Midlands Engine Independent Economic Review

Deep Dive Research - Business Interviews

November 2019



Contents

1. Introduction	1
2. Economic linkages	4
3. Growth and productivity	14
4. Priorities looking forward	28

Annex A: Organisations consultedA-1

Contact:	Rebecca Pates	Tel:	0161 4752112	email:	rpates@sqw.co.uk
A			10/11/10		
Approved by:	Luke Delahunty	Date:	12/11/19		
	Director				



1. Introduction

Context and purpose

- 1.1 The Midlands Engine Economic Observatory (MEEO) was created by the Midlands Engine to undertake economic analysis to inform the development of strategic priorities for the region and provide a strong evidence base for submissions to government. The MEEO is a partnership led by City-REDI at the University of Birmingham in collaboration with Nottingham Trent University, the Black Country Consortium, SQW and Cambridge Econometrics.
- 1.2 The first flagship piece of work by the MEEO has been to produce the Midlands' first Independent Economic Review (IER). The original brief for the Independent Economic Review (IER) from the Midlands Engine had a **strong focus on seeking to help policymakers/wider stakeholders to understand and explain the region's recent productivity performance.** During an initial scoping phase, the following underpinning research questions were identified for the IER, in discussion with the MEEO's Project Board, the Midlands Engine Operating Board and wider partners across the Midlands:
 - **Understand the factors driving productivity performance across the Midlands,** particularly in terms of R&D, skills, international trade, connectivity and infrastructure, sites and premises, and wider characteristics of the business base.
 - **Explore the commonalities, synergies, and economic linkages across the Midlands,** developing a better understanding of Midlands' functional economic geographies.
 - Identify key pan-ME growth opportunities and evidence where a genuinely pan-Midlands approach can add most value.
 - Assess what is required to improve the Midlands' performance over the next 10 years, with reference to accelerating productivity growth, and maximising net impact.
- 1.3 In spring/early summer 2019, existing evidence was gathered from the IER/Observatory team and via a wider call for evidence across Midlands stakeholders. In total, c.250 documents were collected, filtered and prioritised¹. Over 150 documents were systematically reviewed by the SQW-led team and complemented with a top-down analysis of key economic datasets. A synthesis of this desk-based review of existing evidence was presented to the Midlands Engine Operating Board as a Phase 1 report in July 2019.
- 1.4 Following this, a programme of "deep dive" research was designed and delivered to fill specific gaps in the evidence base. This paper presents the findings from one strand of the deep dive research: a wave of in-depth interviews with influential businesses operating within priority sectors/technology areas across the Midlands. In addition, the IER research has also included an academic review of literature relating to the rationale for intervention at a pan-Midlands scale, the creation of Local Area Profiles in collaboration with each LEP,

¹ On the basis of relevance, quality/robustness and timeliness.



assessment of the potential impact of Brexit on sectors in the Midlands, detailed analysis of trade flows across the region, and the development of future growth forecasts and scenarios.

1.5 The evidence from each workstream will be brought together and presented in an overarching IER. This will be used by the Midlands Engine to underpin the Midlands Engine Strategy refresh.

Business interviews

- 1.6 The purpose of the SQW-led research with businesses was to gather evidence that will help to address the core research questions for the IER and fill key gaps within the existing evidence specifically in relation to:
 - an overview of activities undertaken in the Midlands, including scale and core markets served etc.
 - economic linkages across the Midlands, including supply chain relationships, engagement in the innovation ecosystem/networks/collaborations, and wider national/international links
 - opportunities and ambitions for business growth, particularly focused on where the Midlands has distinctive specialisms/strengths and areas of comparative advantage
 - barriers to improving productivity and/or growth at a firm level
 - private sector perspectives on what the key priorities/emphases for the Midlands growth agenda (to help inform the strategy refresh process) should be
 - issues/opportunities that is best to tackle at a pan-Midlands level from a business perspective.
- 1.7 The key criteria for identifying suitable businesses to engage in the research were as follows:
 - businesses of significant scale (now and/or those on a clear growth trajectory whereby they have the potential to be significant in scale-terms in the future), and small but rapidly growing businesses
 - businesses that are innovative and have embedded a significant amount of R&D activity in the Midlands
 - businesses that are active in the region's key/priority sectors, particularly those firms that play an important role in bringing together complementary specialisms within the region and/or are involved in industrial digitisation and technology convergence.
- 1.8 In order to gather contacts, LEPs were asked to nominate businesses against the criteria outlined above, as well as seeking nominations from the Midlands Engine directly (via the Midlands Engine Business Forum and the MEEO team). Following this, further appropriate businesses were identified to ensure coverage across geographies, scales and sectors.
- 1.9 In total, 52 individuals participated, including five individuals from business representative organisations (including the Institute of Directors, the Federation of Small Businesses and



Confederation of British Industry) and 43 private sector companies located in the Midlands. The sample covered all nine LEP areas in the Midlands and a wide variety of sectors.

- 1.10 The scale of businesses consulted ranged significantly. Businesses with large numbers of FTEs in the Midlands included an automotive advanced manufacturing company with around 2,000 employees at their West Midlands headquarters; a retail business with 10,000 employees at their site in the D2N2 LEP area; and a food manufacturing company employing 6,000-7,000 people across six sites across the Leicester and Leicestershire LEP geography. One professional services business, who employed 350 people in their West Midlands site, was part of an international group operating across 200 offices globally. At the other end of the spectrum, small but rapidly growing micro businesses were also well represented; for instance, an East Midlands based engineering company with three employees and a media/digital firm operating in the West Midlands with only one FTE, but other part-time and freelance staff, totalling 27 employees with other working arrangements.
- 1.11 Innovative and/or exporting activity, significant R&D investment, and firms experiencing high levels of growth were also targeted as part of the research. Examples include:
 - an East Midlands based company using R&D to design and manufacture novel medical devices and products
 - an innovative manufacturer of products for the marine and automotive sectors using durable, repairable and recyclable materials and no single use plastic
 - a large East Midlands based food manufacturing group with two main UK hubs, and six businesses manufacturing food for retail sale in the East Midlands
 - a technology-rich SME which designs, develops, engineers and supplies media-based products from two sites in the West Midlands
 - an advanced manufacturing firm specialising in defence equipment with markets including the Middle East and Africa. It has its headquarters in the West Midlands due to the region's rich manufacturing heritage and engineering strengths.

Report structure

- 1.12 The remainder of this report is structured as follows:
 - Section 2 presents evidence on economic linkages across the Midlands, focusing on labour markets, supply chains and R&D collaboration, and highlights business views on how these could be strengthened in the future
 - Section 3 summarises business perspectives on opportunities for growth, and barriers to growth, productivity and innovation
 - Section 4 outlines business views on the priorities in relation to tackling the barriers to growth, and where a pan-Midlands approach could add most value.
- 1.13 The report is supported by Annex A, which lists the organisations consulted for this study.



2. Economic linkages

2.1 In this Section, we present evidence from the business interviews on the nature and strength of economic linkages across and within the Midlands in terms of labour markets, supply chains and R&D collaboration, and key markets served.

Key messages

- Recruitment: All businesses consulted stated that they recruit from within the Midlands Engine region whenever possible. In most cases, businesses recruited within the Midlands for lower-skilled positions, but often had to look elsewhere for higher-skilled or senior-level roles.
- Commuting: There was evidence of extensive commuting across the Midlands, but journey times varied substantially (discussed in more detail in Section 3). North-South travel in the Midlands was considered much easier than East-West. Over recent years, staff appear to be travelling further for work and employers have witnessed an increase in staff working remotely. The ability to work from home has become an important aspect of staff retention/recruitment.
- Supply chains: There was a preference to use local suppliers where possible (notably for services), but inputs were sourced from further afield if the Midlands did not have the capability to supply a product at the requisite quality or scale. Businesses identified opportunities to strengthen supply chains in the Midlands, for example via greater collaboration between suppliers, improved access to finance (enabling suppliers to scale up), improving transport links, a wider/deeper business base, and a greater commitment from the public sector to use local suppliers.
- Innovation/R&D collaboration: Many of the businesses interviewed engage in collaborative R&D within the Midlands, most notably in the advanced manufacturing sector. However, consultees struggled to comment on whether these collaborations were particularly distinctive to the Midlands. There was mixed feedback on whether proximity matters in this context. Businesses noted some frustrations in engaging with research institutions (in general) and saw significant potential to strengthen R&D relationships within the region (particularly around commercial mindsets, IP agreements, improving awareness of university specialisms and how to access them).
- Markets: Businesses consulted served regional, national and international markets, although few of the businesses consulted had plans to increase export activity. Common barriers to exporting reported by business including current economic/political uncertainty, regulatory issues and skills.

Recruitment and commuting

Recruitment patterns

- 2.2 All businesses consulted stated that they recruit from within the Midlands Engine region whenever possible. The extent to which businesses recruited locally was linked to the skills A manufacturing firm in the West Midlands mostly recruited from within the supply, local specialisms and business size. region. It had chosen to locate its R&D
- 2.3 In most cases, businesses recruited within the Midlands for lower-skilled positions (e.g. factory workers, customer service advisors) but often had

facilities in a specific town because of the highly-skilled local labour force.

to look elsewhere for higher-skilled (e.g. software engineers, designers) or senior-level roles. There was a consensus that this recruitment pattern reflected a national skills gap, but it had been exacerbated by local factors. The two most commonly cited challenges were:



- The outflow of graduates to London and the South East in search of higher salaries and a broader range of career opportunities.
- Perceptions of the local area. For example, while the Midlands was seen by multiple businesses as an attractive place to live, some businesses felt that they struggled to attract talent due to the local area's reputation or amenities (e.g. poor housing supply, low standard of education, limited hospitality and leisure activities) or the wider area's branding or image. These businesses were located in different LEP areas in both the East and West Midlands.

Commuting patterns and change

- 2.4 It was reported that most businesses' employees commuted to work from other parts of the Midlands². Distance commuted within the region ranged from five to c. 50 miles and journey times varied substantially – one consultee's commute from Nottingham to Birmingham lasted around 2.5 hours on average because of frequent rail delays on routes between East and West Midlands. There was a general positive trend between the level of seniority and distance travelled to work, reflecting national patterns³: senior executives commonly commuted into the Midlands region from as far as London, whereas lower-skilled workers tended to live nearer to their place of work.
- 2.5 In addition, there had been changes to the way that employees commuted to work. Over the past five years, businesses had noticed that their employees were travelling to work via a wider range of transport modes. Where employers historically used to see most of their staff commute to work via car, it was reported that there had been an increase in cycling, train and bus travel over recent years. In some cases, this shift was facilitated by company-level factors such as the cycle-to-work incentive scheme⁴, new shower and changing facilities onsite, and a reduction in car parking spaces. These behavioural changes were very dependent on the office location - several consultees in the East Midlands did not report any change in the way their workforce commuted because of poor public transport connections. Businesses also reported changes in the distance that employees were willing to travel for work. A minority of firms reported that their staff were travelling further for work than before – one consultee had noticed an increase in the number of commuters from London to Birmingham, explaining that "North-South travel is much simpler than travelling East-West".
- 2.6 Linked to the above, **employers indicated that they had witnessed an increase in the proportion of their staff working remotely**. This had become an important factor in relation to staff retention, especially for employees travelling long distances and for businesses with poorly-connected premises. One food manufacturing company in the GLLEP area explained that working from home is important element of their recruitment offer – not providing this flexibility was seen to be a major barrier. In this context, digital connectivity is important and discussed in more detail below.

⁴ <u>https://www.cyclescheme.co.uk/</u>



² 34 businesses out of 50

³ See ONS analysis, for example, here

Supply chains

Five key factors determine supply chains for the businesses consulted

- 2.7 Businesses reported that five main factors influence their supply chain, the relative importance of which varies between and within the industries consulted:
 - location of supplier
 - quality of good/service
 - price of good/service
 - availability/capacity to produce good/service at the required volume and within the required timescale;
 - company structure.

2.8 There was a **general preference to use local suppliers where possible**. Reasons for this

ranged from practical benefits to ethical considerations. For example, an early stage manufacturing company prefers to use local suppliers because it is easier to monitor the quality of production, and inputs are received more quickly as there is no delay in shipping inputs from abroad.

A digital SME has made a conscious commitment to businesses in their city -"we're supporting a sense of civic pride by connecting and supporting other local businesses".

Transport is also important for firms who require large volumes of (heavy) inputs – using local suppliers reduces transport costs. On the ethical side, the rise in awareness of 'food miles' has also encouraged food and drink firms to source as much of their produce as locally as possible. Finally, for one business that participated in the research, civic pride was identified as an important reason to have a local supply chain.

2.9 Even where companies were not able to use a local supply chain for physical inputs for the reasons discussed below, **respondents were likely to use local firms to supply services.** For example, even large firms with international supply chains reported sourcing cleaning, catering provisions etc. locally. The same was true for smaller firms whose key

An advanced manufacturing SME imports almost 100% of its physical inputs from China because the Midlands/Europe do not produce these specialist inputs. The firm tries to use local services where possible e.g. advertising firms.

inputs were imported, but who still used local HR or advertising specialists for example.

2.10 However, 'local' means different things to different companies. For example, one digital company considered Birmingham to be 'local', whereas a health and life sciences company in the D2N2 area considered 50-100 miles to be 'local.' Given the spatial location of the D2N2 area in the Midlands, this situates parts of the North as 'local' to the firm. Therefore, firms at the geographical extremes of the Midlands area can have a 'local' supply chain which extends beyond the administrative boundary of the Midlands Engine area. In addition, business representative organisations for both the East and West Midlands noted that their members tended to have supply chains within the East or West - rather than at a pan-Midlands level – primarily because of poor transport links. This issue is discussed further in Section 3.



2.11 Where local suppliers were not used, it was suggested that this was most commonly because the Midlands does not have the capability to supply the product at all, or at the requisite quality or scale. For example, exotic fruit and vegetables cannot be grown in the Midlands currently, and it

An international financial services firm is "fairly agnostic about spatial proximity of supply chain." Suppliers are nationally sourced to deliver the best price/quality ratio.

was reported that the Midlands does not have the capacity to produce automotive gearboxes at the quality and volume demanded by one large automotive firm. Similarly, a financial services SME and a large advertising firm reported that the Midlands cannot supply high quality TV and radio commercials. In some cases, businesses indicated that they import highly specialised materials because they are only available from a small number of suppliers globally, such as the raw materials used by a health/life sciences company to produce their products for global export.

2.12 **Company structure also appears to have a big influence on the geography of supply chains.** For example, centralised procurement model offers economies of scale for firms with operations at a national/international scale. Nine companies consulted had headquarters based outside of the Midlands. Being part of a wider group may also 'bind' the operations in the Midlands into a much wider supply chain network. For example, an advanced manufacturing firm in the West Midlands stated that it has to use the pan-European supply chain of its German parent company.

Mixed views on opportunities to strengthen Midlands supply chains

- 2.13 Amongst those consultees able to offer a view, there was an even split between those who considered that more could be done to strengthen Midlands-based supply chains and those who did not (18 and 19 respondents respectively).
- 2.14 The firms who did not see an opportunity to strengthen supply chains were of a variety of sizes and from different sectors. They did not think local supply chains needed to be strengthened, either because they already have a strong local supply chain as in the case of a clean tech manufacturer who was located in Coventry because of strong local engineering capabilities or because local supply chains are not necessarily applicable to their business for the reasons discussed above.
- 2.15 Of the 18 respondents who thought **supply chain relationships could be strengthened** in the Midlands, 12⁵ identified a range of opportunities to achieve this:
 - **Greater collaboration between suppliers** so that they can provide an integrated system/solution to an Original Equipment Manufacturer (OEM), instead of disconnected components. Collaborations between SMEs and Universities/ Research and Technology Organisations (RTOs) would also strengthen the capabilities of suppliers
 - **Improved access to finance** two firms reported that they were prevented from using local suppliers as the suppliers couldn't access sufficient finance to scale their production up to meet the needs of the consultee firm

 $^{{}^{\}scriptscriptstyle 5}$ The other six consultees did not identify specific measures to improve supply chains



- Two business representative organisations noted that **improving transport links** between the East and West Midlands would encourage more firms to take a panregional approach to their supply chains
- Three firms from different industries noted that having a **wider and deeper business base** in the Midlands would allow them to use more local suppliers – this related to improving current negative perceptions of the reliability of some existing suppliers, and also developing new capabilities in the Midlands to meet the needs of those firms higher-up the supply chain
- Finally, one firm stated that a **local government commitment to use local suppliers** would help to strengthen the supply chain.
- 2.16 These challenges are discussed in more detail in Section 4.

Innovation and R&D

Collaborative innovation within the ME

- 2.17 Around 60% of respondents⁶ reported that they had conducted collaborative innovation/R&D with universities and/or RTOs. A further seven had conducted internal R&D. **Of those respondents who indicated that they had conducted collaborative innovation, almost all⁷ did so with partners in the Midlands**. Over half of respondents had also conducted R&D with partners outside the Midlands.
- *2.18* Examples of collaborative product/process innovation ranged from informal conversations about novel methods/ideas through to formal, grant funded R&D projects. For example:
 - A firm in the East Midlands works with the University of Lincoln on projects including big data management, ignition systems, and fuel quality
 - An innovative West Midlands SME has received c.£12m in R&D funding for autonomous vehicle projects from sources including Innovate UK and the Centre for Connected and Autonomous Vehicles (CCAV). Its partners have included the High Value Manufacturing and Transport System Catapults, as well as the universities of Warwick, Coventry and Aston
 - An East Midlands engineering firms works with Cenex (the UK Centre of Excellence for Low Carbon and Fuel Cell Technologies, Loughborough) because of its vehicle expertise.
- 2.19 **Collaborative projects sometimes include partners within and outside the Midlands.** For example, a rail manufacturer works with universities in the UK Rail Research and Innovation Network (UKRRIN) which includes the universities of Birmingham and Loughborough, as well as Southampton.
- 2.20 Some 20 of the 24 respondents who stated that they had conducted collaborative innovation with partners in the Midlands could be broadly defined as advanced manufacturing and

 $^{^6}$ 26 businesses, note that responses from business representative organisations were not included in this question 7 24 of 26 respondents



engineering firms. This includes transport, chemicals, food and the life sciences. There was an even split between East and West Midlands firms (13 and 11 respectively), and both large firms and SMEs were more likely to be represented than micro firms (11, 11 and 2 respectively). However, these differences may be due to the composition of the survey sample rather than inherent differences between sectors and geographies.

- 2.21 Perhaps unsurprisingly, common partners for advanced manufacturing firms included the two High Value Manufacturing Catapult (HVMC) centres in the Midlands: Warwick Manufacturing Group (WMG); and the Manufacturing Technology Centre (MTC). Respondents from other sectors including digital, food, health and life sciences reported formal project collaborations with the universities of Birmingham, Keele, Leicester Loughborough, Nottingham and Nottingham Trent, and some examples of sponsoring PhD students.
- 2.22 There was no real census amongst consultees on whether these collaborations were distinctive to the Midlands. Whilst some firms had partnered with Midlands institutions specifically because they were 'best in class' and thus highly distinctive, others had partnered with local institutions because of the perceived benefits of spatial proximity, rather than being able to access a particularly unique offer.
- 2.23 **Two factors which enable successful collaboration were highlighted by businesses: the skills of the collaboration partner; and the extent to which the partner is commercially focused.** As expected, it was claimed that partnering with academics/researchers with relevant expertise supports project progress. At a broader level, partnering with a specific department or overall institution which is "tuned into commercialisation" was reported to be key to ensuring that the R&D project is completed on time and produces commercially relevant results, rather than only findings of academic interest. One respondent also commented that linking R&D to graduate recruitment helped to encourage knowledge exchange, whilst another emphasised the importance of spatial proximity.

The importance of spatial proximity

- 2.24 Although the sample sizes are very small, all scales of firm (micro, SME and large) were more likely to collaborate on innovation with partners within the Midlands than partners outside the region. Large firms consulted were the most likely to collaborate with non-Midlands partners and micro businesses the least.
- 2.25 However, **over half of respondents** (14 out of 24 engaging in R&D) **stated that spatial proximity was not important for innovation**. The reason – across all business scales and sectors – was that businesses want to collaborate with 'the best' partners, whether they are located within the Midlands or further afield. In determining 'the best', the expertise of key individuals, the track record of specific institutions, and the quality/specialisation of facilities/equipment available are all relevant.

A life science firm reported that selection of its collaboration partners are purely based on expertise and research interest, not spatial proximity.

A large advanced manufacturing firm stated that the individual academic – as opposed to the institution - was typically the key factor. The firm's R&D collaborations have "followed" academic movements between different universities.

2.26 Seven respondents disagreed, stating that **spatial proximity is crucial to building the personal relationships** which are necessary to form long-term and lasting partnerships.



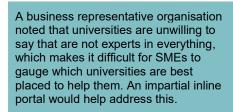
Spatial proximity also reduces the monetary and time costs of travelling to meetings etc. **Proximity also matters from a practical point of view** for some, facilitating partner sites visits and accelerating the R&D process. As demonstrated by one Health and Life Sciences (HLS) firm in the East Midlands, the ability to access nearby partner facilities daily was essential in the development/testing of new drugs.

- 2.27 Interestingly, three businesses said that **spatial proximity was** *sometimes* **important**. This applied when a business was seeking to **make initial links** to start its collaborative R&D journey, when the innovation was informal and happened outside of a funded project, and when innovation was linked with wider activities such as **graduate recruitment**.
- 2.28 Linked to the point about wanting to collaborate with 'the best', partners outside the Midlands varied by the sector of the respondent. For example, advanced manufacturing firms reported that they were routinely collaborating with some of the HVMC centres which are outside the Midlands such the Advanced Manufacturing Research Centre (AMRC) and the Advanced Forming Research Centre (AFRC) in Sheffield and Glasgow respectively, as well as the Transport Systems Catapult in Milton Keynes. Other partners highlighted included the universities of Cambridge (energy), Cranfield (aerospace) and Reading (food). A small proportion of respondents also indicated that they had collaborated with international partners, for example, overseas R&D projects initiated by relationships with local universities and utilising the networks of international distributors to market and sell their goods and services globally.

Opportunities to strengthen R&D linkages

- 2.29 The reasons given by businesses for being unwilling/unable to work with universities in the Midlands were generic challenges and *not* specific to institutions in the Midlands. As such, if the Midlands was (comparatively more) successful in addressing these issues, the region could build its reputation for being *the* place for open innovation.
- 2.30 According to the businesses consulted, barriers to engaging with universities include the following:
 - Businesses are unsure about the research specialisms of specific universities, and how

to judge whether one institution which claims expertise in a particular technology is better suited to the needs of the business than another institution which claims similar expertise. An East Midlands firm noted that there is limited information about what universities offer to businesses – "you have to



search it out". Similarly, a large advanced manufacturing firm "*stumbled on*" the expertise of a West Midlands university located only 20 miles from its manufacturing site

 Businesses are unsure about who to contact at universities about collaborative projects. A financial services firm commented that A digital media SME noted that universities are large institutions and all of them operate differently, so it is difficult to locate the right person to speak to.



"the onus is on businesses to approach universities, but many wouldn't know where to start or whom to contact"

- A perception that universities are not being fully committed to supporting business growth and instead seeing the private sector as an avenue to 'earn money.' Linked with this, some consultees stated that large firms with big R&D budgets are more attractive to some universities than working with SMEs, and hence some SMEs find it difficult to secure interest from universities
- Universities are perceived as not able to respond quickly enough to be a viable collaboration partner in a fast-moving commercial landscape *'universities have no sense of urgency'*
- Businesses have encountered conflicts over IP terms and other contractual issues
- Small firms also want to have exploratory conversations with universities about potential approaches to a problem/new technology, but academics often do not have time for these informal discussions.
- 2.31 Across the businesses who currently engage with the research base, as well as those who struggle to do so, 21 respondents suggested **ways to improve linkages between businesses and academia:**
 - As noted above, respondents identified a lack of knowledge about the specialisms of the different Midlands universities. Nine consultees suggested a centralised online portal which would list university specialisms. This would help businesses decide which university to approach for collaborative projects
 - Eight respondents reported that the 'university mindset' needed to change. This included becoming more open to working with businesses and even becoming proactive in seeking businesses to partner with, and also responding more quickly to project ideas and to and deliver R&D projects in shorter time periods
 - Two respondents also noted that a standardised pan-Midlands/national contract for R&D work with university partners to protect existing IP and fairly allocate IP created during the project would make them more willing to collaborate with universities
 - Interestingly, three respondents also felt that the problem of engagement was doublesided and that there should also be an emphasis on businesses (including their own) to be more proactive in looking for universities to partner with.
- 2.32 Businesses were also asked whether they think there is scope to strengthen economic linkages and networks more broadly across the Midlands. Consistent with above, improving links between industry and the science base was a common theme, with suggested improvements including mapping the core competencies of the region's universities, holding a yearly Cambridge University style science festival to facilitate networking opportunities, and ensuring universities are sufficiently funded to allow them to engage with collaborate R&D projects.
- 2.33 Improved business-to-business linkages (for example, improving links between sectors to facilitate improved knowledge transfer that would be of benefit to companies seeking to



diverse) was also suggested by a number of consultees. However, it was acknowledged that this may be difficult due to sectoral competition. Several consultees also suggested making networking events more engaging by refreshing content to suit 'innovative' businesses and/or greater focus on the specific needs of businesses. A further suggestion was enhanced investment in digital connectivity and infrastructure to enhance East and West linkages and networks.

2.34 In contrast, three respondents were satisfied with the economic linkages and networks across the Midlands, commenting that from their perspective (i.e. sector or location) linkages are relatively strong and are not perceived as a barrier to growth.

Markets

2.35 **Businesses in the Midlands served regional, national and international markets** (Table 2-1). There did not seem to be a link between business size and reach of their client base. For example, some professional services SMEs in the region (e.g. PR agency, engineering firms) had their entire customer base in the Midlands and other specialist SMEs (in health and life sciences, digital and advance manufacturing sectors) served customers in China, Japan, the Middle East, USA and Australia. **There were some cases where the business sector did influence firms' market reach.** For example, one transport manufacturing company was limited by the size of its goods and the associated costs of exporting. The nature of products/services provided similarly influenced market reach, with a financial services company able to serve international clients through their online product.

Geography	Number of businesses (n=50)
Midlands	14
UK	28
Europe	15
Rest of World	19
	Source: SQW

Table 2-1: Main markets of businesses in the Midlands Engine region

NB: Consultees could work in one or more of the geographies

- 2.36 Despite the high proportion of businesses already exporting, **seven businesses had plans to increase their international exports**. In all but one case the focus was on countries outside of Europe, including China, US and New Zealand. There was one interesting example where a firm based in The Marches LEP area had closed two production lines in China to manufacture its product in the Midlands. Although it will be more expensive to manufacture, the "made in the UK" label has opened up new markets (e.g. Austria) where product quality, origin and distance-travelled were important to customers.
- 2.37 Common barriers that prevented businesses from increasing their exporting activity included:
 - The political climate UK politics, including uncertainty surrounding Brexit and the agenda to nationalise railways, had impacted negatively on foreign investor confidence and created unrest amongst their UK-based, European employees. Similarly, businesses argued that the US' "trade war" with China had negatively affected Chinese buyers and American tariffs were a barrier for one company. Global



and local politics also affected suppliers which affected exporting: one manufacturing business was affected by political instability in the Middle East and Venezuela which impacted on their capacity to export.

- **Regulations** some businesses had to adhere to strict safety and environmental regulations set by the UK and EU that left them unable to competitively price their goods and services. However, one consultee who raised this noted that this was changing with stricter regulations being adopted more widely, particularly in Asian countries, over climate and health concerns.
- **Skills** four businesses noted that having the right skills in their business was a barrier to growing internationally, particularly as the skills required were more likely to be specialised and higher-level.
- **Local flight schedules** a minority of consultees reported that international flights from Midlands' airports were limited and did not fully suit their business needs. In most cases firms had to fly their clients via London, while customers visiting business sites faced a commute which would be unappealing to foreign markets. The frequency of flights to Midlands airports and range of locations served were concerns experienced by consultees.

3. Growth and productivity

3.1 In this Section, we present businesses plans for growth and their views on key growth opportunities for the Midlands more generally. We then present business views on barriers to growth and productivity, highlighting specific aspects of the Midlands environment that businesses feel hinder their ability to grow and be more productive.

Key messages

- **Future growth plans**: at the business level, future growth plans focused on introducing new products or services, as well as expanding/entering new international markets. These plans will require expansion or moving to larger premises, although some expressed challenges in doing so in the Midlands.
- Sectoral growth opportunities: key opportunities for growth in the Midlands, according to consultees focused on; clean energy and technologies, automotives, aerospace, biotech and HLS, food processing/technology, digital technologies and creativity more generally. Interestingly, consultees emphasised the scope for more cross-fertilisation between the Midlands' specialisms, particularly in terms of developing disruptive technologies (i.e. the creative side of technology which disrupts traditional sectors). That said, there was concern that the Midlands still lacks a unified message on what its sectoral strengths and specialisms are and should be more confident in promoting these.
- Barriers to growth, productivity and innovation:
 - Most of the businesses interviewed were experiencing barriers to growth, primarily due to skills, access to finance, infrastructure and premises. Around one third identified barriers to productivity, and a small number experienced challenges in commercialising new products/services.
 - Transport: road and rail transport issues were identified as a major constraint for many businesses, particularly in terms of travel East/West and between cities, with slow and unreliable journey times and relatively high cost. This makes it difficult for employees to commute to work and for businesses to access customers and collaborators.
 - Skills and labour supply: many businesses also identified a range of skills gaps, including in management, digital/IT/data analytics, STEM, and specialist skills across the Midlands key sectors. There were also concerns around work readiness, an ongoing mismatch between education provision and business needs, attracting talent and retention, and poaching.
 - Collaboration and innovation: as noted above, businesses cited issues in engaging with the research base and challenges in exploring opportunities for cross-sector synergies, but there is substantial appetite to build/strengthen networks and clusters across the region.
 - Access to finance: two-fifths of businesses were experiencing access to finance issues, for innovation, growth and productivity improvements. There appeared to be some lack of awareness of finance available, but also a view that the current offer was not fit-for-purpose/insufficient.
 - Digital infrastructure: digital connectivity is mixed across the Midlands, and in some places very poor. This is limiting home-working/exacerbating commuting issues, hindering modern communications with clients, hinders technological development.
 - Land and property: Some businesses noted the shortage of grow-on space, industrial land (at affordable rates/sufficient scale) and high-quality office space in some areas.
 - > Other issues raised by businesses included utilities and housing provision.

Growth opportunities

Future business growth plans

- 3.2 Twenty-six businesses who were consulted shared their future plans for business activities in headline terms, including growth plans in the Midlands.
- 3.3 Fifteen businesses planned to expand by introducing **new products or services**; as will be expanded on in sectoral growth opportunities, four businesses highlighted electric cars as an emerging opportunity area for expansion and two highlighted clean energy. Other companies were planning to expand into new product areas, for example with one advanced manufacturing firm stating their plan to move into production with another planning to move into servicing. Understandably, the details shared about new products and services were limited and often vague. Eight businesses also specified that their future growth plans involved **continuing their current activity** to complete existing contracts, enable national growth and enable increase in exports.
- 3.4 Eight businesses had future growth plans which involved **introducing new or expanding current international markets**. These businesses covered a range of sectors, including advanced manufacturing, food manufacturing, media and digital and health/life sciences. Asia was a common area of focus for new markets, in particular China and India, with other specified areas of focus being North America (USA and Canada), Europe (Germany and Turkey), South America and New Zealand. Most of these businesses anticipated being able to do this from their current sites, but one advanced manufacturing business focusing on food processing equipment saw the business' future to likely be outside the UK as they believed was where money and support would be found.
- 3.5 In order to implement future growth plans, eight businesses planned to **expand on current premises or move to a new site** (with a further business having just moved into a new site which would enable their growth). Of these, only two specified that this would be within the Midlands region: one would look specifically in Birmingham (with their current site located in the East Midlands and with further new sites being sought in Cambridge and London), and one would look in the East Midlands (where they were currently located, and they wished to expand within the existing area).
- 3.6 Five businesses identified **expanding or moving to new sites outside of the Midlands** in order to enable their future growth. For three businesses working in transport-related advanced manufacturing, they specified moving activity to Wales for reasons including cheaper labour, premises and business rates, links to local HEIs and location of new contracts⁸. One business previously referenced saw their entire business' future as being located outside of the UK. Challenges

"It is difficult to find commercial business properties in the area and it is very expensive compared to other areas. We are paying a lot of money in rent and rates to be in this location – compared to, for example Wales or Liverpool. We are thinking of expanding into production and are thinking of going out of the Midlands to Wales for that."

Automotive advanced manufacturing business

 $^{^{\}rm 8}$ of which they were at various stages, from considering this change to already undertaking new contracts in different locations



associated with the availability of land, premises and labour in the Midlands are discussed in more detail below.

- 3.7 Three businesses planned to use **acquisition and mergers** as a strategy for business growth in order to build capacity and specialisms. The rationale behind this strategy varied:
 - An advanced manufacturing business had already begun acquiring smaller companies to gather specialist expertise and innovative products to upscale with limited risks.
 - A media/digital firm planned to acquire new agencies to allow them to bring complementary services in-house.
 - A property/energy company saw this as an opportunity due to the current business climate where many companies are struggling, and there for would be "*persistently pursuing aggressive acquisitions*".
- 3.8 For some businesses, their **local supply chains** were identified as being important factors in their future growth plans for one, they would be involved in product innovation with the business and for the other, they saw Brexit as providing an opportunity to take a more local approach to purchasing products within local supply chains which would benefit their growth.
- 3.9 Key aspects of the Midlands' business environment that consultees highlighted as enabling growth included:
 - the low cost of living compared to London and the South
 - central location being advantageous for attracting clients across sectors and being closely located to a large proportion of the population ("*we are never too far away*")
 - strong existing sectoral knowledge and skills and agglomeration of businesses leading to shared expertise, retention of skills and international competitiveness in the manufacturing sector.

Sectoral growth opportunities

3.10 Thirty-five consultees considered sectoral growth opportunities for the Midlands. However, there was no common view on specific priority growth sectors at a Midlands level – in part because most consultees focused primarily on their own sector and increasingly, sectors and

different technologies are converging rapidly. However, perhaps unsurprisingly, traditionally recognised sectoral strengths of the Midlands such as manufacturing (aerospace, automotive and other transport), health and life sciences, and food and drink were mentioned by several different consultees.

3.11 More broadly, businesses identified some interesting areas of opportunity where the Midlands currently possesses or has the potential to develop nationally or globally competitive One consultee who struggled with identifying a particular growth sector attributed this to the fact that "the Midlands Engine covers such a large geography that it is very difficult for it to have a unique set of industrial/technology strengths. What is strong in Nottingham may not be strong in Lincolnshire, let alone the West Midlands. Even going for the traditional manufacturing strengths over the service industry is now problematic given the growth of services in Birmingham."



strengths or assets. Whilst we are not seeking to revisit the Midlands' Science and Innovation Audit here, in summary, the key messages from consultees were as follows:

- **Clean energy and technology** (in particular, electric vehicles/motors, battery technology, light weighting and energy storage, and marine) were seen as key sectoral opportunity areas, usually by advanced manufacturers or energy businesses, which already exist in the Midlands and have the potential to develop rapidly. This was attributed to the high level of skills, knowledge and expertise in vehicle engineering in the region and the regional workforce's capacity to adapt and reinvent themselves to adopt new technologies - these were seen as being distinctive and important Midlands strengths in the view of consultees. Four businesses identified **clean energy** as a future growth opportunity they would be directly exploring, with two specifically identifying electric vehicles. This was viewed as a large, relatively new market and key opportunity area for three of these businesses, which they were keen to exploit, while one was more reticent in their reasons for this change which were more due to 'inevitable policy shift' causing a future shift in the business. However, risks associated with this opportunity were identified: China as a competitor for manufacturing vehicles (including electric vehicles) because of economies of scale and associated lower costs; and the development of electric vehicles being dependent on national and regional infrastructure strategy to implement charging points.
- More generally, **advanced manufacturing in automotive and aerospace** was identified as being an internationally competitive area of strength by many consultees. Importantly, it was felt that there was scope to develop a strong offer in the services associated with manufacturing (including servicing equipment overseas). Also, businesses highlighted existing strengths in **biotech/medtech and healthcare** (with emerging opportunities prosthetics and 3D printing of patient specific orthopaedic implants) **and food processing and food technology**.
- **Digitalisation** was seen as a more cross-sectoral area for growth, being linked for example to automotive and rail advanced manufacturing, development of an electronic prescribing system in the health/retail sector, and digitalisation of banking in financial services (fintech). In particular, autonomous electric vehicles were referenced by five consultees as an area of potential due to the Midlands being "good at developing disruptive technologies the creative side of tech, which disrupts traditional sectors" and there being numerous, large OEMs based in the Midlands. This was viewed as a current strength which made it nationally competitive, due to the leading activity of companies based within the Midlands, with the potential for this to make the Midlands internationally competitive.
- Other examples of **digital technology** strengths in the region included unified communications (where the region already has a substantial presence in marketing technologies, and an opportunity to excel), the digital media sector (where consultees felt that cities such as Birmingham should be better at promoting what's happening in this space in the city) and the potential to develop a competitive strength in big data/AI/assisted decision-making (possibly also linking this to existing healthcare strengths noted above). Linked to this are opportunities relating to **data analytics**



services (in the context of digital technology), where the region is already home to large companies in this space.

• Two additional consultees saw **creativity** itself as an important cross-sectoral strength, with the potential for the Midlands to establish itself as a centre of excellence for creativity – although this is not unique to the Midlands, consultees felt there was

an opportunity to develop this as part of the Midlands' identity to fill a national gap. Based on existing Midlands strengths and creative hotspots such as Leamington, there was a perceived opportunity for the Midlands to promote creativity across

'No one owns creativity as a region... could the Midlands develop a more creative and powerful identity?' *Professional services business consultee*

sectors, such as product design in engineering or manufacturing industries to applying this to advertising, media and digital creativity in professional services. Progress in this area was seen to be reliant on promoting this as a Midlands strength/asset, and developing this identity through increased numbers of HEI creative courses.

- Linked to the growth opportunities outlined above, there are further opportunities linked to the possibilities of **cross-sector fertilisation across the Midlands' key specialisms.** For example, this could include the application of life sciences, gaming and digitalisation in high value manufacturing, or the use of 3D printing in the manufacture of medical instruments.
- 3.12 Cutting across the feedback above, there was a general view amongst consultees that: (a) the Midlands **lacks a unified message and single voice on what its sectoral strengths are**, and therefore needs much more "joined-up thinking" in this respect; and (b) in some instances, the region appears to under-estimate itself and **lacks confidence** in promoting its strengths. Also, one business representative organisation was concerned that, whilst the region generates a lot of ideas and innovations, many then leave the region/are bought out by firms elsewhere this consultee emphasised the need to better showcase and "root" such firms in the region.

Barriers to growth and productivity

- 3.13 Businesses identified challenges that were specific to their sector or stage of development (rather than being place-specific) alongside aspects of the local business environment in the Midlands that hinders their ability to grow, be more productive and/or innovate. The key qualitative messages from the business base were as follows:
 - 42 of the organisations interviewed identified <u>barriers to growth</u>. Across these, the most common barriers were **skills**, **access to finance**, **infrastructure** and access to suitable **premises** in the Midlands, alongside the uncertain economic climate more broadly.
 - 16 of the organisations interviewed identified <u>challenges in raising productivity</u>. **These included skills** (work readiness, attracting/retaining highly skilled staff, and digital skills), **access to finance** (and a cultural underinvestment in productivity enhancing technologies), **digital connectivity and inadequate business support**.



However, other consultees felt that this was not an issue: for example, one business in HLS argued "we are as productive as we can be", and another felt their digital/media firm was already very efficient and used time and resources wisely to maximise returns.

- Six of the businesses interviewed experienced challenges in introducing <u>new</u> <u>processes</u> within the firm, and eight highlighted barriers to <u>commercialising new</u> <u>products/services.</u> As above, challenges focused on accessing the right skills/knowledge, collaboration with academia, securing appropriate access to finance on attractive terms, and issues with digital connectivity in parts of the region.
- 3.14 These challenges and the implications for business performance are discussed in the paragraphs that follow. Where relevant, we highlight issues that are particularly distinctive or prevalent in the Midlands.

Transport

- 3.15 Transport issues were identified as a barrier to growth and productivity by 30 of the organisations interviewed, and for many of these it is a major constraint.
- 3.16 Well-documented issues with train and road transport across the Midlands were reiterated by the businesses interviewed, particularly in terms of travel East/West and between cities (even within the East Midlands, for example), with slow and unreliable journey times and relatively high cost. Other issues raised included limited transport options leading to a reliance on the road network which is heavily congested and unreliable, poor public transport links between railway stations and business parks/business premises and limited public transport options for shift workers (for early mornings/late nights). The opportunities for freight transport on the rail networks was described by one business as "non-existent". This view was supported by a business representative organisation, where restricted rail freight capacity limiting the growth of the logistics sector/supply chains. There was some optimism that HS2 would increase capacity and improve access to clients in London, but at the same time a frustration that existing road and rail infrastructure needs to become more reliable and accessible.
- 3.17 The issues above make it **difficult for employees to commute to work and for businesses to access customers/collaborators (and vice- versa), which in turn is influencing the growth, productivity and costs of some businesses**. This was raised as an issue by multiple

large-scale global advanced manufacturing and retail firms, as well as SMEs in the Midlands (see examples in adjacent boxes). As two business representative organisations argued, poor East/West transport links makes it "unnecessarily hard" for businesses to trade between the two geographies, and therefore business linkages occur where transport networks allow. This was illustrated by a financial services firm that said it

An advanced manufacturing SME argued that travelling even short distances to clients is "a nightmare". Long travel times impacts on the productivity of their workforce. The business has now made the decision to avoid travel where possible to avoid wasted time, but this has had a knock-on effect in relationship building with clients, which is obviously important for the business.



- 3.18 takes so long to get between cities in the East and West Midlands that it limits their ability to take on further work in the East Midlands: *"the ease at which you go from the West Midlands to the East Midlands hinders business growth"*. Another business owner who provides digital services, and argued that poor transport limits the business' spatial reach across the Midlands and, as a result, they serve a relatively local client base.
- 3.19 Also, as discussed in more detail below, **poor transport infrastructure is limiting the pool of labour (especially skilled labour) for businesses.** Consultees gave examples of struggling to attract skilled staff to the business and losing staff because of difficult commutes, and poor connectivity effectively shrinking the labour market catchments on which they can draw more generally.
- 3.20 International airports in the Midlands were seen as an important asset. For example, one HLS firm argued the 24-hour freight hub at the East Midlands Airport provides an efficient service for the business, which is important when dealing with the next day delivery of drugs. However, a small number of businesses commented on the lack of international connections at the region's airport. One HLS business argued that the airport does not

A large global advanced manufacturing firm stated that poor transport links to their site is a major issue for the business. East-west links are particularly poor. There are significant bottlenecks on the road network in rush hour and very infrequent trains to their location. Bringing customers to the site is very difficult, particularly those travelling internationally - a train journey would involve multiple changes, so the business tends to send taxis to collect clients from airports. Because roads are so congested and journey times unreliable, clients must leave much earlier than should be the case to catch return flights.

An innovative and growing HLS firm reported that poor road infrastructure is a "major inhibitor" to recruiting skilled staff. They find it difficult to attract staff to move into the area (due to poor image) but long delays/journey times make commuting from further afield difficult. As an example, the firm recently offered a sales manager position to a strong candidate, but this was rejected after the applicant tested the commute. This has happened in the past, and the situation is worsening. The consultee suggested that applicants would rather find a job closer to home.

provide adequate connections to some of the leading countries in the biotech sector, and a professional services firm gave the example of having to meet an international delegation regarding FDI into the Midlands at Heathrow airport (which did not give a strong first impression of the region).

Skills and labour supply

- 3.21 Issues relating to the supply of labour and skills were raised by 33 businesses consulted and all business representative organisations. One of the latter argued that skills was "the biggest member issue by far".
- 3.22 There were some common messages on skills shortages, including:

• **Good quality management skills**, including finding STEM graduates who are 4-5 years into careers, as well as senior management, and stronger leadership and management skills at the middle level of management. There was also a concern expressed by one business regarding the lack of succession plans for many SMEs led by owners who are close to retirement, which is (in part) leading to a lack of investment in new equipment etc to boost productivity/growth (see adjacent box).

Another firm was concerned that other parts of the UK and overseas competitors were progressing quicker than the Midlands in creating the "next generation of scientists" for the HLS sector in particular.

• A number of consultees highlighted the lack of **digital**, **IT and data analytics** skills, and insufficient qualified maintenance/mechanical/software engineers. Consultees also noted a range of other **specialist skills** gaps, such as property surveyors, thermal imaging An advanced manufacturing SME has observed a "demographic time bomb" whereby a high proportion of SMEs are owned by people who are close to retirement but find it difficult to engage younger people in running the business (with a view to them taking over responsibility in the longer term). The consultee described this as a "glass cave" where older business owners are reluctant to invest in new capital etc, knowing they will soon retire, and/or they liquidate assets as they get older because they do not have staff to take over the business.

optics, financial skills applied specifically to manufacturing (reflecting disruptive changes in finance for manufacturing, and a greater reliance on data analytics), creative talent (in the professional services sector), HGV drivers for retail and food manufacturing firms (reflecting national shortages).

- 3.23 More generally, some businesses were concerned with the **volume of labour available**, especially in areas where unemployment is low and/or where poor infrastructure made it difficult to widen the catchment for lower paid jobs (see food manufacturing example in adjacent box).
- 3.24 On the supply-side, a small number of businesses in advanced manufacturing and digital/media sectors expressed a frustration with the **quality of**

A large food manufacturing firm argued the biggest barrier to growth going forward will be access to labour. If the firm builds a new factory, the location will now be determined by the availability of labour rather than proximity to raw materials or existing sites. Better transport connectivity would help to widen the pool of labour available in this context.

education courses and the mismatch with business needs, both at Further and Higher Education levels. As illustrated in the adjacent box, this focused on the need for more business-ready digital skills. A business representative organisation also noted that the **work readiness** of college/university graduates was a prominent issue across their members. Where there is a strong supply of graduates from the Midlands' universities, a small number of consultees raised concerns around **graduate retention.** For example, a global advanced manufacturing firm in East Midlands has observed substantial outflows of Midlands graduates to London and Manchester. One digital firm argued there needed to be greater acceptance that there will be a "talent boomerang" effect, where some graduates leave for London – however, it is important to ensure that the Midlands remains attractive so they return to start a family, gain a better quality of life and/or progress their career.



- 3.25 Some businesses including large-scale global advanced manufacturing firms and a financial services firm have also found it **difficult to attract talent to the Midlands**. Consultees felt that the Midlands was not considered a "desirable or attractive" place to live compared to other locations, such as London or some cities in the North, both for graduates and more experienced workers.
- 3.26 In response to the issues above, a number of the businesses interviewed have placed greater emphasis on **internal training and promotion**, described by some as "grow your own". However,

A global advanced manufacturing firm noted how disruptive digitisation is now – and in this context, traditional apprenticeships are not providing what is needed by industry. The consultee felt that colleges were slow to respond to changing needs, in part due to funding limitations, and training equipment is outdated (with the exception of the Manufacturing Technology Centre in Coventry, but this was not accessible for the business). It was argued that many electrical, manufacturing and engineering qualifications need "revamping" to include data and digital skills.

businesses noted that this absorbs a considerable amount of resource and senior management time within SMEs. Two financial/professional service firms have adopted this approach but have found **retention is a challenge** – there is a growing tendency for staff to move firms for quicker progression, alongside strong competition from firms in London who can afford higher salaries. **Skills poaching and pay competition** is also an issue *within* the Midlands. Both manufacturing and digital SMEs interviewed argued they are being priced out of the market by large global firms in the area who are able to pay "significantly more" for skilled staff. This was reportedly hindering the growth of firms. The situation for advanced manufacturing firms appears to be most acute, where firms are "fishing in a small pond" for engineers.

Collaboration and innovation

- 3.27 As discussed in Section 2, businesses cited **issues around engaging with the research base** as a barrier to innovation, productivity improvement and growth. These centred on a lack of knowledge of where expertise lies, how to access it, and university interest and responsiveness and appeared to span a variety of sectors, including advanced manufacturing, media/digital and HLS. The lack of a clear gateway into universities was a major obstacle for engagement for many businesses interviewed.
- 3.28 Clustering was also seen as critical by a number of the businesses consulted, with mixed success to date. Consultees gave examples of successful clusters such as gaming in the West Midlands, and biotech in the East Midlands but there was certainly an **appetite from businesses to create stronger clusters**, including across the region. For example:
 - a large chemical manufacturing firm felt their business was "isolated", with a perceived lack of other similar businesses in the area to collaborate, share knowledge and build networks with.
 - Another firm suggested that the aerospace industry could work more collaboratively with other sectors and universities to ensure that "great research" reaches the market.
 - A large professional services firm argued that innovative businesses in similar sectors need a community to feel part of, which would also help the Midlands to attract larger innovative businesses (and suggested a role for the Midlands Engine in driving this forward, discussed in more detail in Section XX).



- 3.29 Some businesses also argued that the region's technology strengths are not strongly clustered - and, whilst that in itself was not seen as an issue, it became more difficult to "sell" the region as a leader in such a sector.
- 3.30 A number of businesses argued that creating/strengthening clusters and sector relationships/networks should be a priority. This would help to create a more vibrant environment for innovation and collaboration, attract more sizeable businesses to the area, attract talent and create more "depth" in the labour market (especially for higher level skills and expertise) - addressing some of the barriers to growth and productivity highlighted elsewhere in this Section.
- 3.31 Finally in this sub-section, a small number of businesses noted the **difficulties in exploring** opportunities for cross-sector synergies, and the lack of support/facilitation in this respect across the Midlands.

Access to finance and investment readiness

- 3.32 Twenty of the organisations interviews raised issues in accessing finance, spanning a range of sectors, geographies and scale of business.
- 3.33 Access to **finance for innovation** is an ongoing issue for small, innovative businesses. Businesses described the realities of the "valley of death" in the early stages of new product development, as well as a "second valley of death" where a significant amount of capital is required to take a new product to market (especially internationally) in some sectors. Finance for the latter was seen as a major challenge, particularly for capital intensive sectors (e.g. engineering) where it takes a longer period of time to generate a return on investment for the funder. This influences speed at

An advanced manufacturing firm supplying major OEMs in the automotive sector and specialising in autonomous vehicles argued that the "number one" barrier to growth is the lack of finance. The consultee argued that, whilst the UK supports early-stage R&D to develop a new product, there is a lack of financial support to take a product to market globally (and the cost of doing so is significant). As a result, the business is struggling in the "second valley of death".

which businesses are able to commercialise new products and services.

- 3.34 Access to **finance for growth and productivity improvements** was also raised as an issue. SMEs have found it difficult to secure business loans, and whilst personal lending is easier, there is a reluctance to invest this into new/more productive systems. Some businesses consulted have continually reinvested (small-scale) profits into productivity enhancing technologies - one HLS business described as an "organic cycle of reinvestment" over 20 years, but recognised this is a slow process. Consultees argued that many businesses haven't been investing in capital equipment over recent years, in part due to the ability to access relatively cheap and flexible labour, and because they claim banks have not been interested in providing finance for high value capital investment. However, the impact of Brexit on labour supply may necessitate businesses investment in more productive equipment.
- 3.35 Some businesses acknowledged that finance is available, but highlighted issues with the current offer:
 - Too much emphasis in public sector support on job creation (rather than productivity gains), university spin outs (where one business argued the skills for growth can be lacking), and/or larger businesses. Also, businesses commented on the resources



needed to apply for public sector grants, finding nationally competitive funds harder to access than previous regional programmes, and the perceived competition (rather than collaboration) between the range of start-up/accelerator programmes available.

- Difficulties for small R&D firms in securing finance at *reasonable* rates/terms from banks, and/or where IP is a firm's main asset (rather than property). There was a concern about the lack of appetite for risk across some of the funding available (especially banks and public sector)
- Challenges in accessing publicly-backed finance for products that have global potential, but are not deemed to be cutting edge technology
- A lack of awareness of funds available, such as the Midlands Engine Investment Fund
- Insufficient scale of finance available, compared to the significant levels needed to take products to market (especially in engineering and HLS sectors). As one business argued, seed finance for R&D is "spread thin" across the UK and Midlands.
- Confusion around the finance available, and the most appropriate source of finance for the business. One consultee described it as "a minefield" for businesses to navigate. Linked to this, there was a concern from one business representative organisation regarding the investment readiness of businesses in the Midlands.
- A perception that accelerators and Venture Capitalists based in the Midlands look to London to invest (especially in the digital sector), rather than investing in Midlands-based firms.

Digital infrastructure

- 3.36 **There is a very mixed picture across the Midlands in terms of digital connectivity**, with current provision described as "very good" or "good enough" in parts of the region, through to "patchy" or "awful" in other areas. Digital connectivity in the East Midlands and rural areas were perceived as worse, but there were exceptions to this. For example, we spoke to two advanced manufacturing firms in the West Midlands, one in a rural location which argued their highspeed broadband was "very good" and the other in a large urban conurbation which described their internet connection as "appalling" and said they were "lucky if you get G, never mind 2G". This was echoed by a professional services firm on a "premier business district" in a city centre that lacked fibre optic broadband.
- 3.37 18 of the organisations consulted indicated that digital connectivity was inadequate or could be improved, and this is impacting upon businesses in a number of ways:
 - It is **limiting the ability of staff to work from home**, especially in more rural/remote parts of the region. This is important in a context where poor infrastructure is a barrier to commuting and the opportunity to work from home is seen as an important "selling point" for businesses to attract skilled workers. Businesses also argued that the inability to work from home due to poor connectivity has meant staff have to commute into work (which places greater pressure on road networks) and hinders the productivity of small



- businesses that are based at home in these areas.
- It is hindering modern communications with existing/potential customers and suppliers, particularly those overseas (as illustrated in the adjacent box). Not only is this an issue for firms looking to trade internationally, but it is also hindering efforts to reduce business travel.
- There is a concern that, without fast reliable broadband, businesses in parts of the Midlands risk "missing out" on future technological developments in

A small innovative HLS firm is increasingly seeking to use Skype calls/webinars, to improve productivity and reduce the firm's environmental footprint (by reducing business travel). However, despite being located on a business park, they described the digital connectivity as "awful" and are having to invest substantial amounts of internal finance to address the issue.

A large global manufacturing firm argued that the broadband connectivity is not good enough for modern business needs. They try to do global video conferencing with customers, but it is typically "a disaster".

infrastructure. This includes (but is not limited to) the ability to introduce automated systems/industrial digitisation across some of the region's key sectors.

Finally, for professional service firms who frequently use trains to reach clients across the region (and, as noted above, journey times are slow), poor digital connectivity on trains is a barrier to productivity.

Land and property

- 3.38 Of the organisations consulted, 16 raised issues with the availability of land or property that is hindering business growth. These varied by location and sector, but there were three reoccurring challenges:
 - Insufficient grow on space, particularly for small, highly innovative firms that are growing rapidly, such as HLS, digital and advanced manufacturing. This included a lack of specialised grow on facilities for chemical and engineering activities, as illustrated in the adjacent box.
 - A shortage of industrial units at sufficient scale and/or industrial land at an affordable price to enable businesses in some of the Midlands' priority sectors to expand (e.g. advanced manufacturing and precision engineering). For example, an advanced manufacturing firm in the West Midlands has been split over multiple sites as they have grown, and are unable to find

An innovative health/life sciences wanted to expand operations in the region. However, the business found it very difficult to quickly find specialised, high quality grow-on space at scale in the region. The type of space needed was available elsewhere in the UK, and so the business has recently opened premises in the North and future growth is likely to take place there.

A global advanced manufacturing firm was looking to consolidate their UK operations in the Midlands. However, they were unable to find suitable/affordable land in the Midlands for example, they were reportedly outbid for sites by logistics firms, who were able to fit out buildings more cheaply and therefore could justify higher land costs. The firm decided to open a new plant elsewhere in the UK and R&D functions are now split between the Midlands and other site.

one large enough space in the right location to accommodate the whole business. Another example is provided in the adjacent box, where relatively high land values



has mean a global advanced manufacturing firm has expanded outside of the Midlands.

• A lack of high quality Grade A office space in parts of the region (notably cities in the East Midlands). Rental rates are low, which is beneficial for businesses, but means that speculative development is limited. As a result, consultees in the professional service sectors argued that places such as Nottingham struggles to attract inward investment of high quality, larger employers, which is important for growth and creating a vibrant sector in the city.

Other Midlands-specific barriers to growth and/or productivity

- 3.39 A small number of businesses noted other aspects of the local business environment that are holding back growth or productivity. These included:
 - Utilities: four businesses spanning a range of sectors (advanced manufacturing, food manufacturing, property and tourism) across the Midlands raised concerns with the supply of utilities, particularly in terms of electricity and water supply. Three of these businesses argued that lack of power supply has is a major consideration in their growth/expansion plans, and for one global advanced manufacturing firm they are not able to expand in their current location due to insufficient electricity.
 - Housing: one of the business representative organisations made a strong case that a housing crisis i.e. the increasingly unaffordable housing market in the Midlands, and the lack of housing in the "right" locations is undermining their members' ability to recruit and retain staff, which is impacting on productivity. As a result, workers are having to commute further and as noted above, this is a challenge in many parts of the Midlands. The consultee argued that this is wasting time, reducing the pool of talent accessible to firms, and limiting the jobs available to workers. A small number of businesses also highlighted housing issues for example, a global advanced manufacturing firm in the East Midlands argued there is insufficient "young-person friendly" housing to attract graduates, and crucially encourage them to establish roots in the area.
 - **Political leadership**: one business representative organisation expressed concern about the level of competition/lack of unity within the Midlands, and the lack of a Combined Authority/Metro Mayor in the East Midlands to create a cohesive agenda.
 - **Corporate hotel offer**: finally, one global manufacturing firm in a more rural part of the East Midlands noted the lack of a good quality hotel offer in the area, which they felt did not project the right image to potential clients. However, this issue was not raised by other businesses consulted.

Wider barriers to growth and/or productivity

3.40 In addition to the Midlands-specific challenges above, many of the businesses consulted said current economic uncertainty is making it difficult for them to make long-term decisions on capital investments that would enable growth and/or productivity improvements. It has also caused "unnecessary costs" (for example, through stockpiling), concerns regarding



international growth prospects and access to supplies, difficulties in recruitment, and a slowdown in the housing market.

3.41 Retail firms also noted the challenging economic climate for that sector, with retailers experiencing declining footfall and reduced spending, and a specific challenge for one HLS firm has been their ability to access NHS data that would inform and help to establish a business case for a new, innovative product.

4. Priorities looking forward

4.1 In this Section, we present consultee views on the priority issues that need tackling to make greatest different to the Midlands' economic growth and productivity performance. We also outline their recommended areas for action, and which issues/opportunities should be best addressed at a pan-Midlands level.

Key messages

- **Top priority issues/opportunities** identified by businesses included transport and digital connectivity, skills, finance, and collaboration across the Midlands (in terms of R&D, business-to-business, and across/within sector specialisms more generally). Consultees also called for a more coherent voice, identity and plan for the Midlands as a whole.
- A pan-Midlands approach was deemed most appropriate to address transport and digital connectivity issues, finance for growth, and strengthening collaborative relationships. Businesses also argued there was a clear role for the Midlands Engine to create and communicate more effectively a unified vision and voice for the Midlands. Given the scale and (to some extent) commonalities of skills issues across the region (e.g. in terms of skills shortages in key sectors, the retention/attraction of talent), businesses also thought a pan-Midlands approach could add value, alongside local interventions.

Priority issues and interventions

- 4.2 As part of the interviews, businesses were asked for their view on the top priority issues/opportunities that need to be tackled in the Midlands to unlock economic growth in the region. From the business perspective, the most common priorities were as follows:
 - **Transport connectivity**: 24 businesses (across all sectors and sizes) and four of the business organisations raised transport as a priority issue to tackle. This included rail and road travel within the Midlands (especially East-West and between cities) in terms of time, quality, affordability and choice (i.e. local public transport). A number of consultees highlighted the importance of HS2 in improving access to London, and one business representative also argued that the Midlands should not lose sight of connections with the Northern Powerhouse. Airports, and connectivity to them, were also considered important given "a renewed focus on global markets".
 - **Skills**: 21 businesses across a variety of sectors, and two business representative organisations, identified skills as a priority issue for the Midlands. The focus was on work readiness, STEM skills, apprenticeships, career advice/raising aspirations of young people, graduate retention, attracting talent, leadership and management skills, and more effectively aligning education provision with business needs.
 - Access to finance: 13 businesses (mainly SMEs, but also two large advanced manufacturing firms) and one business representative organisation prioritised finance. This included both demand and supply side issues (a lack of awareness/understanding and insufficient supply of finance), particularly relating to the commercialisation of R&D and growth finance.



- A coherent voice, identity and plan for the Midlands: 10 businesses and one business representative organisation commented on the need for more joined up thinking and action across the Midlands. There was a concern that there are too many "competing voices" in the region which hinders progress, a lack of co-ordination and focus, and a need to strengthen the Midlands' "collective identity", brand and voice. Consultees argued this would make a difference to external perceptions of the region (for example, as an attractive place to live), raise awareness and recognition of excellence in the Midlands, and ensure that economic and planning policy more effectively responds to the needs of businesses across the region (for example, by providing suitable sites/premises in appropriate locations for firms wanting to expand, and a strategic approach to house building in locations that are fully integrated with good transport links to economic centres).
- **R&D/commercialisation, and business collaboration:** 10 businesses (across a range of scales and sectors, including HLS, energy, digital/manufacturing) and one business representative organisation argued that strengthening links between business and academia should be a priority, to stimulate innovation, accelerate commercialisation and develop clusters of expertise (this also linked to improving the work readiness of graduates, noted above). Businesses also called for greater focus on the Midlands' sectoral strengths and stronger business/supply chain collaboration at a greater scale, within and between sectors, and across the Midlands. This is perceived as a major missed opportunity at present.
- **Digital connectivity:** this was identified by seven businesses (from small digital firms through to global advanced manufacturing firms) and two business representative organisations as a priority, and covered the need for faster, more reliable and more consistent connectivity across the region (both in premises and "on the go").
- 4.3 Other priorities raised by a smaller number of businesses included the **availability of commercial property** (quality and quantity) **and utilities provision** (and more coordinated planning in line with the needs of industry).
- 4.4 Businesses were also asked to recommend interventions/investment areas that would make greatest difference to the priorities raised above. These are summarised in Table 4-1. Whilst some of the suggested interventions are already being implemented, in some instances businesses did not feel these were fully fit-for-purpose.

Suggested interventions				
Infrastructure (transport and digital)	 Creating a roadmap for the roll out of broadband that prioritises business connectivity, alongside interventions to encourage the adoption of new technologies. 			
Skills	 Interventions to inspire young people in terms of their careers aspirations and choices, including improving information of jobs available, mechanisms to better access large firms and their supply chains (e.g. UCAS for apprenticeships) and more businesses hosting visits to inspire/raise awareness of career opportunities. 			
	 Facilitation of business/academia engagement to co-design curriculums to more effectively meet businesses' skills needs. 			

 Table 4-1: Potential intervention areas



	Suggested interventions
	 A more co-ordinated approach to apprenticeships, particularly for engineering, and/or a shared apprenticeship scheme whereby apprentices gain work experience along a supply chain.
	• The need to create "flagship" concentrations of skills, knowledge and facilities around the Midlands' specialisms (most notably technology and engineering businesses) and their supply chains. One digital SME suggested creating a platform to connect young talent, academic and local businesses to facilitate linkages and collaboration.
Sectors and innovation	 The development of long term sector-specific strategies, involving sector experts and tailored to the Midlands
	• Similarly to the point above, facilitating collaboration and networking between businesses at a greater scale to consolidate expertise and talent within sector (whilst there is some evidence of this, one business in the HLS sector argued too much is dependent upon informal/personal networks)
	Supply chain productivity initiatives
	 Support/facilitation to enable cross-fertilisation and synergies between the Midlands' sector strengths – not just within sectors.
Business support and finance	• A greater and more comprehensive support offer specifically for business-led innovation, entrepreneurship, and business-to-academia collaboration, including financial, mentoring, and leadership/management support targeted at middle-level management. Also, some businesses felt that support for the adoption of new technologies was a gap (e.g. digital invoices and accounts, as well as AI etc in the manufacturing sector).
	 A more joined up and co-ordinated approach to the existing business support offer, to address a lack of awareness of support available and how to access it. A preference for more personal support/engagement/signposting rather than online portals.
	• Better co-ordinate business access to finance with existing finance providers in the Midlands (e.g. accelerators and VCs based in the region).
	More investment readiness support, including mentoring.
	 Increase the scale of finance available for technology-focused start ups, reflecting the risk averse nature of private investors in this space and the insufficient amounts available via grant funding.

Source: Consultation feedback

A pan-Midlands approach

- 4.5 The majority of consultees identified a pan-Midlands approach was the most appropriate geographical scale for tackling some of the region's priorities. Only four consultees⁹ did not identify any challenges and/or opportunities to tackle at a pan-Midlands level. However, the *rationale* for a pan-Midlands approach and the *type of intervention* called for by consultees varied depending on the issue. For example, priorities such as improving transport connectivity were perceived as warranting a pan-Midlands approach due to the scale and interconnectedness of the issue; whereas, it was the commonalities and scale of issues such as skills that led to some consultees to suggest a coherent pan-Midlands approach would be valuable (although recognising that intervention may need to be localised).
- 4.6 In the paragraphs that follow, we summarise the most common priorities that businesses argued should be addressed at a pan-Midlands scale.

⁹ Four out of 45 respondents recommended this



Connectivity infrastructure

4.7 **Transport infrastructure was the most commonly identified priority that should be tackled at a pan-Midlands level**¹⁰. Reasons why consultees held this view varied but explanations included: transport being a shared priority/issue across the Midlands, the

strategic importance of better connectivity between the East and West and the rest of the country, the need to present a collective voice in order to secure funds from central Government for interventions, and the potential impact any improvements would have on stakeholders across the region.

A business representative organisation described the rationale for tackling transport connectivity challenges at the pan-Midlands level, comparing the region with the Northern Powerhouse who has *"got its act together"* on infrastructure. They stated that the Midlands needs to collaborate to secure the necessary funding for transport development.

- 4.8 Consultees identified both inter- and intra-regional transport development as requiring a pan-Midlands approach. With regards to inter-regional transport, connectivity to London was considered to be an important pan-Midlands priority, as well as increasing capacity at Birmingham International Airport. The effective delivery of HS2 was cited by several consultees as presenting a strong case for a pan-Midlands approach (although they struggled to articulate *why* a pan-Midlands approach was the most appropriate).
- 4.9 Improving intra-regional connectivity was also commonly identified as a challenge which requires a pan-Midlands effort. Poor connectivity between East and West Midlands is perceived to require joined up thinking and collaboration with pan-Midlands partners in order to effectively address current connectivity challenges and improve economic linkages.
- 4.10 A small number of businesses also highlighted the need to tackle variable digital connectivity at the level of the Midlands, to ensure that high speed broadband is available to all businesses (in both rural and urban areas that are experiencing problems in this respect).

Strengthening economic linkages

- 4.11 Over a quarter of consultees specifically identified a case for a pan-Midlands approach to strengthening economic linkages between businesses and research institutions¹¹.
- 4.12 As noted above, consultees argued that a priority for the Midlands is encouraging enhanced collaboration **between businesses and the research base**, and ensuring relationships are better integrated and more sustainable. Improved collaboration should also facilitate better linkages between graduates and businesses, thereby helping to address sector specific skills shortages. Whilst several consultees acknowledged this will require some local intervention i.e. at the level of the university/R&D institution, one stated that sharing good practice at the scale of the Midlands would be beneficial.

4.13 More effective business-to-business collaboration within the Midlands was also commonly identified by consultees as suitable for Midlands wide support/facilitation. Consultees

A digital media company stated that there needs to be a focus on *"getting people in the room together"* to foster creativity and promote the sector more widely.

 $^{^{\}rm 11}$ 12 out of 45 respondents recommended this



 $^{^{\}rm 10}$ 19 out of 45 respondents recommended this

suggested a range of ways that collaboration could be improved including:

- better engagement between businesses to explore innovative ideas and collectively promote their sector
- improved support for Midlands businesses with regards to bidding for collaborative R&D funding and strengthening supply chains
- developing a sector specific pan-Midlands professional networks to facilitate knowledge exchange.
- 4.14 The opinion of one consultee was that the Midlands should focus more attention on improving internal networks/linkages, alongside its focus on outward facing marketing. The consultee explained that there has been a gradual improvement in collaboration across the health and life sciences sector, but this has often been initiated through informal networks (i.e. stakeholder A having a pre-existing relationship with stakeholder B). Whilst outward facing marketing of the region was considered beneficial for general promotion of the sector, the consultee argued for a pan-Midlands approach to bringing stakeholders together on a larger scale to accelerate growth of the sector as a whole.

Fostering a stronger Midlands identity and vision

4.15 Many consultees argued that there **needs to be a pan-Midlands approach to creating and communicating a unified identity and vision/voice for the Midlands.** Currently, businesses argued that there is no strong collective identity across the Midlands (in comparison to the Northern Powerhouse), with divisions between the East and West Midlands particularly evident, and fragmented regional decision-making. A number of consultees argued that a pan-Midlands approach to identifying sector priorities, and ensuring consistent promotion of the region's strengths and unique assets, were a priority. The development of a stronger, coherent identity would also help improve both national and international visibility.

Developing the skills base

4.16 **Eight consultees considered skills priorities to be appropriate for pan-Midlands intervention**¹². Some consultees identified sector specific skills shortages (for example, in

both the quality and quantity of tech, creative and engineering skills, as discussed in Section 3) which require collective intervention to address due to the scale of the challenge. Attraction and retention of graduates was also considered important to address across the Midlands as a whole. As one consultee explained, these skills challenges are evident across the Midlands and therefore that is

A large food manufacturing company argued that the shortage of engineering skills should be tackled at the scale of the *"regional as it gets lost at the national"*. From their perspective the challenges which each region faces are unique, so any intervention needs to be focussed on the specific needs of the region.

the scale at which the challenges should be addressed. Furthermore, one consultee argued for improved promotion of manufacturing jobs as recruitment is becoming increasingly challenging; whilst this is national problem which could therefore warrant a national

¹² Eight out of 45 respondents recommended this



approach, the consultee thought that understanding the pan-regional dynamics would be beneficial when designing appropriate interventions.

Finance for growth

- 4.17 **Business finance was another common theme identified as appropriate for a pan-Midlands approach.** Consultees identifying this priority had limited awareness of the Midlands Engine Investment Fund (MEIF) or felt that SMEs were struggling to access the Fund.
- 4.18 Suggestions of how to improve access to finance varied and often involved complementary interventions across various spatial scales:
 - Create a pan-Midlands finance scheme to address financial barriers along the supply chain
 - Addressing information failures relating to funding sources at both the pan-Midlands and national level
 - A "turbo charged" quasi-governmental investment mechanism for the Midlands; rather than dividing funds into distinct smaller funds, the view was that there should be a centralised fund, large enough to have a tangible impact on the provision of finance in the region
 - Introduce 'MIPIM-type' Midlands-wide pitches to inward investors under the Midlands Engine umbrella¹³.

Alternative geographical scales for intervention

- 4.19 Whilst many consultees identified priorities which could be tackled at a pan-Midlands level, many also argued that specific priorities require national or local approaches (although this was often in conjunction with some degree of pan-Midlands intervention).
- 4.20 For some consultees, national intervention was considered the most appropriate scale to address certain priorities. Reasoning varied across the consultees, but examples included:
 - The Government must ensure innovation diffusion is at the centre of the Industrial Strategy in order to best support businesses to improve productivity

An advanced manufacturing business argued that the challenges businesses face are national; "what is the purpose of a microscopic view when the need is national?"

- Priorities such as skills shortages (e.g. engineering) and the planning system are national challenges which therefore require intervention at a national scale
- The lack of finance provision requires coordinated Government action to ensure there is alignment across all regions.

¹³ The MIPIM is an international property conference which provides architects, construction firms, property groups, investors and government bodies an opportunity to network. The conference also presents an opportunity for start-ups to pitch ideas to sector investors.



4.21 Local intervention was considered appropriate for some infrastructure improvements, including, the local road network, utilities, fibre-optic broadband and the public realm. Improvements to university-business links were also identified a local priority, at the level of the individual universities and surrounding business base, but a **role for the Midlands Engine in dispersing best practice** was identified.

Level of ambition

- 4.22 The majority of consultees stated that the Midlands should be very ambitious as a region. Consultees commonly argued that the region possess "great opportunities" (based on the region's heritage, geographical location and assets) and thus should have a more ambitious outlook going forward. For example:
 - The geographical location of the Midlands, with connectivity expected to improve with the construction of HS2
 - The quality of life, including the attractive cost of living/affordable house prices compared to the South
 - The region's industrial heritage and more recently its success and reputation in the manufacturing sector (particularly in the automotive and aerospace sectors)

4.23 Few consultees made specific comments regarding target setting, but those that did

were again ambitious. Three consultees argued that the region should aim to exceed the UK growth rate (including London), with some arguing the region should pursue growth which internationally competitive. Four consultees stated that the Midlands should aim to become the strongest economically performing region in the UK outside of London. Conversely, one consultee suggested that the Midlands should set growth targets based on their current performance (e.g. 20% higher targets), rather than comparing itself with London. Several consultees found it too difficult to comment specifically on growth targets given the current political climate (i.e. Brexit), and one argued that the Midlands should be seeking a

It's not about focusing on "how we compare with Manchester, London, Scotland, we don't aim high enough, we should aim to be global, be like Singapore, not we need to be better than Manchester" Engineering services company The Midlands should not compare itself to London, because it can do better. The region should be thinking about becoming an international competitor, not a competitor to UK cities Property company The Midlands needs to "come out from under the Northern Powerhouse's shadow" by competing as an equal rather than a follower.

sustainable, low-carbon future, rather than growth at all costs.

Annex A: Organisations consulted

Table A-1: Organisations consulted

A&M EDM AECOM Aldi Arcadis Aston Martin ATN Europe Ltd Attenborough Dental Bakkavor Biocity Biostatus BlueprintRegeneration Bombardier Boots UK **BPR Medical Butlins** Capgemini Capital One CBI CBRE Ltd CleanTech Business Ltd DESIblitz EEF FSB EM FSB WM Hadley Group **HPL** Prototypes Impression loD Koolmill **KPM** Marine **KPMG East Midlands KPMG West Midlands** Liberty Group Lightbox McCann Mediacom Nemaura Medical Pertemps PettFranklin Productiv Limited Proving Factory RDM AutoMotive Ltd / Aurrigo **Robinson Brothers** Salts Healthcare Samworth Brothers Siemens Turbo Machinery Simorx Sygnature Discovery Top Cashback Toyota Vivarail Wellington Films Worcester Bosch

Source: SQW

