SEMLEP LOCAL INDUSTRIAL STRATEGY

POLICY THEMES AND PROPOSITIONS

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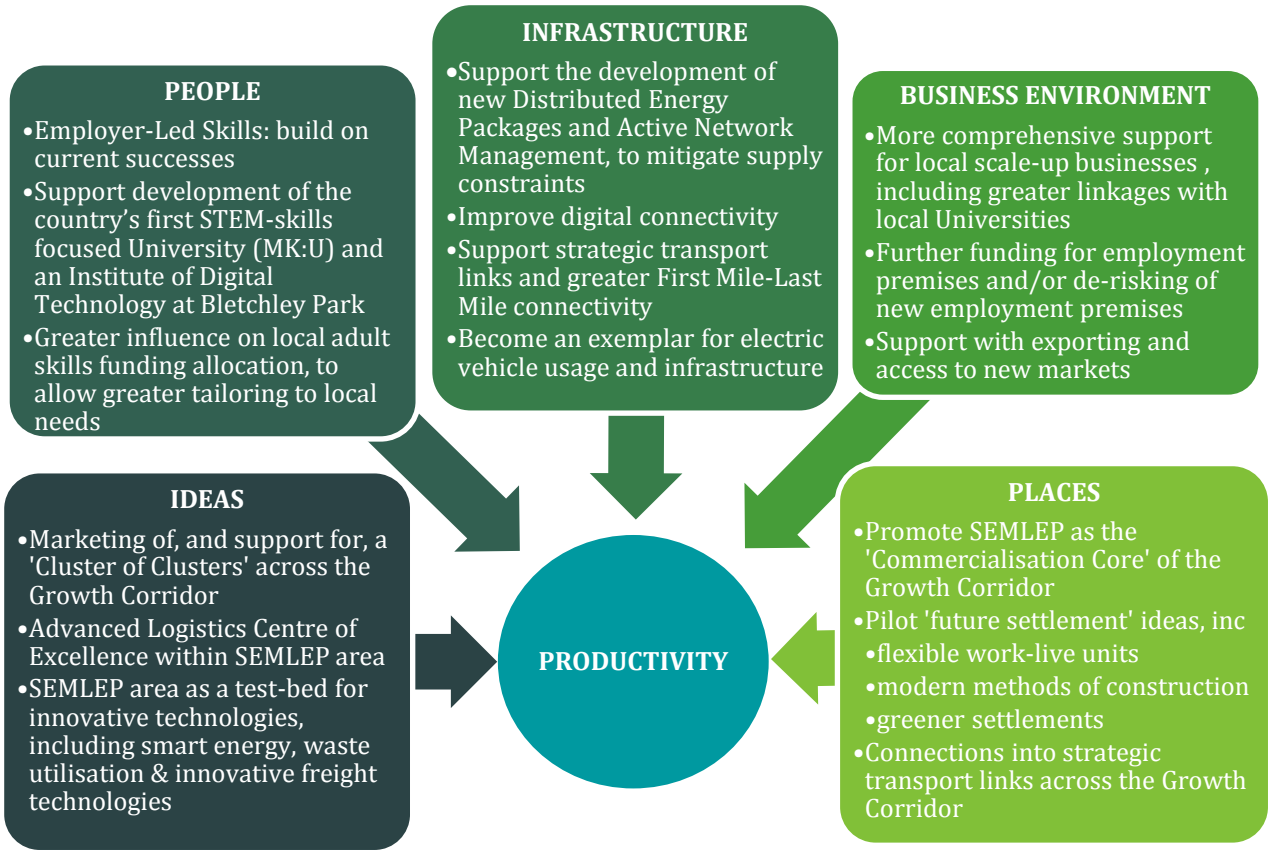
SEMLEP

South East Midlands
Local Enterprise Partnership

Contents

SEMLEP Propositions: how they address the Foundations of Productivity



SEMLEP Propositions: how they support the Grand Challenges

AI and Data	•Develop the country's first STEM-skills focused University (MK:U) and an Institute of Digital Technology at Bletchley Park. •Comprehensive support for local scale-up businesses, increasing the scale of various emerging AI and data-driven micro-firms. •Supply Chain 4.0 South East Midlands Hub of Excellence proposal, using AI and Data to revolutionise the Logistics sector.
Ageing Society	•Greater influence on local adult skills funding, up-skilling and re-skilling an ageing workforce in line with employer needs to support productivity. •Pilot 'future settlement' ideas to best support the needs of an ageing population. •Increase the supply of Health and Social Care skills to meet future demand.
Clean Growth	•Support the development of Distributed Energy Packages and Active Network Management. •Make the most of productivity opportunities from the transition to clean growth, particularly in areas of local specialism (High-Tech; Food and Drink; Logistics). •Build on the existing strengths of Milton Keynes' electric vehicle and Smart City infrastructure to become a green transport exemplar.
Future of mobility	•Market and support a 'Cluster of Clusters' across the Growth Corridor, including the SEMLEP area's advanced engineering and Next Generation Transport testing facilities and capabilities. •Use the SEMLEP area as a test-bed for autonomous vehicles and innovative freight technologies. •Integrate advanced transport infrastructure into new/expanded settlements and/or alongside new East-West links.

SEMLEP Policy Theme/ Proposition:

SEMLEP as the Commercialisation Core of the Growth Corridor

What is the issue?

- **The SEMLEP area contains a large number of cutting edge, high-tech assets** including, but not limited to:
    - Silverstone Technology Cluster
    - Transport Systems Catapult
    - Multi-Use Environment Autonomous Vehicle Innovation (MUEAVI), Cranfield
    - Nissan's European Technical Centre
    - Cranfield University's Aerospace Technology Institute and Aerospace Integration Research Centre
    - Luton Airport Enterprise Zone (aerospace businesses and advanced engineering).
    - Cutting-edge vehicle testing facilities at Millbrook, Catesby and MAHLE.
    - Northampton Waterside Enterprise Zone
    - Westcott Venture Park: space propulsion

- **In particular, the area acts as a test bed for new and emerging technologies**. In the SEMLEP area, 3,500 people are employed in the 'engineering design activities for industrial process and production' industrial sub-sector, a further 3,500 in 'technical testing and analysis' and 3,000 in 'manufacture of air and spacecraft and related machinery', while SEMLEP's location quotients for these sub-sectors are 1.7, 1.5 and 1.1 respectively.

- **Linked to the above, the SEMLEP area has an impressive record on commercialisation**. From 2010/11-2012/13, Higher Education Institutions in the SEMLEP area received 79% of their contract research income from large businesses, which is nearly 2.5 times the share for England as a whole. Meanwhile, Cranfield University is among the top five UK universities for commercial research income.

- **However, there is potential for the SEMLEP area to do a great deal more in this regard – to act as the Growth Corridor's 'commercialisation core'**. Relative to other parts of the Corridor, SEMLEP has
    - *Fewer land planning restrictions*
    - *Lower commercial land values*: as of 1 April 2017, industrial land in Northampton cost an estimated £0.8m per hectare, versus £0.88m in Cambridge and £1.6m in Oxford; while central office space cost an estimated £0.87m, £20.9m and £3.8m per hectare respectively.

- *Housing which is more affordable*: median house price to income ratios for SEMLEP local authorities in 2015 ranged between 6.1-9.3, versus 11.5 and 12.9 for Oxford and Cambridge respectively.

- **There are clear national economic benefits to Oxbridge research developments not being commercialised overseas, and cluster theory suggests there could be additional benefits to this commercialisation activity being undertaken within the Corridor, which makes SEMLEP a prime candidate for further activity**.

- **Constraints on such activity include poor East-West transport links, insufficient energy infrastructure, and a lack of a coherent area brand that is recognised by global investors**, with the visibility of the high-tech strengths of the Central Area of the Corridor in particular needing improvement.

What is already being done to tackle this/raise productivity in this regard?

- **Development of East-West transport links**: SEMLEP, other Corridor partners and Government are working jointly to take forward recommendations from the NIC report, and to strengthen cross-Corridor governance, so as to catalyse the further development of East-West links (particularly East-West Rail, the Expressway, and A14 improvements).

- **Facilitation/brokerage**: SEMLEP is helping to develop local strengths in the Next Generation Transport space, by brokering the appropriate linkages between businesses and government, and working to support the relevant sector groupings and business clusters.

What more could potentially be done?

- **Marketing of, and wider support for, a 'Cluster of Clusters':** Silverstone Technology Cluster, in conjunction with SEMLEP, BTVLEP, Cranfield University, Begbroke Science Park, Blue Abyss, Red Bull Advanced Technologies, Cambridge Network and many others, has applied to the UKRI Strength in Places Fund for money to develop a marketing plan to promote the high-tech business community (or 'cluster of clusters') within the Corridor, for global investment purposes. The bid also proposes using funding to improve networking opportunities and identify the potential for tech transfer between different sectors and businesses.

- **Specific promotion activity:** SEMLEP and GCGP jointly submitted a High Potential Opportunity Nomination to DIT to jointly promote the aerospace and defence assets of the Cambridge-Cranfield-Millbrook axis to provide a compelling proposition for businesses looking for skilled labour, unrivalled academic links in a range of sectors and concept to prototype design capability.

- **Further activity to strengthen high-tech skills – including support for MK:U plans – and digital and energy infrastructure** [see separate SEMLEP propositions for more detail].

- **Learn more about the successful conditions of international competitor regions, and emulate these where possible and relevant**. In its Industrial Strategy White Paper, the government committed to raising its total research and development (R&D) investment to 2.4% of GDP by 2027; the SEMLEP area needs to think about how it could make the most of any additional R&D funding to further local innovation and productivity.

- **Welcome new and emerging sectors within the SEMLEP and wider Growth Corridor area, and support cross-fertilisation between sectors**. Academic work (e.g. by Varian) suggests that many growth possibilities come from the combining and recombining of technological components to create new products. For example, East Northamptonshire has a growing Life Sciences business presence, which might offer fertile ground for combinatorial innovation with some of the SEMLEP area's more established strengths, such as precision engineering and digital capabilities.

Links to National LIS/ Grand Challenges/ other SEMLEP propositions

- **Future of Mobility Grand Challenge**: the SEMLEP area is at the cutting-edge of Next Generation Transport developments, with autonomous capabilities, cutting-edge vehicle testing and expertise in underlying technologies such as materials, composites, sensors and integrated vehicle health management.

- **Clean Growth Grand Challenge**: the Midlands Engine Science and Innovation Audit stated that: "the management and reduction of environmental impact, including vehicle emissions and the impact on air quality, the impact of car greening, intelligent transport systems, and dynamic routing and data to support the green economy is also a significant growth opportunity for the region." The SEMLEP area's testing facilities and wider high-tech strengths mean it is particularly well-placed in this regard.

- **AI Grand Challenge**: AI advances underpin some of the Corridor's high-tech growth and capabilities; for example, the new Digital Research and Technology Centre at Cranfield will lead research and development into artificial intelligence technologies aimed at integrating drones into civilian airspace, and increasing the efficiency of airports.

- **Other SEMLEP propositions**: Employer-Led Skills Development; SEMLEP as Hub of ICT and Digital Training; Overcoming Energy Capacity Constraints; Connectivity.

SEMLEP Policy Theme/ Proposition:

SEMLEP as an Advanced Logistics Centre of Excellence

What is the issue?

- **Logistics is a nationally- and locally-growing sector, in which SEMLEP has significant specialisation and employment**. For example, SEMLEP has a Location Quotient of 3.0 for the 'warehousing and storage facilities for land transport' sub-sector, and employment of c.30,000, while the sector has grown by 53% and 92% at the national and local level respectively between 2009-15.

- SEMLEP's logistics specialisation is in part due to its location at the nexus of Oxford, Cambridge, London and Birmingham, and in part to its **extensive logistics assets and supply chain,** which include:
    - Daventry International Rail Freight Terminal (DIRFT): a nationally-important rail freight distribution centre.
    - Magna Park: a major distribution centre between junctions 13 and 14 of M1.
    - Midlands Logistics Park: its location on the A14 in Corby allows access to both the East Coast Ports, and the Midlands/South East markets.

- **Yet it is a relatively low-productivity sector.** For example, at the national level, the 'warehousing and support activities for transportation' sub-sector has a GVA per hour worked of just £21.40 (versus a UK average GVA per hour worked of £32.60). Within the SEMLEP area, 'Distribution, transport, accommodation & food' jointly account for 31.1% of local employment, versus 25.3% of local GVA.

- **Linked to this, the logistics sector is not as innovative as other parts of the SEMLEP economy.** While a quarter of SEMLEP businesses introduced new products, services, patents or processes in the 12 months to June 2017, just 13% of logistics businesses did. Similarly, only 3% of logistics businesses have links with universities or colleges for research and development purposes, versus 8% of SEMLEP businesses overall.

- **However, there is major potential to boost productivity in the logistics sector, through greater innovation and the adoption of new technologies,** which in turn requires higher levels of skills among the logistics workforce**.** According to PwC, there is no other industry where so many industry experts ascribe a high importance to data and analytics in the next five years than in transportation & logistics (90% in T&L, compared to an average of 83%).

What is already being done to tackle this/raise productivity in this regard?

- The SEMLEP Strategic Economic Plan sets out the importance of the logistics sector to the local economy, and the ambition to support the sector through skills and infrastructure interventions:
    - The South East Midlands Logistics and Supply Chain group exists to identify both the challenges faced by small and large logistics businesses and the interventions required to overcome them, including the need to ensure a supply of higher skills for the sector, which is reflected in the SEMLEP Skills Plan: https://www.semlep.com/growing-people/
    - Local Growth Fund (LGF) monies have been integral in providing employment land and transport infrastructure that supports the sector, such as the Woodside Link Road – which connects Houghton Regis and the Dunstable industrial estates to the new M1 junction 11a – and the dualling of the A421 west to Milton Keynes.

What more could potentially be done?

- **Supply Chain 4.0 South East Midlands Hub of Excellence proposal**: Cranfield University, in conjunction with SEMLEP, John Lewis, Transport Systems Catapult, Millbrook Proving Ground, Network Rail and FiveAI, has applied to the UKRI Strength in Places Fund for money to develop a Hub of Excellence for the logistics sector. This hub would offer companies – including SMEs – in the region knowledge, expertise, and a test bed for new ideas to improve their supply chain processes and operations by introducing automation in logistics and supply chain activities, using predictive analytics to better match supply with demand, aligning operations to cope with batch-size one (high degree of customisation) and utilising the latest technologies for last mile delivery such as drones, autonomous vehicles, and robots. This hub would have a Drone Lab to test delivery performance for different weight, volume, and surface distribution of parcels under several weather scenarios; a Future Warehouse physical simulation where augmented reality enhanced picking and packing operations coupled with industrial robots and automation would be tested; and a Supply Chain Analytics Lab where company representatives matched with researchers would analyse industry scale delivery and sales data using machine learning algorithms and artificial intelligence.

- **Use SEMLEP area as a test-bed for innovative freight technologies**: the Transport Systems Catapult has said that, with government backing, it would like to help SEMLEP to build on its locational and logistics business assets to trial one or more of the following:
    - *Automated Yards*: improving safety, efficiency and environmental impact.
    - *Land Corridor:* speeding up freight deliveries while simultaneously reducing congestion on the roads. There might be mileage, for example, in a Birmingham to Milton Keynes Land Corridor.
    - *Shared Freight between businesses:* to realise greater efficiencies for business-to-business deliveries.
    - *Data Lake*: build up a mobility database of companies across the SEMLEP area, to allow for transport efficiencies to be realised.

- *SEMLEP logistics role vis-à-vis London*: in the longer term, looking to the future and the role that SEMLEP can play in terms of meeting the logistics needs of London. In the shorter term, concentrating on specialist logistics provision to London, with particular potential within the medical logistics sector.

Links to National LIS/ Grand Challenges/ other SEMLEP propositions

- **Future of Mobility Grand Challenge**: companies with autonomous vehicle expertise are starting to think about how they might apply these technologies to the freight industry. Cranfield University and the wider SEMLEP area is working at the forefront of technological developments in both the logistics and autonomous vehicles industries, and has the space to undertake further testing activity, and so is well placed to undertake activity on bringing these two strands together.

- **AI Grand Challenge**: there is significant potential for adding machine learning and AI techniques to data analytics in the logistics industry to, for example, deliver dynamic routing.

- **Other SEMLEP propositions**: Employer-Led Skills Development; SEMLEP as Hub of ICT and Digital Training; Connectivity.

SEMLEP Policy Theme/ Proposition:

Employer-Led Skills Development

What is the issue?

- **SEMLEP businesses identify a lack of skilled labour as their number one constraint upon business growth.** In the 2017 Business Survey, a third of businesses listed skills as a growth constraint, and of those businesses that reported having at least one vacancy that was hard to fill, 85% of these attributed this to skills shortages.

- **Addressing these skills constraints is critical to boosting productivity in the SEMLEP area,** an area which has a higher employment rate than England across almost all age brackets, and the highest employment growth of all LEPs (in 2015-16), but lower skills qualifications and productivity (in terms of GVA per hour worked) than its Growth Corridor neighbours.

- **It is also vital for supporting business scale-up, which has been identified as a key weakness in the SEMLEP area** (particularly vis-à-vis SEMLEP's strong record on start-ups – see the 'Supporting Business Scale-Up' proposition for more detail). Of SEMLEP businesses with vacancies, those with 5-9 and 10-49 staff are more likely than those with fewer or more staff to have hard-to-fill vacancies.

- **Moreover, this issue is set to become increasingly acute over time, with technological progress, leaner management and globalisation leading to rapid changes in the skills required by the workforce**. Over the past 15 years, these factors have led to a 'hollowing-out' of the labour force in SEMLEP (and nationally), and this trend looks set to continue, with over 65% of the projected jobs required by 2024 in the SEMLEP area set to require a Level 4 qualification or higher.

- **This future skills challenges are particularly pertinent for the SEMLEP 'Showcase Sectors', High Tech & Innovation, Creative & Cultural, Logistics and Manufacturing and Advanced Technology (particularly Food & Drink)**. The main influences on both productivity and employment include application of digital technologies, migration of the workforce, skills and competency levels, capacity to support the talent pipeline and demographic changes. For Manufacturing and Advanced Technology, Frey & Osborne estimates suggest that, by 2035, nearly 50% of jobs in the SEMLEP area have a high probability of computerisation.

- **There is also a very high projected future demand for skills in supporting sectors in the SEMLEP area, particularly Construction and Health & Social Care**. Working Futures projected net job requirements for SEMLEP over the 2014-24 period put 'Caring personal service occupations' at the top of the list of

requirements, due to both high replacement requirements – as a result of workers retiring – and the ageing of the population. **While Construction and Health & Social Care skills are needed across the country, a shortage of such skills is likely to be felt particularly acutely within SEMLEP, due to the area's higher-than-national projected population growth across almost all age bands, and disproportionately high housing growth** (SEMLEP accounts for around 6% of national housing completions, versus around 3.5% of the national population).

- **SEMLEP's higher-than-national projected population growth across almost all age bands also provides opportunities**, as it means that, relative to other parts of the country, there will be a larger cohort of young people coming through the education system who can be equipped with the skills and competencies that future technologies warrant and employers need.

What is already being done to tackle this/raise productivity in this regard?

- ***Growing People*, SEMLEP's plan to boost skills in the South East Midlands, outlines a package of interventions to support a pipeline of 'employer-led skills' for the area.** The four main components of this are: improving Labour Market Information; increasing employer engagement with educators; supporting people into and within employment; and investing, through the Local Growth Fund, in skills infrastructure.

- **Over 100 schools are working with SEMLEP as part of the Careers and Enterprise Company network** to develop a talent pipeline by making careers provision relevant to the labour market and of a quality through employer engagement.

- **Investment in skills infrastructure** by both SEMLEP and other stakeholders including:
    - Northampton College, Daventry Campus, Digital Academy
    - Bedford College, Advanced Engineering Centre
    - Central Bedfordshire College, Engineering & Construction Skills Centre
    - Moulton College, Food and Drink Innovation Centre
    - Milton Keynes College, New City Centre Campus
    - Northampton College, Advanced Construction Engineering College
    - Tresham College, Redevelopment of Wellingborough Campus
    - University of Buckingham, Academic Centre, Milton Keynes Hospital
    - University of Bedfordshire, STEM Facility
    - University of Northampton, Waterside Campus

- **Supporting businesses to make the most of 'open recruitment',** through signposting to relevant schemes and awareness of the benefits, to address skills shortages and increase diversity in the workplace. There are promising potential pathways for this in a number of sectors, including construction, food and drink producers and digital employment.

What more could potentially be done?

- **Support proposals to develop the country's first STEM and business led skills focused University (MK:U) at the heart of the Growth Corridor, along with a Institute of Digital Technology at Bletchley Park;** support for these would provide a major boon to skills and productivity across the Growth Corridor [for more detail, see the 'SEMLEP as a Hub of Digital and ICT Training' proposition]

- **Provide funding to expand current activity in line with *Growing People*.**

- **Greater influence on local adult skills funding allocation outside of Further and Higher Education either through allocation of funds to SEMLEP or with SEMLEP being an integral part of the bid selection process**, to allow for greater tailoring of skills interventions to local needs such as informing, re-skilling and up-skilling of the existing workforce especially for leadership, management and the application of digital technology primarily in the logistics, manufacturing and business administration sectors

- **Local funding to develop and strengthen the youth Talent Pipeline through facilitating the development of attitudes, behaviours and core competencies through schools/colleges achieving the 8 Gatsby Benchmarks in line with employer needs.**

- **Greater sharing of, and alignment between, labour market and skills datasets to inform stakeholders, strategy, trends and track impact**. For example, it would be helpful to have open access to useable jobs vacancy data, and/or tracked skills pathways (currently LEPs and others have to pay sizeable sums of money if they want access this sort of evidence).

- **Further improve the working environment through the creation of open space, green corridors, cultural assets, affordable housing, etc. to help attract and retain the workforce.** The SEMLEP area is already rated highly by businesses, with high 2017 Business Survey scores given to its "attractive surroundings", "good quality education options" and "availability of local services and amenities", although there is room for improvement, particularly on the affordable housing front (where 45% of businesses rate this as "poor"). In addition, careful thought will need to be given to how growth ambitions can be realised without a detrimental impact upon the local environment [see the Energy proposition for more detail].

Links to National LIS/ Grand Challenges/ other SEMLEP propositions

- **Industrial Strategy - People**: SEMLEP will:

  - Support, facilitate dialogue and inform local applications for high quality technical education
  - Promote STEM occupations and pathways to young people and adults
  - Inform and facilitate dialogue between stakeholders to address needs for re-skilling and up-skilling

- **Ageing Population Grand Challenge**: in terms of both providing the skills required to care for an ageing population; but also providing – and signposting to – the up-skilling and re-skilling opportunities that can help to keep those aged 50+ in the labour market.
  - Fuller Working Lives - Encouraging businesses to retain, retrain and recruit older workers and presents the benefits of a fuller working life.
  - Life-Long Learning - develop a culture of life-long learning to ensure people can re-engage with work following an absence and continue to up-skill and re-skill in response to changes in business skills needs and the application of digital technologies.
  - The Flexible Learning Fund - Marketing and promotion of projects when available and support the Open University Bringing Learning to Life project

- **Artificial Intelligence and Data Grand Challenge:** the adoption of automated systems and digital technology is already and will continue to impact on productivity and skills needed for employment in sectors including robotics and mechatronics (Advanced Manufacturing/High Performance Technology), intelligent mobility (High Performance Technology), big data, automation and process control (Logistics), robotic process automation and chatbots (Retail, Business Administration and Financial Services) and digital creative media (Creative and Cultural). Fields such as cyber security and data analytics are applicable to all sectors. SEMLEP will promote STEM occupations and pathways to young people and adults and Inform and facilitate dialogue between stakeholders to address needs for re-skilling and up-skilling

- **Other SEMLEP propositions**: SEMLEP as the Commercialisation Core of the Growth Corridor; SEMLEP as a Hub of STEM and Digital Training; SEMLEP as an Advanced Logistics Centre of Excellence; Supporting Business Scale-Up.

- **Sector Deals:** The role for SEMLEP as part of the Sector Deals relating to skills is:
  - Construction - Work with CITB to facilitate and promote construction related activity within the area in terms of pathways, diversity, re-skilling and up-skilling.
  - Life Sciences - Work with the Science Industry Partnership to address skills needs and promote pathways.
  - Automotive - Participate with the Automotive Council and local stakeholders to contribute to plans to address skills needs and promote pathways for the automotive sector, ensure the development of engineering capacity at levels to support pathways.

- Creative Industries - Promote opportunities and pathways within the sector in schools through labour market information and employer engagement with focus on diversity. Work with the Creative Industries Federation to address skills needs in the sector.
- Artificial Intelligence - Highlight opportunities in STEM and pathways within the sector in schools and support the creation of new digital educational facilities within the area for Higher, Degree and Doctoral levels such as MK College IoT and MK:U

SEMLEP Policy Theme/ Proposition:

SEMLEP as a Hub of ICT and Digital Training

What is the issue?

- **The SEMLEP area already has some significant ICT and digital strengths**. For example, in the sub-sector of computer consultancy activities, the area has employment of 14,000, and a location quotient of 1.1. Meanwhile, the Smart Specialisation Hub profiles show that SEMLEP is a long way above the LEP average for computer science research and employment in digital technologies.

- **Yet, despite this, there is still a shortage of ICT and digital skills in the local (and Corridor-wide) economy:** of SEMLEP businesses reporting skills gaps, 13% listed 'advanced IT skills' as a gap, and 9% listed 'basic IT skills'. More detailed analysis of technical skills shortages by sector also found that IT engineers and technicians were in short supply relative to demand.

- **Moreover, ICT and digital skills are only going to increase in importance**. In a national survey carried out by Deloitte, where business leaders were asked what future skills they thought the workforce would require, 'digital know-how' came out top. And across SEMLEP's 'showcase sectors', a large number of the most significant opportunities for productivity growth come from the application of ICT and digital skills to these sectors; for example, the Midlands Engine Science and Innovation Audit identified advanced digital design – which can reduce the need for testing and prototyping, and accelerate the deployment of novel technologies – and digital manufacturing as two key areas for growth in the Next Generation Transport sector. Meanwhile, the National Skills Academy for Creative & Cultural has identified the intersection between the digital world and the creative industries as one that offers great growth potential.

- **As well as being a critical ingredient for future growth in SEMLEP's and the Corridor's high-tech sectors, improved/increased ICT and digital skills are also vital for boosting productivity in lower-wage sectors, and for improving the resilience of the workforce to increased automation**. Within the SEMLEP area, Frey & Osborne estimates suggest that, by 2035, nearly 50% of 'Manufacturing and Advanced Technology' jobs are at high risk of computerisation; however, such technological change will also lead to increased, higher-skill jobs elsewhere in the economy. Meanwhile, analysis undertaken by NIESR and JRF found that countries tend to have a total factor productivity lead over the UK within a particular sector where they have a higher share of employees using ICT.

What is already being done to tackle this/raise productivity in this regard?

- ***Growing People*, SEMLEP's plan to boost skills in the South East Midlands, outlines a package of interventions to support a pipeline of 'employer-led skills' for the area.** The five main components of this are: promotion of digital literacy as a core competence, improving Labour Market Information; increasing employer engagement with schools and colleges; supporting people into and within employment through digital skill development; and investing, through the Local Growth Fund, in digital skills infrastructure.

- Across the Growth Corridor, NESTA has identified a comparative strength in computer science qualifications vis-a-vis computer science research in Luton and Northampton and, to a lesser extent, Aylesbury (i.e. within SEMLEP), whereas for Oxford and Cambridge the reverse is true.

What more could potentially be done?

- **Improve understanding of the niche requirements of local employers within the 'digital skills' category**, and encourage cross-pollination between these, as well as making the most of digital skills innovation funding opportunities.

- **In Milton Keynes, a feasibility study is being drawn up to develop the country's first STEM-skills focused University (MK:U) at the heart of the Growth Corridor,** in conjunction with Cranfield University and a number of key business partners, including Microsoft and Tech Mahindra, who will help to shape course content to make it truly focused on the skills that employers need, and are likely to need in future. There will be an undergraduate curriculum in areas such as digital and cyber skills, design thinking, and robotics and artificial intelligence, as well as part-time/ apprenticeship pathways. **MK Council has already committed £12m and a prime site in the city to the project, but is still looking for substantial capital funds (in the order of £250m) to take this forward**. Early discussions with banks have suggested that a bond placement is feasible, but that underwriting support is required; this (and/or direct capital funding) is a route by which the government could support the project. **If the MK:U plans are realised, this would provide a complementary offering to the broader Oxbridge academic specialisms, and a major skills boost to the Growth Corridor.**

- **Complementary to this, MK College has reached the second stage of a bidding process to develop an Institute of Digital Technology at Bletchley Park**, which will build on the site's history to inspire a new generation to further their digital skills. The IoT will focus on Level 4 and 5 provision, including higher-level apprenticeships, thus supporting pathways to employment and also providing a stepping stone to MK:U qualifications. There are also plans for the IoT to have further sites in Reading and Oxford, thus helping to improve skills linkages across the Growth Corridor.

- We look to Government to support both of these important initiatives which, if accompanied by promotion of the area as a digital and ICT skills hub at the centre of the Growth Corridor, along with a badging as the 'commercialisation core' of the Corridor, could do a lot to attract business investment to the area and support the growth of the Corridor as a whole.

Links to National LIS/ Grand Challenges/ other SEMLEP propositions

- **Future of Mobility, Clean Growth, Artificial Intelligence and Ageing Population Grand Challenges**: ICT and digital skills underpin each and every one of the Grand Challenges.

- SEMLEP would look to both MK:U and IoDT as being the core to any future Local Digital Skills Partnership bid for the SEMLEP area.

- **Other SEMLEP propositions**: SEMLEP as the Commercialisation Core of the Growth Corridor; Employer-Led Skills Development; SEMLEP as an Advanced Logistics Centre of Excellence; Supporting Business Scale-Up

SEMLEP Policy Theme/ Proposition:

Energy: Overcoming Capacity Constraints and Capitalising on Productivity Opportunities arising from the Transition to Clean Growth

What is the issue?

- **Electricity capacity is constrained in certain parts of the SEMLEP area, acting as a brake in several instances on commercial investment and/or housing development**. 5% of the Western Power Distribution Network in the area has zero or little headroom, while 20% of sub-stations have demand headroom of less than 5MW. This has led to several businesses approaching SEMLEP with complaints that they cannot expand in the area, due to power constraints. Similarly, some of the area's Local Authorities have reported difficulties in finding premises with sufficient available power for businesses that are keen to invest locally, as well as obstacles to housing development, in the form of energy providers saying that supplying power to new developments will take several years and/or be vastly expensive to realise.

- **Given growth ambitions across the SEMLEP area and wider Growth Corridor, where the possibility of 1m new homes, and an accompanying major expansion in business, is being considered, these energy capacity issues look set to become increasingly problematic**. Indeed, while the overall spare capacity available in SEMLEP (911MW, or around 24% of current network capacity) is considered to be relatively healthy in terms of providing for traditional, incremental growth, it is not sufficient for any sort of step change in growth, including new settlements, or very significant expansions to existing ones.

- **Similar issues also apply with regards to the water supply**: only a few parts of the SEMLEP area have more water available for extraction, while several other areas are actively over-abstracted. Furthermore, water resilience challenges are set to become more acute over the coming half-century as global temperatures rise.

- **Meanwhile, there is also major change afoot in the national economy to move towards cleaner energy, to support environmental goals.** Specific changes include:
    - Increasing decarbonisation of the energy supply.
    - A growth in renewable energy and other forms of distributed non-fossil powered generation.
    - A growth in the adoption of electric vehicles and hybrids and new integrated public transport systems.
    - A widespread adoption of energy efficiency and the management of energy supply and demand.
    - The introduction of new energy infrastructure, linked to smart technologies and new commercial frameworks for energy services and products.

- **Inefficient existing and new buildings increase demands on the energy network, make it more difficult to meet environmental goals, and reduce business efficiency. This is an issue that affects the whole country, but has a more pronounced impact in a high-growth area such as SEMLEP**. Given that SEMLEP currently accounts for around 6% of national housing completions (relative to around 3.5% of national population), and had faster employment growth in 2015-16 than any other LEP, there is a compelling case for trialling new approaches to energy provision and efficiency within the SEMLEP area.

What is already being done to tackle this/raise productivity in this regard?

- **Making links between the SEMLEP area's Next Generation Transport assets and emerging energy and low carbon technologies**. Crossover areas include lightweight vehicles, more efficient power systems, vehicle emissions testing, more intelligent use of automation to improve transport products, and dynamic routing and data to support the green economy. In addition, Milton Keynes is a 'Smart City', with extensive electric charging infrastructure relative to other parts of the country.

- **Local support for renewable energies**. In its Joint Core Strategy, North Northamptonshire places a focus upon renewable energy and green technologies (including wind, solar and biomass technologies). Through a decentralised energy network, Kettering Energy Park is seeking to lower carbon emissions and increase security of the local power supply, including to the 5,500-dwelling Hanwood Park Sustainable Urban Extension. Meanwhile, Local Nature Partnerships in the SEMLEP area are working alongside the LEP and local authorities to encourage and promote the use of renewable energy. For example, in Central Bedfordshire, there are eight solar farms generating sufficient energy to power 28,500 homes, with an additional 16,500 homes receiving electricity generated by wind and landfill gas.

- **Supporting the development of a Natural Capital Investment Plan for the Growth Corridor**, to ensure that growth across the area takes account of key natural environment concerns and opportunities.

What more could potentially be done?

- **Support the development of new Distributed Energy Packages, to mitigate supply constraints on new developments/ commercial expansion**. This approach could be piloted within the SEMLEP area in the first instance, drawing upon wider expertise to help establish a new commercial framework.

- **Support the development of Active Network Management to mitigate supply constraints,** most plausibly by designing it into a new development [see also the 'Piloting a Settlement of the Future' proposition].

- **Building on local area specialisms, capitalise on other productivity opportunities from the transition to clean growth, particularly in:**

    - **a) the High-Tech sector:** the Midlands Engine Science and Innovation Audit stated that: **"the management and reduction of environmental impact,** including vehicle emissions and the impact on air quality, the impact of car greening, intelligent transport systems, and dynamic routing and data to support the green economy is also a significant growth opportunity for the region." The SEMLEP area's testing facilities and wider high-tech strengths mean it is particularly well-placed in this regard.

    - **b) the Food & Drink/ wider Advanced Manufacturing sector**: SEMLEP's Food & Drink strengths, coupled with local F&D innovation assets, and Cranfield's waste management and resource efficiency specialisms, put it in a strong position to lead on **efficient food processing technologies.** Linked to this, the SEMLEP area has specialisations in plastic packing goods manufacture and other plastic product manufacture (location quotients of 2.9 and 1.7 respectively) and so, with support and/or guidance from government, might be able to play a leading role in **developing waste product utilisation strategies, improving the sustainability of food & drink packaging, and in supporting 'zero waste' food chains** more broadly.

    - c) **the Logistics sector**: as set out in the 'SEMLEP as an Advanced Logistics Centre of Excellence' proposition, **innovative freight technologies** – that would both improve efficiency and reduce congestion and bring about environmental benefits – could be piloted and developed in the SEMLEP area.

- **Build on the existing strengths of Milton Keynes' electric vehicle (EV) and Smart City infrastructure to become a green transport exemplar at the heart of the Growth Corridor**. This could involve developing a support package for businesses to innovate on EV-associated services, providing preferential treatment for early adopters and investors, and making EV and smart infrastructure a key feature of new development(s) [see also the 'Piloting a Settlement of the Future' proposition].

- **Changes to energy regulation**: allowing utility companies to plan for step changes in – as opposed to incremental – growth, would make success in delivering major growth ambitions in SEMLEP and the wider Growth Corridor much more likely, as it would allow utility companies to work with LEPs, LAs and other local partners to achieve a common end, rather than pursuing conflicting goals (growth for the LEPs; consumer price protection for the energy providers).

Links to National LIS/ Grand Challenges/ other SEMLEP propositions

- **Clean Growth Grand Challenge**: this proposition is entirely in line with the aims and remit of the Clean Growth Grand Challenge.

- **Future of Mobility Grand Challenge**: several of the proposals contained here, particularly around expanding EV infrastructure and piloting innovative freight technologies, align closely with the Future of Mobility Grand Challenge.

- **Other SEMLEP Propositions:** Piloting a Settlement of the Future; Supporting Business Scale-Up; Providing Businesses with the Premises they Need to Grow; SEMLEP as an Advanced Logistics Centre of Excellence.

SEMLEP Policy Theme/ Proposition:

Providing Businesses with the Premises they Need to Grow

What is the issue?

- **The third most commonly reported constraint on business growth in the SEMLEP area is employment premises**, with 27% of respondents to the 2017 SEMLEP Business Survey citing this as a constraint (skills and the economic climate were the top two constraints).

- **Among SEMLEP businesses with 5-9 staff, just 38% said availability of suitable premises was good and almost as many (32%) rated it as poor.** The most common reason (by some way) for considering relocation was to move to larger premises (38%).

- **In some parts of SEMLEP, analysis suggests there is a significant undersupply of small to medium industrial units.** In Daventry, for example, vacancy rates are very low, and there is significant frustrated demand in the market (estimated at 25,000 sqm).

- **There appears to be a market failure at play here**. In Daventry, it has been concluded that the development of small to medium industrial units will only happen if:
    - *the land is reserved for small-to-medium units*. If it is released for industrial development without this restriction, land is likely to be taken up for large-scale warehousing, which generates higher land values (smaller units are more expensive to build and manage).
    - *the investment case for such units can be proven*. Higher rents are needed to make development viable, but new development at higher rents won't take place until there are market comparators in place to reassure investors.

- **The SEMLEP Inward Investment Group has said that investment is being lost and investor interest unfulfilled as a result of the market not delivering speculative property supply for grade A premises.**

- As well as affecting smaller businesses that wish to scale up more than larger businesses, employment premises issues in SEMLEP also affect businesses in some industrial sectors more than others. In particular, **SEMLEP's Showcase Food & Drink sector has identified the lack of food-grade, business ready space for businesses to move into as a constraint upon SME growth in the sector.**

- **There are also issues around electricity capacity for businesses looking to invest/expand in certain parts of the SEMLEP geography**. Currently, 5% of the

Western Power Distribution network has zero or little demand headroom, while 20% of substations have demand headroom of less than 5MW.

What is already being done to tackle this/raise productivity in this regard?

- **There are several SEMLEP-supported Local Growth Fund projects in train to increase/ improve the local employment premises offering**. These include:
  - *I-WORX*: a project to build 12 modern engineering and work shop spaces adjacent to the A421, to catalyse further business and skills development, particularly in the high-tech sector.
  - *Leyland Trading Estate*: a project to develop an SME industrial workspace area on the established Leyland Trading Estate in Wellingborough.

What more could potentially be done?

- **Further funding for employment premises and/or de-risking of new employment premises** (e.g. through public services acting as an anchor tenant): this could potentially be combined with other objectives such as supporting clean growth and helping scale-up businesses to grow (through the provision of flexible work spaces, but also through, for example, the provision of greater networking opportunities, which in turn increases the prospect of stimulating economic growth through cross-fertilisation between firms and sectors).

- **Depending on resource and appetite for risk, this could be done at a small scale, or at a much larger, more ambitious scale**, particularly if tied into Growth Deals and new settlements, where new live-work spaces could also be trialled.

- **Thought also needs to be given to the current and future incentives for commercial vis-à-vis residential (and other types of) development.**

Links to National LIS/ Grand Challenges/ other SEMLEP propositions

- **Clean Growth Grand Challenge:** there is an opportunity here for new employment premises to make use of decentralised energy networks and/or smarter energy systems, and potentially to attract businesses partly on the basis of green credentials.
- **Other SEMLEP propositions**: SEMLEP as the Commercialisation Core of the Growth Corridor; Supporting Business Scale-Up; Overcoming Energy Business Constraints.

SEMLEP Policy Theme/ Proposition:

Supporting Business Scale-Up

What is the issue?

- **SEMLEP has one of the highest rates of business start-ups in the country**. In 2017, there were 78 start-ups per 10,000 population, second only to London and Worcestershire. It also contains two of the top ten cities in the UK for start-ups (Milton Keynes and Northampton).

- **However, this impressive start-up rate is not translating into scale-up**. Over the 2014-17 period, only 1.6% of SEMLEP businesses scaled from <£500,000 to £1m+ turnover, relative to 1.9% of businesses in England. Moreover, in its 2017 Scale-Up Review, the Scale-Up Institute identified SEMLEP as one of nine scale-up 'cold spots' requiring particular attention.

- **As identified in the National Industrial Strategy and Patient Capital Review, focusing on company growth in addition to company creation can drive an increase in jobs, productivity and economic prosperity.**

- **Barriers to scale-up in the SEMLEP area include skills shortages and a lack of suitable employment premises**. With regard to the former, among SEMLEP businesses with vacancies, those with 5-9 and 10-49 staff are more likely than those with fewer or more staff to have hard-to-fill vacancies. Meanwhile, with regard to the latter, among SEMLEP businesses with 5-9 staff, just 38% said availability of suitable premises was good and almost as many (32%) rated it as poor. The most common reason (by some way) for considering relocation was to move to larger premises (38%). [See the 'Employer-Led Skills Development' and 'Providing Businesses with the Premises they Need to Grow' propositions for more detail].

- **Trade risks associated with Britain's exit from the European Union, and access to markets more broadly, are also issues for scale-up businesses**. The SEMLEP area is relatively more exposed to trade risks than the UK: in 2016, 61% of SEMLEP exports and 82% of SEMLEP imports were to/from EU countries, compared to 49% and 55% for the UK. And these risks are of particular concern to smaller businesses: in 2017, 45% of businesses in the SEMLEP area with 10-49 members of staff said that they expected a negative impact from Britain's exit from the European Union.

- **Scale-up has been identified as a particular issue for the High-Tech Cluster in the SEMLEP area, and for the wider Growth Corridor**. Within this, Skills and Access to Markets have been identified as two of the foremost barriers to be addressed.

What is already being done to tackle this/raise productivity in this regard?

- **Growth Hub support**: through its Growth Hubs, SEMLEP is promoting and providing a single access point for business support in the South East Midlands, including one-to-one support for company leaders, delivery of workshops, and information on funding and wider business support schemes. It is also actively targeting those businesses who self-identified as pre-scale-ups or scale-ups in the 2017 SEMLEP Business Survey, and who consented to further contact.

- **Export promotion**: through its Growth Hubs, and against the uncertain backdrop of Britain's exit from the European Union, SEMLEP is working with the Department for International Trade (DIT) and local Chambers of Commerce to support exports and encourage businesses to explore new markets.

- **Local Growth Fund projects to improve local skills and employment premises**, including the Bedford College Advanced Engineering Centre ,the Engineering and Construction Skills Centre, and the I-WORX and Leyland Trading Estate projects. [See the 'Employer-Led Skills Development' and 'Providing Businesses with the Premises they Need to Grow' propositions for more detail].

What more could potentially be done?

- **More comprehensive support for local scale-up businesses through proposed 'GrowthCurve' project**: SEMLEP's Growth Hubs, in conjunction with the University of Northampton, Cranfield University and the University of Bedfordshire, have put in an ESIF bid for funding to provide tailored and targeted support to high-potential and scale-up SMEs in the South East Midlands. The University of Northampton and the University of Bedfordshire have designed modular programmes for the GrowthCurve project aimed at potential scale-ups, which will be delivered in the form of 3-4 hour interactive workshops which cover the barriers to scaling businesses. Meanwhile, Cranfield University will draw on the skills and expertise of Cranfield's Bettany Centre for Entrepreneurship and School of Management to develop a short (nine-hour) programme for GrowthCurve aimed at supporting current scale-up businesses. In addition, business coaching support will be procured from the private sector, and peer-to-peer forums will be established.

- **Virtual Peer Advisory Board proposition**: SEMLEP's Growth Hub and the University of Northampton are submitting a joint bid to the Business Basics Fund to trial a 'virtual peer advisory board', which aims to address the productivity gap of local SMEs through peer-to-peer support on a more cost-effective and flexible basis than can be realised through traditional peer advisory boards.

- **Establish a local Scale-Up Forum, to improve co-ordination among organisations which provide support to scale-up businesses, and identify**

gaps in provision. The Forum could include representation from banks, accountants, DIT, Universities, Innovate UK, etc.

- **Further funding for skills development** (see the 'Employer-Led Skills Development' proposition for more detail).

- **Further funding for employment premises and/or de-risking of new employment premises** (see the Providing Businesses with the Premises they Need to Grow' proposition for more detail).

Links to National LIS/ Grand Challenges/ other SEMLEP propositions

- **National LIS**: Scale-up is a key plank of the Industrial Strategy White Paper, with government committing to exploring means of identifying businesses with scale-up potential, and encouraging them to access the support available to help them reach this potential.

- **Other SEMLEP propositions**: Employer-led Skills Development; SEMLEP as a Hub of ICT and Digital Training; Providing Businesses with the Premises they Need to Grow; SEMLEP as the Commercialisation Core of the Growth Corridor.

SEMLEP Policy Theme/ Proposition:

Piloting a Settlement of the Future

What is the issue?

- As outlined in the government's Garden Communities Prospectus**, we need to design "resilient places that allow for changing demographics, future growth, and the impacts of climate change** including flood risk and water availability, with durable landscape and building design planned for generations to come**. This should include anticipation of the opportunities presented by technological change such as driverless cars and renewable energy measures**."

- **The SEMLEP area offers a natural fit for trialling some of these new approaches to place, for the following reasons:**
    - **It is a major contributor to housing growth in the country**, and there is local and national ambition for even greater step changes in growth. **Potential new settlements in particular offer unique opportunities for trialling innovative approaches/solutions to a number of pressing policy issues.**
    - **It has relatively few land planning restrictions, and more affordable land than elsewhere in the Growth Corridor** [see the 'SEMLEP as the Commercialisation Core of the Growth Corridor' proposition for more detail].
    - **It has a solid track record of engineering and technical testing, and for disseminating technologies between sectors** (as in the Silverstone Technology Cluster where, for example, technologies and engineering capabilities of companies with a motorsport pedigree are being applied to the medical, defence and transport sectors).

What is already being done to tackle this/raise productivity in this regard?

- **A number of pioneering initiatives have been developed across the SEMLEP area**, including:
    - *Milton Keynes*: the MK:Smart initiative is an internationally prominent Smart City programme, and the city is also a national leader on electric charging infrastructure.
    - *Smart Commuting,Northampton*: this initiative aims to exploit the potential of new technologies to make better use of network capacity and enable users to make smart choices.
    - *Bicester EcoTown*: the Eco Town development to the North West of Bicester has been used as a catalyst to make the town more sustainable. It is being constructed to highly sustainable standards and has inspired a range of initiatives in the town including the construction of zero or low carbon buildings, improvements to the energy efficiency of existing buildings, improvements for cycling and walking, and support for recycling.

What more could potentially be done?

- **Piloting smarter, greener energy systems and infrastructure:** the SEMLEP Energy Strategy work has highlighted the potential prize (overcoming capacity constraints and supporting clean energy goals) from developing new distributed energy packages, trialling Active Network Management, and supporting the roll-out of electric vehicle infrastructure [see the 'Energy: Overcoming Capacity Constraints and Capitalising on Productivity Opportunities' proposition for more detail]. There is appetite for potentially building some of these components into the Tresham Garden Village development, although the thinking is still at an early stage, and there are likely to be cost and technical considerations to overcome.

- **Piloting innovative freight technologies, such as a Land Corridor and autonomous delivery**, that have the potential to vastly increase efficiencies while also benefiting the environment [see the 'SEMLEP as an Advanced Logistics Centre of Excellence' for more detail].

- **Piloting flexible work-live units and building techniques**: SEMLEP has already been approached by architects and businesses about the possibility of trialling new work-live spaces and new methods of building. Spaces that can be adapted to the needs of an ageing population are also key.

- **Modern methods of construction (MMC) plant and/or delivery**: the scale of building required to make an MMC plant viable is normally beyond viable build-out levels. However, Growth Deal ambitions across the Corridor, along with the relative availability of land in SEMLEP and renewed local authority building in the case of Kettering and Corby – which potentially allows for greater market absorption and thus build-out rates, particularly when a larger affordable housing component is involved – could lead to a SEMLEP-based MMC plant becoming an attractive proposition

Links to National LIS/ Grand Challenges/ other SEMLEP propositions

- **Clean Growth Grand Challenge**: new/expanded settlements offer the scope for trialling lower-carbon buildings and methods of building, as well electric charging infrastructure.

- **Future of Mobility Grand Challenge**: new/expanded settlements offer the potential to act as a trailblazer on the provision of electric vehicle infrastructure, as well as new live-work spaces and new technologies in the logistics sector.

- **Ageing Population Grand Challenge**: new/expanded settlements offer the potential to do more to meet the needs of an ageing population, e.g. through adaptable homes/community spaces.

- **Other SEMLEP propositions**: Energy: Overcoming Capacity Constraints and Capitalising on Productivity Opportunities; SEMLEP as the Commercialisation Core of the Growth Corridor; SEMLEP as an Advanced Logistics Centre of Excellence; Connectivity; Providing Businesses with the Premises they Need to Grow.

SEMLEP Policy Theme/ Proposition:

Greater Connectivity

What is the issue?

- **Evidence compiled by the What Works Centre suggests that when a place is growing fast, as is the case in the SEMLEP area, investment in infrastructure is key to mitigating constraints upon growth, and is likely to be cost effective in terms of providing productivity improvements.**
- **The SEMLEP area has excellent North-South links**, including the M1, M40 and A1(M) and major rail routes (including the Midland, West Coast and East Coast Mainlines). **It also benefits from international connectivity** through London Luton Airport, rail links to Gatwick airport and St Pancras international rail services, and proximity to both London Heathrow and London Stansted airports.
- **However, some of the established links are already suffering from congestion, and Highways England forecasts a 34% increase in average annual daily traffic across the Oxford-MK-Cambridge Growth Corridor by 2035, based on a do-minimum scenario.**
- **In addition, East-West transport links across the SEMLEP area are weak,** with slow east-west road connections, and east-west rail journeys that often require routes via London. These poor transport connections contribute to a lack of integration of labour markets: only 1.7% of the resident workforce in the SEMLEP area works in Oxford or Cambridge, versus 5.1% in London; similarly, under 1% of the resident workforce living in Cambridge works in the SEMLEP area.
- Work done by Arup, the National Infrastructure Commission and others suggests that **connecting the high value economies across the Growth Corridor could potentially lead to a step change in growth, by facilitating knowledge spillover and allowing agglomeration economies – or a 'cluster of clusters' – to be realised.**
- **Given the long timeframes involved in large transport infrastructure projects, and the required transition toward low-carbon modes of transport and clean growth more generally over the next 30 years, electric vehicles (EVs) and EV infrastructure need to form an integral part of any large-scale infrastructure plans.**
- **Digital connectivity has improved in the SEMLEP area since 2015, but still remains a business constraint in parts**, with 4% of businesses in the SEMLEP area, and 10% of businesses in Milton Keynes, citing IT infrastructure/Broadband as a constraint upon their growth (2017 figures). It is a particular issue within the education sector and among smaller businesses (30% of education businesses and 10% of businesses with 5-9 employees cited it as a growth constraint).

- **Improvements in transport and digital connectivity are both highly valued by consumers**; for example, a study of properties in England by CEIS estimates basic broadband increases house prices by 2.8% on average, with faster connections adding an additional 1%.
- **Analysis of Broadband infrastructure projects shows a positive impact upon productivity**, **although the strength and direction of the effect depends on complementary digital technologies or skills,** such as supply chain management software and virtual private networks which enable remote working**. It is therefore vital that digital skills are supported, particularly in rural areas, to maximise the productivity gains from digital infrastructure.**

What is already being done to tackle this/raise productivity in this regard?

- **Strategic East-West links:** SEMLEP is working with partners to support the delivery of East-West Rail and the Oxford to Cambridge Expressway, as well as supporting other strategic East-West links such as improvements to the A14, and the Bedford to Milton Keynes Waterways Park.
- **Support for other strategic transport infrastructure improvements, which will facilitate local growth, including:**
    - *A1 Corridor*: in particular, improvements between Junctions 10-14.
    - *A43/A45 Corridor* (that links the M1 to the A14 in Northamptonshire): Local Growth Fund (LGF) support has been, and is being, provided to upgrade this route between Northampton and Kettering.
    - *M1 to A6 Link Road*: LGF support has been locally approved to link the M1 J11A to the A6, to improve access and open up employment and housing land north of Luton.
    - *Major Roads Network*: e.g. A413/A355 that links Aylesbury to the M40.
- **First Mile-Last Mile connectivity projects, including:**
    - *Total Transport in Northamptonshire,* which seeks to bring together all passenger transport provision in the county under a single umbrella to use collective resources more effectively.
    - *Transporting Bedford 2020*: this LGF-supported project seeks to reduce congestion and enable greater business productivity in the town by improving town centre traffic movement.
- **Digital connectivity:** the Milton Keynes, Bedford and Central Bedford Superfast broadband project – funded by the UK Broadband Delivery fund (BDUK) and the Local Full Fibre Network fund (LFFN) – aims to provide 98% of premises with superfast broadband by 2018. Meanwhile, the Superfast Northamptonshire project has provided over 60,000 premises with Fibre broadband and aims to bring over 6,000 rural premises fibre coverage by 2019.
- **The SEMLEP area has a strong record on electrical vehicle (EV) uptake and infrastructure provision**: over the period 2014 Q1-2018 Q2, the average growth rate

in new EV registrations in the SEMLEP area was 19.2% per quarter, above the UK rate of 15.7%. Meanwhile, the Government's National Chargepoint registry shows that nearly 6% of the country's installed electric vehicle charging points are in the SEMLEP area. Both of these are driven in large part by Milton Keynes, which had the second highest number of new EV registrations of all unitary local authorities in 2018 Q2 (5,558), and which has around 150 EV charging points, comparable with volumes in London. But other parts of SEMLEP are also increasing their number of EV charging points; for example, Bedford is undertaking a project to put in 300 of them.

What more could potentially be done?

- **Connections into strategic transport links**: England's Economic Heartland (EEH) is due to conduct a review on how settlements within the SEMLEP area (and across the Growth Corridor more generally) can maximise opportunities from the planned new East-West strategic transport links.
- **More on First Mile-Last Mile Connectivity**: more could potentially be done to improve this, including greater use of 'smart' transport and transport infrastructure – including integrated ticketing and journey planning – and acting as a test-bed for use of e-cargo bikes/ autonomous vehicles/ other innovative freight technologies [see 'SEMLEP as an Advanced Logistics Centre of Excellence proposition'].
- **Become an exemplar for EV usage and infrastructure**: although Milton Keyes is a national leader on EV charging points, other places in the SEMLEP area (e.g. Bedford, with 22 charging points, and Northampton, with 8) have considerable room for improvement in this regard. However, such improvements are contingent upon sufficient energy capacity [see SEMLEP's Energy theme for more detail].
- **Support digital skills across all industries, not just IT focused roles, to maximise the productivity gains from digital infrastructure, and take a more active role is helping rural businesses realise the benefits of improved connectivity** [see separate proposition on 'SEMLEP as a Hub of ICT and Digital Training'].
- **Integrate advanced digital and/or transport infrastructure into new/expanded settlements and/or alongside new East-West links** [see separate proposition on 'Piloting a Settlement of the Future'].

Links to National LIS/ Grand Challenges/ other SEMLEP propositions

- **Future of Mobility and Clean Growth Grand Challenges**: the SEMLEP area is a national frontrunner in EV uptake and infrastructure, is at the cutting-edge of other Next Generation Transport developments, and has a strong commercialisation record; it thus has the potential to act as a test-bed for a variety of technologies that sit within the Future Mobility and Clean Growth space.

- **AI Grand Challenge**: greater digital connectivity and smarter technologies and infrastructure are prerequisites for developing, and maximising opportunities from, artificial intelligence.
- **Other SEMLEP propositions**: SEMLEP as the Commercialisation Core of the Growth Corridor; SEMLEP as an Advanced Logistics Centre of Excellence; SEMLEP as a Hub of ICT and Digital Training; Energy: Overcoming Capacity Constraints and Capitalising on Productivity Opportunities arising from the Transition to Clean Growth; Supporting Business Scale-up; Piloting a Settlement of the Future