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OCO Global October 2022

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Executive Summary



Origin and Background

Midlands Engine aims to promote and facilitate FDI in R&D and University R&D in the Midlands region.

In this regard, Midland Engine engaged OCO Global as a consultant to conduct a study to better understand the market trends and potential of a selected group of source markets, consisting of Germany, South Korea, Australia and Singapore. In addition, the analysis should identify best practices for attracting FDI in R&D and University R&D.

Approach

We carried out primary and secondary research on FDI in R&D and University R&D.

First, a dynamic quantitative model based on around 40 indicators was constructed for the four selected markets, as well as worldwide, to identify the sectors with the highest FDI potential.

Next, best practices for attracting FDI in the sector were identified through qualitative research. Subsequently, 9 interviews were conducted with experts and potential investors to identify the main drivers and incentives in University R&D and R&D and based on this and considering the identified best practices formulate a set of recommendations for the Midlands Engine.

Results

Through our data analysis, we have determined the current level of FDI in R&D and University R&D, as well as the potential for growth in the coming years, in key sectors for the Midlands and selected source markets. The recommended sectors and source markets are presented below.



Following qualitative primary and secondary research, we identify the main drivers of FDI in R&D and University R&D, as well as key incentives for each of them:

Main drivers of FDI	Incentives for FDI
Research Ecosystem	Facilitate funding
Infrastructure	Facilitate access to research instruments and facilities
Industry presence	Align academic and business objectives

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Context & Methodology

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Origin and Background

The UK government has set a target to "increase R&D investment to 2.4% of gross domestic product (GDP) by 2027". To achieve this target, key regions of the country, such as the Midlands, must position themselves as an attractive destination for R&D and University R&D investment.

Midlands Engine has therefore commissioned OCO to conduct an analysis that should identify the potential for FDI in R&D and University R&D in different sectors, as well as in a selected group of source countries (Germany, South Korea, Singapore and Australia).

The analysis should also identify best practices for attracting FDI in the sector carried out in regions with similar characteristics to the Midlands. In addition, the analysis should identify the main success factors of R&D ecosystems and universities in attracting FDI.

Objectives

- 1) Identify the economic sectors with the greatest potential to attract FDI in R&D and University R&D
- 2) Prioritise the group of source markets analysed in function of the opportunities for attracting FDI in R&D and University R&D from them.
- **3)** Identify best practices for attracting FDI in R&D and University R&D from regions with similar characteristics to the Midlands
- 4) Identify the main drivers or success factors for attracting FDI in R&D and University R&D

Project Approach

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Phase	Analyse	Benchmark	Engage	Present
	Week 1	Week 2 – 4	Week 5 – 6	Week 7 – 8
Actions	 Kick-Off Meeting Define indicators, datasets and evaluation framework Identify trends in FDI inflows & characterize typical investors into academia-led ecosystems Review FDI potential from Germany, Australia, Singapore and South Korea 	 Identification of two sub-regions that are successful in attracting University R&D Analysis of key practices and success factors in University R&D FDI attraction Comparison with Midland's practices to derive recommendations for international positioning and University R&D FDI attraction 	 "Virtual investor- roundtables" or 1:1 exploratory interviews with 2-3 potential investors from each market Explore motives and determinants behind academia-driven FDI 	 Present the final report with key outcomes and results Present a set of recommendations and suggestions on how FDI from selected countries can be attracted into the academic ecosystem in the Midlands
Output	 Work Plan, project schedule, datapoints Definition of target group with investor long list Prioritisation of four selected markets 	 ✓ Examples of best practices of successful academic ecosystems ✓ Recommendations for future investment promotion 	 8-12 exploratory interviews/meetings with potential investors and experts Recommendations for future investment promotion 	 ✓ Final report outlining theses and case studies

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Sector & Source Market Analysis

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Objectives	Approach	Score composition			
Objectives	Арргоасн	Global Performance Score (1-10) Performance Score in the UK (1-10)			
Definition of target group for attracting	 We built a quantitative model to compare and score 5 key economic sectors for the Midlands, based on their current status and prospects for growth or decline in R&D FDI 	Value of FDI projects in R&D worldwide (35%) Number of FDI projects R&D in the UK (25%)			
FDI in R&D and University R&D	 We identified sectors for further investigation. 	Value of FDI projects in the UK in Number of FDI projects in R&D worldwide (35%)			
	 We built a quantitative model to 				
Prioritisation of four selected markets based on their FDI potential in R&D and in the University R&D sector.	compare and score selected source markets, based on their current status and growth prospects of R&D FDI worldwide and in the UK.	CAGR of number of FDI projects in R&D worldwide (20%) CAGR of number of projects in R&D in the UK (30%)			
	 We conducted a prioritisation of selected source markets according to R&D FDI potential. 	Jobs created by FDI projects in R&D worldwide (10%) Number of FDI projects in R&D in Western Europe and North America (10%)*			

* We include the number of FDI projects in Western Europe and North America as an indicator of the potential number of projects the UK can attract in the sector.

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Overview of Sector Analysis

Results of quantitative model *

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Key takeaways

- Advanced manufacturing, health and life sciences are the sectors with the highest current R&D investment and the best growth prospects.
- Computing is the sector with the highest FDI in R&D worldwide, with 2,463 projects and a value of \$55 billion, followed by Advanced Manufacturing and Health and Life Sciences. While in the UK, IT is also the leader in number and value of projects, this gap narrows considerably.
- Globally, the fastest growing sectors are Renewable Energy and Computing, with a CAGR in number of projects of 32% and 8% respectively. In the UK, the CAGR in number of projects is decreasing in all sectors.
- The sectors creating the most jobs per R&D project are Advanced manufacturing and Computing, with 153 and 138 jobs created respectively.

Advanced Manufacturing

Number and value of FDI projects in R&D worldwide in the Advanced Manufacturing sector in US\$ millions, between 2017 and 2021





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Key comments

- This sector has the second highest value of FDI in R&D among the sector studied. Between 2017 and 2021, it invested USD 27 billion in R&D globally, with an average of USD 43 million per project.
- Compared to other sectors, this sector has the lowest CAGR between 2017 and 2021. Overall, the number of projects has decreased by 47% compared to their levels in 2017.



Health and Life Sciences

Number and value of FDI projects in R&D worldwide in the Health and Life Sciences sector in US\$ millions, between 2017 and 2021



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Key comments

- This sector has the third highest value of FDI in R&D and also the third highest number of FDI projects in R&D compared to the sectors analysed.
- In the UK, this sector has the second highest FDI value after IT and is one of the sectors with the highest number of projects.



Food

Number and value of FDI projects in R&D worldwide in the Food sector in US\$ millions, between 2017 and 2021



Number of projects
 Capex



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Key comments

- This is one of the sectors with the lowest value of FDI in R&D and the lowest number of projects, after the removable energy sector.
- After advanced manufacturing, this sector has the lowest CAGR of number of projects between 2017 and 2021. As for the value of projects, it has remained stable over the last five years.



Renewable Energy

Number and value of FDI projects in R&D worldwide in the Renewable Energy sector in US\$ millions, between 2017 and 2021



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Key comments

- This sector has the third highest value of FDI in R&D among the sector studied. Between 2017 and 2021, it invested USD 27 billion in R&D globally, with an average of USD 43 million per project.
- Compared to other sectors, this sector has the lowest CAGR between 2017 and 2021. Overall, the number of projects has decreased by 47% compared to their levels in 2017.



Computing

Number and value of FDI projects in R&D worldwide in the Computing in US\$ millions, between 2017 and 2021



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Key comments

- This sector has by far the highest capex and number of R&D FDI projects. Between 2017 and 2021, it invested USD 55 billion in R&D worldwide, almost three times more than the second largest sector.
- In terms of number of projects, software and IT services is also the sector with the highest number of projects, more than 5 times the second highest number of projects.

Key companies



Source: fDi Markets

Overview of Source Market Analysis



Results of quantitative model *

	Glob Perform Scor	al ance re	Perform Sco in the	nance re UK	Glob Perform Scor	al ance re	Perform Sco in the	iance re UK	Glob Perform Scor	al ance e	Perform Scor in the	ance e UK	Glob Perform Scol	eal ance re	Perform Scor in the	iance re UK
Advanced Manufacturing	High	8.02	High	8.02	Low	2,07	Low	1,66	High	8,29	Low	2,19	Medium	4.58	Low	0.00
Renewable Energy	Low	2,91	Low	1,44	Low	1,44	Low	1,44	Low	1,44	Low	1,44	Low	2.86	Low	1 44
Computing	High	9,68	High	7,23	High	10	High	10	High	8	High	9,99	High	2,00	High	10
Health and Life Sciences	Medium	5,10	High	8,49	High	7,69	Low	2,26	Medium	5,32	High	9,82	Lliab	0,40	Low	2.20
Food	Modium	2.62	Low	2.40	Modium	5 20	Low	4.00	Medium	4 33	Low	1 44	Figh	9,49	LOW	2,30
FUUQ	Wedium	3,03	LOW	2,40	Medium	5,20	LOW	1,00		т,55	LOW	.,	Low	1,64	Low	1,54

Key takeaways:

- Germany and South Korea are the source markets with the highest current FDI, as well as FDI potential, in R&D in the selected sectors, followed by Australia.
- All source markets have high levels of current as well as potential FDI in R&D in Computing. The Health and Life Sciences sector is the second-best performer among the selected countries, followed by Advanced Manufacturing.

15 * 1= low current levels and low potential for FDI in R&D, 10= high current levels and high potential for FDI in R&D



Despite the decline in the number and value of FDI R&D projects, Germany is a key source market with a significant amount of FDI R&D projects in the UK and the rest of the world.

#1	Number of outward FDI projects in R&D among selected source markets
#1	Value of outward FDI projects in R&D worldwide among selected source markets
#3	Average CAGR of number of projects in R&D worldwide
#1	Number of FDI projects in R&D in the UK

Number and value of FDI projects in R&D worldwide from Germany in US\$ millions, between 2017 and 2021

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Value of German R&D FDI projects worldwide by sector between 2017 and 2021, in percentages



Top 5 FDI R&D destinations markets in million US\$, 2017-2021

#5	Spain	864.3
#4	France	1,103.0
#3	India	1,678.1
#2	United States	2,825.4
#1	China	4,016.4





Value of German R&D FDI projects in the UK by sector between 2017 and 2021, in percentages



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Top 5 R&D destinations for German FDI in the UK in US\$ millions, between 2017-2021

#1	West Midlands	143
#2	North West	131
#3	South East	70.2
#4	Scotland	65.3
#5	Yorkshire and the Humber	51.4

Key companies





Fev



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Although the number and value of R&D FDI projects from South Korea have declined significantly since 2018, the rebound in 2021 is an opportunity to attract investment from South Korea. Its main sectors are automotive OEMs and software and IT services.

#3	Number of outward FDI projects in R&D among selected source markets
#2	Value of outward FDI projects in R&D worldwide among selected source markets
#4	Average CAGR of number of projects in R&D worldwide
#3	Number of FDI projects in R&D in the UK

Number and value of FDI projects in R&D worldwide from South Korea in US\$ millions, between 2017 and 2021



Number of projects
 Capex

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Value of South Korean R&D FDI projects worldwide by sector between 2017 and 2021, in percentages



Top 5 R&D destinations markets in million US\$, 2017-2021

#12	United Kingdom	43.7
#5	Russia	258
#4	India	317
#3	China	382
#2	Canada	446
#1	United States	492





Value of South Korean R&D FDI projects in the UK by sector between 2017 and 2021, in percentages



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R&D destinations for South Korean FDI in the UK in US\$ millions, 2017-2021

#1	East of England	39.9
#2	Scotland	4.2

Key companies



Standigm



*CAGR between 2018 and 2021

Source: fDi Markets





Singapore has increased its number of FDI R&D projects worldwide in a number of key sectors, from software and IT services to transport and warehousing; however, its performance in the UK market remains weak, representing an opportunity to be seized.

#2	Number of outward FDI projects in R&D among selected source markets
#3	Value of outward FDI projects in R&D worldwide among selected source markets
#2	Average CAGR of number of projects in R&D worldwide
#4	Number of FDI projects in R&D in the UK

Number and value of FDI projects in R&D worldwide from Singapore in US\$ millions, between 2017 and 2021



- Number of projects Capex

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Singapore

Value of Singapore's global R&D direct investment projects worldwide by sector between 2017 and 2021, in percentages



Top 5 R&D destinations markets in million US\$, 2017-2021

#22	United Kingdom	6.9
#5	France	102
#4	Indonesia	116
#3	China	180
#2	United States	405
#1	India	473





Between 2017 and 2021, only one Singapore FDI R&D project was registered in the UK

Сарех	7.2 million US\$	
Jobs Created	54	
Destination	Scotland	

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Company & Project description

Singapore-based TranSwap, which offers a cross-border B2B fintech platform, opened a R&D centre in Edinburgh in 2021.

Located at the University of Edinburgh's Bayes Centre, it will create 54 jobs by 2024. It will serve markets in Europe. The project has received support from Scottish Development International (SDI).





Australia has increased its overseas R&D investment by more than 200% by 2021, but still lags far behind other selected countries. Australia's performance in the UK is comparatively positive; however, the scope for growth may be narrow, as its worldwide levels of R&D investment abroad are also low.

#4	Number of outward FDI projects in R&D among selected source markets
#4	Value of outward FDI projects in R&D worldwide among selected source markets
#1	Average CAGR of number of projects in R&D worldwide
#2	Number of FDI projects in R&D in the UK

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Number and value of FDI projects in R&D worldwide from Australia in US\$ millions, between 2017 and 2021



Number of projects
 Capex

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Value of Australian R&D FDI projects worldwide by sector between 2017 and 2021, in percentages



Top 5 R&D destinations markets in million US\$, 2017-2021

#1	India	291
#2	United States	146
#3	Singapore	142
#4	United Kingdom	140
#5	Canada	116

Key companies

A ATLASSIAN Lendlease



Value of Australian R&D FDI projects in the UK by sector between 2017 and 2021, in percentages



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R&D destinations for Australian FDI in the UK in US\$ millions, 2017-2021

#1	South East	53.2
#2	Scotland	46.5
#3	North East	26.8
#4	South West	17.2









FDI in R&D in the UK: Among the source markets analysed, only Germany is in the top 10 UK R&D source markets

Number and value of FDI in R&D in the UK between 2017 and 2021, in US\$ millions



No. Projects
 Capex (USD m)

Number of FDI projects and capital expenditure (CapEx) in R&D in the UK between 2017 and 2021, in US\$ million

Ranking	Source Market	Number of projects	CapEx
1	United States	218	6,243.3
2	Germany	35	514.9
3	Japan	31	336.9
4	China	24	1,793.2
5	India	24	885.4
6	France	21	214.7
7	Netherlands	18	265.3
8	Sweden	15	183.6
9	Ireland	14	71.8
10	Switzerland	12	109.9
15	Australia	6	140.3
20	South Korea	3	43.7
41	Singapore	1	6.9

Number of FDI projects in R&D in the UK between 2017 and 2021, by economic sector


Source: fDi Markets

Global FDI in R&D: Among the source markets analysed, Germany and South Korea are the largest in terms of number of global FDI projects and CapEX

Number and value of FDI in R&D between 2017 and 2021 globally, in millions of dollars



Capex (USD m)

No. Prjects

Number of FDI projects and global R&D capital expenditure (CapEx) between 2017 and 2021, in millions of dollars

Source Market	Number of projects	CapEx
United States	1,857	57,005.3
Germany	652	17,977.0
United Kingdom	430	9,583.9
China	317	9,976.8
Japan	309	7,737.1
France	284	11,108.7
Switzerland	236	6,102.6
Netherlands	146	2,695.5
India	141	5,245.0
Ireland	138	3,573.5
South Korea	91	2,896.2
Singapore	90	2,052.3
Australia	43	1,081.7
	Source Market United States Germany United Kingdom China Japan France Switzerland Netherlands India Ireland South Korea Singapore Australia	Source MarketNumber of projectsUnited States1,857Germany652United Kingdom430China317Japan309France284Switzerland236Netherlands146India141Ireland138South Korea91Singapore90Australia43

Number of FDI projects in R&D worldwide between 2017 and 2021, by economic sector



Source: fDi Markets

Automotive components Others

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Analysis of the main drivers of FDI in R&D and University R&D



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Analytical framework for Benchmarking Exercise

To identify the main needs and incentives for FDI in R&D and University R&D, as well as the main driver, weanalysed a set of 7 generic drivers for FDI in the R&D sector:



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Results of analysis of the main drivers of FDI in R&D and University R&D

Average Score (1-6)		FDI in University R&D and R&D Drivers	Needs/expectations of potential investors	Suggested incentives
Very important	5	Research Ecosystem	High quality universities (not necessarily a cluster); academic reputation; access to funding	Facilitate funding through inclusion of banks in investment promotion activities
Important	4,3	Infrastructure	Availability of laboratories and offices; means of transport; specific research instruments	Facilitate access to research instrument and facilities
Important	4,1	Industry Presence	Technological know-how; potential suppliers, partners and customers	Facilitate access to industrial network; align academic and business objectives
Somewhat important	3,3	Access to Human Capital	High level of human capital; understanding of the commercial purpose of the research	Support for talent recruitment; cooperation in academic programmes
Somewhat important	3,2	Start-up Ecosystem	Easy access to start-up community and acquisition opportunities	Facilitating access to the start-up ecosystem and community-building events
Somewhat important	2,7	Regulatory Environment	Business-friendly policies and R&D tax incentives	Guidance on regulatory framework and communication of existing R&D initiatives
Low importance	2	Quality of Life	Means of transport, access to nature; recreational areas for children	Advertise the benefits of living in the Midlands

Research Ecosystem

Results of analysis of the main drivers of FDI in R&D and University R&D



What do investors expect from a location for R&D activities?

High quality universities and research centers:

Existence of proactive universities and research centres. Quality is preferred over quantity.

- Partnerships and associations: Existence of partnerships and associations that facilitate communication between different stakeholders.
- Access to funding: Co-operation with financial organisations as well as assistance in the financing process are necessary for R&D activities.
- Reputation: The reputation of the university is considered to have a direct impact on the credibility of the R&D results.

What can be done by IPAs and EDOs to improve their locations?

- Fostering integration of ecosystem: e.g., through creation and promotion of associations and partnerships.
- Facilitation of financing: e.g. through the inclusion of banks and financial organisations in investment promotion activities.

Key quotes from interviewees:

"It is good to know if a large university is close to another large university, but even if our partner is not part of a cluster we would not rule it out."

"Our main attraction is our university landscape, the research centers, the university of applied sciences, and so on. All of them are very focused on R&D with companies. To the extent that a large percentage of R&D funding is private."

Infrastructure

Results of analysis of the main drivers of FDI in R&D and University R&D



What do investors expect from a location for R&D activities?

- Availability of laboratories and offices: Existence of optimal facilities for R&D activities, including internet access and electricity.
- Access to means of transport: Access to public transportation for commuting and easy access to the location.
- Access to specific instruments: Short distances in the United Kingdom facilitate access to specific instruments. However, compared to Germany and France, the UK is perceived as a less R&D equipped country.

What can be done by IPAs and EDOs to improve their locations?

- Facilitate access to research instruments and facilities: e.g., high-resolution transmission electron microscopy.
- Lobbying for policies that facilitate the testing of products with high investment in R&D: e.g., bicycle lanes, public electric or hydrogen bus fleets.
- Communicate access to financing opportunities: e.g.,

Key quotes from interviewees:

grants or non-equity



Industry

Results of analysis of the main drivers of FDI in R&D and University R&D



What do investors expect from a location for R&D activities?

- **Tech know-how:** Being surrounded by potential suppliers and partners with relevant knowledge in the field is expected by investors.
- Cooperation of local industry and existing universities: This could increase the visibility of the investor's R&D activities among local industry and encourage partnerships and sales.

What can be done by IPAs and EDOs to improve their locations?

- Facilitate access to the industrial circles: Introduction to the industrial network, potential partners and main associations.
- Align academic and business objectives: create and communicate incentives for commercial and short-term research.

Key quotes from interviewees:

"We want our product to work, but we also want to communicate how well our product works. Being close to the industry, our suppliers and pottential customers makes it easier."

"We cooperate a lot with Dutch universities, because our suppliers are Dutch and most of the main companies in the industry are Dutch. I guess it is pull effect."

"It is easy for academic researchers to get off track. Being close to industry and cooperating with it ensures a certain level of guidance:"

Human Capital

Results of analysis of the main drivers of FDI in R&D and University R&D



What do investors expect from a location for R&D activities?

- High stock of human capital: Companies expect to have human capital available for different positions, as well as to be able to recruit and find workers easily.
- Understanding of commercial objective: Universities are expected to adapt to short-term projects, as well as research for commercial purposes.

What can be done by IPAs and EDOs to improve their locations?

- Support on talent recruitment: universities can reduce costs and facilitate the recruitment of talent for companies through cooperation with academic ecosystems (e.g., creation of a job pool for university students).
- Cooperation in academic programmes: companies can benefit from partnership for bachelor and master thesis with research on specific topics.

Key quotes:

"Universities can help a lot in the recruitment process. Not only you do get more applications, but the salaries are usually a bit lower if you recruit through the university."

"I think the biggest hurdle for collaboration with academia is the duration of the projects. In academia everything lasts three years because that's how long a PhD lasts, but a start-up can't wait three years."

Start-up Ecosystem

Results of analysis of the main drivers of FDI in R&D and University R&D

_	Average Score (1-6)		FDI in University R&D and R&D Drivers
	Very important	5	Research Ecosystem
	Important	4,3	Infrastructure
	Important	4,1	Industry Presence
	Somewhat important	3,3	Access to Human Capital
	Somewhat important	3,2	Start-up Ecosystem
	Somewhat important	2,7	Regulatory Environment
	Low importance	2	Quality of Life

What do investors expect from a location for R&D activities?

- Easy access to start-up community: companies expect an international ecosystem where it is easy to integrate and participate.
- Acquistion opportunties: Especially large companies expect to find acquisition opportunities when selecting an R&D location.

What can be done by IPAs and EDOs to improve their locations?

- Facilitate access to start-up ecosystem: Introduction to the start-up ecosystem, potential partners, sources of funding, VCs and main associations.
- Conduct community-building events: Holding events specifically targeted at start-ups in key sectors for R&D activities could strengthen the community.

Key quotes from interviewees:

"For large companies the start-up ecosystem is not really important, may be just for acquisition purposes, but for a start-up it can be a good indicator of a good source of funding and potential cooperation."

"For Korean companies it seems a bit risky to go to the UK to cooperate or work with a start-up They prefer to work with established companies that are more mature and can be more reliable. In this sense, the start-up ecosystem is not a deciding factor when choosing a location"

Regulatory Environment

Results of analysis of the main drivers of FDI in R&D and University R&D

Average Score (1-6)		FDI in University R&D and R&D Drivers
Very important	5	Research Ecosystem
Important	4,3	Infrastructure
Important	4,1	Industry Presence
Somewhat important	3,3	Access to Human Capital
Somewhat important	3,2	Start-up Ecosystem
Somewhat important	2,7	Regulatory Environment
Low importance	2	Quality of Life

What do investors expect from a location for R&D activities?

- Business Friendly Policies: Companies expect a business-friendly environment and are not overly concerned about regulations, as R&D is generally not an overly regulated sector.
- R&D Tax Incentives: Business expects locations to be interested in attracting R&D investment and to offer tax incentives for R&D activities.

What can be done by IPAs and EDOs to improve their locations?

- Guidance on regulatory framework: explain the regulatory framework to potential investors and prepare material to facilitate market entry.
- Communication of existing R&D tax incentives: generate material and inform key stakeholders of tax incentives at the regional level, but also at the national level.

Key quotes from interviewees:

"Particularly in the agricultural sector, one does not come across big difficulties with regulations. Unless they are very bad, they are not very important when evaluating where to invest:"

"Regulations are not usually a problem, but it would help to have some guidance to better understand the regulatory system, the main taxes, tax benefits..."

"Cardiovascular diseases (CVDs) research is heavily regulated and permitting is difficult. So companies that want to research these diseases are forced to do so abroad, where such research is less regulated.

Quality of Life

Results of analysis of the main drivers of FDI in R&D and University R&D

Average Score (1-6)		FDI in University R&D and R&D Drivers
Very important	5	Research Ecosystem
Important	4,3	Infrastructure
Important	4,1	Industry Presence
Somewhat important	3,3	Access to Human Capital
Somewhat important	3,2	Start-up Ecosystem
Somewhat important	2,7	Regulatory Environment

Low importance 2 Quality of Life

What do investors expect from a location for R&D activities?

- Recreational areas for children: Ensuring that researchers' families have access to recreation is important for attracting the necessary human capital.
- Access to nature: Especially Western workers value easy access to nature and use it as a criterion for deciding where to work.

What can be done by IPAs and EDOs to improve their locations?

 Advertise the advantages of living in the Midlands (e.g., access to nature, cost of living, welcoming areas).

Key quotes from interviewees:

"I moved to Australia partly because of the quality of live. If you want to attract talent, a location must have also good quality of live:"

"The current market is the market of employee. The employee has a lot of options and remote working has exacerbated that phenomenon."

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- In 2021, TeleMedC, an emerging Singapore-based startup offering diagnostics for on-site screening and virtual management of eye and chronic diseases, formed an R&D partnership with the Department of Ophthalmology at the University Hospital Hamburg-Eppendorf (UKE) in Germany.
- The partnership followed the involvement of Hamburg Investment and Scaler8 market expansion experts who specialize in successfully positioning Asian startups and SMEs in the German market through customized market exploration and access programs, among others.
- The company received funding from the Hamburg Investment and Development Bank.



US\$4.20 million



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- Infineon Technologies AG designs, manufactures, and markets semiconductors. The Company offers products that include power semiconductors, microcontrollers, security controllers, radio frequency products, and sensors.
- In 2019 the company opened a research and development center in Vienna, Austria. Named the "Infineon Hub", the new project is located at the Technical University of Vienna.
- This means that all Infineon doctoral students and master's students and partners at the TU Vienna now have their own networking and working space at the TU Vienna.
- According to Sabine Herlitschka, CEO of Infineon Technologies Austria AG, the Infineon Hub is another initiative to attract highly qualified specialists to the company at an early stage.







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Need more help?

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Simplifying

Global



- TranSwap offers cross-border B2B financial technology platform.
- The company launched a new global Research and Development (R&D) center at the University of Edinburgh in 2021.
- Transwap says it will work alongside the Bayes Centre, the University of Edinburgh's innovation hub, and will use its expertise to bring together "worldleading" data science and artificial intelligence teams, industry experts and innovation.
- The project has received support from Scottish Development International (SDI).



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- Germany-based Robert Bosch, a global provider of technology and services, has opened in 2017 a new lab in Amsterdam Science Park, as part of a joint initiative with the University of Amsterdam.
- The Delta Lab will focus on fundamental research into deep learning.
- The company will make a total of €3m available to support the research of 10
 PhD students and post-doctoral fellows by 2021.
- *"We are joining a number of strong initiatives here, like the Qualcomm Lab, plus startups like Scyfer,"* said Professor Max Welling, co-head, Delta Lab.



Main driver	Research ecosystem & start-up ecosystem
Main incentive	Cooperation in academic programmes & easy access to start-up ecosystem



Recommendations to make the Midlands a more attractive location for University R&D and R&D



Strengthen the research ecosystem by facilitating funding and promoting Midlands research centers abroad

- Host financing rounds for national and international start-ups
- Participation in university rankings
- Inclusion of bank and financial organizations in investment promotion activities.



Matching Midlands infrastructure to the needs of businesses in certain sectors

- Encourage and communicate sustainable transport policies in the region
- Offer access to offices and laboratories for national and international start-ups.
- Promote and communicate grants and non-equity loans for investment in R&D infrastructures

Promote cooperation between industry and universities through an alignment of interests

- Create incentives for universities to participate in projects with commercial objectives and of short duration
- Promote the cooperation of universities and industry in bachelor and master programs (e.g., for theses).
- Promote and create partnerships between the two sectors

Drivers of FDI in R&D based on fDi Markets database: The main driver of FDI

in R&D in the UK is the availability of skilled labour and technology & innovation

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Source: fDi Markets

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Best Practices for Investment Promotion & Facilitation



Objectives	Approach	Benchmarks	
Objectives	Approach	Region Main IPAs and EDOs*	
Examples of good practices from subregions that have been successful in attracting EDL in University R&D	 We conducted a benchmarking exercise, first identifying two sub- regions that are successful in attracting University R&D and then analysing their strategies, marketing activities and services to identify best practices and success factors. 	North Rhine-Westphalia region, Germany	OBAL SS Agency
attracting FDF in University R&D		Auvergne-Rhône-Alpes region, France	IN Alpes
	 We analysed the Midlands region's attrategies, marketing activities and 		
Recommendations for future investment promotion	 strategies, marketing activities and services for attracting FDI in university R&D and compared them with selected sub-regions. We formulate recommendations for international positioning and attracting FDI in university R&D. 	Reference Point	
		Midland's region, United Kingdom	

Best Practices for Investment Promotion & Facilitation



In order to identify best practices and success factors for attracting University R&D, we analyzed:



Overview of Benchmarking of Best Practices for Investment Promotion and Facilitation in the Midlands and Benchmarking Locations



General Strategy: strong emphasis on sectors with high levels of investment in R&D and University R&D, and on direct and indirect acquisition abroad

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Main best practices identified



Strong focus on key R&D sectors

- Despite the success achieved in attracting University R&D FDI, the locations analyzed do not have a specific strategy for University R&D FDI, but rather strategies for sectors with high R&D and University R&D investment, also called "sectors of the future".
- Focus on sectors such as biotechnology, cybersecurity, medical technology, smart mobility and hydrogen.

Strong focus on direct marketing and acquisition abroad

- Building of additional operational resources (lead generation national/international, settlement support, business intelligence tools, etc.) in relevant source markets for key R&D sectors.
- Through cooperation with investment promotion agencies, chambers of commerce, state and private entities abroad, positioning itself as the first stop for companies in their key source markets.







Main best practices identified

Presence in the key source markets

 Representatives in key source markets for the region with the task of constantly doing business development, multiplying opportunities to attract investment and form partnerships with universities and research centers. For example, AGIT has a strong presence in South Korea that has led to creation of the Korean German Technology Cooperation Center in Herzogenrath, Germany, that aims to support expanding Korean companies in the technology sector.

Strengthening the relationship through delegation trips

 Invite business delegations and policy makers to visit the university's R&D ecosystem and learn about Midlands' developments in technology sectors. In addition, send local researchers to visit target source markets to seek opportunities for cooperation with universities, research centers and companies.

Investment rounds

 Helping local startups receive funding by organizing annual investment rounds with domestic and foreign angel investors, where technology startups can present their projects, can be a good opportunity to invite local and international investors to visit the region.

Branding

 Communication of a location profile strongly related to innovation, sustainability and an attractive university ecosystem and emphasis on proximity to innovation and technology hubs or centers of excellence.

Strategic services: services target investors in sectors with high levels of investment in R&D and University R&D





Gaps identified and recommendations for investment promotion and facilitation



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Recommendations for Next Steps





Focus your investment promotion strategy on **sector with high levels of R&D and University R&D FDI** worldwide and in the UK such as Computing, Advanced Manufacturing, Health and Life Sciences.



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Work on the Midlands R&D ecosystem, especially in three aspects: access to finance, access to general (e.g. public transport) and specialised infrastructure (e.g. glass houses) and the integration of industry with research centres.



Implement incentives that increase the attractiveness of the Midlands as a location for R&D and University R&D, such as facilitating access to funding by integrating funding agencies into investment promotion activities or aligning academic research with commercial objectives.

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The main investment criteria when considering investment in regional locations outside London are the availability and skills of the local workforce, the strength of local business networks and access to regional grants.

According to the EY survey, the sectors that will drive growth in Europe in the coming years will be the digital economy, cleantech and renewable energy, and health and well-being.

According to the EY survey, national policy priorities to attract FDI should include increasing R&D funding, supporting foreign investment, reducing corporate tax levels, improving infrastructure and investing to accelerate the UK move to net carbon emissions.

According to the EY survey, the most important factors that make the UK an attractive destination for foreign direct investment are access to the European market, quality of life, research and innovation capabilities, and transport and logistics infrastructure.

Comments:

- The EY UK Attractiveness report analyses the performance and perception of FDI in the UK.
- Between the EY UK Attractiveness report and the OCO FDI in R&D Analysis there are similarities in the results regarding the drivers of FDI as well as the sectors that will drive growth. The differences are due to the focus of the OCO analysis on R&D and University R&D.
- Among the main commonalities are the importance of access to R&D funds, as well as the importance of local business networks.
Sector & Source Market Analysis List of indicators and scoring weighting for target group definition

Theme	Indicator	Data Source	Weighting (%)
Global performance score (by sector)	Value of FDI projects in R&D worldwide	FDI Markets	35%
	Number of FDI projects in R&D worldwide	FDI Markets	35%
	CAGR of number of FDI projects in R&D worldwide	FDI Markets	20%
	Jobs created by FDI projects in R&D worldwide	FDI Markets	10%
Performance score in the UK (by sector)	Number of FDI projects R&D in the UK	FDI Markets	25%
	Value of FDI projects in the UK in R&D	FDI Markets	25%
	CAGR of number of projects in R&D in the UK	FDI Markets	30%
	Number of FDI projects in R&D in Western Europe and North America*	FDI Markets	20%

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Sector & Source Market Analysis



Global performance score and performance score in the UK, by sector

	Global performance score	Performance score in the UK
Automotive components	High	High
Automotive OEM	High	High
Biotechnology	High	High
Business services	High	High
Chemicals	High	High
Communications	High	High
Electronic components	High	High
Industrial equipment	High	High
Pharmaceuticals	High	High
Semiconductors	High	High
Software & IT services	High	High
Food & Beverages	High	Medium
Medical devices	High	Medium
Aerospace	Medium	Medium
Business machines & equipment	Medium	Medium
Space & defence	Medium	Medium
Textiles	Medium	Medium
Building materials	Medium	Low

Global performance score	Performance score in the UK
Medium	Low
Low	Medium
Low	Low
	Global performance score Medium Mediu

Midlands Sectors	FDI Markets Sectors
Advanced Manufacturing	Automotive OEM Engines & turbines Non-automotive transport OEM Semiconductors
Computing	Software & IT services
Energy	Renewable energy
Food	Food & Beverages
Health and Life Sciences	Biotechnology Healthcare Medical devices Pharmaceuticals



Organisation/ Institution	Sector	Country	Interview-Partner
Zoomo	Smart Mobility	Australia	Moises Sánchez-Barbudo Cobo (Head of Operations)
Bygen	Renewable Energy	Australia	Lewis Dunnigan (CEO)
Allegro Energy	Energy	Australia	Thomas Nann (CEO)
Lleaf	Agri-tech	Australia	Chris Wilkins (COO)
In-tech	Smart Mobility	Germany	Dr. Sebastian Mair (COO)
Stadt Monheim	Smart Mobility	Germany	Dr. Julian Sandiano (Project Manager)
AGIT Aachener Gesellschaft für Innovation und Technologietransfer mbH	Investment Promotion	Germany/South Korea	Frank Leisten (Division Manager)
Beanstalk Agtech	Agri-tech	Singapore	Eng Keat Lee (Senior Advisor)
Asian Business Alliance	Investment Promotion	South Korea	Sean Oh (CEO)



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