November 2024

Consultation response to Invest 2035: The UK's Modern Industrial Strategy

Consultation response to the Green Paper published by UK government from Hertfordshire Futures

HERTFORDSHIRE FUTURES

1. Introduction and overarching comments

Introduction

Invest 2035: The UK's Modern Industrial Strategy was published as a Green Paper by UK government in October 2024.

This document sets out a response to the consultation from Hertfordshire Futures[1]. In this document, we provide detailed answers to most of the questions posed in the Green Paper. These are presented in Section 2. Note that the consultation seeks responses which are structured question-by-question.

In the remainder of Section 1, we make some overarching observations which summarise our main lines of argument and reflection.

Overarching comments

Hertfordshire Futures welcomes the publication of Invest 2035: The UK's Modern Industrial Strategy. We recognise that the UK needs to see more rapid economic growth and to improve performance in relation to productivity growth. It needs businesses (and sectors and clusters) that are internationally compelling and competitive. Hertfordshire is very well placed to contribute effectively and sustainably to this wider growth narrative, building on the achievements and progress of the last decade, and harnessing significant ambition as we look forward.

We welcome the identification of eight key sectors – and we consider that within Hertfordshire, we have significant strengths, assets and opportunities in seven of the eight. Indeed, in three of the eight, we have established private sector-led sector panels which have overseen the development of focused action plans through which we are seeking to invest. We also think that the list of priority sectors/clusters should be extended to include, for different reasons, both construction and agritech. Both are of strategic significance, and Hertfordshire has much to offer in relation to both.

In welcoming the Green Paper, we would note the following:

- There is an urgent need for a 'whole system' response at a local level, through which we might unlock the potential of key growth sectors/clusters: sectors will thrive only within local economies that 'work' in terms of labour markets, infrastructure, investment, networks and many other factors. Hertfordshire can demonstrate where this has happened in the recent past and to what effect, and where more could be done. Our Strategic Economic Plan was unusual in adopting this approach some years ago, and much has been achieved through it.

[1] Hertfordshire Futures is the new name for Hertfordshire Local Enterprise Partnership. This name reflects the newly integrated status into Hertfordshire County Council following the decision by Government to empower democratically elected local leaders in supporting their local economies. This opportunity has been welcomed to align a strategic economic vision with other plans and strengthen the partnership with local government.

- Looking ahead, Local Growth Plans need to be linked meaningfully to the new Industrial Strategy at a sub-national scale. This will require Local Growth Plans to be relatively long term in timescale; to have a formative and strong business input; to respect functional economic geographies of different forms (not just city-regions); and to relate, meaningfully, to all areas with major growth potential, not simply the Mayoral Combined Authorities (MCAs). Further, Local Growth Plans will need to be aligned to other key strategies at a local level – most especially Local Plans and Local Transport Plans.

- At the same time, we recognise the importance of functional economic footprints, and the need to work 'with the grain' of key sectors and clusters. Often this means working across administrative boundaries. We are very comfortable with this approach, and we are well used to working with different partners and across different geographies.

- The need for a 'whole system' response in high performing (and high potential) areas like Hertfordshire should not be conflated with a particular set of governance arrangements. Put another way, the existence of a particular set of governance arrangements should not be conflated with economic potential or ambition – or with a track record in terms of delivery.

- There is a need for investment in measures to increase employability and to develop workforce skills. Larger corporates are reasonably engaged, but we know from our local skills and employment work that there is much to be done across the rest of our economy. Greater local control of available resources could make a significant difference in this context.

- Within Hertfordshire, we need to ensure that there is an appropriate supply of employment land. There has been a significant loss of employment sites over recent years, and we are seeing this as a key constraint, particularly in the context of interest from would-be inward investors. Increasingly, power supply is also highly problematic and it is delaying development and investment processes.

- Achieving sustained and sustainable economic growth will depend on investment in the transport infrastructure and also on housing delivery. Both are challenging in Hertfordshire in part because of dispersed patterns of growth in which site-specific development processes may be of insufficient scale to trigger the requisite infrastructural investment. In this context – and building on our own local commitments – a devolved infrastructure investment fund could make a disproportionate impact in seeking to respond to UK government's wider growth ambitions.

- Investment in Transport Infrastructure and Housing: Achieving sustained and sustainable economic growth in Hertfordshire will depend on investment in transport infrastructure and housing delivery. Both areas are challenging due to dispersed growth patterns, where site-specific developments may be too small to trigger necessary infrastructural investments. In this context, a devolved infrastructure investment fund, building on our local commitments, could significantly impact addressing these challenges and support the UK government's wider growth ambitions.

2. Response to Questions

Overall Approach

1. How should the UK government identify the most important subsectors for delivering our objectives?

The Green Paper describes a '*multi-indicator assessment*' as the basis for identifying UK subsector strengths. This is defined around *'output growth'*; *'productivity'*; and *'international position'*. Although not stated, our assumption is that these indicators have been populated with historic data. There is a risk that the approach identifies sectors/sub-sectors that have been important (rather than those that are emerging).

In this context and as defined, 'productivity' may be a blunt measure. The Green Paper refers (page 19) to '*opportunities to boost national productivity'* – which is different from a headline measure of productivity (i.e. the former is about potential change whilst the latter relates to current performance). It is unclear how this assessment has been completed. **High productivity sectors may not provide the greatest opportunity to boost productivity further – and it may well be the case that improvements in low productivity sectors could have the greatest overall effect**.

In our view, **UK government should avoid being overly prescriptive in its approach to identifying sub-sectors**. This is because sectors (and sub-sectors) – and certainly those that are driving innovation – increasingly defy meaningful definition, and the factors that link them are often tacit and intangible. **In Hertfordshire, we are seeing increasing evidence of convergence across technologies and sectors (e.g. digital and life sciences), and this process is likely to accelerate looking ahead**.

'Organised' sectors may define themselves, sometimes through organisations that were set up for that purpose. However, definition and promotion can become ends in themselves – and legibility and visibility should not be conflated with 'most important'. **The 'loudest' sectors or sub-sectors are not necessarily the most significant in economic terms, or the most important in delivering the government's objectives**. This is true of whole sectors/industries and also in relation to place-based 'clusters' which self-define, sometimes with endorsement from government and its agencies. **The risk is that visibility correlates more with partnership resources than with economic potential**.

In addition, we would argue that **account ought to be taken of supply chains** – both those that exist and those that could exist with appropriate nurturing and support. For example, Hertfordshire's Domestic Energy Efficiency supply chain market is valued at approximately £1.2 billion and is forecast to experience substantial growth, with projections estimating its value to reach £36 billion by 2030, indicating a robust employment landscape tied to net zero and energy efficiency initiatives.

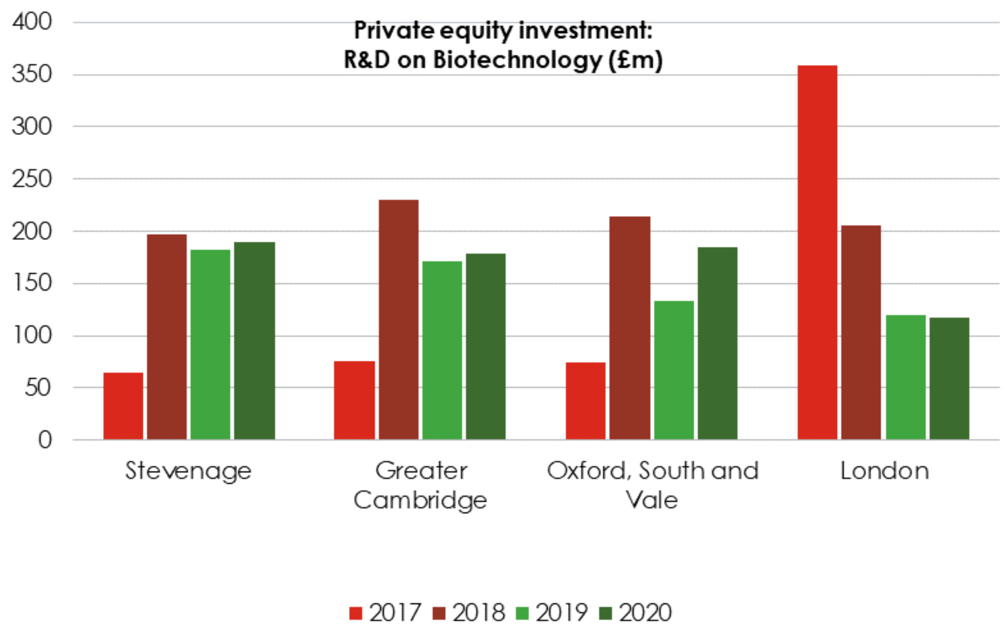
2. How should the UK government account for emerging sectors and technologies for which conventional data sources are less appropriate?

It is really important that UK government has regard for emerging sectors and technologies. We welcome government's recognition of this point – but also note the challenges.

In response, UK government should have regard to what we might describe as '*leading indicators*'. In other words, there is a need to consider evidence of what may be about to happen. This would mean, for example, considering patterns of early stage equity investment; patents; and spin-outs. Attention ought also to be given to private sector developers and where investment appears to be '*crowding in*'. Finally, it will be important to have regard to international perspectives, noting the overall scale of ambition and the (actual or potential) strength of the UK in this context.

In Hertfordshire, we have seen all three processes at work in the context of cell and gene therapy in and around Stevenage. Significant early stage investment (as the chart below demonstrates) has precipitated developer interest, and attracted international attention. This signals the enormous long term potential that exists – even if investment is volatile year on year and if large scale job creation is some way into the future. We would encourage UK government to recognise this in full.

Figure 2-1: Equity investment in biotechnology



Source: Data from Beauhurst

3. How should the UK government incorporate foundational sectors and value chains into this analysis?

In our view, it is essential that UK government has regard to supply chains (or value chains). This is because they are critical to both innovation and value creation; and they tend to account for the majority of jobs. Further, supply chains are critical in terms of resilience – particularly in an era of increased geopolitical uncertainty, volatility and risk, and with the real prospect of more frequent 'black swan' events.

Foundational sectors are possibly different – although much depends on their definition (which is not clear in the Green Paper). If there are no buses between the Rothamsted Research and St Albans because bus drivers cannot be recruited, then the wider 'economic system' simply will not work (either well or at all) and economic potential will be lost. Similarly, in Hertfordshire there is enormous pressure in seeking to recruit a workforce to deliver health and social care, particularly given the affordability of housing (and noting that outside London, St Albans district is the least affordable nationally). There is a need to respond to issues of this nature if the economy of Hertfordshire is to thrive and to contribute meaningfully to the UK's wider growth agenda. The point here – and throughout our submission – is that there is a need for a system-level response: sectors will thrive only within local economies that 'work' in terms of labour markets, infrastructure, investment, networks and many other factors.

Within this context, housing delivery will need to be part of the solution, and the imperative must be to develop sustainable communities – including in relation to New Towns. Hertfordshire has much experience to bring to bear in this context, and it has the ambition for further development and change. The inference is that Local Growth Plans need to be linked meaningfully to the new Modern Industrial Strategy at a sub-national scale. Local Growth Plans will also need to be aligned to other key strategies at a local level – most especially Local Plans and Local Transport Plans.

The Green Paper recognises this in the context of major city-regions. However the link is absolutely critical for Hertfordshire. We would not therefore seek to define the foundational sectors in a top down manner; rather we suggest that the two processes are joined up through Local Growth Plans and resourced to function at a sub-national scale across the UK.

Growth-Driving Sectors

4. What are the most important subsectors and technologies that the UK government should focus on and why?

We agree that all eight of the sectors identified in the Green Paper are important. There are some definitional issues that will need to be resolved – e.g. the 'defence sector' is really a market, and in practice it is very closely related to advanced manufacturing and/or cyber security (which we assume is part of 'digital and technologies').

However we think the Green Paper omits some very important sub-sectors and technologies which we think should be added:

- Construction (including house building) will be critically important to the UK over the decades ahead. UK government will fail in relation to its housing delivery targets unless there is substantial innovation and investment in the sector. It will also fail in its commitments in respect of Net Zero carbon. Currently the sector is dominated by SMEs using very traditional methods and approaches, and there is an urgent need for change.

- Agritech / agriculture also has a pivotal role to play given the need to adapt to climate change and to improve food security.

5. What are the UK's strengths and capabilities in these subsectors?

Hertfordshire has significant strengths and capabilities in seven of the eight sectors/sub-sectors identified in the Green Paper (the exception being financial services).

In three of the eight, the strength of the county's capabilities is such that Hertfordshire Futures (previously Hertfordshire LEP) has already developed Action Plans and convened groups of businesses to oversee their implementation. These are:

- Life sciences: Hertfordshire has a world class cell and gene therapy cluster, centred on Stevenage, which was recognised as such in the *Life Sciences Vision* published by government in 2021[2]. Hertfordshire LEP investigated the growth of the cluster and published a report outlining its potential[3]. The narrative links scientific discovery and early stage commercialisation with the work of Stevenage Bioscience Catalyst and the Cell and Gene Therapy Catapult Manufacturing Innovation Centre. Increasingly, private sector investment has followed, including through the expansion of Autolus in Stevenage town centre and investment at the GSK site. Currently, this is the largest cluster of cell and gene therapy companies outside the US and the third largest in the world. Looking ahead, the potential for further growth is substantial. In addition, Hertfordshire has a strong life sciences sector more generally – GSK and Roche alone account for well over 4,000 jobs within the county.

- Creative industries: Hertfordshire is a major focus for film and TV production. It is home to Elstree Studios and BBC Studio Works Elstree, as well as Bovingdon Studios, OMA Studios, Warner Bros (at Leavesden) and Sky Studios. It generates significant output and its strengths are internationally recognised. The Action Plan that was developed played particular regard to the development of appropriate workforce skills – and investment has subsequently been secured. In addition, Hertfordshire has relevant research specialisms. For example, the Games and Visual Effects Research Laboratory (G+VERL) is a part of the University of Hertfordshire's Creative Economy Research Centre (CERC) – a multidisciplinary hub for research and business engagement in sectors across the creative industries including film and TV, the dynamics of virtual work, games and VFX, and local heritage[4].

- Advanced manufacturing / Defence: Hertfordshire is home to major research-intensive advanced manufacturing businesses, some of which are strongly embedded in the defence sector (e.g. MBDA, Airbus). Some significant investment has been secured and this could unlock further growth. For example, Airbus has been awarded a £3.9m UK Space Agency Grant to develop the Space Catalyst and has also secured the contract to build European space agency spacecrafts. Through the work of Hertfordshire Futures, an Action Plan has been developed for

[2] See Life Sciences Vision, page 48
[3] See hertfordshire-s-cell-and-gene-therapy-cluster-july-2021.pdf
[4] See East of England Science and Innovation Audit East of England - Innovation Region

Advanced Manufacturing. This is being delivered with an initial focus on upstream space, linking in with wider approaches to cluster development.

In addition, Hertfordshire has both strengths and capabilities, and substantial ambitions, in relation to four of the other sectors identified:

- Clean energy industries: This sector has many different elements. Hertfordshire is committed to low carbon goods and services. Although the sector tends to be less spatially concentrated than other priority sectors identified in the Green Paper (according to analysis by CBI/Data City in 2022), within Hertfordshire, we have undertaken an initial mapping exercise[5]. There are some major businesses within the county – such as RES, the world's largest independent renewable energy company. Overall the sector accounts for 12.4% of Hertfordshire's GDP (vs UK average of 11.4%). In 2021/22, it was worth £5.8bn and forecast sector sales are set to rise to £8.2bn by 2025/26, creating significant employment opportunities.

- In addition, in 2022, Johnson Matthey (JM) announced that it was building a £80 million gigafactory at its existing site in Royston (in North Hertfordshire), to scale up the manufacture of hydrogen fuel cell components[6]. This is very significant both for JM and for the UK as a whole. Within Hertfordshire, we regard this as part of our wider advanced manufacturing competence – but it is equally central to clean energy industries as defined within the Green Paper.

- Professional and business services: This sector is large and diffuse. It includes vast numbers of small and micro businesses and/or freelancers – and Hertfordshire is a hub in this context, particularly around St Albans. Hertfordshire is also home to major professional and business services companies: both PwC and KPMG have a significant presence on Clarendon Road in Watford (which is a growing focus for the sector) while LV= has long been established in Hitchin. Hertfordshire's labour market – and its proximity to London – are both significant in this context. However post-pandemic, the geography of professional and business services is changing, and Hertfordshire is in the vanguard. In towns like Watford, we recognise the full potential of professional and business services as a core part of our wider regeneration and reinvestment priorities.

- Digital and technologies: Hertfordshire has a strong profile in relation to the digital sector, defined broadly. Imagination Technologies – located at Kings Langley near Hemel Hempstead – is a case in point. In addition, the University of Hertfordshire has specialist expertise in the digital sectors. Its assets include the Smart Systems Laboratory, the Cyber Security Centre, the Machine Learning and Biocomputation Research Group, and the Optical Networks and Wireless Laboratory[7].

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[5] See Hertfordshire's Green Economy: Low Carbon Environmental Goods and Services Sector, Report by kMatrix Data Services, published July 2023 ttps://www.hertfordshirefutures.co.uk/media/ev3jqle5/low-carbon-environmental-goods-and-services-sector-lcegs-report-2023.pdf

[6] See Johnson Matthey announces new hydrogen gigafactory to accelerate the transition to a decarbonised transport economy | Johnson Matthey

[7] See East of England Science and Innovation Audit East of England - Innovation Region

- As noted above, we believe that two sectors should be added to the list set out in the Green Paper. Hertfordshire has world-class strengths and assets in relation to both:

- Construction (including house building) will be critically important to the UK over the decades ahead. UK government will fail in relation to its housing delivery targets unless there is substantial innovation and investment in the sector. It will also fail in relation to its obligations linked to Net Zero carbon unless the construction sector adopts different methods and approaches across the supply chain. Currently the sector is dominated by SMEs using very traditional methods and approaches, and there is an urgent need for change. Hertfordshire is home both to BRE and to some major construction firms (e.g. Willmott Dixon). It needs to deliver substantial numbers of homes, and it needs to do so sustainably. Potentially it could lead the way.

- Agritech / agriculture also has a pivotal role to play given the need to adapt to climate change and to improve food security. Through Rothamsted Research, Hertfordshire has world class assets and expertise. With inputs from Hertfordshire LEP (now Hertfordshire Futures) and others, the commercialisation journey has been significantly supported (e.g. through investment in the Daniel Hall Innovation Centre and links to Herts IQ Enterprise Zone). There is far more that could be done. Although now in need of updating, significant detail was provided in the East of England Science and Innovation Audit, and we would urge UK government to take account of it[8].

6. What are the key enablers and barriers to growth in these subsectors and how could the UK government address them?

As noted above, Hertfordshire Futures (previously Hertfordshire LEP) has identified a series of sector action plans – for life sciences (focused on cell and gene therapy)[9], film and TV production[10] and advanced manufacturing.

The key barriers and enablers vary by sector/sub-sector. Broadly, however, we would note the following:

- The regulatory and fiscal environment is very important in some of Hertfordshire's key sectors and here, UK government obviously has a key role. In relation to film and TV production (part of the creative industries), Film Tax Relief and High-End TV Tax Relief have been extremely important (noting that they are being replaced by the Audio-Visual Expenditure Credit). More generally, R&D tax credits are critical across the board, and they need to be retained in the context of fierce global competition (and we are seeing that in life sciences in particular).

- Separately we would observe that business rates are also having a major impact on some of our key sectors; for example, we have seen this bite particularly in relation to investment in major studios. Again in the context of global competition, the business rates regime is an important consideration.

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[8] See EoE-SIA-SUMMARY-Final-25.09.17

[9] See https://www.hertfordshirefutures.co.uk/media/3dobfibp/life-sciences-sector-cell-and-gene-therapy-cluster-action-plan-v1-0.pdf

[10] See Version 1.0

- Across many of Hertfordshire's key sectors – most of which align with UK government priorities – workforce skills issues are an on-going concern. Some sectors (e.g. film and TV production) have very informal arrangements (based around networks of freelancers); others are better aligned with apprenticeships and degree-based learning systems (e.g. advanced manufacturing). But across the board, there is a challenge in retaining these skills in Hertfordshire, particularly when the price of housing is extremely high and London salaries (nearby) are very competitive. It will be important that the new Modern Industrial Strategy is fully aligned with both a comprehensive approach to workforce skills and a recognition of the importance of (and links to) housing delivery. In this context, UK government must work closely with local partners, and not just the Mayoral Combined Authorities.

- Another absolutely critical factor relates to the supply of employment land. In part through permitted development rights, Hertfordshire lost 7 million sq ft of commercial space (office and industrial) over the 10 years preceding the pandemic[11]. Although patterns of commercial land use have changed – particularly in relation to office space – we believe this presents a substantial challenge in seeking to grow our key sectors and clusters consistent with a Modern Industrial Strategy. There is a need, in particular, for grow-on space for early stage businesses, and for larger sites/premises that are appropriate for inward investment marketing, etc. While UK government might conclude that this is a matter for local partners and processes, a clear strategic steer from across Whitehall would certainly be helpful in reconciling demands at a local level. The needs of the key sectors identified in the Green Paper ought to be seen as a priority.

- Finally, we would comment on the need to align the activities and spend of Innovate UK with priorities identified at a local level, and not simply in the MCAs. Hertfordshire has very clear growth ambitions defined in relation to sectors that are national priorities, and we ought to be working in partnership with Innovate UK to unlock and animate investment and innovation at a local level. Much has been achieved through investment in the Cell and Gene Therapy Catapult Manufacturing Innovation Centre in Stevenage, and more could follow through ventures of this type. However apart from a handful of corporates, Hertfordshire businesses are not strongly engaged with Innovate UK or its associated funding programmes.

Creating a Pro-Business Environment

7. What are the most significant barriers to investment? Do they vary across the growth-driving sectors? What evidence can you share to illustrate this?

The Green Paper notes a need for both cross-cutting and sector-specific responses, with which we concur.

Specific barriers to investment vary across growth-driving sectors. However they invariably also need to be understood at a 'whole system' level. This has both local (place-based) and national dimensions, and both elements are critical, usually in combination.

[11] See loss-of-employment-space-in-hertfordshire-february-2019.pdf

The associated issues are explored in some detail in a recent report for UKRI[12]. We regard this as a core part of the evidence base – in Hertfordshire and more generally – and full account should be taken of it. Numerous different examples could be cited in Hertfordshire from across our key growth-driving sectors. Often the 'barriers' may appear rather mundane – but they are barriers nonetheless and they need to be understood in relation to the whole system.

For example, the growth of the cell and gene therapy cluster in and around Stevenage was reliant, in the first instance, on the whole system – including (at the time) Technology Strategy Board, Department of Business, Innovation and Skills, East of England Development Agency, GSK and others – developing a business case for Stevenage Bioscience Catalyst (in c. 2008). This relied on a funding package that needed 'the system' to work together. Much more recently, investment in the Cell and Gene Therapy Catapult Manufacturing Innovation Centre has been critical to the continuing narrative. That investment decision would not have been made without Hertfordshire LEP Board's agreement to underwrite (through Local Growth Fund) improvements to a nearby roundabout (without which the Manufacturing Innovation Centre would not have gone ahead; and the cluster would not have developed in anything like its current form). **The commitment to invest in local infrastructure clearly was not sufficient to create a world-leading cluster, but it was absolutely necessary – and that is why we believe a 'whole system' approach is essential.**

Across the piece, **labour market and skills issues** are a barrier to investment, particularly in a high cost location like Hertfordshire. Our key growth-driving sectors have a global footprint and they often rely on labour which is internationally mobile. **A flexible and accommodating approach to international migration will be critical in sustaining future growth.**

In many growth-driving sectors, recruitment is very difficult and retention is challenging. **All three of our sector panels have reported these issues (in life sciences, film and TV production and advanced manufacturing).** Building on ventures like the Hertfordshire Opportunity Portal (HOP), there is a need to make stronger links between schools/curricula and the opportunities in growth sectors (including through careers advice); to structure apprenticeships appropriately; and to make far more provision for re-training mid-career (as job opportunities change). Across the board – and of relevance to all our growth sectors – there is a need for better digital skills.

Business rates are having a major impact on investment in some of our key sectors; for example, we have seen this bite particularly in relation to investment in major studios. In the context of global competition, the business rates regime is an important barrier to investment and growth.

Finally, we would comment again on the **need for an appropriate supply of employment land**. Critical moments in Hertfordshire's economic history can be traced to the availability of sites – e.g. the investment by Warner Bros at Leavesden Aerodrome site and by GSK at a large site on Gunnels Wood Road in Stevenage. **Currently there is a deficit of major sites that are appropriate for inward investment. There is huge pressure on employment land in the context of even greater pressure for housing delivery. Local Planning Authorities are under-resourced and under pressure, and there needs to be far stronger links between planning processes and national priorities for the new Modern Industrial Strategy.** We

[12] [Research and Innovation (R&I) and Place]

would like to see incentives for Local Planning Authorities in seeking to deliver employment land; this should be recognised as a priority alongside the delivery of housing.

In delivering the Modern Industrial Strategy, Local Growth Plans will need to be aligned to key strategies at a local level – most especially Local Plans and Local Transport Plans.

People and Skills

8. Where you identified barriers in response to Question 7 which relate to people and skills (including issues such as delivery of employment support, careers, and skills provision), what UK government policy solutions could best address these?

As outlined in response to Q7, we would welcome more flexibility in respect to policies surrounding international migration which are better aligned with the needs of our key growth sectors. We need to continue to attract the best global talent. Therefore it will be important to protect migrant visas to ensure sectors such as life sciences are not affected. This will also be very important in relation to the higher education sector within Hertfordshire.

Government policy relating to skills and employment support is often confusing. Where it is delivered by different government departments, it is often not aligned, adding to the confusion of both intended beneficiaries and businesses.

For example, within Hertfordshire over the last year, funding has been secured from at least six different government departments to support skills programmes (including DESNZ, DBT, DCMS, DfE, DWP and MHCLG). While these initiatives are welcomed, the short-term nature of recent funding streams and differing priorities of the government departments result in a fragmented skills service. Our employers and residents do not know which initiative would suit their needs most effectively. It is well documented that skills participation has declined significantly over the past 10 years, particularly in relation to adult provision. The East of England (including Hertfordshire) has the lowest participation rate of all regions.

We welcome the creation of Skills England, with its commitment to working closely with local government and businesses. There is an opportunity now to ensure that all skills, employment and careers policies driven centrally through government departments are 'approved' through Skills England to ensure nationwide alignment of funding and programmes and that there is no duplication of provision.

Nevertheless, greater responsibility for the delivery of a range of government policies and associated programmes at a local level would enable greater flexibilities. This would allow us to meet business demands in relation to accessing a skilled workforce. It would also enable greater alignment of support to move residents from being economically inactive towards being active in the labour market, and supporting the continued growth of the local economy. At a Hertfordshire level, we are seeing evidence of increasing economic inactivity coupled with high levels of unfilled vacancies. This means that the labour market continues to be tight.

It is recognised that devolution is a priority for UK government. Where deals have been agreed (such as Greater London Authority and Cambridgeshire and Peterborough MCA), local flexibilities in relation to the delivery of the Adult Education Budget appear to have increased participation in training. Looking ahead, it will be important to avoid the creation of a two-tier skills system (i.e. MCAs and 'the rest'). Within Hertfordshire, there will be a need for some co-ordination locally. The process of developing a Local Growth Plan could make a key contribution. This should be recognised across the board (and certainly in areas like Hertfordshire). It is not just a matter for MCAs.

9. What more could be done to achieve a step change in employer investment in training in the growth-driving sectors?

Across Hertfordshire, we have observed that the level of employer investment in training differs greatly depending on sector, size of business, regulatory requirements and other factors.

In most cases, **larger 'corporate' businesses** do invest in upskilling their workforce. Most of these employers are levy payers. **A more flexible approach to levy use will encourage even greater investment particularly if there are to be greater restrictions with regards the use of the levy for certain apprenticeship frameworks**, i.e. those at Level 7.

For **SME and micro businesses**, the situation is different. Whilst some may invest in upskilling their workforce, the majority do not. Local research has identified barriers to investment. This research includes for example the evidence underpinning the Hertfordshire Skills and Employment Strategy (plus the Adult Skills Strategy, Apprenticeship Strategy, and Local Skills Improvement Plan (LSIP)). These barriers include: lack of time to identify both the upskilling need and appropriate solutions; access to available funding to encourage further investment in skills training; confusion with regards to both sources of funding and appropriate provision to meet identified needs; the dearth of solutions that are flexible enough in content and delivery to meet businesses' operational needs, etc.

Previous approaches driven from the centre have not always been effective in Hertfordshire. As mentioned in response to Q8 above, **greater responsibility and control at a local level of key government policies and associated programmes/funding would bring real benefits.** Specifically, it would enable alignment of programmes and therefore greater flexibilities to meet the needs of businesses at a local level.

We welcome the introduction of the **Growth and Skills Levy** to ensure greater flexibility for funding across our apprenticeship and skills system. Funds raised by the apprenticeship levy should be devolved to local areas. This would ensure more flexibility and less bureaucracy. It should also mean that small employers could access levy funds. Flexibilities within the Adult Skills Fund and the introduction of programmes such as bootcamps has enabled local delivery of shorter skills programmes directly linked to our growth sectors. Additional support to learners to help them secure employment, progression in the workplace and new contracts. We would hope that the Growth and Skills Levy provides flexibility of funding to allow providers to deliver the *skills* that are really needed alongside *qualifications*.

Hertfordshire has a strong footprint in at least seven of the eight key sectors listed in the Green Paper. Across all of these, there is a need to upskill existing and future workforce across a range of skill levels – and throughout the associated supply chains. A strong local partnership approach is required in order

to work with the key employers, their supply chains, local skills delivery partners and employment support providers. This in turn will ensure an aligned approach to meeting the local skills needs.

In addition, and particularly in relation to SMEs, access to a local skills & employment support service will be important. Previously, this was a significant skills policy focus supported by central government. However, in recent years, it has not been supported or funded. We believe this is one reason for both dwindling participation rates in adult skills and reduced investment in skills by employers.

Innovation

10. Where you identified barriers in response to Question 7 which relate to RDI and technology adoption and diffusion, what UK government policy solutions could best address these?

We would like to see more – and more consistent – support for knowledge exchange processes and programmes at a local level.

Although there were few direct beneficiaries in Hertfordshire, our observation was that the Strength in Places Fund and Connecting Capability Fund programmes both appeared to be effective.

Partners in Hertfordshire applied for SiPF funding. Our bid was unsuccessful. However we benefitted from the process nonetheless – the process of bidding helped to strengthen relationships and to develop and test intervention rationales. This meant, in the end, that through the persistence and creativity of key partners, alternative funding solutions were found and our project largely progressed. Whilst unsuccessful bids can be dismissed as a waste of time, our experience was different – and arguably SiPF did play a role in animating cluster partners. That said, there are only so many times that partners will commit fully to a bidding process if the prospect of success appears very remote.

11. What are the barriers to R&D commercialisation that the UK government should be considering?

The 'Valley of Death' (i.e. the funding gap after early development phases to enable progress towards commercialisation and scale-up) continues to be an issue, and funding solutions ought to be developed.

In more general terms, we are keen to see more intervention on the demand side. We would like to like to see the public sector – locally and nationally – play more of a role through its procurement activities. The risk aversion that is implicit within procurement processes – together with the growing burden on those involved in tendering processes – is stifling innovation and creativity, and this links directly to commercialisation.

Specifically in Hertfordshire, barriers to R&D commercialisation include, *inter alia,* the availability of next steps/grow on space. As Hertfordshire LEP, we invested in the modular Spark Building, close to the Cell and Gene Therapy Catapult Manufacturing Innovation Centre. This was a temporary solution, but it has been fully occupied by research intensive businesses looking for space, and we believe there is demand for more. The effectiveness of the Spark Building (which originally had a three-year lifespan, but now has a lifespan of ten) demonstrates the steps that have been taken in Hertfordshire to respond flexibly and quickly to accommodate the changing needs of our key growth sectors. More generally, we have sought to meet fast-changing demands by converting existing premises to meet emerging and changing needs – and there is scope to do more.

Data in the Industrial Strategy

12. How can the UK government best use data to support the delivery of the Industrial Strategy?

Data – and the digital science that unlocks those data – are increasingly important within Hertfordshire's growth sectors. We are seeing, for example, significant convergence between digital science and life sciences.

UK government can support this process by increasing the supply of digital skills – at all levels, from basic to advanced – and working with providers to ensure there is a high quality digital infrastructure across and beyond Hertfordshire.

We think that the use of data held by government needs to be used more effectively – whilst also noting the restrictions linked to GDPR, etc. Specifically, more effective data sharing between DfE and DWP could be transformative in encouraging more economically inactive people to (re-)engage effectively in the labour market. Data sharing across Integrated Care Boards should also be considered; sharing patient notes could save time and resource across care practitioners.

13. What challenges or barriers to sharing or accessing data could the UK government remove to help improve business operations and decision making?

UK government could help improve business operations and decision making by increasing the supply of digital skills – at all levels, from basic to advanced – and working with providers to ensure there is a high quality digital infrastructure across and beyond Hertfordshire.

Energy and infrastructure

14. Where you identified barriers in response to Question 7 which relate to planning, infrastructure, and transport, what UK government policy solutions could best address these in addition to existing reforms? How can this best support regional growth?

Issues relating to planning, infrastructure and transport are major concerns in relation to Hertfordshire's growth sectors.

As mentioned already, relatively small scale infrastructure investments have demonstrably unlocked the growth of key clusters within the county (see our response to Q7). Interventions of this nature need to be identified and addressed at a local level, and local partners need the wherewithal to respond. In the case of the roundabout at the entrance to the GSK site (see Q7), it was absolutely critical that

Hertfordshire LEP had immediate access to flexible resources from Local Growth Fund to underwrite the associated risk; without this, the whole sequence of events that led to the Catapult's investment and substantially accelerated the growth of the cell and gene therapy cluster simply could not have happened. The key point here is that Hertfordshire needs to continue to have access to resources of this nature – despite the fact that it is does not currently have a Mayoral Combined Authority. UK government needs to avoid conflating judgements on cluster potential at a local level with decisions in relation to resource allocation linked to local governance.

In addition, we would like to see support from UK government for measures to encourage east-west movement in Hertfordshire. Economic flows are dominated by north-south routes (M1, A1(m), A10/M11, plus East Coast Mainline, Midlands Mainline and West Coast Mainline). Without exception, these are major radial routes from London – but they are also the core of Hertfordshire's transport infrastructure. We want to make much more of the A505 Corridor (between Luton and Cambridge) and the A414 Corridor (from Hemel Hempstead, home of Herts IQ (our Enterprise Zone), through to Stansted Airport and beyond), through the Hertfordshire Essex Rapid Transport (HERT) proposal. We believe better east-west connectivity will accelerate cluster growth. We also believe it will result in more sustainable growth. By linking the framework for (and investment in) local transport policy to cluster growth, UK government could make a substantial contribution.

More generally, accelerated housing delivery would be helpful – particularly along the A505 and A414 Growth Corridors. Government policy is, in principle, therefore aligned with local needs and opportunities – albeit its implementation needs to be appropriately and fully resourced.

Finally, it will be important to align planning policy with energy generation and grid infrastructure to enable clean growth and development. This will become increasingly important as businesses report on their scope 1 and 2 emissions so they will need access to green energy supply.

15. How can investment into infrastructure support the Industrial Strategy? What can the UK government do to better support this and facilitate co-investment? How does this differ across infrastructure classes?

Economic stability and certainty are, in our experience, critical; conversely, 'stop-start' messaging around key infrastructure investments are profoundly unhelpful.

In general terms, we would like to see infrastructure priorities defined with reference to sectors with significant growth potential, and their spatial footprints; this could be transformative. As noted in response to Q14, in Hertfordshire, significant investment in east-west connectivity would enable our key sectors to grow whilst also supporting accelerated housing delivery.

At a more local scale, Hertfordshire's growth map is characterised by large numbers of relatively small schemes – reflecting in part the area's polycentricity and the absence of a 'core city' within the county. This means that individual schemes are often too small to activate triggers to instigate infrastructure investment through planning gain. This is very problematic in Hertfordshire. Moreover, many developments rely on releasing plots to fund future infrastructure. This inability to forward fund infrastructure creates uncertainty and is frustrating for local communities. We would welcome the opportunity to work with UK government to formulate appropriate responses, including impact funding that forward-funds infrastructure through loan arrangements.

Figure 2-2: Planned housing growth in Hertfordshire

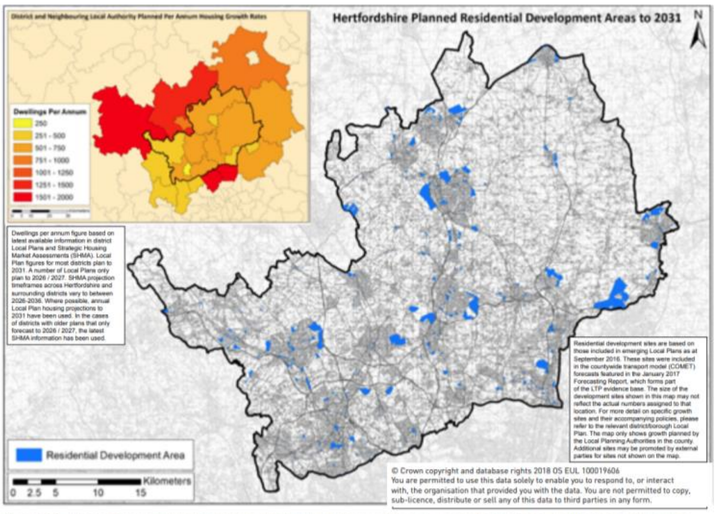


Figure 3.2: Planned residential development in Hertfordshire, and housing growth levels in neighbouring authorities

Energy

16. What are the barriers to competitive industrial activity and increased electrification, beyond those set out in response to the UK government's recent Call for Evidence on industrial electrification?

We understand from larger developers that power supply in Hertfordshire is usually the greatest constraint after securing planning permission. The wait for power supply to a new development can be five years. Often this will make schemes commercially non-viable and/or it will prevent the developer from responding to current demand.

The issues are acute in Hertfordshire – particularly given the use of EVs and the proliferation of data centres (each of which has power needs equivalent to a town). Our view is that the national grid simply does not have enough power for the increased use of EVs and we will struggle to satisfy client demands in the coming years unless some major nationwide changes are made.

We are seeing issues around power supply affecting our major growth sectors, including those that are aligned with the priorities set out in the Green Paper. In film and TV production, for example, there is increasing use of EVs by production crews and there is also much more use of electric trucks to move equipment. This is a critical part of the sector's response to sustainability imperatives, yet it means issues surrounding power supply are becoming acute and a very real growth constraint.

Hertfordshire welcomes the Local Area Energy Plans (LAEP) approach.

17. What examples of international best practice to support businesses on energy, for example Purchase Power Agreements, would you recommend to increase investment and growth?

We are not experts in this matter.

Regulatory environment

18. Where you identified barriers in response to Question 7 which relate to competition, what evidence can you share to illustrate their impact and what solutions could best address them?

We are not experts in this matter.

19. How can regulatory and competition institutions best drive market dynamism to boost economic activity and growth?

We are not experts in this matter.

20. Do you have suggestions on where regulation can be reformed or introduced to encourage growth and innovation, including addressing any barriers you identified in Question 7?

We are not experts in this matter.

Crowding in investment

21. What are the main factors that influence businesses' investment decisions? Do these differ for the growth-driving sectors and based on the nature of the investment (e.g. buildings, machinery & equipment, vehicles, software, RDI, workforce skills) and types of firms (large, small, domestic, international, across different regions)?

In our experience, there is a host of different factors at work. The macro-economic and political environment is certainly one consideration – and 'higher for longer' interest rate, coupled with rising employers' NICs will both have an adverse impact in the short term. Over a longer timescale, it is possible that higher employers' NICs will prompt capital intensification, particularly if interest rates start to decline.

In addition to these general points, we make some observations which are specific to growth-driving sectors in Hertfordshire:

- In Life Sciences – and specifically within the cell and gene therapy cluster – we have observed reluctance on the part of early stage businesses to invest in sites and property. Businesses of this nature are heavily research intensive, often with substantial equity investment, and they are evolving quickly; in relation to their business model, they need immediate property solutions. In this context, there is a clear intervention rationale for local partners and, potentially, government (through relevant funding streams); we can point to examples of Local Growth Fund being deployed with great effect in precisely this context. The modular Spark Building (discussed in response to Q11) is a case in point.

- The film and TV production sector is fundamentally 'project based' – which means there is very limited incentive to invest for the long term (other than in relation to the major studios). This has major implications for the sector. It means, for example, that there are substantial market failures linked to investment in workforce skills (reflecting high levels of dependence on a freelance model).

- The advanced manufacturing sector is different. Within Hertfordshire, we have observed some very significant investment, particularly in the corporate sector. Johnson Matthey, at Royston (in the north of the county) has announced that it will invest in a £80 million gigafactory at its existing site in Royston (in North Hertfordshire), to scale up the manufacture of hydrogen fuel cell components[13], and Airbus (Stevenage) has also redeveloped its site. In both cases, investment has come with significant corporate backing, and in the context of businesses which are multi-national. The inference is that Hertfordshire is seen as a strong business location – which UK government should recognise and support.

22. What are the main barriers faced by companies who are seeking finance to scale up in the UK or by investors who are seeking to deploy capital, and do those barriers vary for the growth-driving sectors? How can addressing these barriers enable more global players in the UK?

The short termism of financial institutions in the UK is a continuing issue.

We would like to see meaningful investment funds at a local level aligned with a local variant of an Economic / Modern Industrial Strategy (which itself must be aligned with a Local Growth Plan for Hertfordshire). Looking ahead, the existence of a Mayoral Combined Authority should not be a prerequisite for a devolved investment fund. Our concern is that conflating the two issues will be a mistake. Hertfordshire has a substantial contribution to make – both in terms of the asset base within the county and also the overall scale of growth ambition. It needs the wherewithal to unlock investment from the private sector. We would like to work with UK government – and potentially through the National Wealth Fund – to develop co-investment models of this nature.

[13] See Johnson Matthey announces new hydrogen gigafactory to accelerate the transition to a decarbonised transport economy | Johnson Matthey

23. The UK government currently seeks to support growth through a range of financial instruments including grants, loans, guarantees and equity. Are there additional instruments of which you have experience in other jurisdictions, which could encourage strategic investment?

We are encouraged by recent Government announcements exploring a defined proportion of Local Government pension schemes being invested in local areas. We would also wish for all areas to have access to retained business rate (growth) income which is currently only available to MCAs.

International Partnerships and Trade

24. How can international partnerships (government-to-government or government-to-business) support the Industrial Strategy?

We are not experts in this matter.

25. Which international markets do you see as the greatest opportunity for the growth-driving sectors and how does it differ by sector?

In our major growth-driving sectors, the north American market is extremely important. Boston is seen as the global hub for life sciences in general and many of our early stage life sciences businesses have links to it. Similarly, film and TV production has very strong links to north America. Europe is also very important – as a source of expertise and also capital.

Hertfordshire performs strongly in relation to inward investment. The Department for International Trade (DIT) classified the area around Stevenage as a High Potential Opportunity (HPO) zone in recognition of its thriving cell and gene therapy cluster. HPO status denoted specific commercial opportunities to potential overseas investors, which are packaged into a compelling commercial proposition for promotion through DIT's global network. Looking ahead, it would be better placed to convert interest with a stronger pipeline of appropriate sites. As noted already, the lack of high quality employment sites is a constraint to growth.

Place

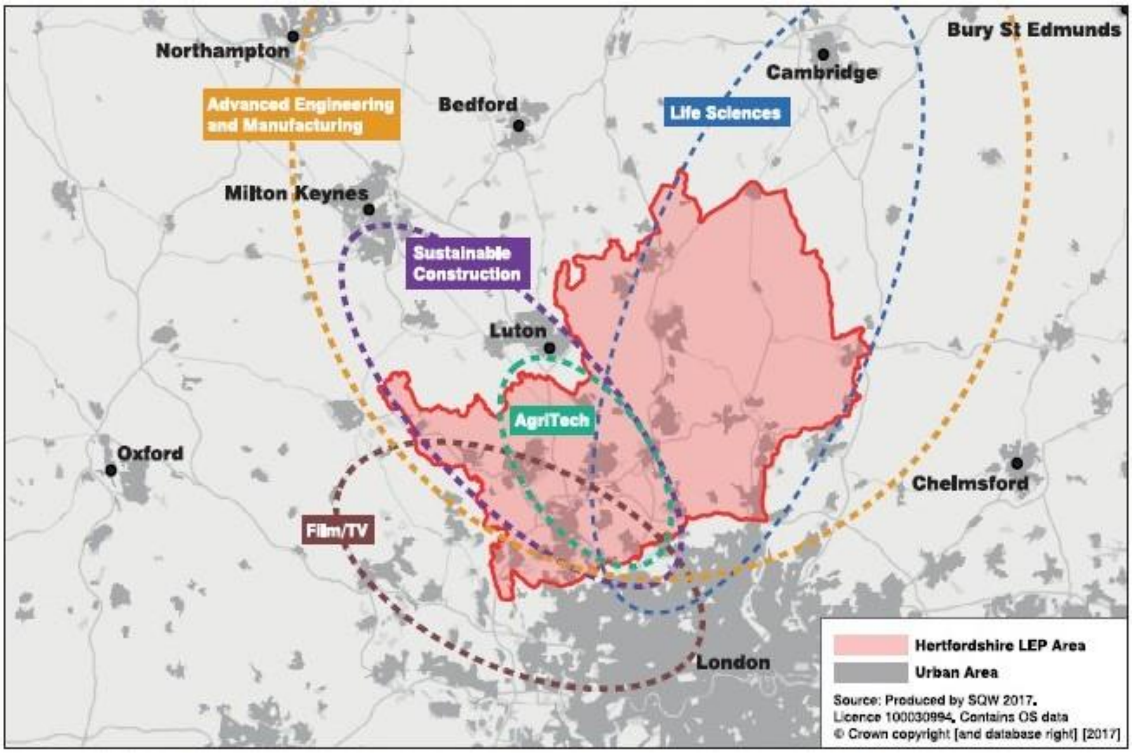
26. Do you agree with this characterisation of clusters? Are there any additional characteristics of dimensions of cluster definition and strength we should consider, such as the difference between services clusters and manufacturing clusters?

The approach set out in the Green Paper is extremely broad. Whilst we agree that there should be flexibility, the risk is that it is so broad that it loses traction. To mitigate that risk, it might be helpful if government provided a clear statement explaining '*what a cluster is not*'.

In our view, clusters are about processes – the essence of a cluster is a verb, not a noun, and it is linked fundamentally to risk. In other words, the focus ought to be active forms of value creation, knowledge development and innovation; and the flows of people, knowledge and investment that can facilitate all this. Those flows need to be supported and blockages need to be removed – and it is in this context that investment infrastructure needs to be considered.

Given the emphasis on *process*, we would also observe that administrative boundaries should not be allowed to define cluster boundaries. Hertfordshire is an administrative area (with an upper tier county council and ten district/borough councils), yet we have long worked across functional economic space. We have developed a map of key sector footprints. This relates, fundamentally, to labour markets and supply chains, and also flows of both knowledge and capital. Over the last decade, we have made much use of this map and we think it should be reflected in a Modern Industrial Strategy. We also think interventions from UK government should work 'with the grain' of the functional map.

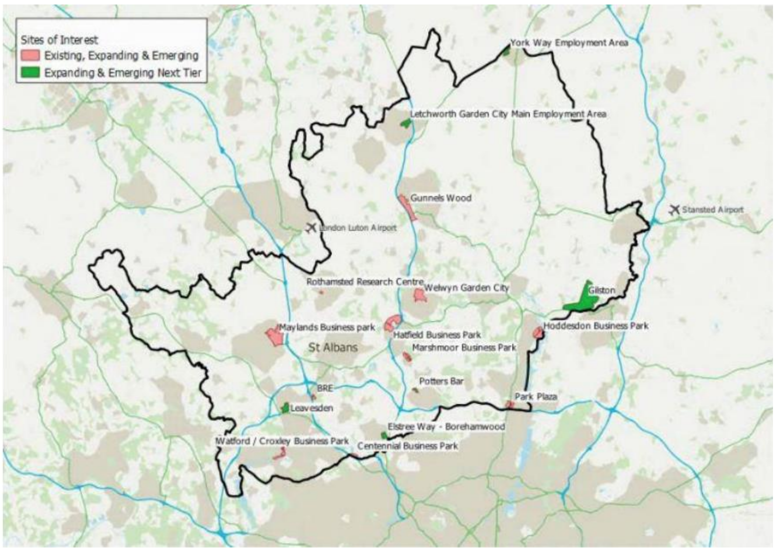
Figure 2: Understanding the spatial footprints of key growth sectors in Hertfordshire



27. What public and private sector interventions are needed to make strategic industrial sites 'investment-ready'? How should we determine which sites across the UK are most critical for unlocking this investment?

Within Hertfordshire, there is a small number of key sites that really need to be part of our response to a Modern Industrial Strategy. These include: Gunnels Wood Road (Stevenage) (currently the focus of a masterplanning exercise); Maylands Business Park (Hemel Hempstead) (which includes Herts IQ); SEGRO Logistics Park (Radlett); Hatfield Business Park; Watford/Croxley Business Park; York Way (Royston); Hoddesdon Business Park; Park Plaza (Broxbourne); Leavesden (Watford); and Gilston (Harlow).

Figure 2-3: Major employment sites



In addition, there are various other sites which are at an earlier stage of development but – in time – should also be part of the area's economic infrastructure. One important example is land north and east of Baldock, owned by Hertfordshire County Council. As well as housing, this could eventually deliver 600,000 sq ft of new employment space. It will be critical that this is used well, and aligned with the sectors that are both strong in Hertfordshire and flagged within the Modern Industrial Strategy Green Paper.

Across these sites, investments of different forms are needed to extract maximum economic potential and impact. These include investment in transport infrastructure (e.g. linked to Maylands/Herts IQ); investment in site assembly (e.g. Gunnels Wood Road); and investment in utilities, energy and water. Longer term sites need to see the range of feasibility and viability work to be completed – all of which is expensive and takes time, yet is critical.

We also believe that there is scope to create a Hertfordshire Investment Fund to encourage new investment by providing a flexible approach to funding, especially where there is market failure. This would be loan funding and could be used to forward-fund infrastructure so that it is in place before development starts.

In terms of determining which sites should be prioritised, we would encourage UK government to consider the economic potential, particularly vis-à-vis major growth corridors. We consider that Hertfordshire offers huge potential in this context, both in the short term (e.g. Maylands) and looking further ahead (e.g. Baldock).

28. How should the Industrial Strategy accelerate growth in city regions and clusters of growth sectors across the UK through Local Growth Plans and other policy mechanisms?

Although it will depend on how exactly they are defined by UK government, we believe that Local Growth Plans could make a substantial contribution to the delivery of the new Modern Industrial Strategy. This will require Local Growth Plans to be relatively long term in timescale; to have a formative and strong business input; to respect functional economic geographies of different forms (not just city-regions); and to relate, meaningfully, to all areas with major growth potential, not simply the MCAs.

The Strategic Economic Plan that was first developed in Hertfordshire in 2013 has many of these characteristics and it has been extremely important. It was not simply an inventory of project possibilities linked to Local Growth Fund (which was certainly the case elsewhere). Instead, we took a much broader view, focusing on the possibility of using our science-based assets in the context of major growth corridors. Over the last decade, substantial progress has been made. LGF played its part – and we used it to unlock substantial private sector investment. Moreover companies like GSK, Airbus and Warner Bros have been at the heart of the journey, and the business-led Board played a key role.

This approach has been highly effective. We believe that more could be achieved through it and that it might be regarded as a blue print for an effective Local Growth Plan. The key point about it is that it has been focused system-wide. It was underpinned by a deep understanding of sector/cluster dynamics, and a commitment to address related infrastructure challenges and invest in workforce skills to support and unlock sustained high value growth. Focusing on the interconnections was what set out approach apart, and investment followed – from both the private sector and public sector.

For example, investment in the Cell and Gene Therapy Catapult Manufacturing Innovation Centre has been critical to the growth of the cell and gene therapy cluster. That investment decision would not have been made without Hertfordshire LEP Board's agreement to underwrite (through Local Growth Fund) improvements to a nearby roundabout (without which the Manufacturing Innovation Centre would not have gone ahead; and the cluster would not have developed in anything like its current form). The willingness to underwrite local infrastructure clearly was not sufficient to create a world-leading cluster, but it was absolutely necessary. That is why we believe a 'whole system' approach is essential – and we think it should be engineered into the design of Local Growth Plans.

Finally, we would note that Local Growth Plans – and funding to support their delivery – should not be held back by processes of reform to local governance. In Hertfordshire, we believe there are significant growth opportunities. In response, we are seeking to create a local investment fund to accelerate economic growth, working closely with investors and developers. We would like UK government to recognise this, and to invest further in it, so that potential opportunities are realised fully.

29. How should the Industrial Strategy align with devolved government economic strategies and support the sectoral strengths of Scotland, Wales, and Northern Ireland?

We are not experts in this matter.

Partnerships and institutions

30. How can the Industrial Strategy Council best support the UK government to deliver and monitor the Industrial Strategy?

We think the new Industrial Strategy Council could play a key role – but it is very important that it has real 'teeth'. Whilst not superseding democratic processes, it needs to be capable of holding UK government to account – and across all departments, not simply those with a clear and obvious stake in a Modern Industrial Strategy. We think the most effective way of achieving this is through a programme of 'enquiries'.

There are parallels with the sector groups that we have convened in Hertfordshire (focused on life sciences, film and TV production, and (although still embryonic) advanced manufacturing). These function on a 'select committee' model. This means that they are not involved in day-to-day detail, but they do ask questions and seek answers from across the public and quasi-public sector, both those that are 'of Hertfordshire' and those that are defined in relation to UK government/agencies whilst playing a role in the county.

This means that the composition of the Industrial Strategy Council is important. It should involve individuals with real stature from across a range of sectors/clusters. The remit should be to represent the sector/cluster nationally – not to lobby for particular places.

However, it would be useful to have a meaningful (and independent) perspective on the extent to which the Modern Industrial Strategy is being delivered 'in places'. This might itself provide the focus for a set of 'enquiries'. Again, we would emphasise that it is not just the MCAs that matter. Hertfordshire has a critical role to play, and 'joining up' cross-government intervention will be all the more important in the context (we assume) of a 'thinner' devolution settlement. Again, we would urge UK government not to conflate these different strands. We would be pleased to work with UK government to consider progress in delivering the Modern Industrial Strategy in key growth locations that do not have an MCA.

31. How should the Industrial Strategy Council interact with key non-government institutions and organisations?

The Industrial Strategy Council should engage on a select committee model – defining specific issues for investigation and the inviting key individuals to appear, including some from key non-government institutions and organisations. Some of these 'enquiries' will focus on specific sectors/issues and some should focus on 'place' – but they will need to be conducted independently.

32. How can the UK government improve the interface between the Industrial Strategy Council and government, business, local leaders and trade unions?

As stated above, we believe that the Industrial Strategy Council needs to have 'teeth' and to have senior representation from key sectors and clusters. However it should not seek to be 'representative'. It should also retain a clear focus on the policy imperatives set out within the Modern Industrial Strategy White Paper, once this is published.

The Industrial Strategy Council needs a degree of independence. Its interface should therefore be relatively 'thin' and light touch – and we would see key publications playing a key role.

Annex: Theory of Change

33. How could the analytical framework (e.g. identifying intermediate outcomes) for the Industrial Strategy be strengthened?

Given the importance of the Modern Industrial Strategy, and some of the challenges linked to measurement, we would suggest that the analytical framework needs to be appropriately future facing. Most immediately, there is a need to consider evidence of what may be about to happen. This would mean, for example, considering patterns of early stage equity investment; patents; and spin-outs.

Beyond this, it will be important that the framework has regard to processes of change – particularly those linked to technology and those wrapped up with the changing international situation. The Modern Industrial Strategy is about the UK's position in the global economy, and this could change very quickly and unpredictably over the next decade – with a Trump administration, the possibility of new trade tariffs, the implications of climate change, and the full(er) implications of the revolution(s) associated with (for example) artificial intelligence and advanced therapeutics. Many of the jobs that will employ people in a decade do not yet exist – and the analytical framework underpinning the Modern Industrial Strategy needs to both anticipate and respond to these. The overall fluidity is going to be very challenging indeed in analytical terms.

In this context, a range of approaches will be needed to chart progress in relation to the Modern Industrial Strategy, and to take a view on its continuing applicability and relevance. This needs to include, *inter alia:* the use of new datasets and datasources, again with a focus on leading indicators (on the presumption that the science of data develops substantially and quickly); the use of foresighting and related methodologies; and the intelligent use of international perspectives and benchmarks (noting that comparing the UK to its past situation is much less useful than comparing the UK to other nations currently and prospectively).

34. What are the key risks and assumptions we should embed in the logical model underpinning the Theory of Change?

As set out in response to Q33, it will be imperative to recognise the sheer extent of risks and uncertainties which will underpin the Theory of Change. These take many forms, but the key ones are likely to be geo-political (Trump, tariffs, conflicts), environmental (e.g. extreme weather events, whether in the UK or internationally), technological (data, AI plus biologics), and social (e.g. expectations in relation to work, amongst both young people and older workers; and the pace of population ageing and the full implications that follow).

Across all of this, it will be important to have regard to international comparators: the UK cannot be understood in isolation, and the Modern Industrial Strategy is concerned with international competitiveness (acknowledging that this will take new and different forms, and involve different competitors from previously – less Germany and more India, for example).

35. How would you monitor and evaluate the Industrial Strategy, including metrics?

Monitoring and evaluating the Modern Industrial Strategy will be very challenging indeed. It will be extremely broad – and if it is to be effective, it needs to impact on most of the economy across every place in the UK. The scope therefore for control groups, comparator areas and experimental or quasi-experimental methods and approaches is likely to be limited. Econometric approaches might have a role to play, but even this is questionable given that we have had an Industrial Strategy in the recent past, and also that the context for delivery is both fluid and complex.

A more meaningful answer to this question can be provided from the perspective of Hertfordshire – as a major local economy in the south of England that has significant growth potential but is also facing constraints, and without (currently) a MCA or a devolution deal.

Key Performance Indicators linked to the Industrial Strategy could include:

- Supply and uptake of major employment sites and premises – recognising the need to reverse the loss of employment land over the last decade.

- Evidence of local supply chains and processes of clustering around key institutions/businesses within the county.

- Levels and patterns of interest from inward investors, including projects secured.

- Evidence linked to the strength of international trade – recognising that the Industrial Strategy needs to focus, fundamentally, on wealth creation.

- Evidence of better alignment between the supply of and demand for workforce skills, and across different age groups.

In addition, evidence on the *process* of clustering would be helpful. This needs to focus on issues like knowledge exchange, collaboration, labour market dynamics, access to finance and locational decisions in key sectors. These elements provide insights into processes of change – and they ought to say something about changing perspectives on risk within Hertfordshire's economy. The aim, overall, should be to mitigate and manage risk so that businesses can invest and thrive.

Finally, we would note that any and all monitoring and evaluation activity needs to have regard to the UK's international position. In this context, in-depth case studies and 'enquiries' – perhaps instigated by the Industrial Strategy Council – could bring important insights to bear. International comparisons are obviously difficult, but they can also be a key source of learning and that ought to be their principal purpose.

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