



Attracting International Investment in R&D: Impacts of corporate decision-making processes

OCO Global

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The National Centre for Universities and Business (NCUB) represents a collective voice of leaders across higher education and business and aims to tackle issues of shared interest. The NCUB is an independent and not-for-profit membership organisation that promotes, develops and supports university-business collaboration across the UK.

This report forms part of an evidence commission undertaken as part of the NCUB Attracting International Investment in R&D project. This project is intended to improve understanding of the factors that attract international investment into R&D in the UK.

This report was produced by OCO Global with input from NCUB staff.

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Introduction – Demand for R&D FDI

Research and Development (R&D) is a critical component of innovation and a key driver of growth for many companies. It is also an increasingly coveted type of foreign direct investment (FDI) due to its typically:

- 1) Higher capital investment values
- 2) Skilled employment profile and higher salaries
- 3) Contribution to the knowledge economy
- 4) Contribution to national agendas/strategies including the UK shift to value (prosperity, levelling up, innovation powerhouse and net zero).

As such, national and regional investment promotion agencies (IPAs) are placing great emphasis on building attractive and competitive environments and supporting in identifying and securing R&D focussed FDI.

However, the internal decision-making processes that drive site selection are often complex and multifaceted, involving a range of strategic, economic, and operational considerations.

We have engaged with a range of companies across various sectors, sizes and nationalities to understand how their processes work and which factors most influence the site selection decision.

Introduction – Common Site Selection Factors

Companies commonly select R&D locations on a combination of factors



Strategic/Market Access

Strategic considerations often play a significant role in the decision-making process.

Companies often choose locations that align with their broader business strategy. For instance, a company may invest in R&D in a region with a large market size or where they plan to expand their industry presence.

Alternatively, they may choose locations that are known for specific industries or technological advancements that align with their strategic goals.



Cost Factors

Cost factors are important for any site selection process – R&D FDI is no different.

Companies often consider the cost of doing business across a short list of locations, including labour costs, tax environment, costs of real estate and utilities.

Additionally, the availability of funding and grants for R&D activities can also influence the decision.



Talent, Partnerships, M&A

Talent availability has an increased importance for R&D FDI.

Companies often choose to invest in locations with a strong talent pool, particularly in areas of specialisation relevant to their R&D objectives.

This is often influenced by the presence of universities and research institutions with which partnerships can be formed.

An existing industry presence is also important for companies operating an M&A strategy.

Introduction – Common Site Selection Factors



Regulatory Environment

The regulatory environment can significantly impact R&D activities.

Companies prefer locations with a favourable (or at least a clear) regulatory environment, such as strong intellectual property protections, streamlined approval processes for new products, or regulations that encourage innovation and R&D.

The importance of this factor differs greatly depending on the type of technology/industry being researched.



Infrastructure

Supporting infrastructure and ecosystems can be an important factor depending on the R&D requirements.

This may include supply chains and specialist research facilities (both internal and external).

Many companies select pre-existing sites for R&D investment or form partnerships with local universities to establish new centres of research.



Risk Management

Companies must consider a range of risk management factors when selecting a location for any investment.

Considerations may include geopolitics and stability of locations (economic, political, etc.), physical connectivity, distance/time zones, etc.

This is often a major factor in companies preferring to invest in their home market vs internationally.

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Summary of companies selected for consultation

Interviewees were selected to provide a sample with appropriate distribution across global HQ location, sector/industry of primary focus, size, and output tier.

#	Global HQ	Industry	Scale	Tier
1	Germany	Technology conglomerate	MNC	Final product
2	UK	Defence, marine, energy	MNC	Final product, maintenance & repair
3	USA	IT solutions	MNC	Final product
4	Belgium	Blockchain	SME	Final product
5	UK	Pharmaceuticals	MNC	Final product
6	Japan	Medical Devices	MNC	Final product
7	USA	Aerospace	MNC	Tier 1 components
8	Netherlands	Automotive	MNC	Final product
9	China	Telecommunications	MNC	Tier 1 components and final product
10	South Korea	Electronics	MNC	Tier 1 components and final product

UK arm of this company fought to establish partnerships and develop capabilities that allow them to now pitch and be considered for R&D investment in key areas of specialism.



Sector: Technology conglomerate

Scale: Large MNC

Key findings

- The company's R&D is a mixture of HQ driven strategy/directive and regional companies building their own capacity and attracting R&D programmes.
- New global R&D programme focuses the company's R&D into 16 clusters. These are heavily supported by collaborations with academia, etc.
- UK now has 7 universities in the company's top tier of innovation partners.
- These universities now get priority access to the company's Open Innovation Platform, with identified real world challenges; access to company's industrial researchers and business leaders; tech mentoring and business contacts to support academic start-ups.
- To facilitate the close collaboration between the universities, the company embeds staff permanently at the universities and encourages the flow of interns and recruitment into their businesses.

Takeaways

1. UK arm needed to build UK R&D capability in order to be considered for investment. They've been successful in doing this.
2. Industrial Cooperative Awards in Science & Technology (ICASE) is a real boost for UK cost competitiveness.
3. UK has potential to establish as centre for living labs R&D.

The company operates an indirect preference for domestic R&D – due to combination of physical distance (‘visibility’) and sensitive nature of sector



Sector: Defence, Marine, Energy

Scale: Large MNC

Key findings

- The company’s operations are predominately based in UK with the MoD as its largest client.
- The sensitive nature of many of its technologies and applications mean that there is a large preference (verging on requirement) for much of its R&D to be carried out in UK.
- However, there are operations in several overseas locations – each of these locations hold individual budgets for innovation.
- There is no unified official board to decide R&D location selection.
- Partnerships with universities are important to the company and its R&D activities but these form with relevant local universities after an investment is made rather than the other way around.
- Infrastructure and market opportunity are the leading factors in deciding on investment locations.

Takeaways

1. Nature of R&D leads to preference to be conducted in home market.
2. Geographical distance and timezones, etc. also lead to preference for UK R&D.
3. Investment locations largely directed by market opportunities and infrastructure.

The company's R&D strategy is largely driven from US HQ and there is intense internal competition between country branches. Acquisitions is a key strategy and this often influences R&D placement.



Sector: IT solutions

Scale: Large MNC

Key findings

- R&D strategy is largely driven from the global HQ in USA.
- The global business is very country & theatre structured and there is intense internal competition between these entities for securing of R&D investment.
- The company completes a lot of acquisitions and this often influences where R&D activities are placed.
- Important factors are also talent availability, operating costs and government support/incentives.
- They have established key partnerships with the University of Edinburgh and UCL with a focus on AI and quantum technologies.
- EU incentives are important drivers currently as the EU seek to reduce their reliance on US and China for semiconductors.

Takeaways

1. Global branches do compete internally for specific investments.
2. Lobbying and promoting their capabilities generally is also essential.
3. Cost, talent and government support are important to demonstrate.
4. University partnerships often seed larger investment.

The company, as an SME operating at the cutting edge of a new technology, are heavily influenced by operating cost, talent availability and market opportunity.



Sector: Blockchain

Scale: SME

Key findings

- Company model primarily involves establishing physical presence (including R&D activities) in regions to access market opportunities.
- Talent, operating costs and government support/incentives are all essential when selecting location from regional shortlist.
- Regulatory environment and national strategies/ambitions/aspirations are important factors that the company consider when selecting international sites. They must see future opportunity and evidence that the country will readily adopt their technology.
- While talent availability is critical, partnerships with universities are of limited importance to the company at present.

Takeaways

1. International locations are selected to access regional market.
2. Governments and IPAs must be able to evidence support for blockchain as well as the availability of talent and cost competitiveness.
3. As an SME, they are extremely sensitive to costs and timeline to revenue accrual in new markets.

The company's branches have responsibility for presenting 'internal pitch' and evidence base to secure R&D investments – turnaround for this is often rapid.



Sector: Pharmaceuticals

Scale: Large MNC

Key findings

- R&D strategy and individual programmes are largely driven from company HQ.
- Individual sites are then responsible for responding to 'internal tenders' and presenting evidence base of their capabilities. This usually includes information of talent availability, regulatory environment, market opportunity, etc.
- Speed of response is a major consideration for decision-makers – Site selection process for each R&D investment is rapid (~10 working days).
- 4 main global R&D centres globally but multiple secondary innovation hubs around the world.
- Globally, the company operates over 2,000 partnerships with academia, clinicians, government and industry.

Takeaways

1. Speed of response from candidate sites is important.
2. Support could be provided to ensure UK locations are optimally positioned.
3. Company strategy to operate a few main R&D centres globally.
4. Partnerships are important but are often virtual.

Company operates a large global R&D network, although major sites are located in Japan. Acquisition strategy results in many inherited sites.



Sector: Medical Devices

Scale: Large MNC

Key findings

- Company operates a diverse network of R&D activities via 22 sites around the world. However, the main focus of R&D activity takes place in Japan.
- Regional R&D operations often focused on specific technologies/devices based on market demand/opportunity.
- Company operates an intensive acquisition strategy and inherit many international R&D sites through this practice.
- Ensuring positive relations and support with local government is extremely important to the company.
- Talent availability and market access are the main drivers influencing investment decision-making.

Takeaways

1. Supportive M&A strategy can attract leading international companies
2. Support of local government is key for the company – this is a large factor, especially for expansion activities
3. Ability to evidence market access is critical. This includes openness, regulations, demand, etc.

Company's focus on R&D to improve manufacturing processes mean that much of its activity is located at existing large manufacturing sites. Gov clients also often dictate locations of contract specific R&D



Sector: Aerospace,
Defence

Scale: Large MNC

Key findings

- Much of the company's leading R&D activity is focused on manufacturing and materials improvements, rather than product design. Therefore, it is commonly operated out of the company's main manufacturing sites globally.
- R&D strategy is entirely driven out of global HQ but international sites regularly receive significant investments through successful internal pitching to demonstrate necessary infrastructure, talent availability, operating costs, etc.
- R&D activities are also undertaken as part of client contracts (primarily national military) and are therefore often situated in relevant locations e.g. UK site if client is MoD.

Takeaways

1. R&D activities are often reliant on being located within existing manufacturing bases.
2. Internal pitching and evidencing of talent, costs, etc. is still important and can be supported.
3. As tier-1 component manufacturer, international footprint is also directed by customer presence (shortening supply chains)

Company operates a global portfolio of R&D intensive car brands. Complex, multi-team partnerships form and bid for R&D programmes (comprising universities, manufacturing centres, industry).



Sector: Automotive

Scale: Large MNC

Key findings

- Company is collaborating with researchers, scientists and engineers around the world - one of the largest networks of cooperative innovation - to speed the development and implementation of technologies to help the company deliver the goals of their strategic plan, including reaching carbon net zero emissions by 2038.
- Currently over 160 projects with 1000+ partners are taking place across the core themes of autonomous driving; materials; EV & advanced propulsion; manufacturing; body, chassis & interiors.
- Existing infrastructure and talent availability (of the company and partner network) are critical drivers when deciding on R&D placement. Detailed business cases received from candidates for review and decision-making.

Takeaways

1. Partnerships are critical for the company and its individual brands.
2. These are often complex in structure and fiercely competitive – requiring detailed business cases and pitches.
3. The international structure/governance of the company reduces the potential for ‘home bias’.

A large proportion of this company's R&D is completed in China due to geopolitical tensions. However, they still invest significant sums overseas and seek collaborations with universities and industry.



Sector: Electronics

Scale: Large MNC

Key findings

- Company has expanded rapidly in recent years – undertaking a significant strategy of increasing global footprint.
- Majority of R&D takes place at main R&D centres in China.
- Talent availability and opportunity to increase presence in new or major markets are main drivers to selecting locations outside of China.
- Geopolitical issues have become significant barriers to entry and operation in recent years.
- Several large-scale R&D partnerships have been established between the company and universities & industry overseas in recent years.

Takeaways

1. Despite the geopolitical tensions with China, large R&D investments are still taking place.
2. International investment in R&D is primarily driven by presence of talent and infrastructure.
3. UK government strategy and infrastructure development are critical considerations for the company.

This major electronics company operate an extensive and diverse global R&D network yet recent events have resulted in some ‘home bias’. A supportive government are high on their list of drivers.



Sector: Electronics

Scale: Large MNC

Key findings

- The company is one of the world’s largest investors in R&D annually and has an extensive global network.
- While ultimate strategy is directed from global HQ, the regions have a degree of autonomy and are responsible for budgets, partnerships, etc.
- Company has been victim of major corporate espionage in the past and so level of caution remains in place. R&D in home market has increased and investment in China has decreased in recent years as a result.
- Availability of talent, government support and market readiness (enabling infrastructure, size, etc.) are important factors when considering establishment of new sites or placement of specific R&D programme into existing R&D location.

Takeaways

1. Heightened geopolitical tensions and recent corporate espionage has increased preference for ‘home bias’.
2. Ability to demonstrate government support is critical.
3. UK’s talent availability and market readiness are key drivers for R&D being located here.

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While the UK has a series of clear strengths for attracting R&D FDI, there are a number of challenges and areas which could be improved and/or supported to increase UK regional competitiveness

Strengths

- Talent availability, costs (e.g. ICASE), etc. in UK viewed positively by many innovative companies.
- Good government support (clear regulations, ambitious strategies, incentives, etc.)
- Attractive market readiness and size.
- Good proximity and 'visibility' for many companies – UK benefits from favourable time zones, English language, physical connectivity, etc.
- UK Universities and industry highly rated and open to collaboration.

Challenges

- Emphasis is often placed on regional locations to develop and present business case (often with short deadlines).
- Geopolitical tensions play significant role in location decision-making. UK's R&D ecosystem is not disconnected from wider national foreign policy and diplomacy.
- UK exit from EU has weakened the perceived position of UK as an investment location – uncertainty around ability to access joint European programmes, ability to sell into wider European market, visa requirements, etc.

Possible Actions

- Development of detailed R&D specific UK proposition that sells the UK's strengths and opportunities (similar to WHY UK) but that also provides region specific focus, assets, sales messaging.
- Development of data library to assist in the compilation of business cases for UK branch locations when responding to internal 'tenders'.
- Direct support in development and presentation of offer may even be provided for large-scale/strategic opportunities (DBT, OFI, UKRI, etc.).



Contact Us
www.ocoglobal.com



HQ – BELFAST
6 Citylink Business Park
Belfast, UK
BT12 4HB

Tel +44 28 9024 1849



DUBLIN

The Rotunda, Pillar Room
Parnell Square
Dublin 1
Republic of Ireland

Tel +353 87 2321947



LONDON

2 Stephen St
Fitzrovia
London, UK
W1T 1AN

Tel +44 20 7822 0710



PARIS

12 Rue de la Chaussée d'Antin
75009 Paris
France

Tel +33 143 87 56 40



FRANKFURT

Marienstraße 15
60329 Frankfurt am Main
Germany

Tel +49 69 244 04 25 10



NEW YORK

524 Broadway
11th Floor
NY 10012, USA

Tel +1 646 350 3490



LOS ANGELES

5792 West Jefferson Blvd,
Los Angeles
CA 90016, USA

Tel +1 626 524 0511



BOGOTA

Casa Buró, Of 5
Calle 67 No. 4A-41
110231 Bogotá
Colombia

Tel +57 1 795 7630



DUBAI

PO Box 123885
Dubai
UAE

Tel +971 4 369 2899



SHANGHAI

585 TianMu Middle Road,
XinMei Mansion,
Jing'an District,
200070 Shanghai, China

Tel +86 158 0086 2274



TOKYO

East Tower 4th Floor
Otemachi First Square
1-5-1 Otemachi
Chiyoda-Ku
Tokyo 100-0004, Japan

Tel +81 3 5219 1262 / 1263