



**MIDLANDS
ENGINE**

AGRI-TECH

MIDLANDS CLUSTER SNAPSHOT 2023

Agri-tech









With 20% of the UK's agri-tech businesses based in the Midlands, the region is home to some of the UK's most significant concentrations of economic activity in this sector. These include Greater Lincolnshire's Food Valley, and significant clusters in Herefordshire and Shropshire, with further contributions across counties in the region in a wider agriculture sector with upwards of 90,000 jobs. The Midlands has attracted a disproportionately high 36% of all domestic and 23% of foreign investment in agri-tech in the UK since 2017.

The Midlands has the largest farmed area and the highest crop and livestock output of all English regions. Along with swathes of arable

land, agri-tech clusters in the Midlands benefit from dedicated cluster support environments and connectivity with leading research and innovation spaces.

Research and innovation spaces include food enterprise zones (in Lincolnshire), dedicated innovation parks such as Ni.Park, and expertise at universities such as Harper Adams, Nottingham, Lincoln. There are significant opportunities for greenfield investment across the Food Enterprise Zone and beyond, including two High Potential Opportunities for Foreign Direct Investment in Telford & Wrekin and one in Greater Lincolnshire.

Cluster in context

-  Almost 4,000 jobs; 10% of the UK total.
-  2% of Midlands university graduates in 2021 studied relevant subjects to agriculture, including from 3 of the top 25 UK universities for Agriculture and Forestry.
-  Almost 300 businesses; 20% of UK total and 72% growth in business numbers since 2013.
-  24 high growth companies (9% of UK) and nine £100m+ turnover companies (35% of UK).
-  11% of Innovate UK funding to agri-tech businesses since 2005 has been awarded to those with a Midlands address.
-  23% of UK agriculture Foreign Direct Investment Capex and 36% of UK agriculture Domestic Direct Investment Capex 2017-2021.

Business Ecosystem



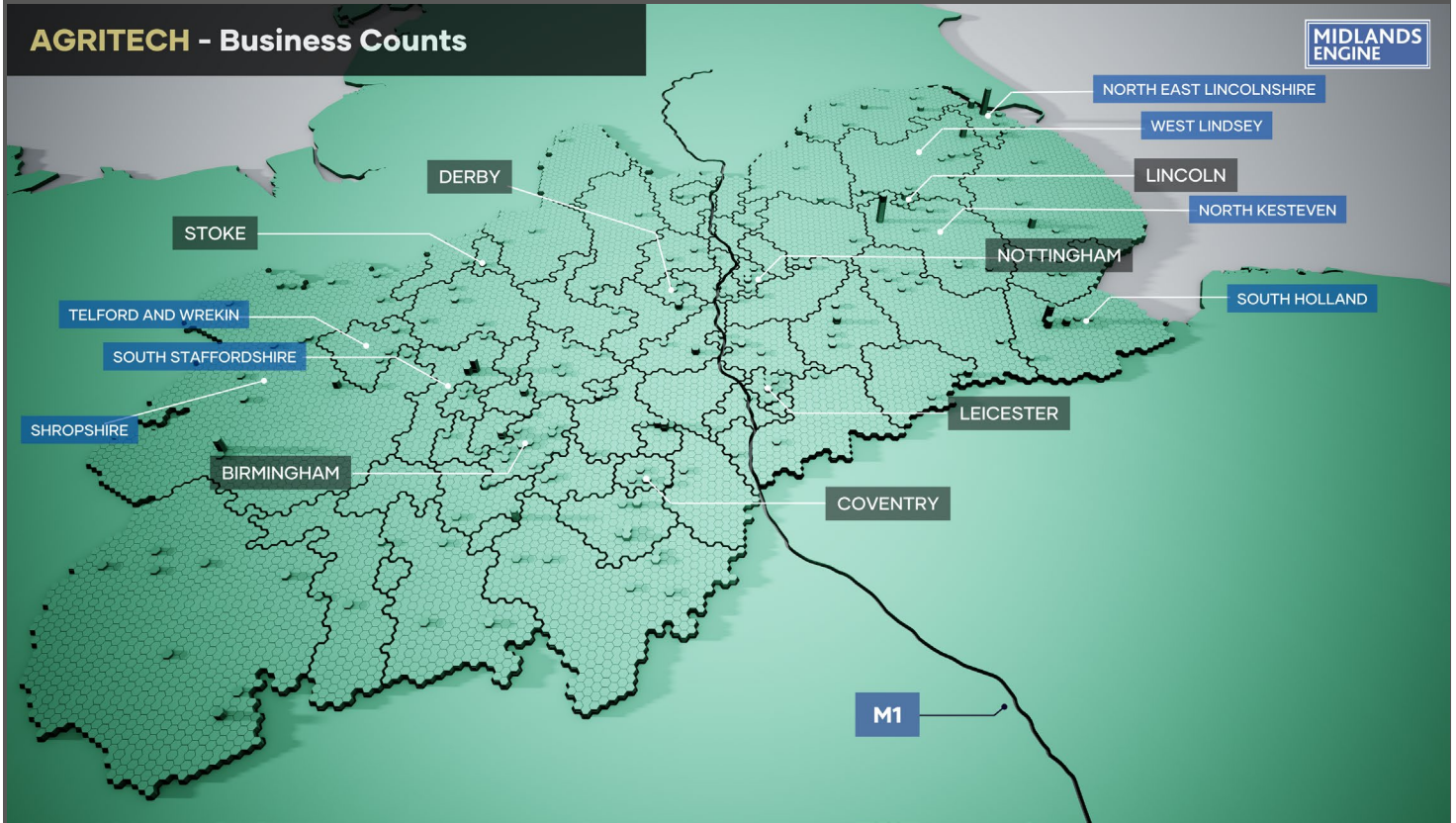
Total Cluster Business Count: 20% of UK total; 72% growth since 2013. ¹	284
£100m+ Turnover Companies: 35% of all in the UK have a Midlands location. ²	9
High Growth Companies: 9% of all in the UK have a Midlands location. ³	24
Incorporations 2017-22: 16% of UK agri-tech incorporations between 2017 and 2022 have a Midlands location. ⁴	79
Foreign-owned enterprises: 54 are known to be foreign-owned; Higher proportion of foreign-owned than national average (13%). ⁵	19%



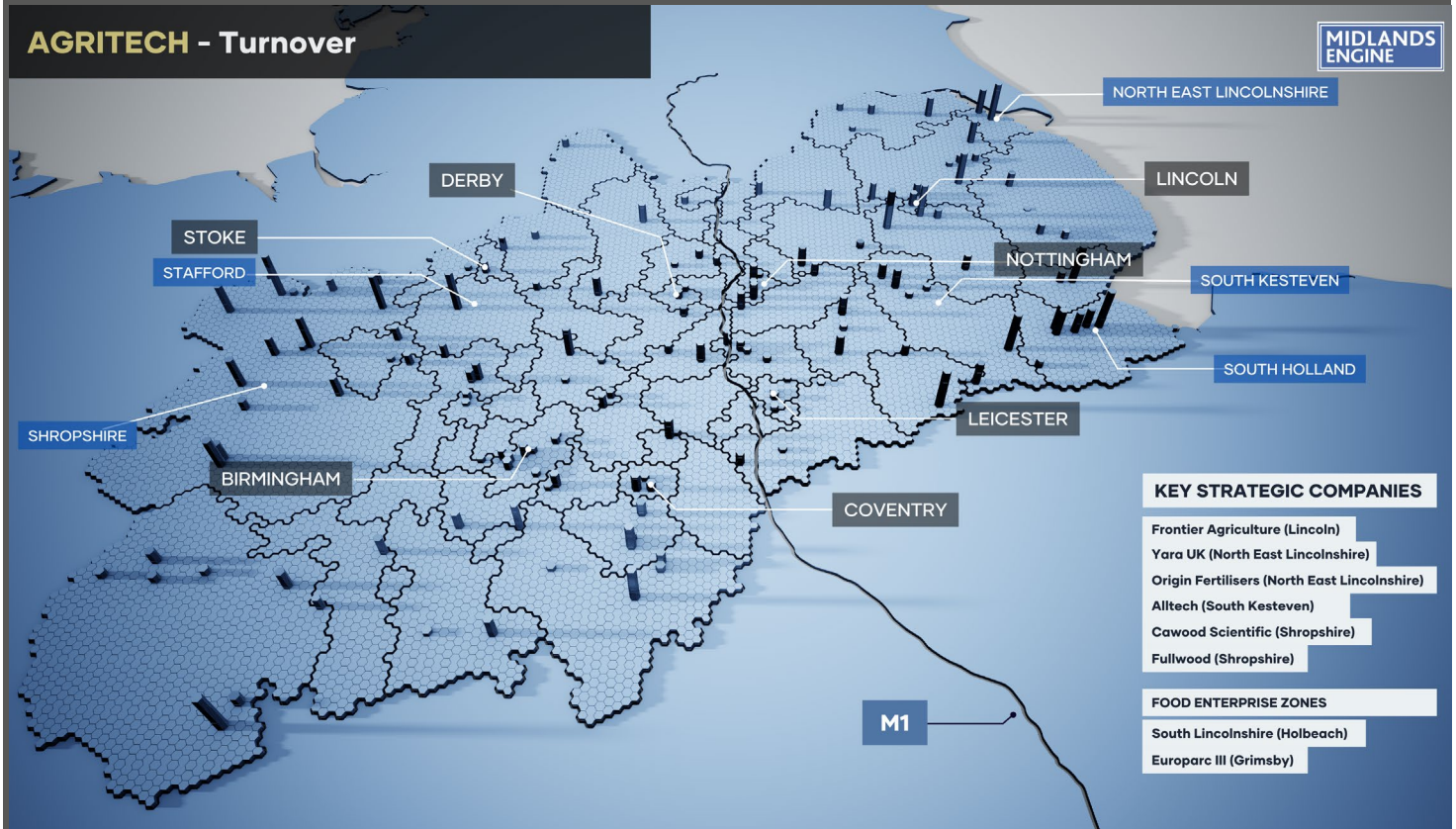
Agri-tech is an emerging cluster with strength in an established food and agriculture sector in the Midlands. The data presented for this cluster in this report should therefore be seen as a subset of the much larger food and agriculture sector, identified in 2022 work by Midlands Engine Observatory in partnership with industry (see [this report](#) and [executive summary version](#)) – suggesting that over 850,000 jobs contribute to the overall Midlands Engine food chain, and upwards of 90,000 in agriculture specifically. Midlands Engine continues to work with the agri / food industry to support policy, intelligence and campaigning, with this report highlighting agri-tech as one specific market opportunity within this.

^{1,2,4,5} Data City 2023, ³20%+ company growth percentage per year.

AGRITECH - Business Counts



AGRITECH - Turnover



KEY STRATEGIC COMPANIES

- Frontier Agriculture (Lincoln)
- Yara UK (North East Lincolnshire)
- Origin Fertilisers (North East Lincolnshire)
- Alltech (South Kesteven)
- Cawood Scientific (Shropshire)
- Fullwood (Shropshire)

FOOD ENTERPRISE ZONES

- South Lincolnshire (Holbeach)
- Europarc III (Grimsby)

Agri-tech



Innovation Ecosystem



Accelerator Engagement: **10**

Relevant Cluster Organisations:

National Farmers Union (NFU); Country Land and Business Association; Food Valley; Food Enterprise Zones; Midlands Future Food Alliance ¹

Relevant Spinouts²: **2**

Relevant high performing HEI research:

Universities of Nottingham; Keele; Birmingham; Lincoln; Leicester; Warwick

6 Midlands universities with high research ranking in relevant subjects.³

Significant Innovation Hubs:

Food Valley; Lincolnshire & Worcestershire Food Enterprise Zones; Ni.Park; National Centre for Precision Farming (Harper Adams); Lincoln Institute for Agri-Food Technology; Warwick Crop Centre

High Growth Company Grants⁴: **36**

Innovate UK funding:

11% of Innovate UK funding awards for agri-tech were to businesses with a Midlands location.⁵

£54m since 2005



¹Beauhurst 2022: High growth companies utilised accelerators, ²Beauhurst, 2022, ³REF 2021 GPA >3.0 in any of Agriculture, food and veterinary science; Biological Sciences, ⁴Beauhurst 2022, ⁵Data City 2023.

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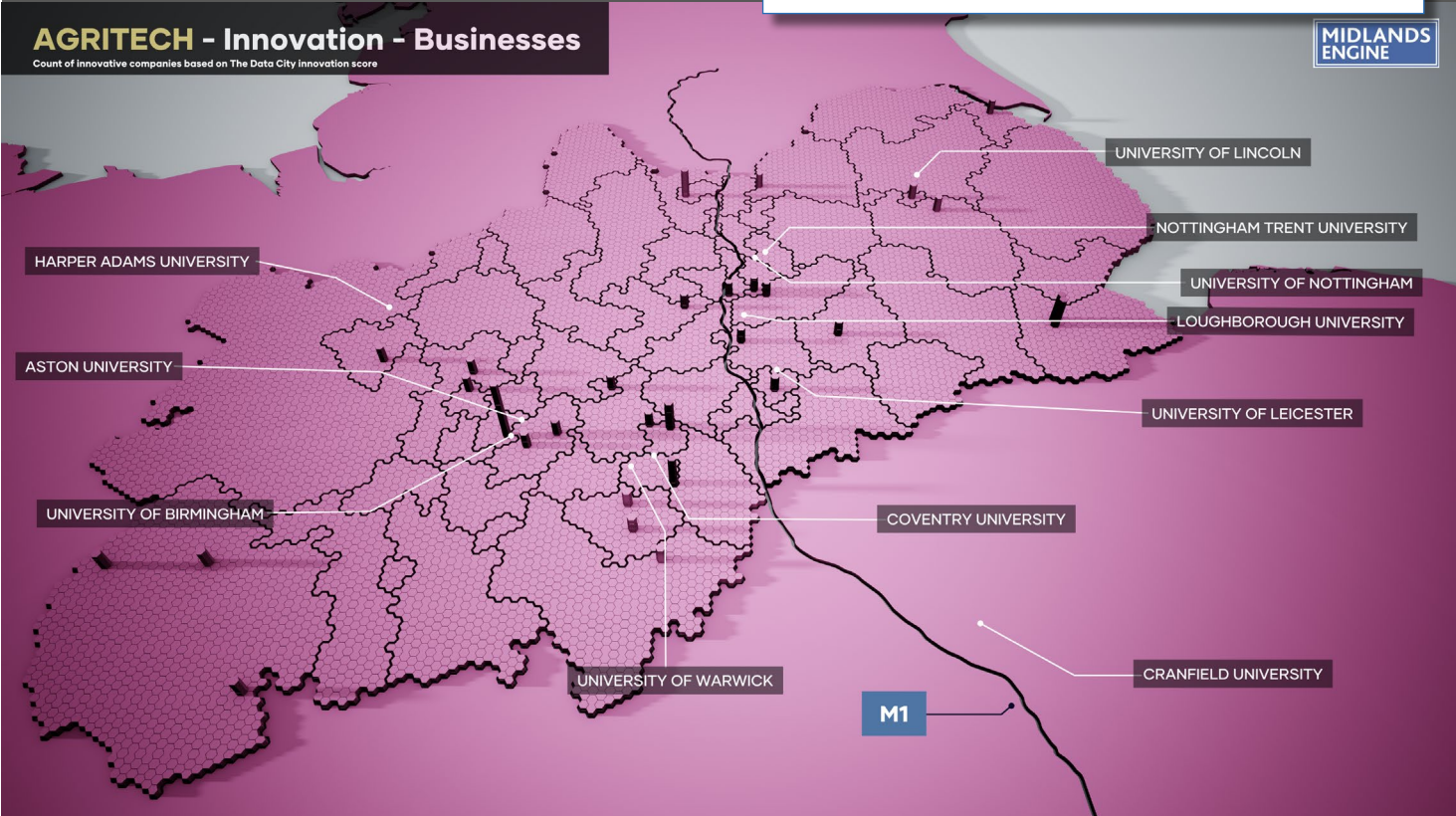
OBSERVATORY

The large spike located just west of Birmingham (in the Sandwell local authority) appears to not be reflective of agri-tech activity actually occurring in reality. Looking at the company-level data suggests several agri-tech type businesses based elsewhere have their registered address within the B66 postcode – likely to be an accountant or financial advisory address. The level of innovative agri-tech businesses in this specific area should therefore be disregarded.

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AGRITECH - Innovation - Businesses

Count of innovative companies based on The Data City innovation score



Agri-tech



Talent Ecosystem



Estimated Employees: **3,808**
10% of the UK total.¹

Earnings: **Average salary £30,515**
National average £32,225 (5% lower in Midlands).²

Further Education Leavers: **2,440**
Second highest of all regions for FE leavers (and most for higher level FE) in relevant subjects.³

Relevant HEI High-Ranking Department:
Universities of Nottingham; Harper Adams; Lincoln
3 universities high ranked: international presence and expertise.⁴

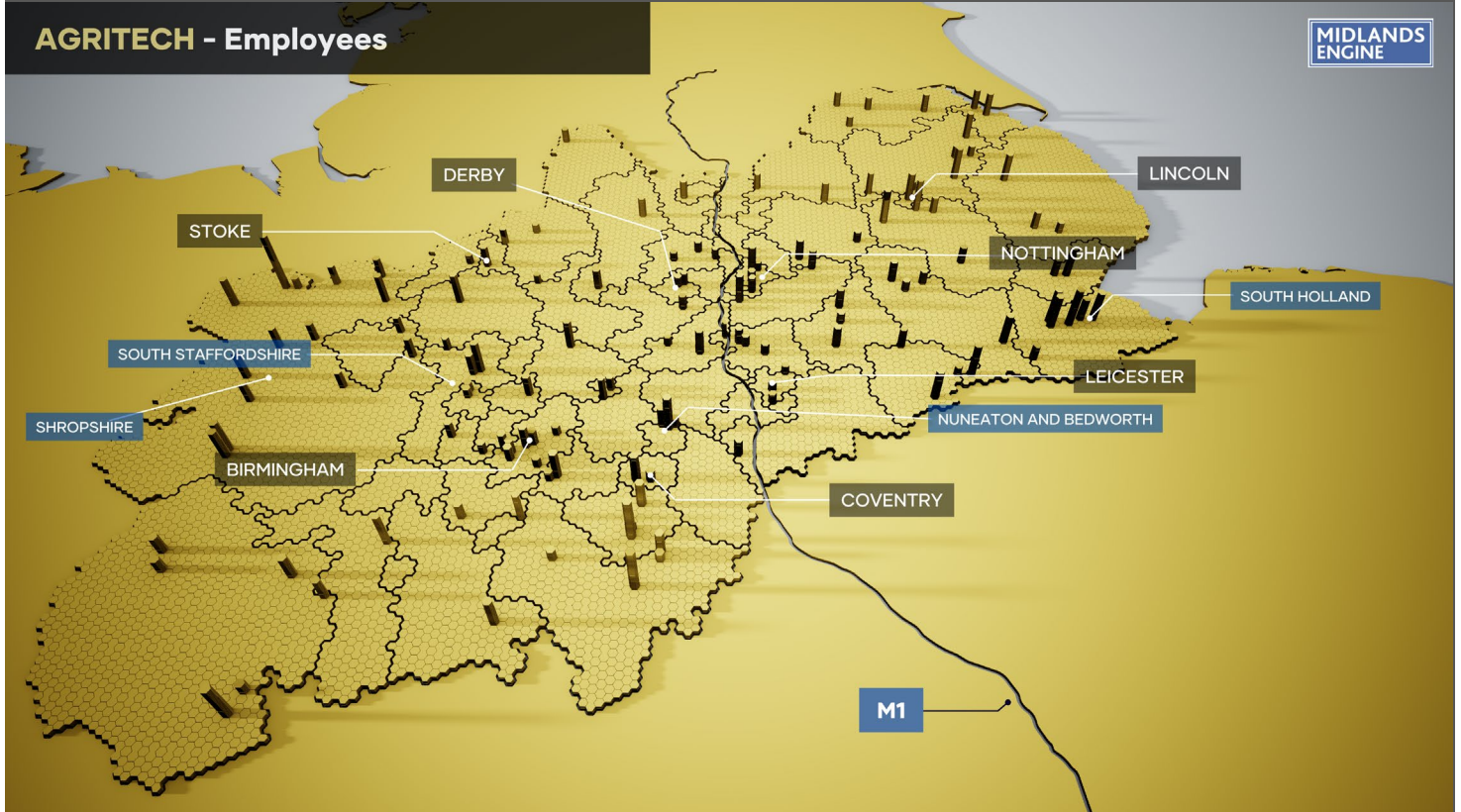
University Graduates: **3,175**
3% of Midlands graduates studied relevant subjects to agri-tech.⁵

Graduate Retention: change over 3 years: **73%**
West Midlands has a higher number of agriculture graduates trained in the region, but a third have left the region for work. The East Midlands also is in a negative balance.⁶



¹Data City, 2023, ²ONS ASHE, 2021 - relevant sectors, ³DfE Unit for Future Skills: Further Education leavers 18/19 in relevant fields, ⁴QS 'Agriculture & Forestry' 2022 world ranking - top 25 UK, ⁵Graduates from relevant subjects 2021, ⁶80/110 first degree graduates trained in region remain in 'Agriculture, Forestry & Fishing' in 3 years of graduating in 2019. (DfE Graduate Outcomes by Industry).

AGRITECH - Employees



Agri-tech



Investment Ecosystem



Investment/Venture Capital Firms:			
Funds HQ'd in Midlands Engine area	200	FDI Jobs 2017-2021:	5,476 jobs
313 Funds have offices in region. ¹		25% of UK total. ⁶	
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FDI into High Growth Companies:	31%	DDI Jobs 2017-2021:	11,218 jobs
16 of 51 UK investments in High Growth Companies. ²		34% of UK total. ⁷	
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FDI Capex 2017-21:	\$1.82bn	FDI Projects 2017-2021:	80 projects
23% of UK total. ³		24% of UK total. ⁸	
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DDI Capex 2017-21:	\$2.41bn	DDI projects 2017-2021:	92 projects
36% of UK total. ⁴		13% of UK total. ⁹	

Fundraising Volumes:

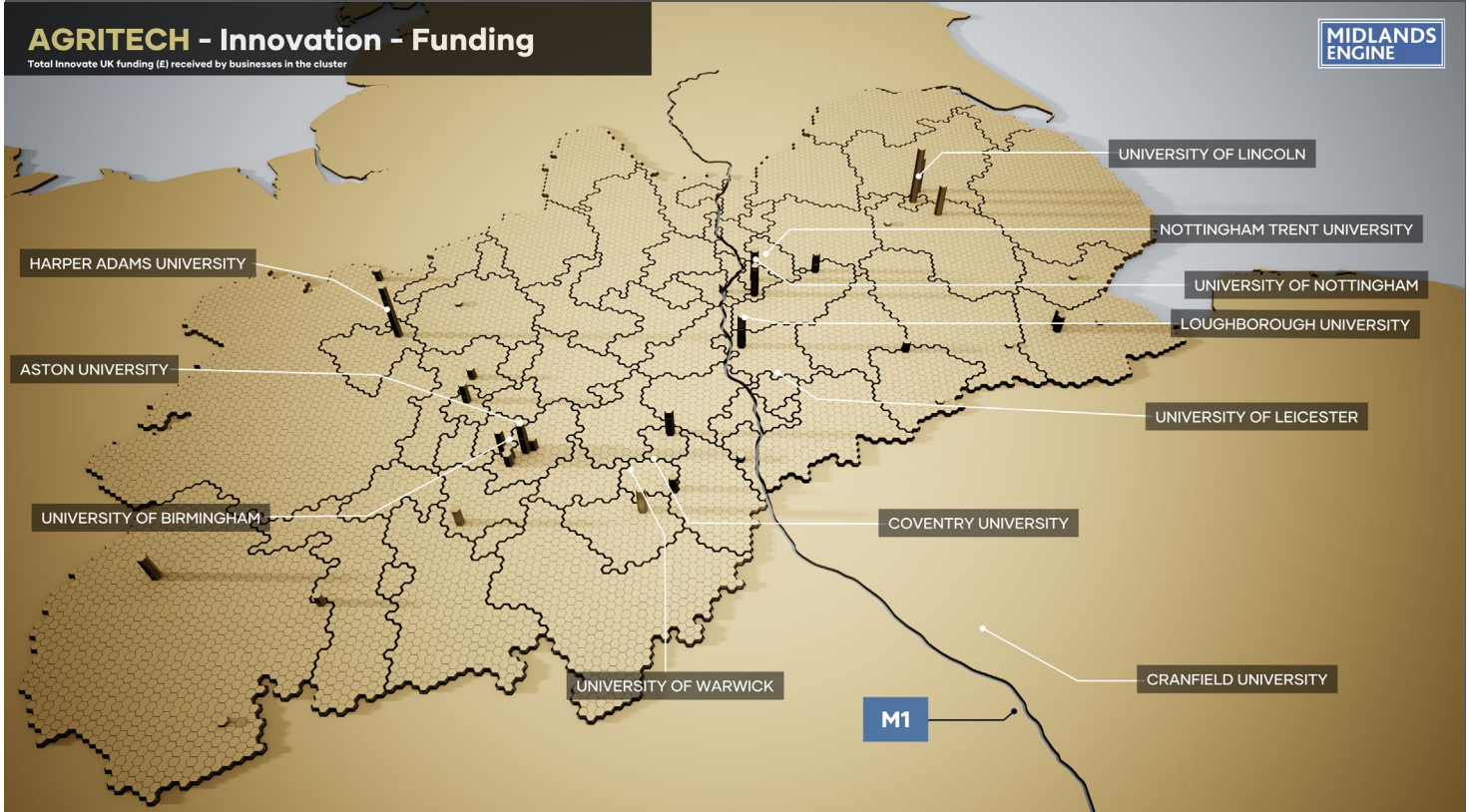
Mean av. **£1.1m** fundraising investment

£59.8m in 51 investments (inc. £51.6m across 33 seed investments; £8.2m across 12 venture investments).⁵

¹Beahurst 2022, ²Beahurst 2022, ³Wavteq 2022, ⁴Wavteq 2022, ⁵Beahurst 2022, ⁶Wavteq 2022, ⁷Wavteq 2022, ⁸Wavteq 2022, ⁹Wavteq 2022.

AGRITECH - Innovation - Funding

Total Innovate UK funding (£) received by businesses in the cluster





COMMENTARY

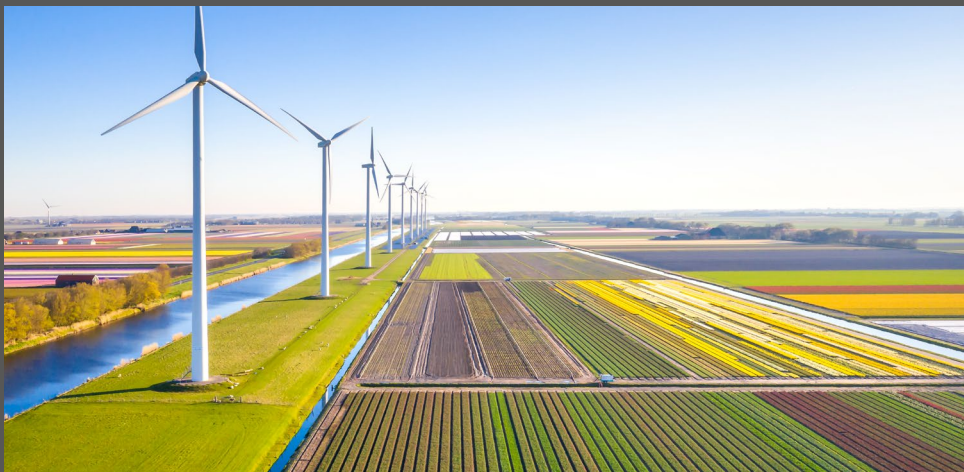
- The strength of the cluster in Greater Lincolnshire in particular is evidenced through the high proportion of agri-tech businesses based there relative to the rest of the UK.
- Midlands-based businesses in the food and drink processing (including quality control) and precision agriculture sectors raised just 2.83% of the total equity received in the UK from 2017 to 2021 by high-growth companies in these sectors, despite making up 10.5% of the sectors' business population. They also received 7.30% of the total grant money received by the sector.
- The top countries for foreign ownership counts are Norway, USA and France.
- The Midlands has the largest farmed area and the highest crop and livestock output of all English regions.
- The East Midlands has comparatively high positive employment and education outcomes from its FE graduates.

Roundtable: cluster-specific challenges & recommendations

Recent events such as Brexit, COVID-19 and the war in Ukraine have disproportionately impacted the food & drink sector. The sector is currently under pressure from energy costs fuelling food inflation, transport and logistics challenges, labour shortages, as well as growing health and obesity challenges. Businesses point to a need for industry, local and regional government, universities, and central government to join up to solve these challenges.

Recommendations for UK policy:

1. **Funding:** Public investment to support the sector in improving nutrition, providing healthy, yet affordable, food and drink options.
2. **Governance:** Improve alignment within government departments and develop a joined-up approach to addressing key challenges such as health, inflation, food poverty, and the shift to net-zero.
3. **Energy:** Support with rising energy costs and improvements in energy efficiency.



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.