (EoI) form.

> **Many health technology businesses that expressed an interest were experiencing their own version of the 'valley of death'.**

This collected essential information without being burdensome to the company, which helped them focus on describing their product and their initial ask from the programme, and formed the basis of the triage interviews. Having a website presence helped generate interest and applications.

**Demand exceeded expectations. It quickly became clear there was a pipeline of projects for the WMHTIA when over 200 health technology businesses in the region registered with the programme in the first two months**. Keeping the registration form focused on a small number of critical questions contributed to achieving a high number of applicants. The decision to have a wide, inclusive definition and selection criteria for business eligibility during the Pathfinder was made to further understand the unmet needs in this sector.

Many health **technology businesses that expressed an interest were experiencing their own version of the 'valley of death'**, struggling to transition from research and development to commercialisation. **A further stage of triage occurred through interviews with the businesses**. All those partners involved in the triage process had considerable experience and knowledge of the sector in the region.

**The two-stage application process controlled for potential biases in applicants' descriptions of their projects in their expressions of interest**. It is not unusual for companies to request support for what they consider key milestones, such as a clinical trial, when they need support in undertaking foundational activities.

**The WMHTIA's evolving delivery model supported WMCA's vision for a region where business support is driven by actual company needs** rather than predetermined service packages. The delivery model was live-piloted, tested, and adapted. Unlike other innovation accelerators, which are less ambitious in scope, the WMHTIA aimed to support as many businesses as possible beyond those receiving bespoke support or a grant to support their project.

The 'WMHTIA community' was created to allow companies and innovators to still register an interest when the application process for bespoke support closed in February 2024. This allowed them access to the core offer, in addition to the pool of applicants who had not been onboarded for bespoke support or whose grant application was unsuccessful. This 'community' of health technology firms that missed the cut-off to apply for intensive support provides a solid basis for continued support of this practical nature to health tech enterprises in the West Midlands.

Applicants presented a wider range of technologies than initially anticipated, including some, such as implantable devices, with development pathways of up to 15 years to commercialisation. Other comparable innovation accelerators often focus on digital health due to its shorter development and adoption timescales and financial incentives.

The main purpose of the diagnosis triage clinic was to facilitate a more tailored discussion, relevant to the specific technology, to elicit next steps more accurately based on their expression of interest. It also enabled a shorter EoI form to enhance the take-up rate. The WMHTIA maintained effective communication with applicants while their applications were under review.

The WMCA's flexible approach to eligibility, based on companies' current or potential regional presence, has enabled the WMHTIA to support international companies interested in establishing themselves in the West Midlands and leveraging the expertise of the region. Several applicants had already established a regional presence, often using partners' office space.

## Building the collaborative partnership and offer

The development of the WMHTIA partnership can be traced back to several previous initiatives in the region that helped lay the foundations for the programme.

These include Birmingham Health Partners (BHP), the development of NHS, industry, and universities in partnerships delivering ERDF-funded projects in the sector, and the coming together of many partners to develop a Strength in Places Fund (SIPF) proposal in 2019.

**There was a pre-existing aspiration to work collaboratively across the region, but the prevailing challenge was that funding models for regional programmes encouraged silo working and competition for clients**. While some partners had prior experience of working together, it was not at the scale of their ambitions for the WMHTIA.

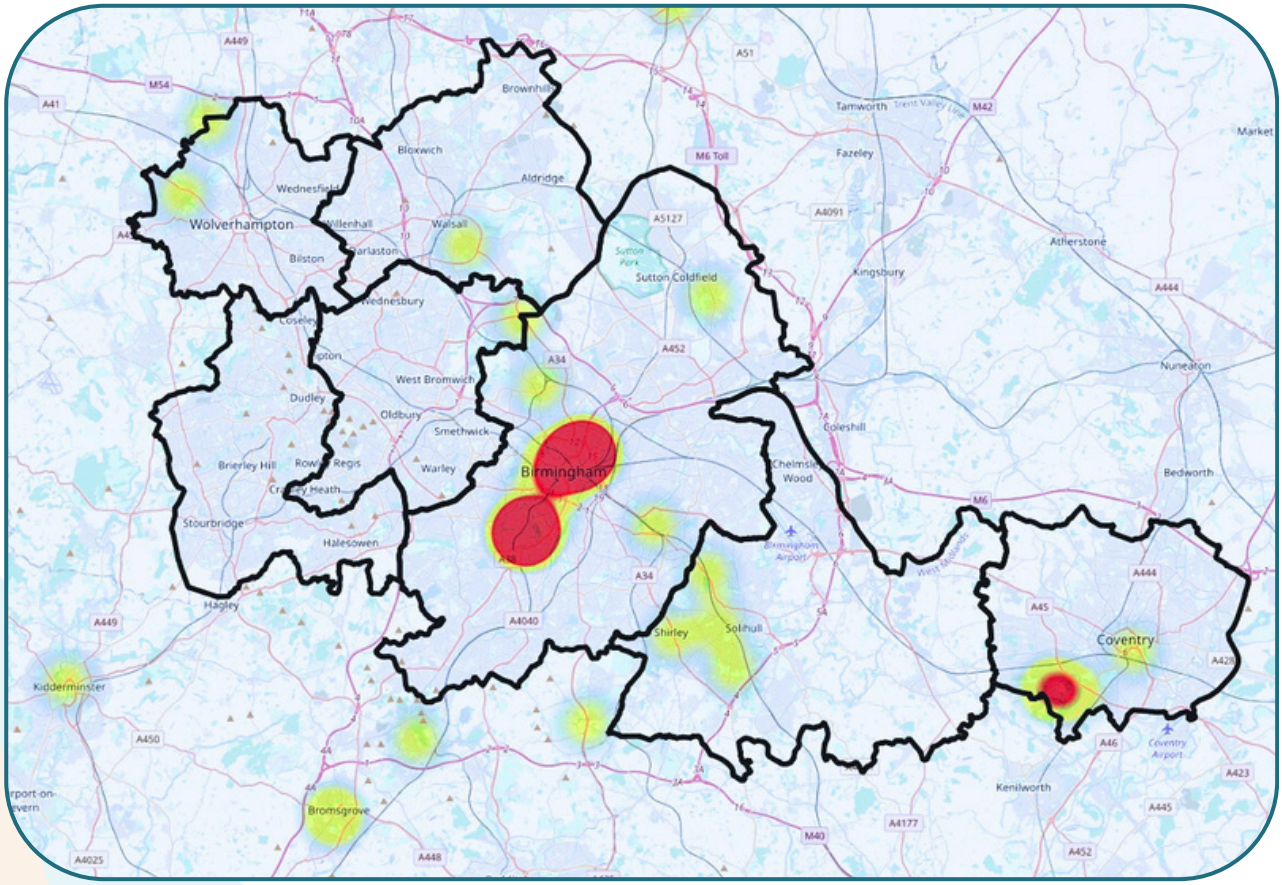
The period following the announcement of funding for the WMHTIA involved operationalising and implementing the proposed programme. It also involved developing and deepening collaboration to create the **collaborative advantage** needed to achieve the wider aims of Innovation Accelerators, as set out in the Levelling Up White Paper.

Over the duration of the programme, the collaboration between partners matured and could be characterised by:

- The willingness of partner organisations to work at risk during a prolonged contracting period and funding sign-off
- The development of a high level of openness and trust between partners and a genuine desire to work effectively together
- Creating different types of relationships within the region between the academic, industry and public sectors around key themes and activities
- Increased transparency between partners
- Continuing to grow and being willing to accept new partners who bring new capabilities and connections, allowing the WMHTIA to adapt to the needs presented by companies coming through the front door

# Overview of health technology enterprises engaged and supported

**The WMHTIA has clearly demonstrated demand for its offer**. The programme exceeded its original targets of engaging **150 enterprises over two years by 180% (actual: 269 enterprises) and delivering 50 high-value or intensive support packages by 228% (actual: 114 enterprises).**




Most enterprises that joined the programme and those that received intensive support were from the wider West Midlands region, and around half were located within the WMCA region. 73% of the businesses intensively supported by the WMHTIA were from the Greater West Midlands region when adjusted for the national focus of one of the partner programmes. Of these, 75% were specifically within the WMCA boundary (equates to 54% of the intensively supported cohort overall).

**Table 1: Types of technologies supported**

| Type of technologies | Percentage of technologies supported by WMHTIA (N=114) |
|---|---|
| Digital Health and Software | 59.6% |
| General Medical Device | 26.3% |
| In-Vito Diagnostic Medical Device | 9.6% |
| Active Implantable Medical Device | 3.5% |
| Advanced Material/Other | 0.9% |

The supported technologies, which received intensive assistance, were **predominantly digital health and software** (59.6%) or general medical devices (26.3%), as shown in Table 1.

The nature of the expertise provided by two of the WMHTIA partner programmes (SPARK The Midlands and WMHWIN) has had a particular impact on the type of companies and enterprises involved. SPARK The Midlands (Aston University) primarily focused on early-stage academic teams forming spin-out companies, whereas WMHWIN (UoW) supported health technologies that were ready for deployment in an NHS setting, resulting in a greater focus on more established businesses.

**Table 2: Age of the businesses supported**

| Years since establishment | Overall | SPARK The Midlands | WMHWIN |
|---|---|---|---|
| Less than 1 year | 28% | 75% | 9% |
| 1 - 4 years | 27% | 5% | 22% |
| 4 - 8 years | 22% | 20% | 26% |
| 8 - 12 years | 11% | 0 | 13% |
| More than 12 years | 12% | 0 | 30% |

As shown in Table 2, just over **half of enterprises (55%) supported by the WMHTIA had been established for less than 4 years**. Compared to that, 80% of the SPARK cohort and a third of WMHWIN (31%) had been established for less than 4 years. A quarter (23%) of all intensively assisted enterprises had been established for eight or more years, which included none of the SPARK cohort and two-fifths (43%) of the WMHWIN cohort.

Businesses were able to access support from a range of partners, with the number of enterprises assisted by each partner outlined in Table 1 (in the period to 31st March 2025).

**Table 3: Number of businesses supported by partners**

| Partner | Percentage of technologies supported by WMHTIA (N=114) |
|---|---|
| Aston University (Including SPARK The Midlands) | Supported 29 enterprises directly. A further 20 businesses received support via SPARK The Midlands, which develops credible, costed plans for clinical trials. Hosted the SPARK Europe Showcase conference at Millennium Point, Birmingham – attended by 15 WMHTIA businesses and over 60 European peers. |
| Birmingham City University | Collaborated with one NHS trust and provided support to 21 businesses. |
| Bruntwood SciTech/BHIC | Supported 16 enterprises across two separate cohorts. |
| Element Materials Holding | Provided intensive regulatory guidance to one company and triaged business cohort in readiness for the larger scale RegNavigator programme to be delivered in the extension phase. |
| Forresters | Alongside Shoosmiths, delivered 1-to-1 legal and IP advice to eight businesses. |
| Medilink Midlands | Organised 26 events and workshops, attracting 1,600 attendees from 750 organisations. |
| MTC | In partnership with WMG, conducted in-depth needs assessments for 43 businesses, each receiving a development plan. Of these, 27 progressed to technical support. |
| OHP/PCA | Supported six businesses with primary care expertise, collaboration opportunities and investment. |
| Plug and Play | Supported 24 businesses across two cohorts. Account-managed several funding rounds, generating approximately £17m confirmed investments for WMHTIA businesses. |
| Shoosmiths | Alongside Forresters, delivered one-to-one legal and IP advice to eight businesses. |
| TSC | Supported 44 businesses, with a further 24 attending TSC events. Hosted two conferences and 10 informal networking events to build connections across the cohort. |

| | |
|---|---|
| University of Birmingham | Supported 17 enterprises directly, with the HealthTech AI Hub supporting an additional 15 businesses. Delivered innovation support to 32 enterprises, and as lead partner in the collaboration, provided the core management team that also and administered the £1.54m Secondary Grant Scheme, which co-funded R&D in 24 businesses (£16,500–£150,000 each) as well as administering the 22 WMHWIN (£20,000 each) |
| University of Warwick | Supported 32 enterprises and five NHS trusts/ICBs. WMG worked with nine very early-stage businesses (pre-revenue, <TRL4). WMHWIN ran an open-call challenge-led programme with five NHS trusts/ICBs and 23 established digital health businesses. |
| UHB | Supported 22 businesses. Provided 100–700 hours of 1-to-1 support per business. |
| WMGC | Supported 28 businesses, 30% of which were overseas and 20% from outside the West Midlands. Promoted WMHTIA at 33 international events. |

Acuwomen, Azets, Cogniss, Element, Health Innovation West Midlands, Shoosmiths/Forresters, and Smallfry all initially provided in-kind support. In later stages of pathfinder, some of these partners were able to access funding to deliver specific services identified as needed by supported enterprises by the WMHTIA . They also provided non-business-facing advice to the consortium.

# Case studies

## Championsys - AI diagnostics to detect multiple eye diseases

AI Diagnostics utilises algorithms to identify up to 39 distinct eye conditions, improving diagnostic efficiency and reducing eye care costs through early intervention.

**The challenge**

In the United Kingdom, every six minutes someone is told that they are going blind. With more than 2 million people already living with sight loss, the numbers are expected to almost double by 2050. Treatment of eye diseases, such as Diabetic Retinopathy, costs the NHS an estimated £70M/year[5]. Meanwhile, the increasing referral lists for ophthalmology assessments and treatments add to the growing workload of UK health professionals. Worldwide, more than 1 billion people suffer from vision impairment with underserved communities being the most disadvantaged due to financial cost or limited access to conventional eyecare in remote areas .

**The innovation**

Championsys has developed AI-powered diagnostic software alongside a smartphone-compatible solution designed to improve screening efficiency, lower eyecare costs, and extend diagnostic services to remote areas. The software utilises advanced algorithms that can identify up to 39 distinct eye conditions, thereby significantly enhancing both the speed and accuracy of diagnoses.

**The benefits**

- **Improved efficiency**: Shorter diagnosis, allowing more patients to be seen each day
- **Early detection**: Early treatment can prevent severe vision loss in 90% of people with Diabetic Retinopathy[6]. The sooner the condition is detected, the easier it is to treat, resulting in direct benefits to patients and the healthcare system
- **Increased accessibility**: The smartphone attachment enables examinations in remote areas or mobile clinics, thereby improving access to essential eye care for underserved communities

**The support received from WMHTIA**: The WMHTIA helped Championsys develop its software into a robust user interface in preparation for real-world application. This has included drawing on the support of the following WMHTIA partners:

- **BCU**: BCU's computer science department played a pivotal role in developing the software for the diagnostic tool
- **WMG**: Oversaw the product development of the smartphone attachable screening device, enhancing its accessibility and efficiency
- **Bruntwood SciTech**: Championsys received support refining their strategy for AI Diagnostics' market development and positioning
- **TSC**: Provided Championsys with expert bid writing support
- **Medilink Midlands**: Facilitated crucial connections for Championsys with key stakeholders in the regional healthcare and innovation ecosystem
- **Forresters**: Delivered comprehensive IP support, safeguarding the AI Diagnostics technology

Championsys also received WMHTIA grant funding, allowing the company to further accelerate the development of AI Diagnostics.

**Alejandro Garro**, Director of AI Diagnostics and Director of the Data & AI Studio at Championsys, said:

"*The support from WMHTIA was a turning point: it helped us turn an ambitious idea into a viable product, ready to deliver real-world impact. It brought us closer to launch and connected us with the right partners to scale our vision*."

Cytecom

# Cytecom - Rapid diagnostic device for Antimicrobial Resistance

Cytecom has developed a groundbreaking approach to diagnosing bacterial infections, ensuring the correct antibiotic is prescribed every time.

**The challenge**

Bloodstream infections and sepsis are responsible for 20% of global deaths, a number that is predicted to rise due to the growing global health threat of antimicrobial resistance (AMR).[7] Currently, determining the most effective antibiotic to treat a bloodstream infection takes several days, as laboratory testing is required to determine antibiotic susceptibility.

During this delay, clinicians are often forced to rely on broad-spectrum antibiotics. While this approach is intended to provide immediate coverage, it can disrupt a patient's microbiome and further accelerate the spread of AMR. Worse still, resistance is now emerging against these broad-spectrum antibiotics. As a result, patients may be treated with drugs that are ultimately ineffective during the most critical window of illness.

This delay in administering the right therapy can lead to rapid deterioration, and in some cases, death before lab results become available. Every hour counts. Mortality from sepsis increases by 4-7% for every hour that effective treatment is delayed. These realities underscore the urgent global need for faster, more accurate diagnostic tools that can guide timely, targeted antibiotic therapy, ultimately saving lives.

**The innovation**

Addressing this urgent clinical need, Cytecom, a spin-out from the University of Warwick, is developing the CyteCount system – an innovative diagnostic platform poised to drastically shorten the time needed to identify effective, targeted antibiotic therapy from days to hours. This approach aims to enable faster, more precise treatment for patients with bloodstream infections and sepsis.

At the heart of CyteCount is Optical Electrophysiology – a novel, patented technique that measures changes in bacterial and fungal membrane potential in response to antibiotics. By combining fluorescent microscopy, electrical stimulation and AI, the system detects real-time physiological changes at the cellular level. Living cells respond by glowing brighter, while dead or inhibited cells dim, providing a direct readout of antimicrobial susceptibility in as little as 45 seconds.

Crucially, this method does not rely on bacterial growth or replication, enabling much faster results than conventional culture-based diagnostics. Currently in the preclinical development phase, CyteCount's integrated approach is showing promise for delivering actionable results at the point of need.

**The benefits**

If fully realised, the system could offer several transformative benefits:

- **Reduced mortality**: CyteCount's rapid identification of effective antibiotics could reduce complications, readmissions, and sepsis-related deaths
- **Optimised antibiotic use**: Real-time results support coordinated, targeted prescribing and reduced reliance on broad-spectrum antibiotics
- **Shorter hospital stays**: Patients with sepsis currently spend up to 12 days in the hospital while effective treatment is being found rapid diagnosis and treatment could free up crucial hospital space and save significant NHS costs

**The support received from WMHTIA**: Cytecom has received intensive, cross-sector support through the WMHTIA, with seven partner organisations helping to advance the commercialisation of its health technology. This collaboration addressed key challenges across design, manufacturing, intellectual property, regulatory, and investment readiness.

- **Bruntwood SciTech**: Enrolled Cytecom to the 8-week Triple Chasm business development and commercialisation programme, helping improve commercialisation process and focus on a target niche that clearly distinguishes customer from end user
- **Forresters**: Delivered comprehensive intellectual property support, safeguarding the CyteCount technology
- **MTC**: Created a design for manufacture process for a research laboratory variant of the diagnostic device
- **Medilink Midlands**: Played a key role in supporting Cytecom's strategic visibility and ecosystem engagement, as part of its broader effort to establish a thriving MedTech innovation landscape in the West Midlands. Cytecom partnered with Medilink Midlands to co-organise the Innovations Against AMR event, bringing together academia, industry, and policymakers to accelerate collaboration against antimicrobial resistance
- **Plug and Play UK**: Provided one-to-one investors and industry partners introductions, along with commercialisation support, including being part of a delegation that showcased their business at the 2024 Winter Summit in Silicon Valley, USA
- **SPARK The Midlands (Aston University)**: Supported regulatory training and compliance strategy by upskilling an in-house regulatory expert and facilitated grant collaborator introductions

Cytecom was also a WMHTIA grant recipient which engaged support from **Smallfry** in the development of their product. Together, the team engaged with hospital laboratories, initiating an explorative design process grounded in insights into the needs of the working environment and its personnel.

Since receiving support from the WMHTIA, Cytecom has already reached a major milestone – commercialising its first research-use device and securing its initial clients in the academic sector.

**Dr Magdalena Karlikowska**, CEO of Cytecom, said:

"*The WMHTIA support has been instrumental in accelerating Cytecom's journey from innovation to commercialisation. It enabled us to enhance the reliability of our diagnostic technology, strengthen our regulatory position, and refine our product development strategy.*

*Thanks to this support, we are now positioned to bring our rapid antimicrobial susceptibility testing solutions to market sooner, improving patient outcomes and supporting the fight against antimicrobial resistance. This support has not only advanced our technology but has also opened doors to new collaborations, investment opportunities, and regional economic growth.*"

Members of the Cyteocom and Smallfry teams

LBN Innovations

## LBN Innovations - Revolutionising women's health

LBN Innovations introduces an alternative to the traditional speculum for the first time in 150 years.

**The challenge**

In 2024, Public Health England reported that 1.87 million women and people with a cervix failed to accept their cervical screening invitation, despite its life-saving potential.

Of the 5.12 million individuals invited for screening, only 3.25 million aged 25 to 64 attended, resulting in national coverage of 64.1%, which is below its target of 80%.[8]

Specifically in the West Midlands, nearly one in three people do not take up the screening offer[9], resulting in a significant regional and national unmet clinical need. As reported in a national survey, the most common reasons cited for avoiding appointments are pain and embarrassment.

This is not surprising, considering that the conventional speculum used for screenings has seen no innovation in the last 150 years.

Recognising this unmet need, LBN Innovations set out to revolutionise women's health with a new screening device that prioritises comfort and dignity.

**The innovation**

The innovation is a camera-assisted screening device that aligns with the size of a tampon. With its small and ergonomic design, LBN Innovations' technology aims to replace the traditional speculum completely. The device is also capable of changing the nature of screening appointments.

The camera assist allows the clinician to perform the screening at the patient's side, preserving modesty, and allowing the patient to have the check done 'with them' rather than 'on them', as they can also observe it on a screen.

By addressing both the physical discomfort and emotional barriers associated with traditional cervical screening, LBN Innovations offers a transformative solution to a longstanding problem.

This pioneering device not only enhances the patient experience but also has the potential to increase screening uptake, narrow socioeconomic health disparities, and ultimately save lives.

**The benefits**

If fully realised, the system could offer several transformative benefits:

- **Screening uptake**: Disparities in screening uptakes are higher in ethnic minority communities. The minimisation of emotional barriers creates a more inclusive procedure which in turn can encourage higher screening attendance
- **A novel innovation**: Patient-centred innovations like this are essential in making preventive care more accessible, dignified, and effective for all
- **Life-saving potential**: Approximately 800 annual deaths are caused by cervical cancer in the UK.[10] However, with early intervention, 99.8% of cancer cases can be prevented. An accessible screening procedure could reduce mortality rates.

**The support received from WMHTIA:** The WMHTIA has supported LBN Innovations by driving the technology towards real-world deployment through the development and protection of an early working prototype. The prototype then underwent further refinement and early stages of validation. This has included drawing on the support of multiple WMHTIA partners:

- **UHB**: UHB conducted a Patient and Public Involvement session (focus group) with a practitioner, gathering expert feedback to aid the additional refinement of the product design
- **TSC**: Network expansion and connection to local manufacturers
- **MTC**: Technical assessment of current product design, bespoke product design development, supply chain support to keep manufacturing in the UK
- **Azets, Acuwomen, Forresters, Medilink Midlands, HIWM**: Professional business services including market positioning, financial planning, IP support, stakeholder introductions and bid writing

**Louise Ben-Nathan**, Founder of LBN Innovations, said:

"*The WMHTIA is the first programme I have partaken in that offers bespoke support tailored to my company. It has played an invaluable part in helping my innovation progress along the health tech development pathway. I cannot recommend the programme enough.*"

# Secondary grant funding

The University of Birmingham on behalf of the consortia managed a competitive secondary grants scheme. It was launched in February 2024, was **open to all companies registered with WMHTIA** for projects that could be completed by 31st December 2024. The WMHTIA Grant Committee was made up of grant assessors, external investors, and other representatives of stakeholder bodies appropriately qualified to make grant decisions, with Public and Patient Involvement Engagement representation and independently chaired by Professor Michael Lewis, Director of the NIHR i4i Programme and Small Business Research Initiative (SBRI) and Scientific Director for Innovation (NIHR Board).

**In terms of demand, the secondary grant scheme was a success.**

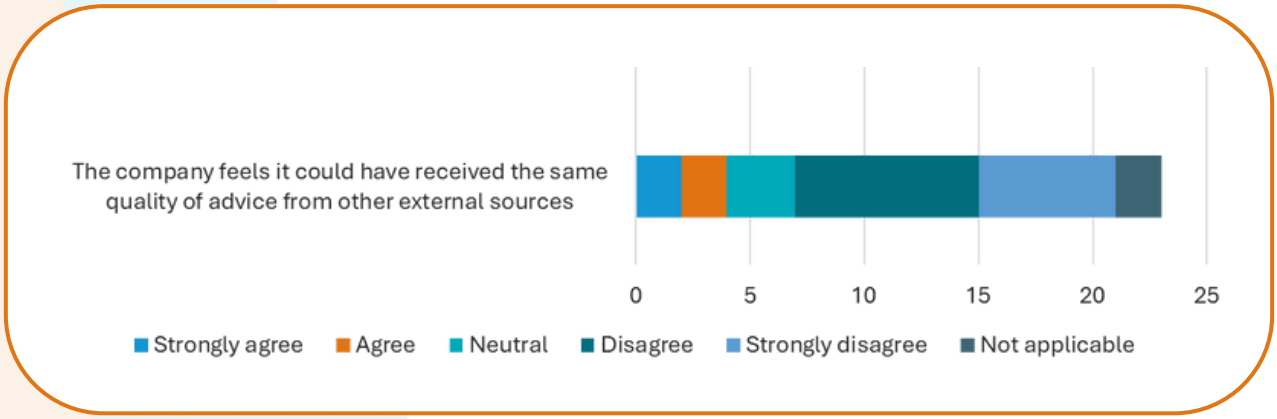
**Table 4: Breakdown of secondary grant application**

| | Applications | Unsuccessful | Successful | Funding split |
|---|---|---|---|---|
| Small grants | 56 | 37 | 19 | £861,973.60 |
| Large grants | 16 | 11 | 5* | £677,454.53 |
| **Total applications** | **72** | **48** | **24** | **£1,539,428** |
| **8 - 12 years** | | | **Total £1.54m**** | |

*All companies in receipt of awards >£100k (4 of the 5 companies) have undergone gearing calculations (ratio of company debt to equity) and the company details have been submitted to the public subsidy database.
**The initial funding pot for this part of the grant scheme was £1.4m, but due to the calibre of projects submitted and the potential need to reallocate a proportion of funds resulting from the delayed project start, additional funds were made available to support more grant projects.

**Of the 72 applications, 24 were successful, with a total of £1.54m awarded**, and of these, 38% were female founded companies. The grant scheme operated separately from the 'paid for' element of bespoke support offered by WMHTIA partners. **Projects were typically of 6-8 months' duration (May 24 – January 25) to allow the impact to be realised** within the WMHTIA programme timeframe. Grant values ranged from £16,500 to £150,000. The **average perceived acceleration effect among grant recipients was 9-10 months (median: 9 months; mean: 10 months; IQR: 6-12 months)**.

The majority of grant recipients also reported they would not have received the same quality of advice from other external sources to WMHTIA in developing their technology.



In addition to the competitive secondary grants scheme, participants in the **SPARK The Midlands** and the **West Midlands Health and Wellbeing Innovation Network (WMHWIN)** were provided with grants to develop their propositions.

SPARK
THE MIDLANDS

**SPARK The Midlands**

20 business teams were supported by SPARK, which provided working capital of £25,000 to develop their concepts. Of these, 14 were academic teams where the lead innovator was based in a university or NHS Trust.

SPARK The Midlands programme works with innovators to develop credible, costed plans to take their products to clinical trial.

It is the first UK branch of Stanford University's global network of pre-clinical accelerators that supports companies, academics, and clinicians whose diagnostic and therapeutic products are at the earliest stages of development, providing personalised support on intellectual property, business administration, regulatory issues, and clinical trial planning.

Businesses were supported to engage with the Medicines and Healthcare products Regulatory Agency (MHRA) and to prepare their preclinical development plans by a multidisciplinary panel of advisors.

Small development grants of £25,000 were then provided to each company or pre-company to help implement the planned activities, including the development of MHRA technical documentation and evidence for investors.

SPARK The Midlands was established as part of Aston University's active involvement in the delivery of the WMHTIA.

WMHWIN
WEST MIDLANDS
HEALTH AND WELLBEING
INNOVATION NETWORK

**West Midlands Health & Wellbeing Innovation Network (WMHWIN)**

Companies engaging in the programme were awarded £20,000 each to co-develop their products with NHS organisations.

**WMHWIN and its contribution to fostering demand-led innovation are described under Impacts of WMHTIA.**

# Events and international exposure

**The WMHTIA significantly exceeded its target in terms of the number of events held (420%) and organisations reached (more than 375%)**. The information collated through the EoI forms enabled partners to provide tailored events that addressed actual needs, rather than delivering the standard **playbook of events associated with previous** initiatives to support the sector.

**The WMHTIA International Assembly** took place over 3 days:

- 2 December 2024 – International reception hosted by the University of Birmingham at the Exchange, Birmingham,
- 3 December 2024 – Conference programme with regional and international plenary sessions, nine themed workshops, an exhibition area with 46 exhibition stands and an international brokerage event facilitating one-to-one pre-arranged meetings
- 4 December 2024 – International visit to the Institute of Translational Medicine and the Medical Devices Testing and Evaluation Centre

The Assembly was **delivered in collaboration with Innovate UK, and the Department for Business and Trade (DBT) and provided the basis for building on the international visibility of the West Midlands health technology innovation ecosystem, as well as the WMHTIA**. It provided an opportunity to:

- Showcase the WMHTIA programme and health technology ecosystem in the West Midlands and opportunities in the region to an international audience
- Showcase businesses on the programme
- Learn from insights of industry leaders and experts
- Learn about international funding programmes such as Horizon Europe, EUREKA, and the European Innovation Council (EIC) and other international health tech clusters
- Attend nine interactive workshops ranging from securing investment to one-to-one advice sessions on regulatory issues
- Globally network and exchange knowledge

The Assembly concluded with the Health Tech Brokerage Event, led by Innovate UK's Business Growth team, which provided an opportunity for delegates to set up one-on-one meetings with like-minded innovators, market players, and industry experts in attendance.


A panel of international delegates representing Germany, Norway, UK and Taiwan - WMHTIA International Assembly, 2024

# Highlights from the WMHTIA International Assembly


# Impacts of the WMHTIA

The **WMHTIA has made good progress against its original targets and, in some cases, has exceeded them**.

The WMHTIA has demonstrated the power of collaboration in mobilising regional expertise and assets to support businesses, enabling health technology enterprises to better navigate the support they need during their commercialisation journey.

In certain circumstances, importantly this has also resulted in examples where assisted enterprises, through discussions with partners, have taken a 'fail fast' approach to less promising ideas or pivoted into alternative indications.

**£49.4m of private investment**
**(tripling initial Innovate UK investment)**
**£36m** direct VC investment
**£13.1m** private co-investment

**£67.3m total investment realised including private and public co-investment**
(public co-investment includes £10m secured from successful grant applications)

**5 products produced** by NHS in less than two years (a process which usually takes multiple years)

**269 companies joined WMHTIA cohort**
creating a vast talent and skills network

**5 challenge-led** programmes delivered in partnership with West Midlands NHS trusts

**114 new jobs created or safeguarded**
in this high technology sector (72.5 FTE)

**28 new health tech companies** formed during the lifetime of the WMHTIA

**73% of cohort** members receiving intensive support are **West Midlands based companies** and **54% are within the WMCA boundary** – spanning engagement across all districts of the region

**£2.48m directly awarded to**
**63 SMEs and academic teams**
**£1.54m through secondary grant competition**
**£500k** via SPARK The Midlands
**£440k** via WMHWIN

**114** health tech companies provided with **intensive bespoke development support** from across 21 WMHTIA partners

**Accelerated rate of technology procurement** as well as **rate and quality of grant application/pitching skills** – bringing economic benefit to the region and improving services for patients and NHS

**2 international support programmes landed in West Midlands through WMHTIA**
SPARK The Midlands
Plug and Play UK Health

# Fostering demand-led innovation – WMHWIN

The WMHTIA supported the scaling up of the WMHWIN programme, originally developed using West Midlands Innovation Programme (WMIP) funding to kickstart demand-led innovation in the region. WMHWIN is a **regionally focused, challenge-led innovation programme** delivered by the University of Warwick. It places the NHS at the heart of the innovation journey as a co-creator of new applications of technologies to address specific challenges identified by NHS organisations in the region.

The WMHWIN model centres on defining NHS-led challenges, scouting and selecting suitable innovators, and facilitating a structured development journey that includes discovery sprints, weekly co-design workshops, and final demonstration days.

WMHWIN has **delivered its target of five challenges** involving the following NHS Challenge sponsors and challenges:

- **Black Country Integrated Care Board (ICB)**: Improve urgent and emergency care integration through predictive analytics, real-time data sharing, and system-wide visibility
- **Coventry & Warwickshire Partnership Trust**: Tackle digital consent challenges and health inequalities by improving content accessibility and user experience
- **Herefordshire & Worcestershire ICB Continuing Healthcare**: Improve Continuing Healthcare (CHC) efficiency from referral to decision via automation, visibility of caseloads, and task tracking
- **Royal Orthopaedic Hospital Foundation Trust**: Improve productivity and data insights in orthopaedic workflows using AI, workflow automation, and visualisation tools
- **University Hospitals Coventry & Warwickshire (UHCW)**: Tackle digital consent challenges and health inequalities by improving content accessibility and user experience

> **“WMHWIN... a regionally focused, challenge-led innovation programme places the NHS at the heart of the innovation journey”**

WMHWIN **supported 23 projects with companies working on solutions for NHS Trusts** in the wider West Midlands region of which 22 received grant funding (one company self-funded).

It is too early to quantify the full benefits to the NHS and companies but there is clear value creation.

For the **NHS, it has improved awareness of market solutions, enhanced innovation confidence**, and seeded relationships that are already influencing procurement thinking and service redesign. Challenge sponsors consistently reported that their teams now have stronger capability to define, source and shape innovation in the future.

On the **SME side, participants gained early-stage validation, design input from frontline users, and access to NHS systems and workflows**. This support helped many refine their product–market fit and accelerated readiness for implementation or commercial partnerships. At the end of the first phase, procurement discussions were already in progress for two of the companies that worked with the Trusts involved.

Finally, the **WMHWIN model has attracted strategic infrastructure investment, notably from Salesforce, and laid the foundations for future private and public funding partnerships**. It offers a practical blueprint for how challenge-led innovation can operate at the intersection of system transformation and economic development.

## Impacts on business commercialisation

The WMHTIA has successfully developed and implemented a holistic approach to building capabilities and contributed to reshoring later stages in the commercialisation of health technologies (such as manufacturing) that would otherwise take place outside the UK. Furthermore, it has led to the development of the capability framework by the University of Birmingham and the MTC – the Venture Readiness Canvas – that offers: **(a)** a promising new holistic assessment tool for supporting early-stage enterprises in commercialising their innovation; **(b)** an improved methodology for evaluating the impact of commercialisation support and **(c)** the potential to be a kitemark for investors.

The programme has supported enterprises in **identifying new international market opportunities** and has encouraged them to either relocate or transfer research, development, and innovation activities to the West Midlands, even from regions in the UK traditionally considered supportive of health tech research (e.g., Cambridge). The programme has **identified and assisted entrepreneurs in developing solutions** using AI that address key NHS healthcare challenges, including applications that reduce administrative burden among clinicians.

The WMHTIA supported three types of mutually reinforcing partnerships (collaborations and peer support): partners and enterprises, partners and partners, and enterprises and enterprises. These partnerships provided not only practical support but also, importantly, emotional support through creating psychologically **safe spaces for the enterprises to discuss challenges and issues with peers**.

Through the delivery of this programme, a much better **understanding of the size and nature of the health technology sector and innovation ecosystem within the West Midlands region**, as well as the support required by enterprises in the sector, has been achieved. It has resulted in a rich dataset on a large cohort of enterprises that can support research into the commercialisation journey of health technology innovation and future skills development that can underpin evidence-based policy and practice. The programme has formed the basis for a community of practice for those involved in providing advice and assistance to the sector.

## Estimating regional economic benefit

**Table 5: GVA and FTE generated due to support by WMHTIA**

| Region / Year | Total GVA by region | Total FTE job-years by region |
|---|---|---|
| West Midlands | £38.3m (85%) | 739 (89%) |
| Rest of the UK | £6.7m (15%) | 90 (11%) |
| Total by year | £45.0m | 829 |

An early assessment of the potential economic impact of the WMHTIA programme has estimated an uplift **of £38.3m in regional GVA and a £45.0m uplift in national GVA, based on £42.3m R&D activity taking place within WMHTIA partners and businesses between 2023/24 and 2026/27.**

This £42.3m R&D activity comprises:

- £15.2m R&D activity within WMHTIA partners during the Pathfinder period
- £9.9m R&D activity within WMHTIA businesses during the Pathfinder period
- £17.2m R&D activity within WMHTIA businesses in the two years following the Pathfinder period

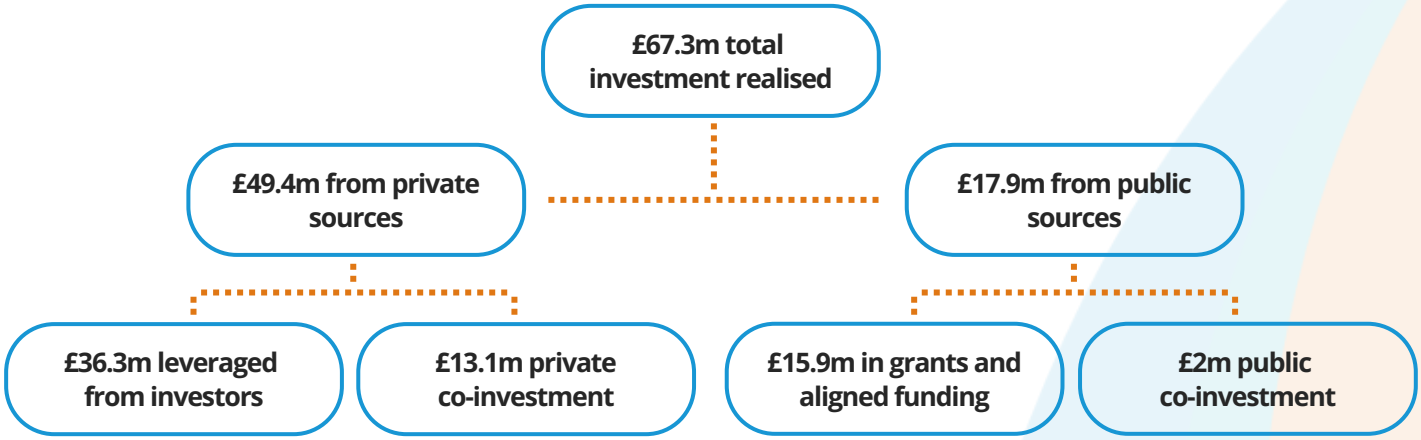
| Table 6: GVA generated by different sectors in the West Midlands due to support by WMHTIA | |
|---|---|
| **West Midlands Industrial Sector** | **Total by sector** |
| Information and communication | £12.3m (32%) |
| Professional, scientific and technical | £10.8m (28%) |
| Education | £5.0m (13%) |
| Human health and social work | £2.0m (5%) |
| Other | £8.2m (21%) |
| Total | £38.3m |

**City-REDI used Socioeconomic Impact Model (SEIM) to estimate the employment and Gross Value Added (GVA) effects of the WMHTIA programme**. This estimate includes jobs not directly created or safeguarded by the programme captured by the job audit. WMHTIA support generated significant GVA and FTE impacts (Table 5) with sectoral contributions detailed in Table 6.

## Co-investment generated

**The level of co-investment achieved to date is £67.3m**. This comprises £15.1m in Type 1 and 2 (pledged and accompanying) co-investments, £6.0m in Type 3 (aligned) co-investments, and £46.2m in Type 4 (follow-on) co-investments.

The Type 3 and 4 figures are expected to rise substantially over time, given the potential for new initiatives within and between partners, as well as further successful fundraising by the business cohort.




**Pledged and accompanying co-investment**: The R&D activity supported by the WMHTIA programme took place within each of the partner organisations and within each of the participating businesses. Of the £14.5m Innovate UK grant, £11.9m was employed to provide direct partner support to the businesses at no cost to the business, and £2.5m was transferred directly to businesses through grants.

This supported a further £3.0m in R&D and related activities within partners, and an estimated £12.1m in R&D and related activities within the participating businesses. In total, partners and businesses contributed £15.1m to the cost of delivering Innovate UK-sponsored R&D projects.

These figures have been evidenced in the Innovate UK co-investment return.

**Examples of how WMHTIA is making supported enterprises more attractive to investors and healthcare commissioners**

- Diagnostic review when joining the programme focusing on value proposition and holistic assessment of development needs
- De-risking product development through rigorous due diligence, testing of assumptions and developing iterative prototypes or processes with leading experts/cutting edge facilities and validation of ideas with end users from the earliest stages
- Co-development with end users ensures a viable and receptive customer
- Provides a 'kite mark' of credibility
- Moderates the push factor associated with healthcare innovation and provides opportunities for industry to respond to clearly articulated needs
- Provides confidence to scale quickly into other regions or global markets by demonstrating impact in the West Midlands with its diverse and stable population

## Impact on the West Midlands innovation ecosystem and business support for HealthTech

Partners saw the main strength of the programme as the **unprecedented range of support services available to enterprises via a single point of access**. They considered clinical testing and regulatory support to be the programme's unique contribution to the local innovation ecosystem. Prototyping services, grant support, networking events, and connections with international businesses and investors were also considered vitally important.

The programme **initiated new connections between partners as well as with enterprises**, and this has led to improved mutual understanding and new collaborations outside the programme. This, in turn, **contributes to partners' organisational goals**, including NHS strategic priorities. The consortium plans to deepen its collaborative work building on those relationships through co-designing and co-delivering elements of innovation support into the future.

The programme has contributed to **increased coherence in the offer to HealthTech enterprises** through partners creating meaningful relationships including improved understanding of each other's capabilities and the complementary services each provides. This includes higher levels of referrals of enterprises to other partners best able to support them and reduced the sense of being competitors and working in silos.

**Partners have gained distinct benefits from the WMHTIA**. For Plug and Play (investment platform), the WMHTIA provided an entry point into the UK health technology sector. The MTC has benefited from being part of a larger framework, which reduced its operational costs when working with health technology companies. This also enabled MTC to develop new capabilities, including tools for assessing companies' Environmental, Social and Governance (ESG) performance.

The WMHTIA, through strengthening partner-to-partner collaborative working, has contributed to solving healthcare challenges that directly benefit patients in the West Midlands. For example, BCU has partnered with the Royal Orthopaedic Hospital to develop insights using their data, aiming to improve patient outcomes.

# Discussion

**The pathfinder has shown the WMHTIA model – and the consortium of partners – has the potential to deliver economic growth for the West Midlands and nationally**. It has generated an unprecedented level of collaborative advantage that was required to provide the full range of skills and expertise required by enterprises to overcome the challenges that could otherwise stall their progress to commercialisation. Thereby, providing a firmer basis on which regional growth in the health and life sciences sector can continue.

**The value of increased intelligence on the needs of enterprises within the cluster should not be underestimated**. This allowed the development of new offers by partners including Reg-Navigator to support enterprises develop their regulatory pathway strategy for their health technology and the HealthTech AI Hub for example.

This intelligence has enabled partners to 'tailor' the 'core offer' available to all enterprises registered on the programme regardless of whether they were selected for more bespoke intensive support; information gathered through the expression of interest and triage process has enabled the WMHTIA to be demand-led, with partners delivering a more tailored series of events and networking opportunities more closely matched to the needs of the cohort.

The nature of the support provided through the WMHTIA provides a strong model for achieving the key objectives and pillars as set out in Government's Life Sciences Sector Plan (LSSP).[11]

- **World-class research and development:** Strengthening the UK's global leadership in science and discovery through initiatives like accelerating access to innovative treatments and making the most of health data.

- **Best place to start, scale, and invest**: WMHTIA has supported a step change in the West Midlands innovation ecosystem that supports local enterprises and is attractive to national and international enterprises wishing to develop their technology or relocate within the region and investors. To maintain this, there needs to be some dedicated continued public funding to support a central co-ordination function that has enabled the collaboration to work so effectively as well as funding from different sources of specific activities delivered by individual partners. As part of the Industrial Strategy, the British Business Bank has allocated £4.5bn to support small and medium sized enterprises to scale and crowd in private capital, with HealthTech recognised as a sector that needs improved funding offers. The businesses that have been de-risked as a result of working with the WMHTIA can provide a pipeline of credible scalable prospects for these investments. The establishment of Regional Health Innovation zones as set out in the LSSP will also give local systems the flexibility to test and scale these innovative technologies.

- **Health innovation and NHS reform**: Through scaling, the demand-led innovation challenge model developed by the University of Warwick (WMHWIN) has demonstrated how innovation can be better integrated based on needs into the NHS to improve patient outcomes, reduce pressure on the system, and cut waiting times. It also empowers NHS staff to feel confident to implement innovative health technologies by enhancing their skills.

**Like previous initiatives, WMHTIA is hampered in reaching its full potential by short term funding**. We concur with Patrick Vallance's report finding that 10-year funding for RD&I would better support the ability to form long-term partnerships with industry, build and develop skills and talent, and foster international collaborations, allowing the UK to stay at the forefront of global innovation.

In many respects the pathfinder has demonstrated the WMHTIA model meets the criteria proposed for departments and arm's length bodies considering awarding ten-year funding.[12]

Building on the success of the WMHTIA, the next evolution is focused on securing long-term stability, integrating it with the wider regional economic and policy activity to crowd in further private investment around a mature multi-partner platform for industry growth, and support government objectives for a technology and data-driven reform of the NHS.

While the pathfinder focused on unlocking innovation and early translation, the next logical step shifts the emphasis towards scaling, investment readiness, and long-term sustainability.

**Options are being explored and acted upon that build upon the learning and the interest generated in the outcomes of the WMHTIA demonstrator phase. These include:**

- **Development of an investment fund to enable investment into scalable health tech companies that the WMHTIA incubates**. Actions being taken include the development of an "investment brochure" that makes the case to potential investors for the establishment of a fund whose purpose is to invest in promising technologies and enterprises receiving support from WMHTIA. This a strategic evolution designed to embed the conditions for perpetual growth and economic return in the health tech sector across the West Midlands and represents a step-change from earlier innovation support models. It delivers a physically grounded, investor-facing, and outcomes-led approach to growing the West Midlands HealthTech sector. It combines a central cluster positioned at the PHTA, a commissioned delivery model, and a credible sustainability plan, all aimed at moving health technologies from prototype to real-world impact, investment, and adoption.

- **The development of a Venture Readiness Canvas as an output from the WMHTIA has the potential to become a kitemark for both public and private investors** as it provides a commercialisation framework which assesses HealthTech propositions against key capabilities. It is being live piloted in the extension year and once trademarked could provide a source of revenue through licensing and training in its use.

- **Identification of alternative funding sources for components of the WMHTIA programme**. It is unlikely that there will be a single funding source for the range of activities and initiatives supported by the pathfinder. The Innovation Accelerator funding stream has been rolled up into Local Innovation Partnership Fund (LIPF)[13] which excludes traditional innovation accelerator type activities supported by the WMHTIA. In the case of SPARK The Midlands, it is being scaled up to include the wider East and West Midlands region through Forging Ahead and Forging Further programme to increase the number of scalable spinouts and will be a valuable source of upstream opportunities. The WMHWIN demand-led model has demonstrated its value and has the potential to scale with more direct funding from NHS Trusts looking for technology-based solutions to support service innovation.

Associating the programme with a private investment fund and using the physical location of the Birmingham Health Innovation Campus, networked with our regional academic, clinical and industry partner sites, will enable us to simultaneously supercharge regional growth of the sector while moving towards a sustainable model for health tech innovation.

## Implications for national policy and delivery

There is potential based on learning and expertise developed through the WMHTIA pathfinder to:

- Become a national centre of expertise in the commercialisation of health technologies that operates a hub and spoke model with smaller regional clusters to support the delivery of the Government's Life Sciences Sector Plan. There is currently no funding stream to support such a development and for now this is aspirational, but aligns with the West Midlands Growth Plan to forge stronger partnerships between the West Midlands and other regions.

- Leverage with nationally delivered programmes managed by Innovate UK, British Business Bank and NIHR to increase coherence and systematic efficiency of support to the life sciences sector. This could be achieved in two ways. The first being the use of the Venture Readiness Canvas to assess eligibility and innovation and commercialisation progression on national schemes. The second being the management of bespoke calls for Smart, KTP and Small Business Research Initiative to address specific challenges that can be integrated with appropriate wider support packages (subject to State Aids rules) delivered by WMHTIA partners to increase both the likelihood and quantum of return to the exchequer.

- Continue to support businesses developing technologies that have a particular focus to address the three strategic shifts outlined in the Fit for the Future 10-Year Health Plan for England[14], focusing on the prevention of illness, delivering care closer to home in communities, and the digital transformation of service delivery. Innovation in technology and partnerships lies at the very centre of driving healthcare reform.

# Implications for regional policy and delivery

The WMHTIA pathfinder has resulted in a model that neatly fits with WMCA's ambitions including:

- **Premium business support services** for potential high growth enterprises within the region that are responsive to and led by business needs and aspirations rather than supplier-led, easy to navigate and create genuine value and economic growth. WMHTIA has clearly met the ambition set out in WMCA (2021) **Business Support Simplification Report** based on business and stakeholder feedback[15]

- **WMCA's Plan for Growth** which identified Life Sciences as a key cluster for growth in the region, with the 3-year objective of delivering an expansion of dedicated health technology support for MedTech scale-ups

The following recommendations are proposed to strengthen the long-term sustainability, impact, and collaborative advantage created by the WMHTIA pathfinder:

- **Adopt Longer-Term Public Funding**: Move to a five-year funding cycle (aligned with the quinquennial review in year four) to provide stability, enable higher-risk projects, and support international collaboration

- **Leverage Partner Programmes**: Build on partners' existing initiatives to create greater impact, including joint bids for collaborative funding and integration with wider business support offers

- **Sustainable Partner Funding Models**: Explore models of funding partner involvement that maintain the collaborative advantage developed during the pathfinder, avoiding transactional arrangements where possible that could weaken shared purpose

## WMHTIA legacy: Ask for resources post March 2026

To capitalise on the pathfinder the following ask for resources has been developed.

1. An initial five-year funding period (extendable to ten years subject to a quinquennial review) of at least £10m that funds:
   a. Change of focus, developing on the sector intelligence gained from the initial WMHTIA pathfinder to support a small number of SMEs identified as having high potential to scale.
   b. Utilise a commissioning expert delivery model, managed through a central co-ordinating function, to pay for specific services or interventions as required from a growing network of delivery partners, initially utilising the established WMHTIA private/public network but open to further regional providers with specialist capabilities. This approach will ensure a highly efficient, performance-based delivery model that encourages value for money and responsiveness. This will enable the region to capitalise on the legacy of the WMHTIA whilst remaining agile, cost-effective and focused on specific, evolving business needs.
2. Support from British Business Bank, UKRI and NIHR in developing a funding ladder that includes loan guarantees and alternative funding mechanisms (social impact bonds, factoring, crowd funding, export financing) as well as grant and equity funding.
3. Support in developing a dedicated health tech evergreen investment fund housed in Birmingham's health and life sciences district. Initially this would enable continued support of the small number of scalable businesses and the equity stakes taken will enable the profits made to be reinvested into other businesses or programmes to support ongoing regional economic development.

By actively engaging institutional investors, regional development funds, and corporate capital, the programme aims to **create a self-sustaining mechanism** that can continue to fund HealthTech scaling activity after the end of the public funding cycle.

# Appendix A: Overview of WMHTIA partners

| Partner | Description |
|---|---|
| Acuwomen | Acuwomen is the UK's first all-women business network. Acuwomen delivered business diagnostics, strategic advice and growth support. |
| Aston University (Including SPARK The Midlands) | Aston University provided access to research expertise including SPARK, a global preclinical accelerator programme for Midlands-based entrepreneurs and startups. |
| Azets | Azets are accountants who provided information on business planning, accountancy, tax and business advisory services. |
| Birmingham City University (BCU) | BCU supported enterprises in developing digital tools, ranging from predictive and analytical software to NHS cybersecurity accreditation and preclinical trials involving patients and clinicians. |
| Bruntwood SciTech/BHIC | Bruntwood SciTech provides specialist lab and office space, as well as funding, talent, and market-access support for science and tech firms. It ran an accelerator programme as part of its WMHTIA offer. Bruntwood SciTech is the developer behind BHIC in partnership with UoB. |
| Cogniss | Cogniss provided access to their no-code platform for creating and deploying patient-centric digital health apps and therapeutics. This provided interested enterprises a means of developing applications at less cost, over a much shorter period to meet relevant regulatory requirements. |
| Element Materials Technology | Element Materials Technology assisted enterprises in meeting regulatory requirements by providing access to testing, inspection, and certification, ensuring their products, materials, and processes are safe and compliant. |
| Forresters | Forresters is a legal practice that provides information and advice relating to intellectual property, the development of patent strategies, filing patents, and engaging with rights holders and regulatory bodies. |
| Health Innovation West Midlands (HIWM) | Health Innovation West Midlands provided access to their network of NHS, academia and industry partners. The services and collaboration opportunities they provided aimed to accelerate healthcare innovation in the region. |
| Medilink Midlands | Medilink Midlands is a life-sciences industry membership body that promotes WMHTIA and provides business diagnostics, development, information services, seminars, and networking events with other partners across a range of topics. |
| Manufacturing Technology Centre (MTC) | MTC is a national centre that provides enterprises with access to advanced manufacturing equipment, expertise, and collaboration in developing their products from concept through to commercialisation. |
| Our Health Partnership/Primary Care Accelerator (OHP/PCA) | OHP is a large general practitioner partnership that provided support and collaborative opportunities for enterprises developing technologies and deployment in a primary care setting. OHP in partnership with Harbr (health venture experts) are now delivering accelerator activity under the 'Primary Care Accelerator' brand. |
| Precision Health Technologies Accelerator (PHTA) | PHTA is a 70,000 $ft^2$ incubator based at Birmingham Health Innovation Campus providing space, expertise, and clinical links to fast-track health and life-science startups. |
| Plug and Play | Plug and Play provided access to their global innovation platform that connects startups with corporates and investors through the accelerator programme they delivered for WMHTIA. |
| Shoosmiths | Shoosmiths is a law firm that has expertise in the life sciences and MedTech sectors, providing support related to intellectual property, patents, R&D, funding, licensing, and manufacturing agreements. |
| Smallfry (Tagdraw Ltd) | Smallfry provided strategy-led design consultancy using human-centred research to create market-ready products and services. |

| Partner | Description |
|---|---|
| Technology Supply Chain (TSC) | The TSC is a West Midlands network that brings together manufacturers and innovators, providing access to mentors, training, business development, and support with funding applications, as well as connecting with manufacturers, investors, and non-executive directors. TSC organised conferences and networking events. |
| University of Birmingham (UoB) | UoB provided multidisciplinary research, clinical and enterprise expertise including access to:<br>• Clinical Immunology Service – Delivers advanced immunological diagnostics and consultancy to support patient care and translational research<br>• Healthcare Technology Institute – Fast-tracks medical devices and digital health innovations from laboratory concept to clinical adoption<br>• Chemical Engineering – Conducts education and industry-focused research in sustainable process, energy, pharmaceutical and materials engineering<br>• Electrical Engineering – Drives R&D and teaching in power systems, communications, electronics and control, producing skilled engineers and practical solutions<br>• HealthTech AI Hub (Genomics) – Applies artificial-intelligence techniques to genomic data for precision medicine, biomarker discovery and disease prediction<br>• City-REDI – Provides evidence-based economic analysis and policy insight to boost inclusive city and regional growth.<br>• UoB provided the consortium core management team (oversaw project finances, grant administration, strategic communications, programme level coordination, business engagement, programme level evaluation) |
| University of Warwick (UoW) | UoW provided access to advanced manufacturing expertise and health-innovation networks that translate ideas into real-world impact.<br>• WMHWIN – A regional initiative connecting NHS trusts, researchers, and innovators to co-develop and scale health and wellbeing solutions<br>• WMG – A leading centre for applied research and industry collaboration, driving innovation in manufacturing, materials, digital technologies, and clean energy. |
| University Hospitals Birmingham NHS Foundation Trust | UHB provided access to the regional NHS-academic partnership BHP, which it hosts and is the accountable body. Through the partnership, UHB provided access to support and advice related to clinical trials, regulatory science, and innovation support for health technologies:<br>• MD-TEC – Supports MedTech innovation by providing end-to-end guidance from concept development to usability testing, clinical trials, and regulatory compliance<br>• Access to BHP – Connects NHS Trusts and academic institutions to accelerate translational healthcare research and innovation<br>• BHP Centre for Regulatory Science and Innovation – Advances regulatory frameworks and tools to support the safe and rapid development of medicines and medical technologies<br>• NIHR Health Technology Research Centre (Devices, Digital and Robotics) – Drives cutting-edge research in health technologies, enabling the development and real-world testing of digital tools, robotics, and medical devices. |
| West Midlands Growth Company (WMGC) | The WMGC is a regional agency responsible for attracting investment, tourism, and business growth to the region. WMGC support included finding suitable premises for companies that wished to relocate to the region, access to grants to support inward investment, and where appropriate, referral to complementary services that they provided. |

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