MIDLANDS ENGINE

HEALTH & LIFE SCIENCES

MIDLANDS CLUSTER SNAPSHOT 2023

Health & Life Sciences

Midlands Super Cluster/ Key Sector

Health and Life Sciences is a Midlands Super Cluster. The sector is estimated to contribute £20.5 billion to the regional GVA every year. It also increasingly operates as an integrated, networked cluster of firms, businesses and healthcare providers across the region – albeit with notable concentrations including the East Midlands Medical Technologies Cluster and Data Driven Healthcare Innovation in Birmingham.

With a broad innovation base (including 11 of the region's universities performing highly in research), Health & Life Sciences is a growing cluster in the Midlands Engine (93% company count growth 2013-22). There are established Health Innovation West Midlands and Health Innovation East Midlands, and Medilink Midlands, dedicated Life Science Opportunity Zones in Birmingham and Charnwood, as well as private incubator space such as BioCity in Nottingham, providing a robust cluster support infrastructure across the region. The Midlands also hosts some of the country's largest Clinical Trials Units, providing a diverse testbed for developing new interventions.

With 420 businesses incorporated since 2017 and 34 spinouts currently being tracked, the growth looks set to continue. Prominent cluster locations based on business, growth and employee figures are especially Birmingham and Nottingham.

Cluster in context

Over 18,000 jobs; 7% of UK total.

8% of Midlands university graduates studied relevant subjects to health and life sciences, including from 4 of top 25 UK universities for Life Sciences and Medicine.

Almost 1,300 businesses; 17% of UK total and 93% growth since 2013.

78 high growth companies (12% of UK) and 17 £100m+ turnover companies (23% of UK).

Over 10% of Innovate UK funding to health & life sciences businesses since 2005 has been awarded to those with a Midlands address.

3% of UK health and life sciences Foreign Direct Investment Capex and 15% of UK health and life sciences Domestic Direct Investment Capex 2017-2021.

Business Ecosystem

Total Cluster Business Count: 1294

17% of UK; 93% growth since 2013.[1]

£100m+ Turnover Companies: 17

23% of all in the UK have a Midlands location.[2]

High Growth Companies: 78

12% of all in the UK have a Midlands location.[3]

Incorporations 2017-22: 420

15% of UK health and life sciences incorporations between 2017 and 2022 have a Midlands location.[4]

Foreign-owned enterprises: 10%

131 are known to be foreign-owned; Higher proportion of foreign-owned than national average (7%).[5]

[1,2,4,5] Data City 2023, [3] 20%+ company growth percentage per year.

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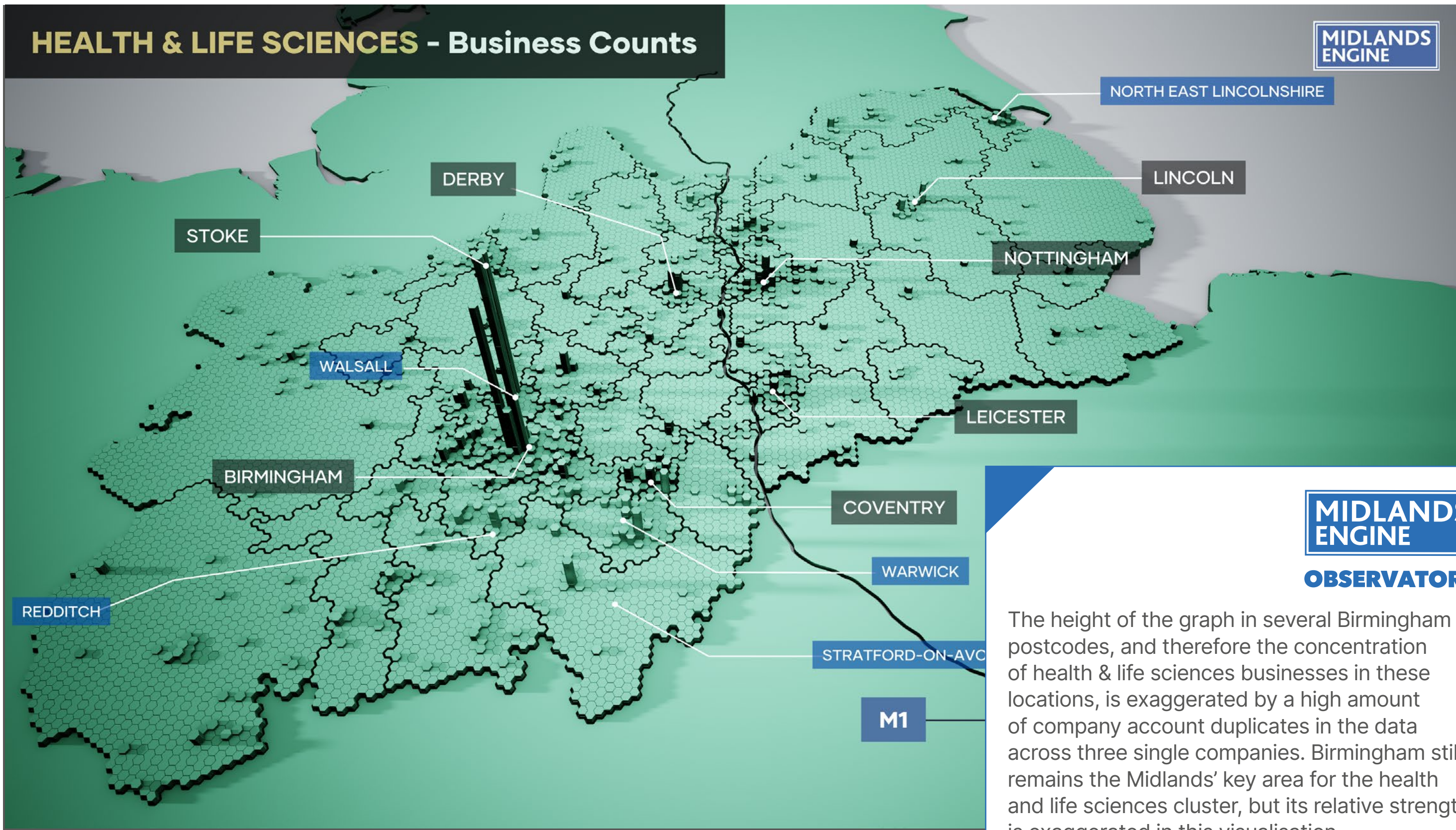
Health and life sciences is a difficult cluster to define and quantify, hence some discrepancies between the data - particularly the number of jobs - presented here and previous work; for example the Midlands MedTech sector analysis, which uses Office for Life Sciences (OLS) data, and previous Midlands Engine Observatory publications related to health and life sciences, e.g. this factsheet. The latter takes a broader definition of health than this cluster project, incorporating public healthcare and social care service jobs, while the difference between the OLS data and the Data City estimates for the Midlands (32,000 jobs vs 18,000 jobs) is likely due to the method for allocating jobs per location in this project (an equal distribution across addresses). In this case the number of actual Midlands jobs in health and life sciences is likely to be underestimated by the Data City data (18,177) due to company account structures, specifically addresses. This is validated somewhat by the number of total employees in companies with a Midlands Engine address being as high as over 68,000. Therefore, as per the OLS company-level data, the number of employees in health and life sciences in the Midlands Engine are more likely to be in excess of 30,000 and beyond, while moving forward, MEO will continue to work with partners to best identify and track the cluster moving.



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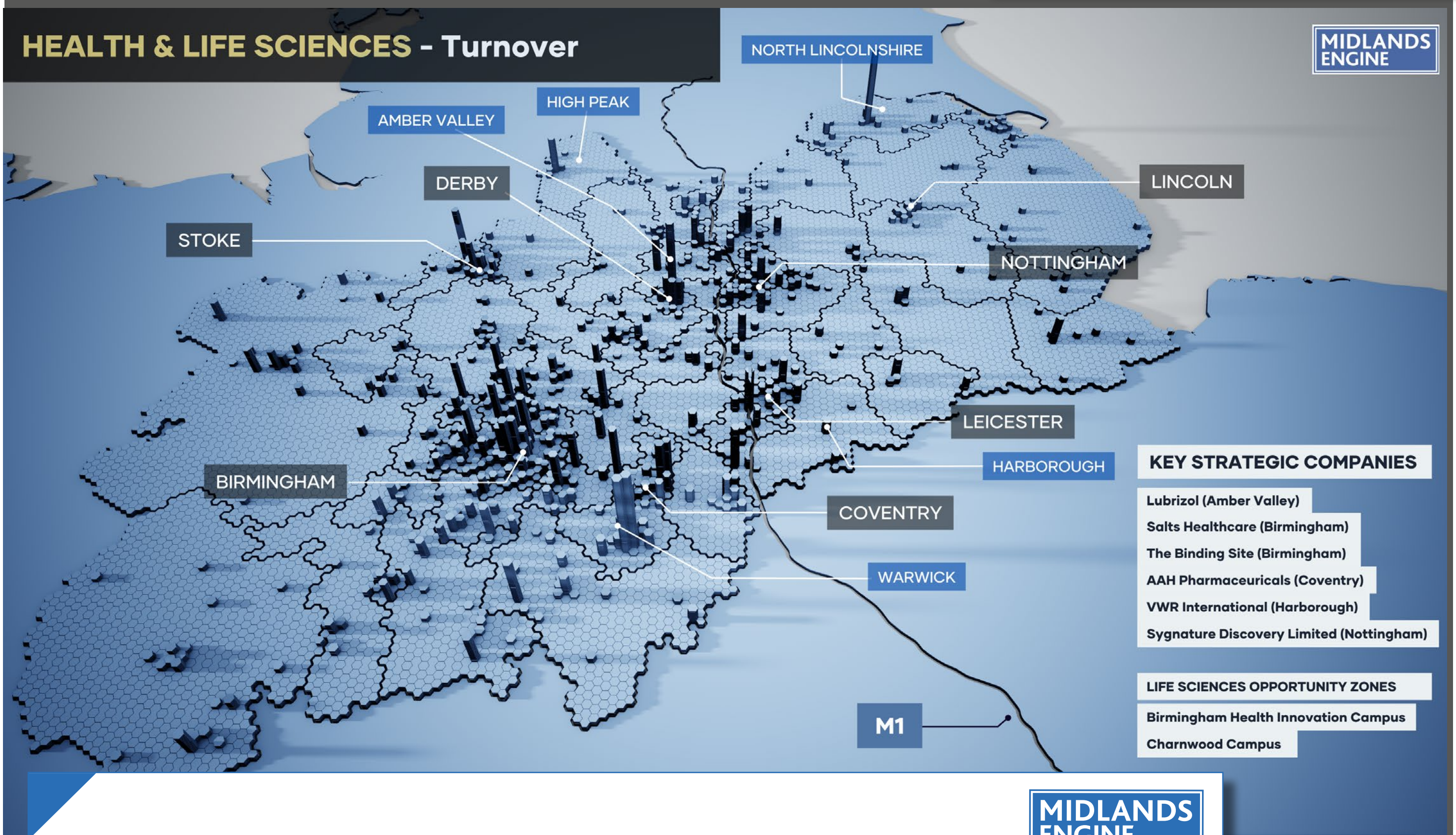
The height of the graph in several Birmingham postcodes, and therefore the concentration of health & life sciences businesses in these locations, is exaggerated by a high amount of company account duplicates in the data across three single companies. Birmingham still remains the Midlands' key area for the health and life sciences cluster, but its relative strength is exaggerated in this visualisation.
A truer reflection would be the height reduced by around 25% than currently displayed in the highest Birmingham postcodes.



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The height of the graph in a single North Lincolnshire postcode is likely to be exaggerated by a single large company, which is unlikely to generate the level of turnover accounted for just in this location, and indeed unlikely to all be related to health and life sciences. The level of health and life sciences turnover in this specific area should therefore be disregarded.

Health & Life Sciences

Innovation Ecosystem

Accelerator Engagement: 75

Relevant Cluster Organisations:

Mediink Midlands; East & West Midlands Health Innovation Networks; Innovation Alliance for the West Midlands; DIAGCOMM – The West Midlands Diagnostics Innovation Community; West Midlands Health Technologies Cluster; Midlands Innovation Health; Midlands Health Alliance.[1]

Relevant spinouts: 34

Relevant high performing HEI research:

Universities of Keele; Loughborough; Nottingham Trent; Universities of Aston; Birmingham; Coventry; De Montfort; Keele; Leicester; Lincoln; Nottingham; Warwick

11 Midlands universities with high research ranking in relevant subjects.[2]

Significant Innovation Hubs:

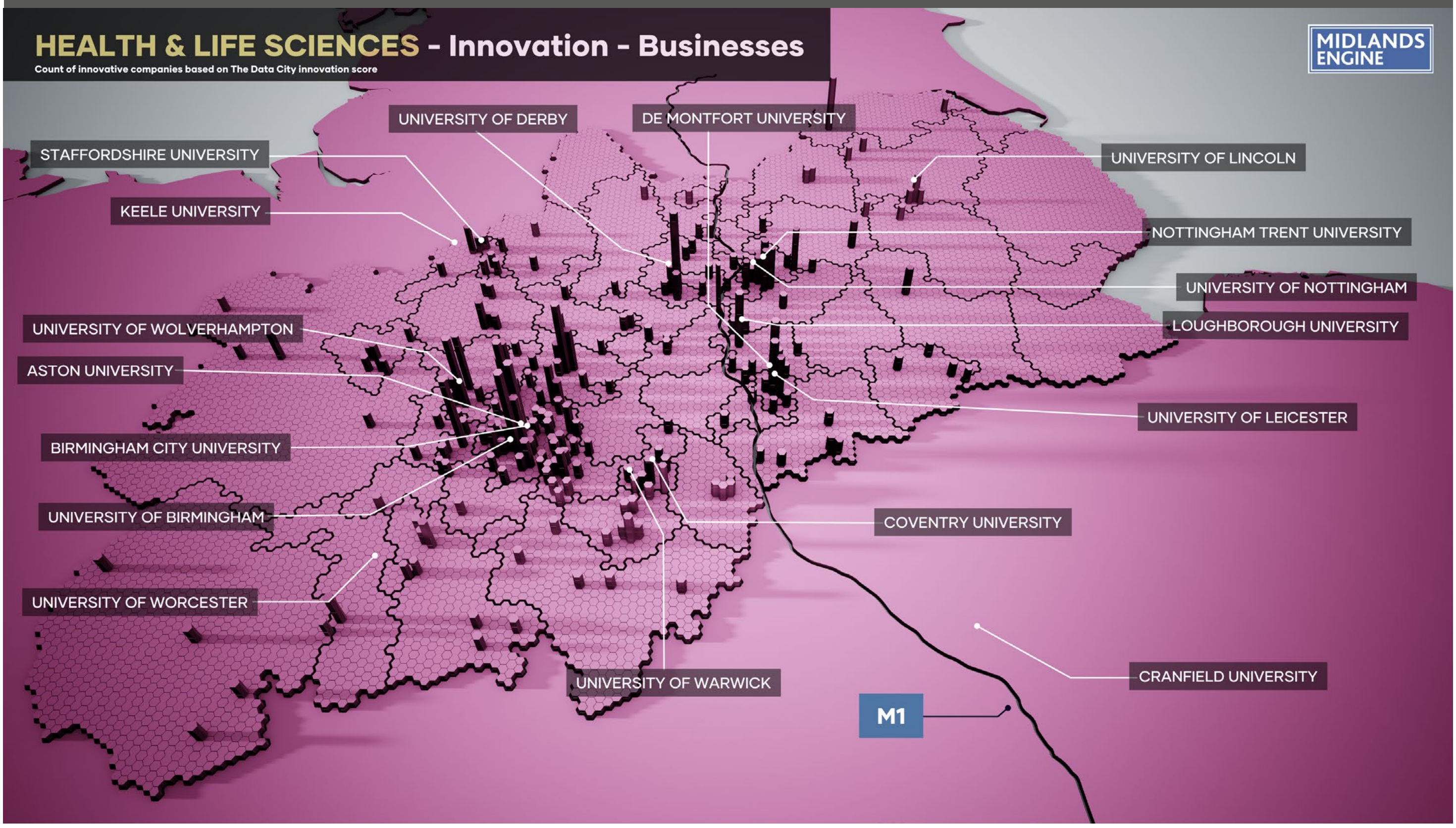
Birmingham Health Innovation Campus; Charnwood Campus; Biocity Nottingham

High Growth Company Grants[3]: 54

Innovate UK funding: £18m since 2005

10% of Innovate UK funding to health & life sciences businesses had a Midlands location.[4]

[1]Beauhurst 2022: High growth companies utilised accelerators [2]REF 2021 GPA >3.0 in any of Allied health professions, dentistry, nursing and pharmacy; Biological Sciences; Chemistry; Clinical Medicine; Computer science and informatics; Psychology, psychiatry and neuroscience; Public health, health services and primary care; Social work and social policy, [3]Beauhurst 2022, [4,5]Data City 2023.



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Talent Ecosystem

Estimated Employees: 18,177

7% of national; largest region outside of London & SE.[1]

Earnings: Average salary £30,755

National average £36,836 (17% lower in Midlands).[2]

Further Education Leavers: 43,940

More FE leavers (including higher level) in relevant subjects than all other regions.[3]

Relevant HEI High-Ranking Department:

Universities of Nottingham; Birmingham; Warwick; Leicester

4 universities high ranked: international presence and expertise.[4]

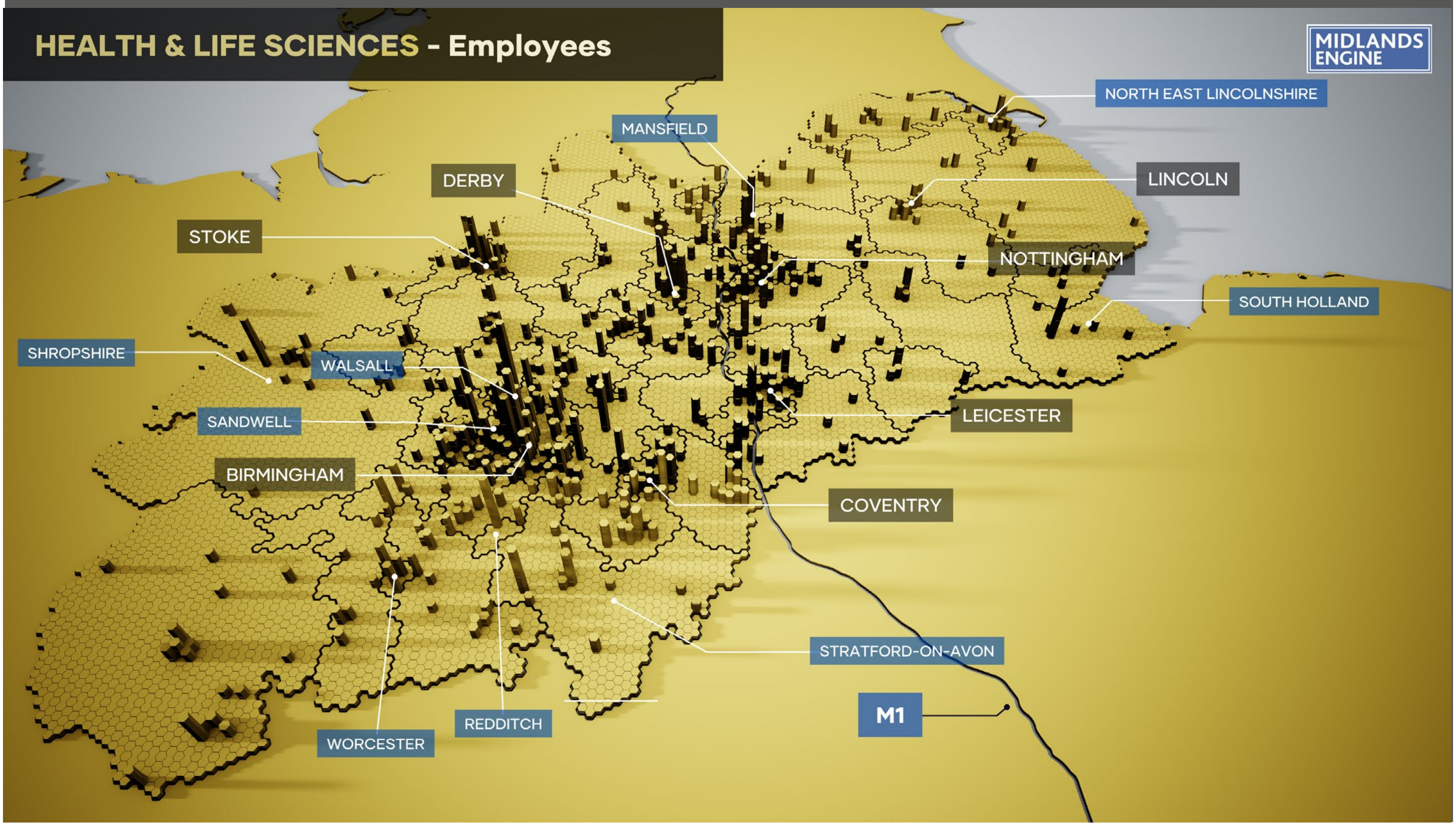
University Graduates: 11,200

8% of Midlands graduates studied relevant subjects to aerospace.[5]

Graduate Retention: change over 3 years: 91.7%

Negative balance for graduate retentions for both East Midlands and West Midlands.[6]

[1]Data City, 2023, [2]ONS ASHE, 2021 - relevant sectors, [3]DfE Unit for Future Skills: Further Education leavers 18/19 in relevant fields, [4]QS 'Life Sciences & Medicine' world subject ranking 2022 - institutions appearing in UK top 25, [5]Graduates from relevant subjects 2021 (HESA), [6] 5,780/6,300 first degree graduates 'Human health and social work activities' in 3 years of graduating in 2019. (DfE Graduate Outcomes by Industry).



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Investment Ecosystem

Investment/Venture Capital Firms:
Funds HQ'd in Midlands Engine area 200
313 Funds have offices in region.[1]

FDI into High Growth Companies: 56%
143 of 254 investments in High Growth Companies.[2]

FDI Capex 2017-21: $266.3m
3% of UK total.[3]

DDI Capex 2017-21: $544.21m
15% of UK total.[4]

Fundraising Volumes:

Mean av. £688k fundraising investment
£68.2m in 99 investments (inc. £25.1m across 43 seed investments; £19.4m across 33 venture investments).[5]

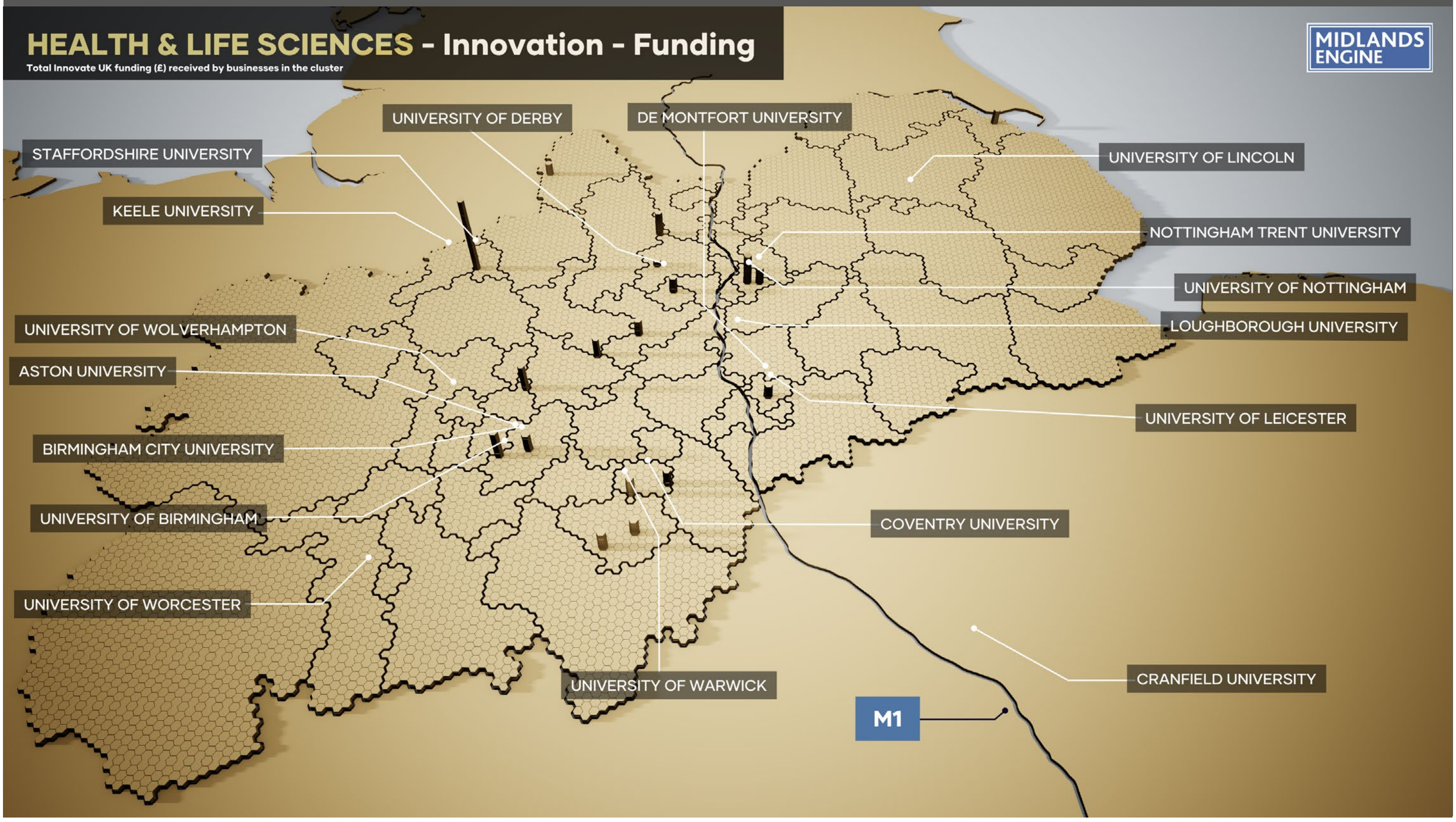
FDI Jobs 2017-2021: 889 jobs
5% of UK total.[6]

DDI Jobs 2017-2021: 3,321 jobs
17% of UK total.[7]

FDI Projects 2017-2021: 27 projects
7% of UK total.[8]

DDI projects 2017-2021: 47 projects
20% of UK total.[9]

[1]Beauhurst 2022, [2]Beauhurst 2022, [3]Wavteq 2022, [4]Wavteq 2022, [5]Beauhurst 2022, [6]Wavteq 2022, [7]Wavteq 2022, [8]Wavteq 2022, [9]Wavteq 2022.



COMMENTARY

- The number of jobs created in this cluster saw a large spike in 2021, far higher than pre-Covid-19 levels, although the UK's marketshare in this cluster declined steadily to reach its lowest point in 2019 at 3.1%, it then steadily inclined from 2019 to 2021.
- The top countries for foreign ownership of businesses in this cluster are the USA, Germany, Australia, France, and Sweden
- There are almost 45,000 FE leavers each year in health & life sciences, supplemented by over 10,000 HE graduates.
- The top countries for foreign ownership counts are the USA, Germany, and China.

Roundtable: cluster-specific challenges & recommendations

Access to NHS procurement has been a key frustration for many Midlands businesses in the sector. Businesses point to a need for cultural changes within the NHS to embrace new products and ideas, and to engage more with SMEs. Participants also believed that national procurement should focus on UK products and solutions, instead of seeking cost-efficiencies elsewhere.

Recommendations for Midlands Engine Partnership:

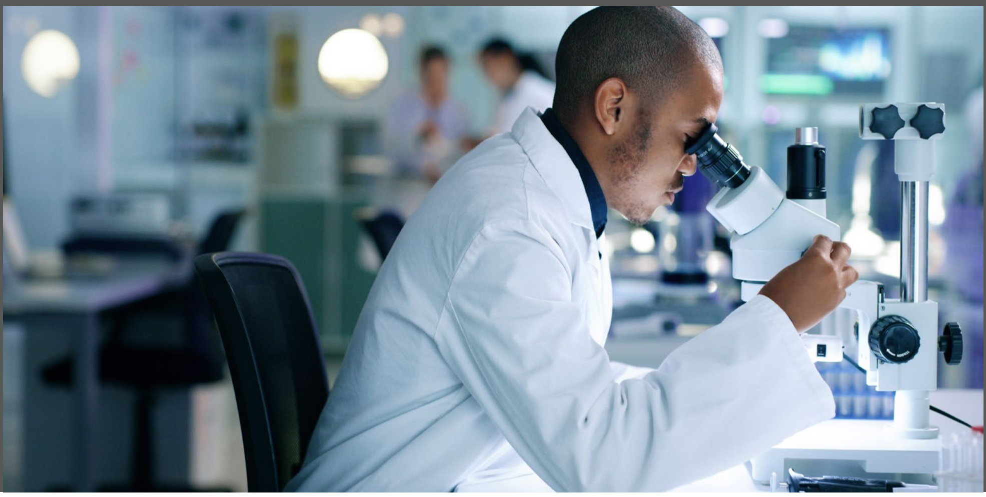
Strategy: Develop a strategy around healthcare for Midlands, linked into the new data in healthcare national strategy.

Finance: Increase access to pre-seed grant funding for proof of concept/prototype, providing a bridge to commercial sales and financial sustainability.

Recommendations for UK policy:

Procurement: Improve procurement processes within NHS to better engage with UK and Midlands businesses, particularly SMEs, and to embrace new solutions/ products, new processes to reduce waste going to landfill, and routinely using and re-purposing data.

Regulation: Support in navigating and adapting to a complex new regulatory environment post-Brexit, including support with streamlining processes and improving data collection.



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datacity

wavteq

Beauhurst

This data has been compiled from multiple sources, using classifications based on clusters as proposed by Midlands Engine Partners. Where necessary wider sector data has been used as a 'best proxy'. Unless otherwise stated, all data is contemporary as of May 2023, and is an aggregation of all known counts/data within the Midlands Engine's 65 Local Authorities. Unless otherwise stated, business, employee and turnover figures have been calculated via DataCity based on trading addresses within the Midlands Engine.