



The Economic
Intelligence Unit

Baseline Mapping of the West Midlands Health Technologies Sector

October 2024



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1. Introduction

The West Midlands Health Technologies Sector represents a vital and rapidly evolving component of the West Midlands Combined Authority's (WMCA) economy, with potential to drive significant innovation, investment and economic growth. To fully unlock this potential, it is necessary to have a robust understanding of the sector. This report and its accompanying validated company list, commissioned by the West Midlands Health Technologies Cluster (WMHTC) to The EIU (Economic Intelligence Unit) provides a comprehensive baseline mapping of the sector as of October 2024.

The EIU is uniquely positioned to undertake this task due to its experience and flexible expertise in economic intelligence. Since its inception in 2002, The EIU has been at the forefront of providing data-driven insights that shape policy, strategy, and economic development across the region. The analysis not only identifies the existing strengths and gaps within the sector but also offers strategic intelligence that will inform future initiatives aimed at fostering innovation, attracting investment, and enhancing the sector's global competitiveness.

This baseline mapping exercise, via secondary data, will serve as a first step in a broader strategy to support the growth and development of the WMCA's Health Technologies sector and its wider associated clusters. Through meticulous data collection, and the creation of a validated list, this report provides additional insights and analysis into the sector providing a credible baseline.

However, it is important to acknowledge the challenges of mapping the health technologies sector. To put this into perspective, traditional Office for National Statistics (ONS) data suggests that the WMCA's health sector in the widest sense includes approximately 6,700 companies; many of which are associated with healthcare services, rather than technology, such as hospitals, clinics, and care providers.

In contrast, a more focused analysis of the sector shown within this report identifies 614 companies, specifically within the health technologies sector, highlighting the importance of distinguishing between general healthcare and specialised sub-sectors. This distinction is crucial as health technology encompasses medical device manufacturing, digital health solutions, biotech innovation, and R&D – all which fall outside traditional classifications.

The report also provides an in-depth analysis of the sector's skills landscape, with job postings for specialised roles more than doubling since 2019 – highlighting a growing demand. Moreover, the sector's vibrancy is bolstered by proximity to top research institutions like universities or science parks, driving innovation and workforce development. However, the sector also faces a skills gap, as an identified 96% of roles were found to require higher level skills.

The nuanced and evolving nature of health technology, which intersects with various other industries and often falls under the broader classifications, makes it difficult to map precisely. As a result, many companies within this sector may be underrepresented and/or misclassified in broader datasets. This challenge underscores the importance of this exercise which aims to shed a light on a sector which traditional classifications may overlook.

2. Methodology

The primary objective of this project was to establish a reliable baseline of the health technologies sector within the WMCA. Within the bounds of this project, this geography is defined as the West Midlands 7 Metropolitan County, covering the following Local Authorities/Councils¹:

¹ For clarification, the analysis covered the "trading address" approach, covering company operations within the defined geography and not just those with a registered address i.e., a company headquartered within London – or elsewhere - with a Midlands address would be classed as having operations in the Midlands and thus be included as part of the search.

- Birmingham
- Coventry
- Dudley
- Sandwell
- Solihull
- Walsall
- Wolverhampton

As per the project aims and objectives set out within the initial briefing, the sector was broadly defined as covering the 4 Ds of Data, Devices, Diagnostics and Digital health, pharmaceutical businesses, manufacturers of health technologies (drugs, devices, diagnostics), design, private sector applied R&D, and applied regulatory support services.

In order to meet the criteria The EIU have collectively met with the WMHTC to agree a definition, which has resulted in a trifecta approach covering Real Time Industrial Classifications (RTICs), publications from The Office for Life Sciences (OLS), and Standard Industrial Classifications (SICs).

All three approaches were combined and put into one succinct list, the specifics of which are shown below:

2.1 Real Time Industrial Classifications

Much of the analysis and dataset was compiled using Data City's platform via the use of RTICs which are an alternative to SIC codes and provide a more accurate, dynamic classification of industries reflecting today's landscape i.e., medical technologies. Data City achieves this by leveraging Artificial Intelligence (AI) and Machine Learning to web scrape and deliver more precise insights.

Working closely with the WMHTC, The EIU have agreed to pick the widest definition of health technologies including wearables, environmental sciences, and rehabilitation – this led to a list of 58 RTICs which are available under [Appendix A](#). From there on, a full list of companies fitting this criterion was identified and:

- Manually validated by checking each companies' details including websites and Companies House pages – making sure that they are a part of the medical technologies sector, having a presence in the region, and being operational;
- Validating their trading addresses to make sure that they have regional presence;
- Manually matching postcodes to correct local authorities and regions where relevant, as this is likely not verified within Companies House itself;

Caveat: Data City's data is highly dependent on the field of concern and may vary in accuracy depending on the source of their data (i.e. Companies House), however, they claim to have one of the most accurate UK business databases in the world. Their data sources are highly reputable and undergoing rigorous processing methods to ensure reliability as a data provider.

2.2 Office for Life Sciences

The second largest contributor to the validated company list was Office for Life Science's publications, particularly drawing on "[Bioscience and health technology sector statistics 2021 to 2022](#)" data. This dataset included validated bioscience and health technologies companies by the OLS under their own criterion.

One publication included a West Midlands user request which was utilised within this project. This dataset included a series of companies from 2021/22 which was validated and added to the final company list. Validation included:

- Manually validating to make sure that these companies are still active as per Companies House;
- Manually validating their trading addresses to make sure that these companies are within the WMCA 7 Met geography, and have not relocated elsewhere, and;
- Manually matching postcodes to correct local authorities and regions where relevant, as this is likely not verified within Companies House itself;

2.3 Manual Additions

Final contributions to the list came in the form of additions via known health technology companies, Dealroom platform searches, and the use of Companies' House for sectors not elsewhere identified such as regulatory bodies.

In order to identify regulatory companies "SIC 84.120 Regulation of health care, education, cultural and other social services, not incl. social security" was used as a filter on Data City's platform. This search was further narrowed by filtering for the keyword "health", excluding companies not relevant to health technology as many companies fell under generic healthcare and training activities, this output was then validated in the same way as RTIC and OLS data.

2.4 Exclusions

Whilst many of the companies within the validated list were part of the original specification as outlined in section 2, many companies were falsely flagged as part of the health technologies sector and were thus excluded from the final list. Overall, an approximate 2,000 companies were checked to make the final list. Below is a quick summary of company types which were excluded from the validated list, but are still present within sheet three, titled 'Removed', of the associated excel list:

- Charities and Community Organisations
- Herbalists and Alternative Medicine/Healthcare
- GPs, Private Healthcare Providers and Pharmacies
- Care Homes & Assisted Living Facilities
- Chiropractors, Physiotherapists, Dentists, Traditional Mental Health and Therapy Services, and providers of Osteopathy and Acupuncture services
- Environmental, Consulting and Engineering services not linked to healthcare or health technologies
- Recruitment agencies, Insurance services and Skills providers
- Veterinary and animal services

2.5 Health Warning

As a health warning it is important to understand that the business data within this report and list is collected via Data City amongst others and is only as good as what is inputted via Companies House data. Please also note that this data relates to all company operations as captured within this list, going beyond the WMCA i.e., 'the headquarters effect'. Similarly, it is currently not possible to quantify the full extent of supply chain activity of these companies.

Equally, due to the live nature of the platforms used to capture this data, this list should be viewed as a snapshot in time. If and when this exercise is repeated, future results may vary.

3. Findings

3.1 Company Level Analysis

A total of 614 companies were identified within the WMCA via the Data City platform. To put this into perspective, traditional ONS data suggests that the WMCA's narrow health sector includes

approximately 5,095 companies, employing a total of 198,915 people, whilst a broader definition includes approximately 6,700 companies, employing a total of 233,015 people (definitions available in [Appendix B](#)). The caveat with this data is that it primarily covers the health and care sector, one of the largest in the UK, and not technology which is the purpose of this project.

Estimated analysis² of the established baseline of 614 companies reveals that these companies employ 60,200 total people, with an estimated 14,000 (23%) of these employees based in the WMCA. Moreover, these companies bring in a total estimated turnover of £28.9bn of which £6.1bn (21%) is attributed to the WMCA.

Data City estimates suggest that these companies generate £5.2bn in Gross Value Added (GVA), which equates to an estimated £86,350 for GVA per employee in total (i.e., per 60,200 total employees). Please note that these estimates encompass all companies within the dataset, regardless of their geographical location, including all activities of large and multinational firms. Unfortunately, at this stage we are unable to gain insights into the WMCA specifically.

Additionally, the companies with data available show they are predominantly made up of Small and Medium Enterprises (SMEs) at nearly 91% (excluding the 152 of these companies that had no available employee or turnover data, likely due to not reporting or due to being nascent companies) where 275 companies are classed as Micro (45%) companies, 99 (16%) are classed as Small and 45 (7%) classed as Medium sized businesses.

Table 1. Health Technology Companies by Size, WMCA

Company Size	Company Count
No Employee or Turnover Data	152
Micro	275
Small	99
Medium	45
Large	43
Total	614

3.2 RTIC Analysis³

Given that SIC codes are outdated (last updated in 2007), many health technologies no longer fit the broad definition as they did not exist at the time, including medical technologies in a broad sense, biopharma, medical software or wearables i.e. smart watches.

This means that alternative classifications such as Data City’s RTICs are deployed to better map the sector. As part of this analysis, the following shows a breakdown of the validated company lists with RTIC sectors and RTIC verticals. They are defined as:

- **RTIC Sector:** An RTIC Sector is an industrial classification made up of industry verticals (RTIC Verticals), an alternative to SIC. Data City uses a taxonomy-based approach based on industry verticals to build each RTIC. It is best to think of it as a broad sector definition.
- **RTIC Vertical:** RTIC Verticals make up RTIC Sectors, and can be thought of as subcategories of RTICs, or SIC sections/2-digit subclass equivalents. They are developed through a bottom-up approach and can belong to multiple RTICs, for example, one of Data City’s industry verticals is titled “Artificial Intelligence: Data Analysis”. Currently, it exists within their Artificial Intelligence RTIC, but it could just as easily exist within a Data Analysis RTIC.

² Please note that Data City analysis works by dividing total figures for a chosen metric and equally dividing them between identified sites with an equal weighing. For example, a company identified to have 100 employees across two sites will be split 50/50.

³ RTIC analysis was conducted via the Data City’s platform as opposed to a similar method for the SIC. This has meant that all RTICs identified within the list were picked up and ordered by their frequency.

3.2.1 RTIC Sectors

When running the validated company list through the Data City platform, and as per Figure 1 and Table 2, RTICs which are the most prevalent (by frequency) were Life Sciences which came up within 233 companies, followed by Pharma which came up 51 times, Data Infrastructure, Software as a Services (SaaS) and MedTech which came up 42 times each.

Broadly speaking, this suggests that health technology companies within the list are predominantly made up of the Life Sciences RTIC, companies working in the fields of research, manufacturing, human health, biology, biotechnology, and chemistry.

Figure 1. Top 15 Health Technology Companies by RTIC Sector Count, WMCA

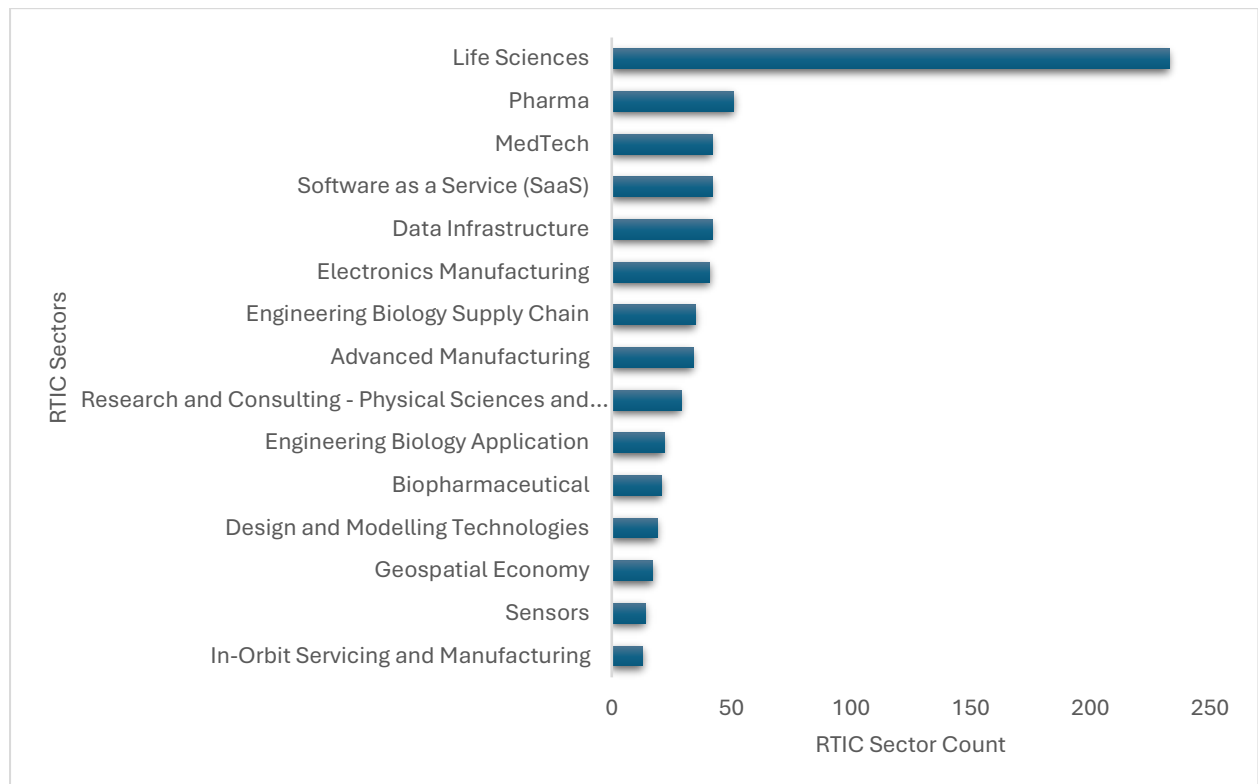


Table 2. Top 15 Health Technology Companies by RTIC Sector Count, WMCA

RTIC Sector	RTIC Sector Count
Life Sciences	233
Pharma	51
Data Infrastructure	42
Software as a Service (SaaS)	42
MedTech	42
Electronics Manufacturing	41
Engineering Biology Supply Chain	35
Advanced Manufacturing	34
Research and Consulting - Physical Sciences and Engineering	29
Engineering Biology Application	22
Biopharmaceutical	21
Design and Modelling Technologies	19
Geospatial Economy	17

RTIC Sector	RTIC Sector Count
Sensors	14
In-Orbit Servicing and Manufacturing	13

3.2.2 RTIC Verticals

On the other hand, delving deeper into RTIC Verticals which make up RTICs in the validated list, as per Figure 2 and Table 3, the most frequent verticals in the list were Life Sciences: Human Health Services which came up in 61 companies, Life Sciences: Life Sciences Manufacturing which came up 59 times and Life Sciences: Research which came up 52 times.

Following a similar trend to RTIC sectors, the verticals imply a high concentration of health technologies companies which work within the life sciences sub-sector, covering research, manufacturing, human health, biology, biotechnology, and chemistry. The second major sub-sector being the digital sub-sector, covering the likes of software, infrastructure and various health services. Specifically, companies working offering complementary services for overall data practice, and companies which are developing and commercialising software that contribute to efficient data management, transfer and storage - amongst others.

These verticals also offer a much more even spread across various sub-sectors of health technologies than as shown within the sectors.

Figure 2. Top 15 Health Technology Companies by RTIC Vertical Count, WMCA

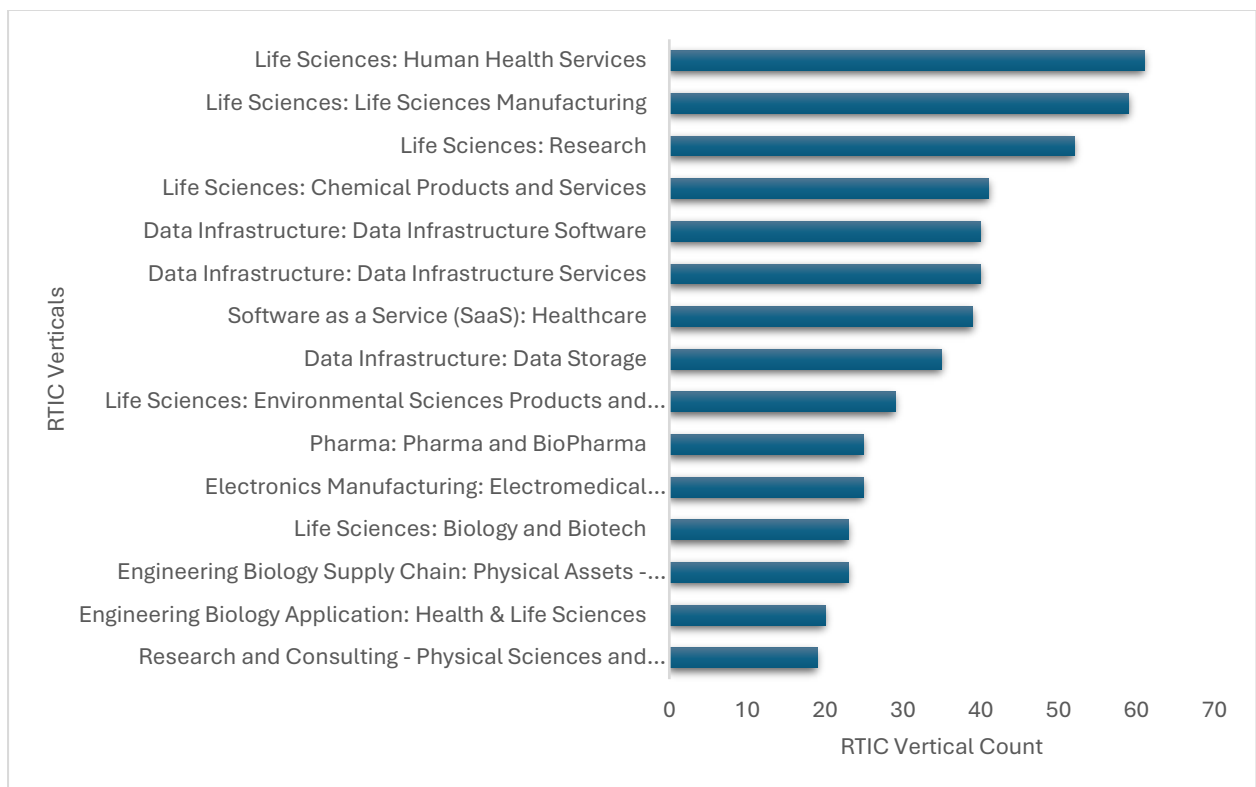


Table 3. Top 15 Health Technology Companies by RTIC Vertical Count, WMCA

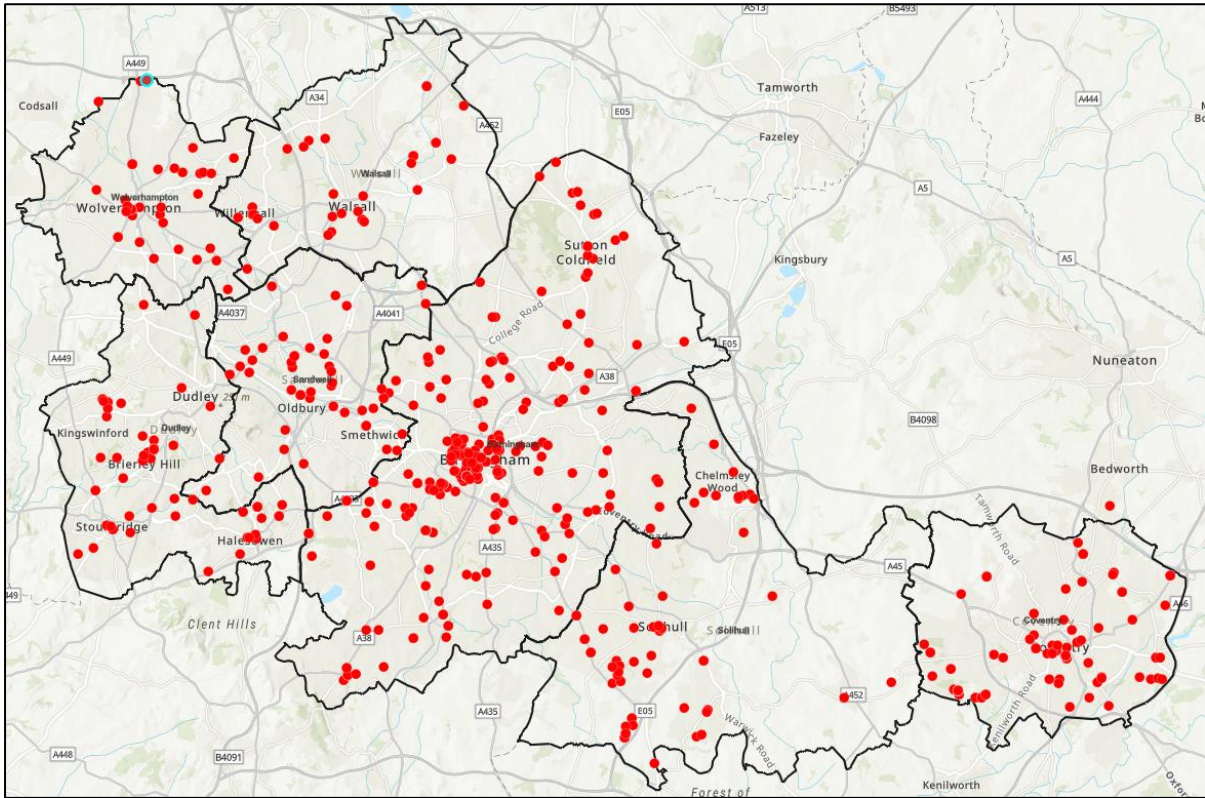
RTIC vertical	RTIC Vertical Count
Life Sciences: Human Health Services	61
Life Sciences: Life Sciences Manufacturing	59
Life Sciences: Research	52
Life Sciences: Chemical Products and Services	41
Data Infrastructure: Data Infrastructure Services	40
Data Infrastructure: Data Infrastructure Software	40
Software as a Service (SaaS): Healthcare	39
Data Infrastructure: Data Storage	35
Life Sciences: Environmental Sciences Products and Services	29
Electronics Manufacturing: Electromedical technologies	25
Pharma: Pharma and BioPharma	25
Engineering Biology Supply Chain: Physical Assets - Supply Chain Small Scale Manufacturing	23
Life Sciences: Biology and Biotech	23
Engineering Biology Application: Health & Life Sciences	20
Research and Consulting - Physical Sciences and Engineering: Physical Sciences Research	19
Life Sciences: Human Health Services	61
Life Sciences: Life Sciences Manufacturing	59
Life Sciences: Research	52
Life Sciences: Chemical Products and Services	41
Data Infrastructure: Data Infrastructure Services	40

3.2.3 Mapping

As per figures 3-5, it can be seen that many of these health technology companies are clustered around major towns and cities, universities and science parks. This is evident as seen in the below maps, particularly figure 4, showcase clustering around Birmingham and Coventry, or around Blythe Valley Business Park and the University of Warwick Science Park.

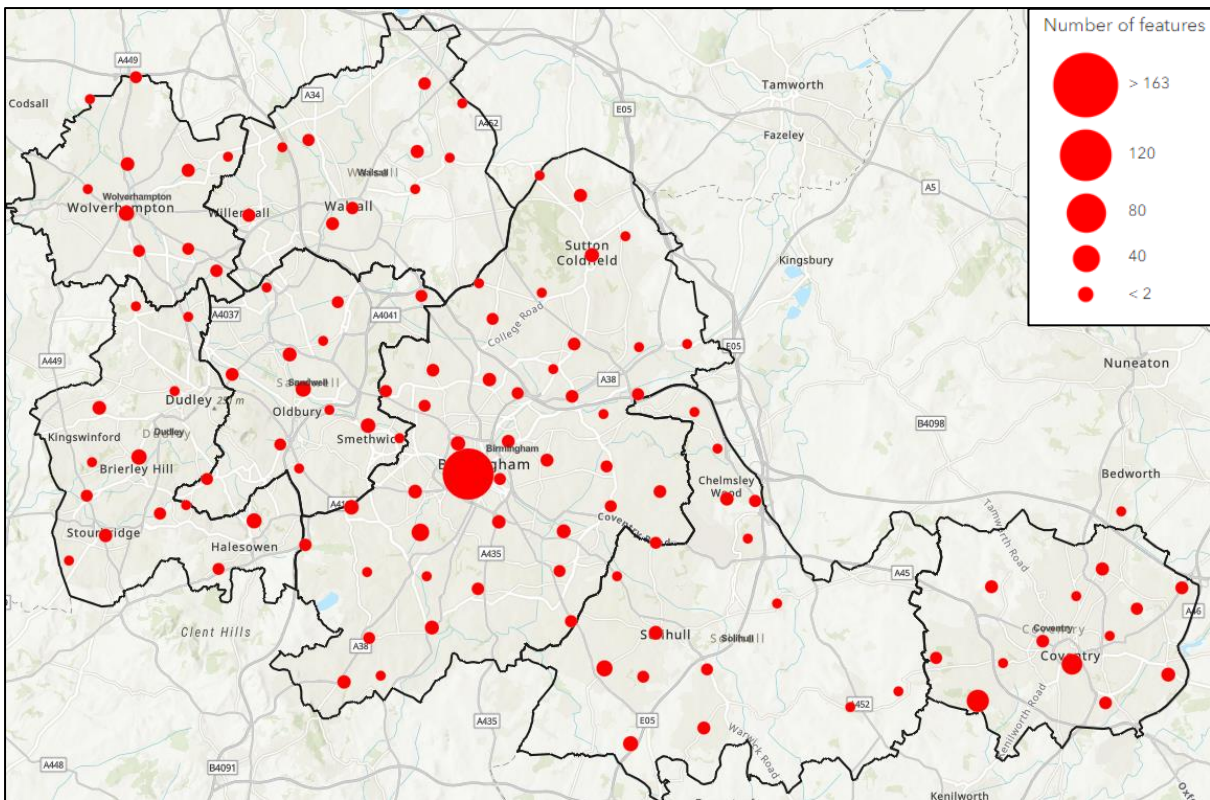
Thus, the WMCA can be viewed as having a robust health technologies sector interacting between the private sector and universities, encompassing everything from R&D and manufacturing to business support services and sales.

Figure 3. Health Technology Companies, WMCA



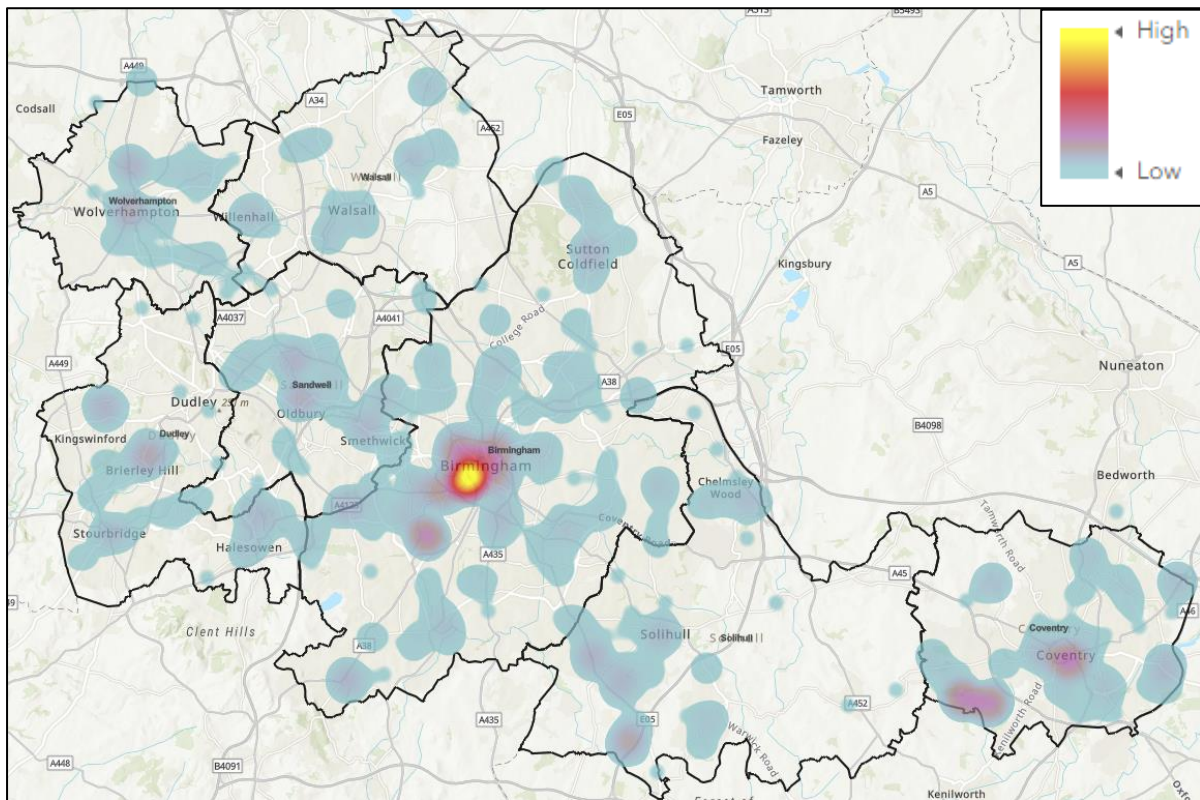
(Source: [EIU](#))

Figure 4. Health Technology Companies Clustered, WMCA



(Source: [EIU](#))

Figure 5. Health Technology Companies Heat Map, WMCA



(Source: [EIU](#))

4. Skills

The WMCA hosts numerous SMEs, as well as major companies (like AAH Pharmaceuticals or Salts Healthcare), research institutions, and healthcare providers. The proximity to renowned universities and research facilities adds to the sector's vibrancy, fostering innovation and skilled workforce development.

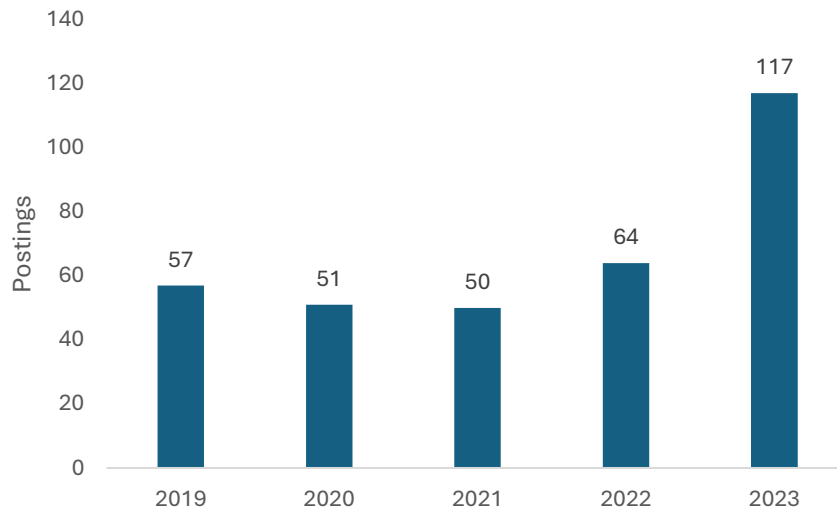
This section of the report aims to:

- Analyse skills trends over recent years.
- Identify the current demand for health technologies jobs.
- Highlight key skills and qualifications in demand.
- Look at skills Challenges and Opportunities.

4.1 Demand for Health Technologies Jobs

Analysing data from Adzuna shows that Since 2019 job posting demand for health technologies roles in the WMCA, as per Figure 6, has more than doubled (105%) from 57 postings in 2019 to 117 in 2023. Over the same timeframe demand for health technologies roles nationally increased by 35%.

Figure 6. Yearly Total Health Technologies Job Postings, WMCA

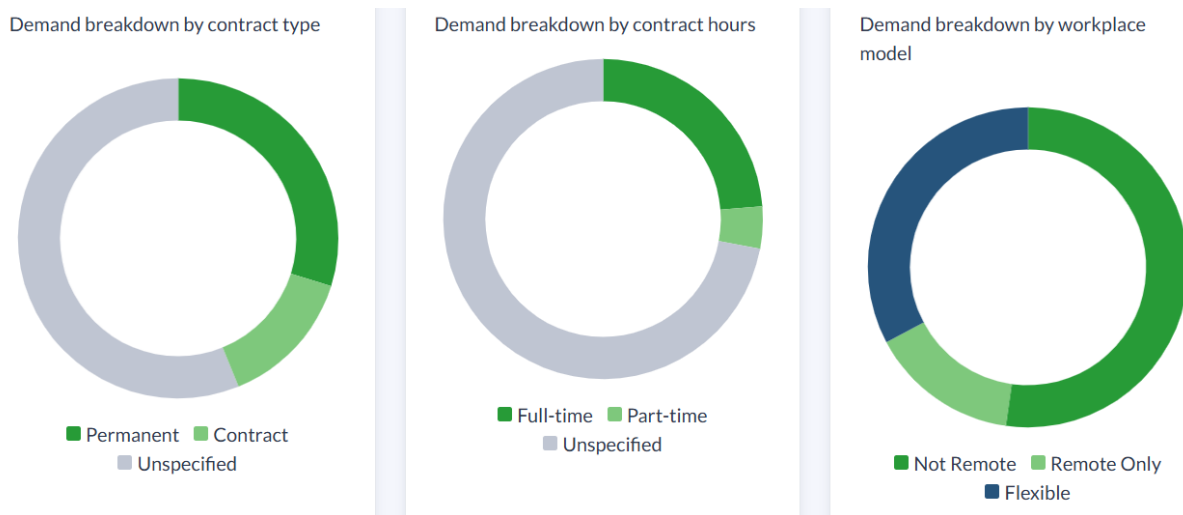


(Source: Adzuna Labour Market Data, August 2024)

As of July 2024, there have been 103 job postings for roles in the health technologies sector across the WMCA. Extrapolating this trend suggests that the demand for health technologies roles will likely continue to rise throughout the year. This growing demand may indicate skills gaps and shortages within the industry, as the need for highly specialised and advanced skills outstrips the supply of qualified candidates. Addressing these shortages will be essential to meet the increasing demand and sustain the sector's growth.

An analysis of the available roles, as per Figure 7, reveals that permanent positions are nearly twice as common as contract roles. Most of these positions are full-time, and the majority, at 85%, are not remote.

Figure 7. Health Technologies Contract, Demand and Model Breakdown, WMCA



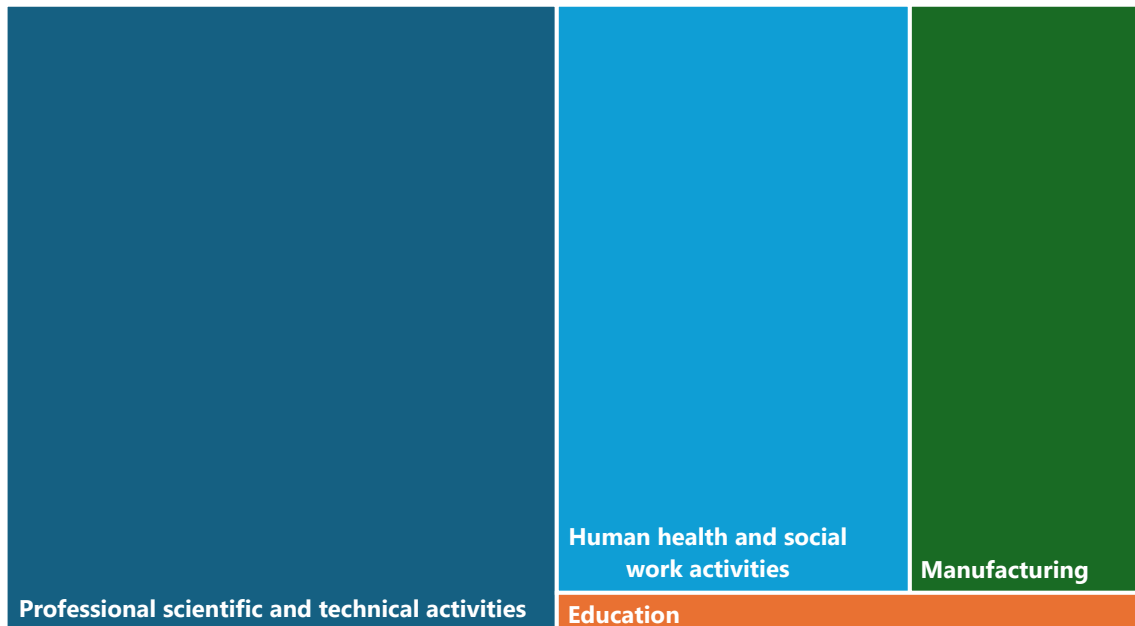
(Source: Adzuna Labour Market Data, August 2024)

4.2 Sectors and Industries

As shown in Figure 8, 48% of the postings are associated with 'professional, scientific, and technical activities' (SIC 2007 Major Section).

There is also high demand for health technologies roles in 'human health and social work activities' at 29% and 'manufacturing' at 20%.

Figure 8. Health Technologies Job Posting Demand, WMCA



(Source: Adzuna Labour Market Data, August 2024)

4.3 Occupations

Examining job postings at SOC2010⁴ 4-digit level provides more detailed information about the types of occupations within the health technologies sector.

Top 10 in-demand health technologies occupations (by number of postings):

1. Biomedical Engineers

- **Role:** Design and develop medical devices and equipment.
- **Demand:** High demand due to ongoing advancements in medical technology.

2. Clinical Research Associates

- **Role:** Manage and oversee clinical trials and research studies.
- **Demand:** Critical for the development and approval of new medical treatments.

3. Regulatory Affairs Specialists

- **Role:** Ensure compliance with health regulations and standards.
- **Demand:** Essential for navigating complex regulatory landscapes, especially post-Brexit.

4. Data Scientists and Analysts

- **Role:** Analyse healthcare data to inform decision-making and improve outcomes.
- **Demand:** Increasingly vital due to the rise of data-driven healthcare solutions.

5. Software Developers

- **Role:** Develop digital health solutions, including telemedicine platforms and health apps.
- **Demand:** Growing need driven by the digital transformation in healthcare.

⁴ SOC 2010 - Office for National Statistics (ons.gov.uk)

6. Quality Assurance Managers

- **Role:** Maintain product quality and regulatory compliance.
- **Demand:** Important for sustaining product standards and meeting regulatory requirements.

7. Business Development Managers

- **Role:** Identify new business opportunities and market trends.
- **Demand:** High demand due to the need for growth and expansion in the competitive health technologies market.

8. Marketing Manager

- **Role:** Develop and execute marketing strategies to drive brand awareness, market share, and revenue growth.
- **Demand:** High demand due to the need for effective brand positioning and competitive differentiation in the rapidly evolving health technologies market.

9. Programme Manager

- **Role:** Oversee multiple projects to ensure timely and budget-compliant completion.
- **Demand:** High demand due to the need for effective coordination and management of complex projects in the health technologies sector.

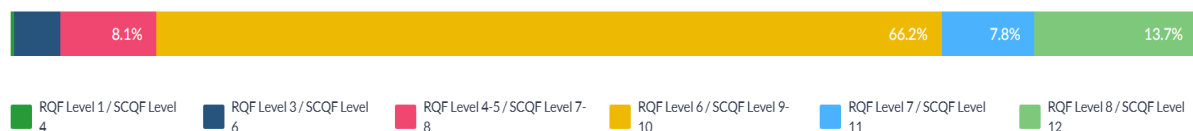
10. Financial Planning Analyst

- **Role:** Develop and manage budgets for projects and departments.
- **Demand:** Increasingly vital for guiding financial decisions and ensuring the economic health of health technologies companies.

Minimum Requested Education

Analysis of the minimum requested education level for roles in the health technologies sector, as per Figure 9, shows that 96% of advertised jobs require higher level qualifications, specifically RQF Level 4 and above⁵.

Figure 9. Heal-tech Minimum Advertised Job Requirements, WMCA



(Source: Adzuna Labour Market Data, August 2024)

Moreover, 66.2% specifically request a bachelor's degree, 7.8% a master's degree or Postgraduate Certificate and 13.7% a Doctorate.

Only 4.2% of roles are open to people with lower-level skills.

4.4 Sector Specific Skills

The following skills are crucial for professionals seeking to enter or advance in the health technologies sector in the WMCA:

- **Technical Skills:** Expertise in biomedical engineering, software development, and data analysis.

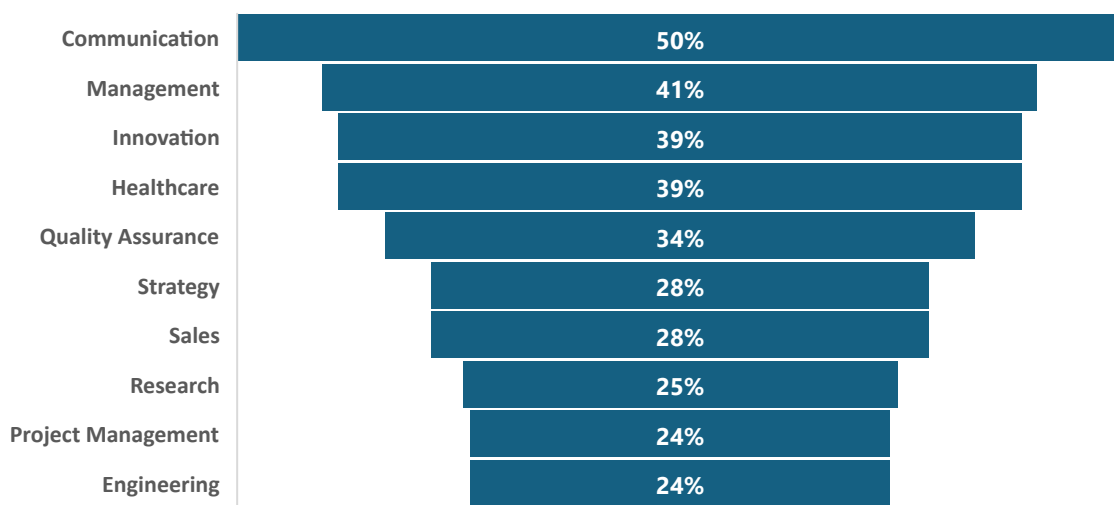
⁵ An RQF Level 4 qualification includes Certificate of Higher Education (CertHE), a Higher-level Apprenticeship or Higher National Certificate (HNC).

- **Regulatory Knowledge:** Understanding of UK and international healthcare regulations and compliance requirements.
- **Clinical Research Skills:** Proficiency in managing clinical trials and research projects.
- **Project Management:** Ability to oversee and manage complex projects, ensuring timely and successful delivery.
- **Communication and Collaboration:** Strong interpersonal skills for working in multidisciplinary teams and engaging with stakeholders.

Co-occurring Skills:

Skills that are most often seen in health technologies postings:

Figure 10. Most Frequently Demanded Skills in Health Technologies Job Postings, WMCA



(Source: Adzuna Labour Market Data, August 2024)

4.5 Salary Trends

Reflecting the advanced skills required for roles in the health technologies sector, the average salary is notably higher at £57,500. This figure is 93% above the average advertised salary for all other job roles in the WMCA, emphasising the premium placed on specialised expertise in the health technologies industry.

Figure 11. Health Technologies Median Salaries, WMCA



(Source: Adzuna Labour Market Data, August 2024)

4.6 Skills Challenges and Opportunities

Challenges:

- **Regulatory Changes:** Adapting to the evolving regulatory landscape post-Brexit.
- **Skills Shortages:** Addressing gaps in specialised skills identified above, but also in digital health and AI.

Opportunities:

- **Innovation and Growth:** Leveraging the area's robust research and innovation ecosystem to drive growth.
- **Investment in Digital Health:** Capitalising on increased investment in digital health technologies to create new career opportunities.

The health technologies job market in the WMCA is vibrant and growing, with a variety of roles available across technical, regulatory, and clinical domains. The WMCA's strong research base, coupled with ongoing investments and a focus on innovation, positions it well to continue attracting top talent and driving advancements in medical technology. Despite challenges around skills shortages, the opportunities for growth and development in the health technologies sector remains significant.

5. Investment Landscape

The WMCA is an emerging hub for health technology innovation, attracting significant attention from a range of investors. The WMCA's strategic location, coupled with its strong academic institutions and collaborative industry networks, positions it as a key player in the national and global health technologies landscape.

5.1 Company List

Dealroom⁶ ⁷ analysis reveals that out of a list of 614 health technologies companies, 77 (13%) of these companies have received some sort of investment funding, with 43 (7%) of these being publicly disclosed. Of these 43 companies, they have received a total of £1.3bn (£134.9m excluding Hewlett Packard Limited – a multinational, multi-sector company). Below are the top 10 invested in companies:

Table 4. Top 10 Invested in Health Technology Companies, WMCA

Company	Total Dealroom Funding (£m)
HEWLETT PACKARD LIMITED	1,026.7
NANOSYRINX LTD	16.2
REM3DY HEALTH LIMITED	15.1
PEANUT LTD	13.0
EYOTO GROUP LIMITED	12.7
SPECIALIST COMPUTER CENTRES PLC	12.0
MEDHERANT LIMITED	10.2

⁶ Caveat: Dealroom's proprietary database aggregates data from multiple sources in real time: harvesting public information, user-submitted data verified by Dealroom, and integrating robust data from trusted partners with data engineering. All data is verified and curated with an extensive manual process. This ensures best-in-class data coverage and accuracy of startup and innovation ecosystems worldwide, that is trusted and by public and private decision makers worldwide, at the highest levels.

⁷ Please note that due to the nature of the bespoke company list it is not possible to gain insights into regional and national comparisons as this would be inaccurate due to the mixing of methodologies and multiple data sources.

Company	Total Dealroom Funding (£m)
YAQRIT LIMITED	9.7
ATS TECH SOLUTIONS LIMITED	8.5
PBD BIOTECH LIMITED	5.1

Additionally, relevant investors who have invested within these companies include:

- Midlands Engine Investment Fund (British Business Bank)
- Mercia Asset Management / Mercia Technologies
- Future Planet Capital
- Midven Limited
- Foresight Group
- New Anglia Capital
- Tech Nation
- Index Ventures
- Female Founders Fund
- EQT Ventures

5.2 Innovate UK Awards

As per Innovate UK Award recipients, for the WMCA, there were 80 awards totalling £35.4m. Below are the top 10 recipients of Innovate UK awards:

Table 5. Top 10 Recipients of Innovate UK Grants in Health Technology Companies, WMCA⁸

Company	Total Innovate UK Grants (£m)
EXPERT TOOLING & AUTOMATION LIMITED	5.8
HEWLETT PACKARD LIMITED	3.1
SIEMENS PUBLIC LIMITED COMPANY	2.4
BOC LIMITED	2.1
TUNSTALL HEALTHCARE (UK) LIMITED	1.8
XSTRAHL LIMITED	1.4
ASTON PARTICLE TECHNOLOGIES LIMITED	1.4
ORBSEN THERAPEUTICS UK LTD	1.3
ZIMMER AND PEACOCK LIMITED	0.9
INOCARDIA LIMITED	0.8

Some examples of relevant health technologies Innovate UK projects include:

- **Ocular surface bandage in eyedrop form – safer and more effective use of therapies to restore sight.**

HEALOME THERAPEUTICS received £263,049 to develop a 'fluid-gel' eyedrop that retains therapeutics on the eye's surface for 6-8 hours, addressing the rapid clearance of conventional eyedrops, which often require frequent dosing or uncomfortable contact lenses for effectiveness.

⁸ This table includes all Innovate UK Grants received by companies within the validated list, this also means that not all of these will be relevant to health technologies. For example, Hewlett Packard (HP) is a major recipient of funding, yet health, primarily digital health, is just a small part of their wider business.

- **Improving Long COVID patient recovery through voice-based AI symptom tracking and personalised rehabilitation.**

DDM HEALTH received £84,150 to adapt their existing AI-driven, voice-based app to monitor and manage Long COVID symptoms through Amazon Alexa devices, providing personalised rehabilitation plans that address physical, mental, and social needs.

- **Midlands & Wales Advanced Therapy Treatment Centre (MW-ATTC)**

ORBSEN THERAPEUTICS UK received £1m to establish the necessary infrastructure to deliver advanced cell and gene therapies (ATMPs) to patients across the Midlands and Wales, addressing challenges like transportation and staff training.

Appendix A

Data City RTICs:

Artificial Intelligence: Life Sciences
Biopharmaceutical: Advanced Therapy Medicinal Products (ATMPs)
Biopharmaceutical: Antibodies
Biopharmaceutical: Blood & Tissue Product
Biopharmaceutical: Small Molecules
Biopharmaceutical: Therapeutic protein
Biopharmaceutical: Vaccines
Electronics Manufacturing: Electromedical technologies
Engineering Biology Application: Biological Materials & Reagents - Nucleotide synthesis & sequencing
Engineering Biology Application: Chemicals & Materials - Biosensing
Engineering Biology Application: Chemicals & Materials - High Value Compounds
Engineering Biology Application: Health & Life Sciences
Engineering Biology Supply Chain: Biological Materials & Reagents - Biological Materials & Reagents
Engineering Biology Supply Chain: Biological Materials & Reagents - Nucleotide synthesis & sequencing
Engineering Biology Supply Chain: Computational - AI / Bioinformatics / Omics / Software
Engineering Biology Supply Chain: Computational - Robotics
Engineering Biology Supply Chain: Computational - Supercomputing
Engineering Biology Supply Chain: Diagnostics
Engineering Biology Supply Chain: Physical Assets - Pilot / Mass Manufacturing
Engineering Biology Supply Chain: Physical Assets - Supply Chain Small Scale Manufacturing
Immersive Technologies: Healthcare
Internet of Things: e-Health
Life Sciences: Biology and Biotech
Life Sciences: Chemical Products and Services
Life Sciences: Environmental Sciences Products and Services
Life Sciences: Human Health Services
Life Sciences: Life Sciences Manufacturing
Life Sciences: Research
Life Sciences: Synthetic Biotechnology
MedTech: Advanced Materials
MedTech: Artificial Intelligence
MedTech: Extended Reality
MedTech: Imaging
MedTech: Monitoring Technologies
MedTech: Photonics
MedTech: Robotics
Omics: Epigenomics
Omics: Genomics
Omics: Lipidomics

Omics: Metabolomics
Omics: Proteomics
Omics: Transcriptomics
Pharma: Additive Manufacturing
Pharma: Artificial Intelligence and Blockchain
Pharma: Automation
Pharma: Pharma and BioPharma
Pharma: Precision Medicine
Pharma: Research and Data Analytics
Pharma: Targeted Therapies
Rehabilitation: Cognitive Rehabilitation
Rehabilitation: Physical Rehabilitation
Rehabilitation: Psychiatric Rehabilitation
Rehabilitation: Speech and Language Rehabilitation
Rehabilitation: Vocational Rehabilitation
Sensors: Medical
Software as a Service (SaaS): Healthcare
Wearables and Quantified Self: Fitness Tracking
Wearables and Quantified Self: Medical

Appendix B

SIC Broad Definition:

1 Crop and animal production, hunting and related service activities
<ul style="list-style-type: none"> 1.280 Growing of spices, aromatic, drug and pharmaceutical crops
21 Manufacture of basic pharmaceutical products and pharmaceutical preparations
<ul style="list-style-type: none"> 21.100 Manufacture of basic pharmaceutical products 21.200 Manufacture of pharmaceutical preparations
26 Manufacture of computer, electronic and optical products
<ul style="list-style-type: none"> 26.600 Manufacture of irradiation, electromedical and electrotherapeutic equipment
32 Other manufacturing
<ul style="list-style-type: none"> 32.500 Manufacture of medical and dental instruments and supplies
46 Wholesale trade, except of motor vehicles and motorcycles
<ul style="list-style-type: none"> 46.450 Wholesale of perfume and cosmetics 46.460 Wholesale of pharmaceutical goods
47 Retail trade, except of motor vehicles and motorcycles
<ul style="list-style-type: none"> 47.730 Dispensing chemist in specialised stores 47.741 Retail sale of hearing aids 47.749 Retail sale of medical and orthopaedic goods in specialised stores (not incl. hearing aids) n.e.c. 47.750 Retail sale of cosmetic and toilet articles in specialised stores 47.782 Retail sale by opticians
64 Financial service activities, except insurance and pension funding
<ul style="list-style-type: none"> 64.209 Activities of other holding companies n.e.c.
65 Insurance, reinsurance and pension funding, except compulsory social security
<ul style="list-style-type: none"> 65.110 Life insurance 65.201 Life reinsurance
71 Architectural and engineering activities; technical testing and analysis
<ul style="list-style-type: none"> 71.200 Technical testing and analysis
72 Scientific research and development
<ul style="list-style-type: none"> 72.110 Research and experimental development on biotechnology 72.190 Other research and experimental development on natural sciences and engineering 72.200 Research and experimental development on social sciences and humanities
75 Veterinary activities
<ul style="list-style-type: none"> 75.000 Veterinary activities
84 Public administration and defence; compulsory social security
<ul style="list-style-type: none"> 84.120 Regulation of health care, education, cultural and other social services, not incl. social security
86 Human health activities
<ul style="list-style-type: none"> 86.101 Hospital activities 86.102 Medical nursing home activities 86.210 General medical practice activities 86.220 Specialists medical practice activities 86.230 Dental practice activities 86.900 Other human health activities

87 Residential care activities
• 87.100 Residential nursing care facilities
• 87.200 Residential care activities for learning difficulties, mental health and substance abuse
• 87.300 Residential care activities for the elderly and disabled
• 87.900 Other residential care activities n.e.c.
88 Social work activities without accommodation
• 88.100 Social work activities without accommodation for the elderly and disabled
• 88.910 Child day-care activities
• 88.990 Other social work activities without accommodation n.e.c.

SIC Narrow Definition:

86 Human health activities
• 86.101 Hospital activities
• 86.102 Medical nursing home activities
• 86.210 General medical practice activities
• 86.220 Specialists medical practice activities
• 86.230 Dental practice activities
• 86.900 Other human health activities
87 Residential care activities
• 87.100 Residential nursing care facilities
• 87.200 Residential care activities for learning difficulties, mental health and substance abuse
• 87.300 Residential care activities for the elderly and disabled
• 87.900 Other residential care activities n.e.c.
88 Social work activities without accommodation
• 88.100 Social work activities without accommodation for the elderly and disabled
• 88.910 Child day-care activities
• 88.990 Other social work activities without accommodation n.e.c.