SPACE TECHNOLOGIES

MIDLANDS CLUSTER SNAPSHOT 2023

Space Technolgies

Midlands New Economy Cluster

Overlapping the Aerospace cluster but distinct due to unique applications, the Space Technologies cluster across the Midlands Engine centres on several key innovation bases with high growth companies and highly-paid talent working on aerospace, defence, satellite and related space-uses. Notable sites include Space City Leicester with a strong cluster organisation, and space technology manufacturing in the West Midlands, with high growth clusters also found elsewhere including in parts of Worcestershire, Herefordshire and Shropshire. The cluster has seen considerable growth in the past decade (+48% in terms of number of businesses) with growing domestic investment in particular - the Midlands receiving half of all domestic investment in the wider sector since 2017. In 2023 the UK Space Agency invested £6.5m in the region to establish the Midlands Space Cluster. Alongside the specialised business parks there is significant talent across several high performing research universities and both HE and FE graduate pipelines, including a strong postgraduate pipeline. Current significant investment opportunities include Space and Pioneer Park in Leicester, Malvern Science Park and Infinity Park Derby among others.

Cluster in context

- **18,000 jobs; 12% of UK total and the most of any region outside London and the South East outside of London and SE.**
- **8% of Midlands university graduates graduates in 2021 studied relevant subjects to space, including from 4 of the top 25 UK universities for Engineering & Technology.**
- **Almost 500 businesses; 21% of UK total and 48% growth in business numbers since 2013.**
- **26 high growth companies (14% of UK) and 13 £100m+ turnover companies (25% of UK).**
- **43% of Innovate UK funding to space businesses since 2005 has been awarded to those with a Midlands address.**
- **8% of UK total space-related Foreign Direct Investment Capex and 50% of UK total aerospace Domestic Direct Investment Capex 2017-2021.**

Business Ecosystem

Total Cluster Business Count: **488**

21% of UK; the most of any region outside London and the South East. 48% growth since 2013.[1]

£100m+ Turnover Companies: **13**

25% of all in the UK have a Midlands location.[2]

High Growth Companies: **26**

14% of all in the UK have a Midlands location.[3]

Incorporations 2017-22: **103**

17% of UK space incorporations between 2017 and 2022 have a Midlands location.[4]

Foreign-owned enterprises: **18%**

87 are known to be foreign-owned; Higher proportion of foreign-owned than national average (1%).[5]

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

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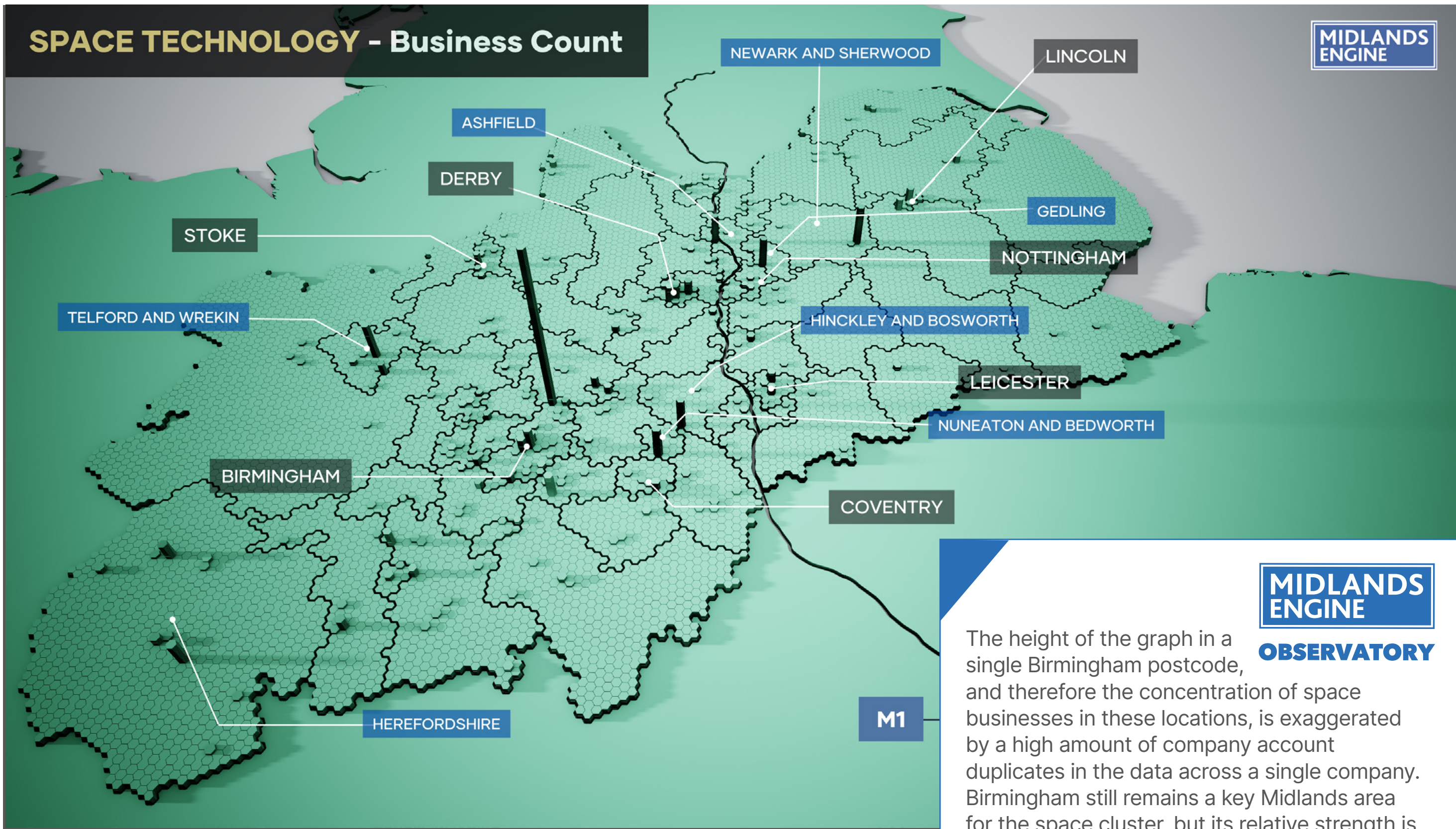
Naturally, there are many cross overs between the space and aerospace clusters, given many companies are likely to provide products and services to both aerospace and space, as well as other industries. Hence the data and visualisations presented between aerospace and space are not too dissimilar, albeit with space considerably smaller – given its less established market – and some different spatial elements. Space can be seen as a sub-cluster of aerospace but also a cluster in its own right, reflecting the many examples of cluster cross-fertilisation highlighted in this work. This broader incorporation of aerospace companies (that also supply the space sector) into the space definition is likely to overestimate the number of Midlands space cluster employees (18,000); particularly compared to national datasets such as from the UK Space Agency (under 3,000). However, the true number is likely to be somewhere inbetween, something which may be part of wider work ongoing by Midlands partners to build the Midlands Space Cluster, of which the data presented can support as a baseline.



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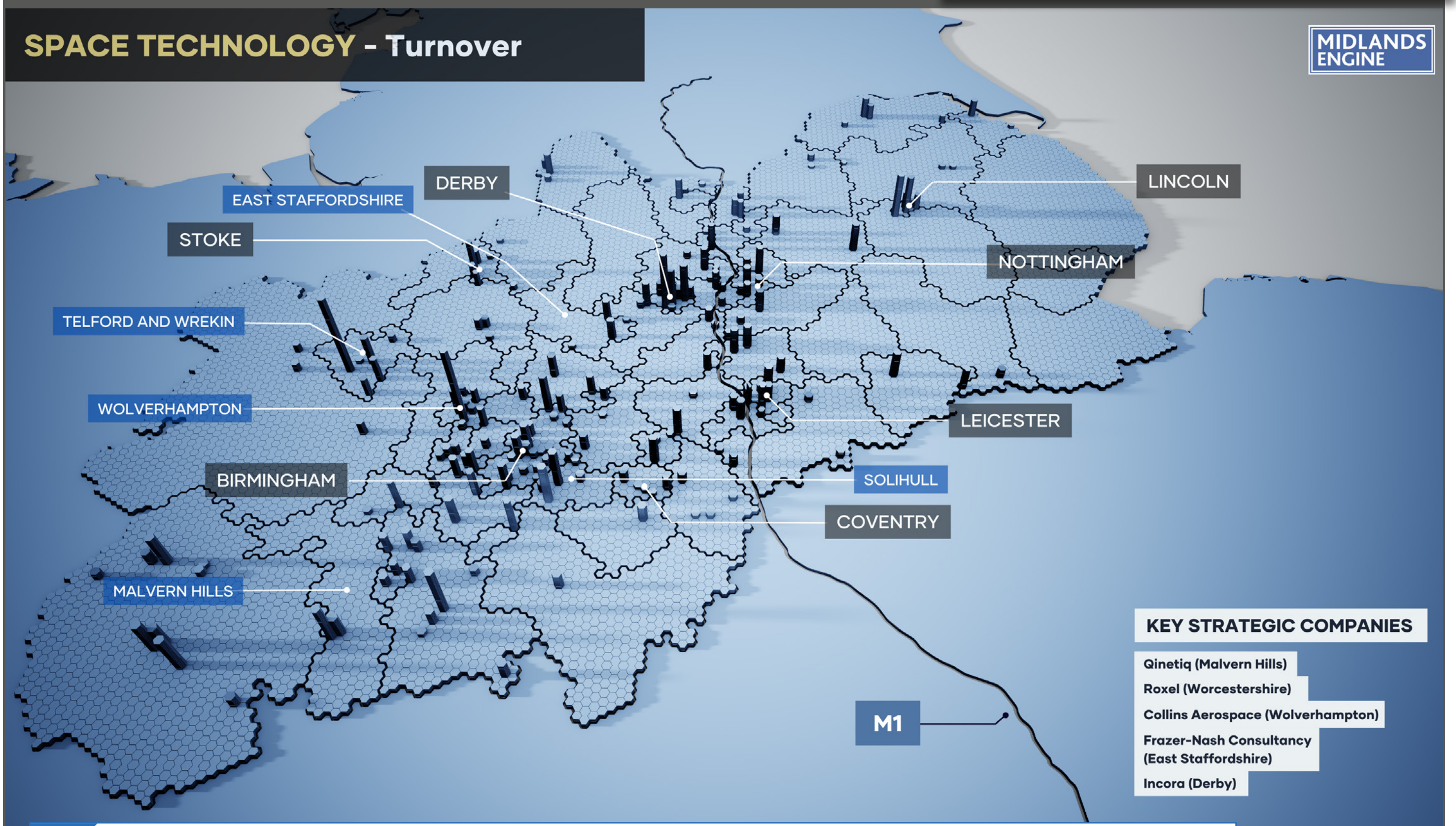
The height of the graph in a single Birmingham postcode, and therefore the concentration of space businesses in these locations, is exaggerated by a high amount of company account duplicates in the data across a single company. Birmingham still remains a key Midlands area for the space cluster, but its relative strength is considerably exaggerated in this visualisation. A truer reflection would be the height reduced by around 50% than currently displayed in the highest Birmingham postcode.



The height of the graph in a single postcode within Telford & Wrekin 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 aerospace. So, while Telford and Wrekin retains a notable, "real" level of space activity, the level of space turnover identified to this specific postcode (the highest spike) should be disregarded.

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Innovation Ecosystem

Accelerator Engagement:[1] **2**

Relevant Cluster Organisations:
Space Park Leicester; Midlands Space Cluster; Midlands Aerospace Alliance

Relevant high performing HEI research:
Universities of Leicester, Birmingham, Lincoln, Loughborough, Keele, Nottingham, Warwick, Nottingham Trent
8 Midlands universities with high research ranking in relevant subjects.[3]

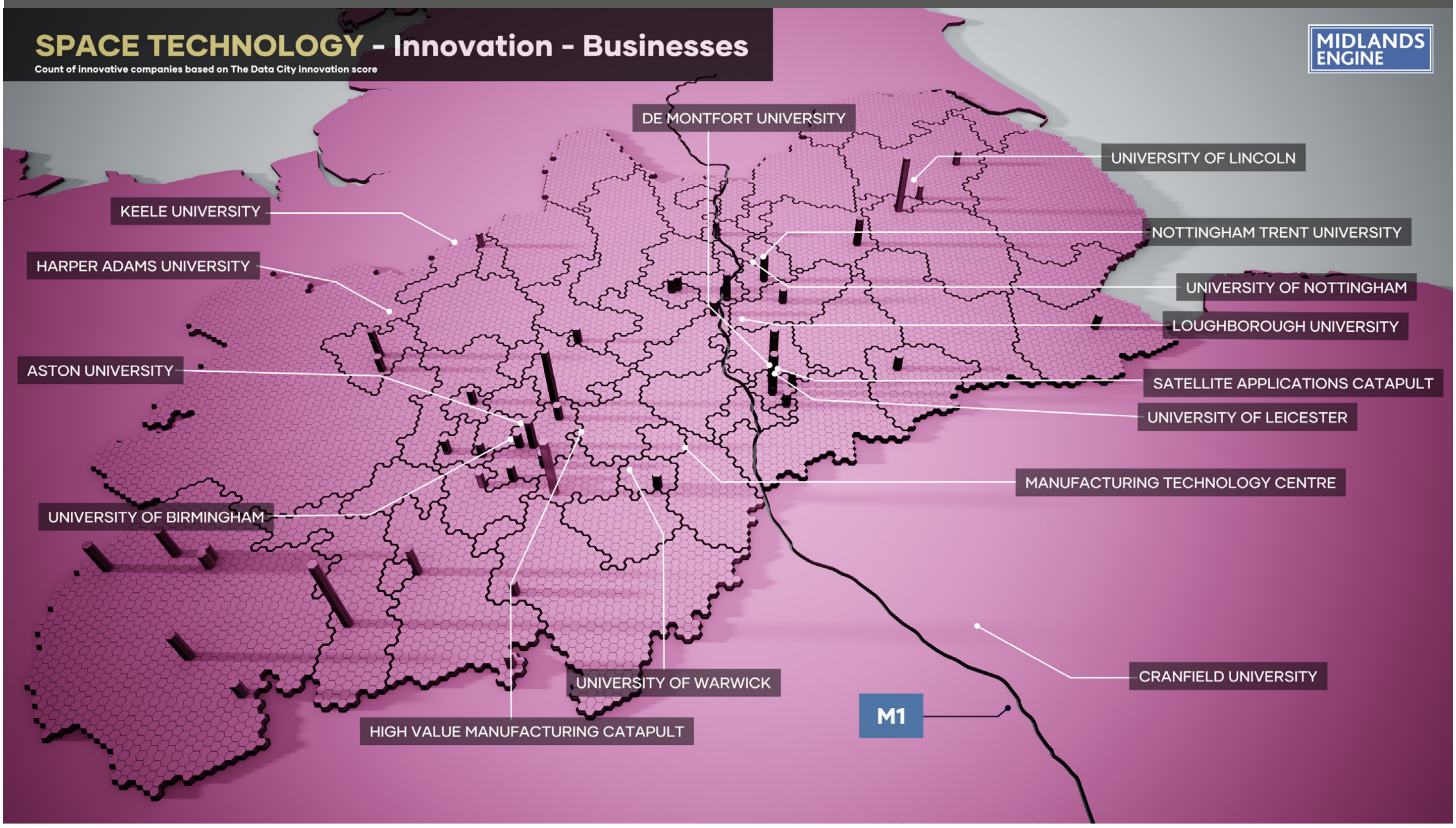
Significant Innovation Hubs:
Pioneer Park; Space Park Leicester; Manufacturing Technology Centre; Malvern Science and Technology Park; Satellite Applications Catapult

High Growth Company Grants[4]**:** **23**

Innovate UK funding:
£167m since 2005

43% of Innovate UK funding to space had a Midlands location.[5]

[1]Beauhurst 2022: High growth companies utilised accelerators, [2] Beauhurst, 2022, [3]REF 2021 GPA >3.0 in Computer science and informatics; Engineering; Physics, [4]Beauhurst, 2022, [5]Data City, 2023.



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Talent Ecosystem

Estimated Employees: 18,105

12% of national; largest region outside of London & SE.[1]

Earnings: Average salary £45,752

National average £51,351 (10.9% lower in Midlands).[2]

Further Education Leavers: 23,710

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

Relevant HEI High-Ranking Department:

Universities of Nottingham; Birmingham; Warwick; Loughborough

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

University Graduates: 10,620

8% of ME graduates studied relevant subjects to space.[5]

Graduate Retention: change over 3 years: 79%

Manufacturing retention is relatively strong but technology/IT aspect performs poorly.[6]

[1]Data City, 2023, [2]ONS ASHE, 2021, [3]DfE Unit for Future Skills: Further Education leavers 18/19 in relevant fields, [4]QS 'Engineering and Technology' world subject ranking 2022 - institutions appearing in UK top 25, [5]Graduates from relevant subjects 2021 (HESA), [6]3,655/4,625 first degree graduates 'Manufacturing; Information & Communication' in 3 years of graduating in 2019. (DfE Graduate Outcomes by Industry).

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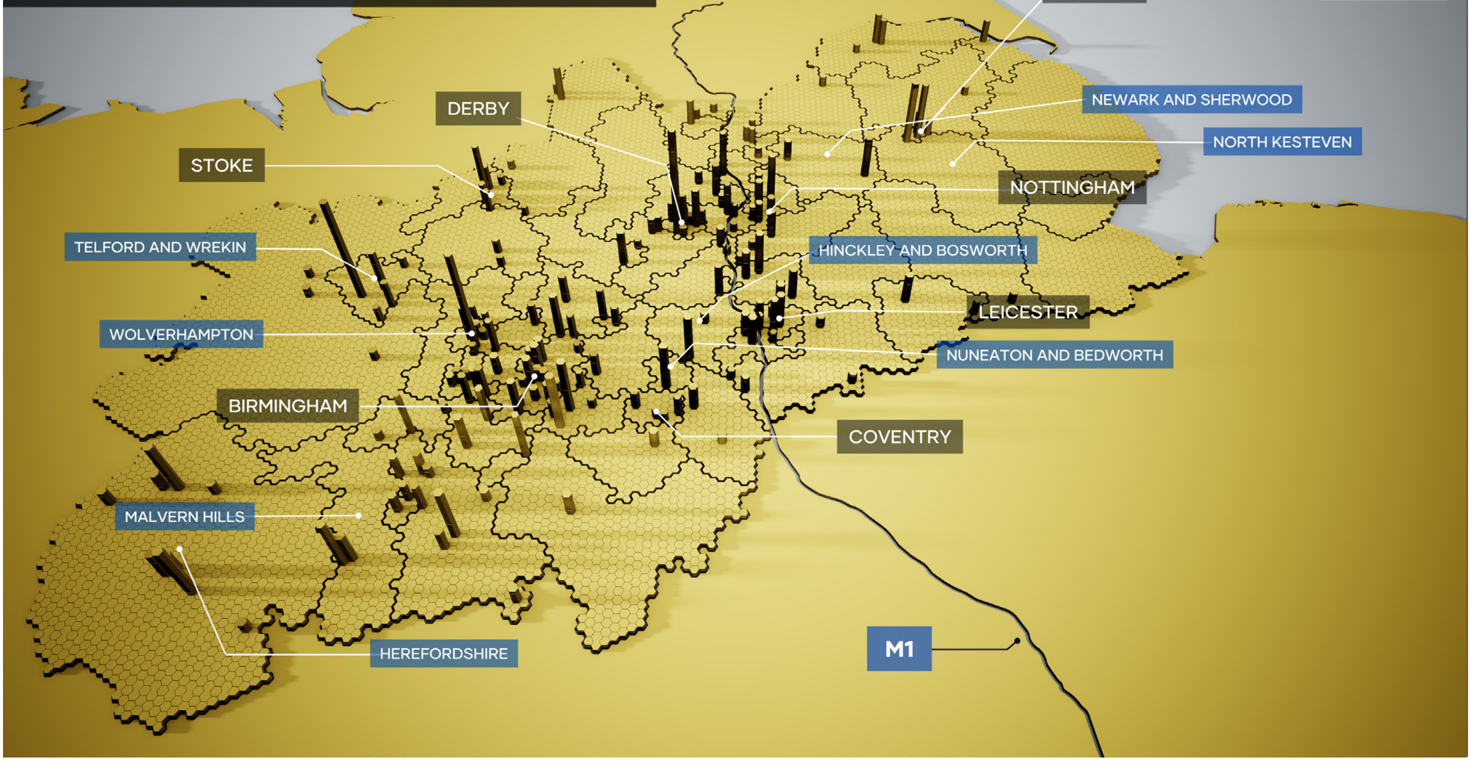
The height of the graph in a single postcode within Telford & Wrekin is likely to be exaggerated by a single large company, which is unlikely to generate the level of employees accounted for just in this location, and indeed unlikely to all be related to space. So, while Telford and Wrekin does retain a notable, "real" level of space activity, the level of space employees identified to this specific postcode (the highest spike) should be disregarded.

SPACE TECHNOLOGY - Employees



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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: **19%**
7 of 36 investments in High Growth Companies.[2]

FDI Capex 2017-21: **$29.3m**
8% of UK total.[3]

DDI Capex 2017-21: **$28.31m**
50% of UK total.[4]

Fundraising Volumes:

Mean av. £630,933 fundraising investment
£22.7m in 36 investments 'aerospace' (inc. £50k across 15 seed investments; £360k across 7 venture investments).[5]

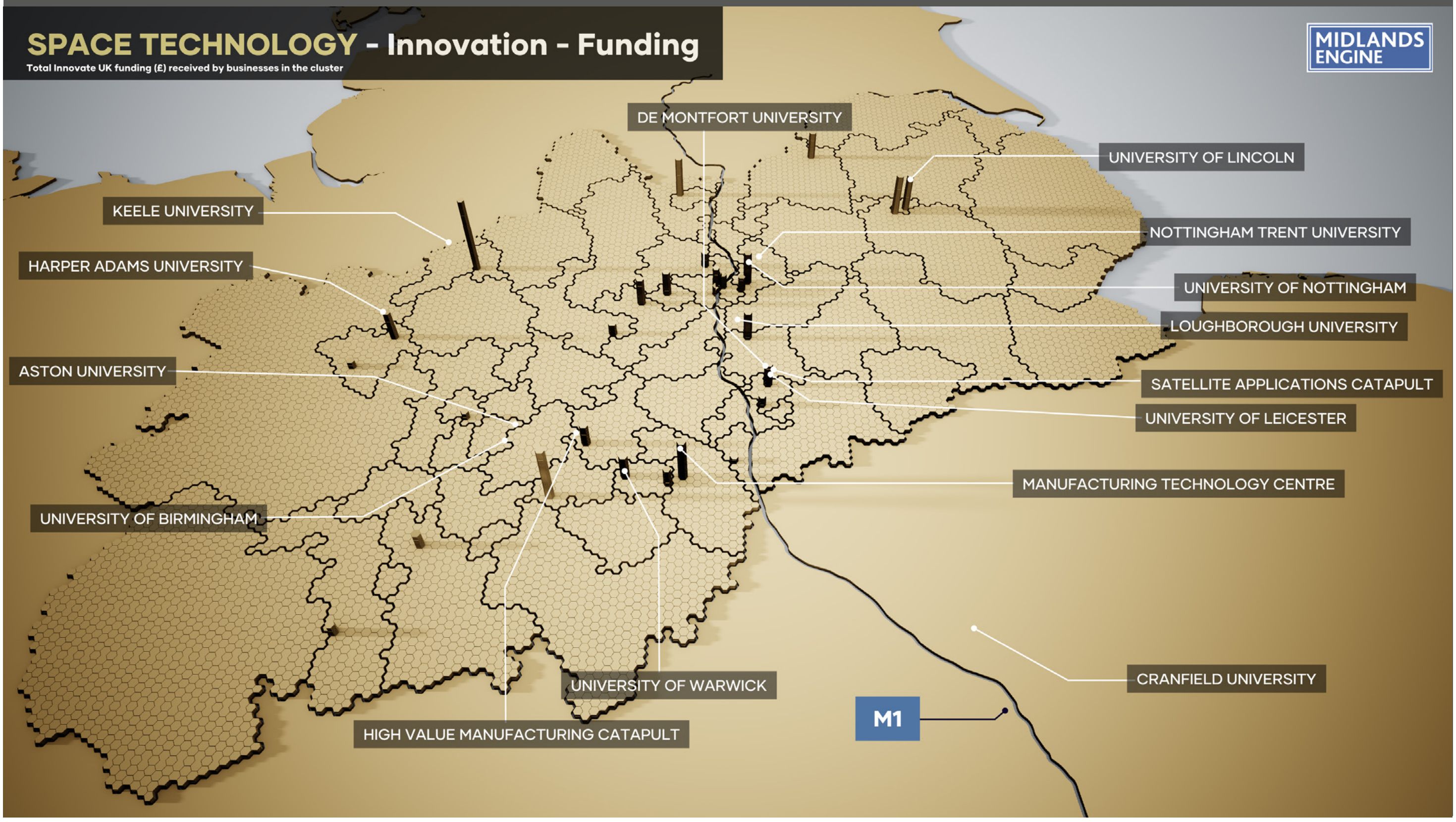
FDI Jobs 2017-2021: **213 jobs**
11% of UK total.[6]

DDI Jobs 2017-2021: **200 jobs**
38% of UK total.[7]

FDI Projects 2017-2021: **2 projects**
7% of UK total.[8]

DDI projects 2017-2021: **2 projects**
22% 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

- In early 2023 the UK Space Agency awarded £6.5m to the Universities of Leicester, Birmingham and Nottingham, Manufacturing Technology Centre and Midlands Aerospace Alliance, to establish a pan-regional Midlands Space Cluster. Together, the Group forms one of the largest collections of space expertise in the world, combining 900 academic, research and technical staff within the Midlands, this funding allows us to further leverage our expertise in this area.
- Leicester is home to a significant space cluster through Space City Leicester, with wider aerospace and defence strengths across the region.
- Wavteq forecast a UK FDI Capex of $94mn in this sector in 2025.
- The top countries for foreign ownership of businesses in this cluster are the USA, China, Sweden, Spain and Germany.

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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.