Industrial Strategy Green Paper January 2017

Consultation response

07 April 2017

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Foreword from the Chairman

The Swindon and Wiltshire Local Enterprise Partnership welcomes the opportunity to help frame the Government's Industrial Strategy which comes at a critical time as the country prepares to depart from the European Union and as a nation we embark on the 4th industrial revolution.

Swindon and Wiltshire is an attractive, competitive and productive location but we acknowledge that our level of GVA has been falling behind and below the national average since 2009. We have started to see an upturn in our performance since 2014 but we still have more to do to catch up with our benchmark LEPs particularly those located in the very high performing urbanised South East. In addition, we would like to highlight the need to promote the rural economy, not just in terms of agriculture and land based businesses but in terms of high performing knowledge based industries which require reliable ultrafast digital infrastructure.

Our area has a set of unique national assets and sector opportunities which we would like to discuss with Government in order to address our productivity deficit and realise our economic potential in support of UK PLC. As part of our response to the consultation therefore we have included six case studies where we can have the greatest impact in achieving the vision of the industrial strategy. These are:

1. **Innovation in emerging low carbon energy technologies:** drawing on research activity into battery technologies by Dyson; the operation of the Hydrogen Hub; and opening up access to leading edge research in sustainable technologies to the business community connecting activity in Swindon and Wiltshire in the low carbon energy sector through to Cambridge and to Cardiff.

2. **Advanced engineering in aerospace defence sector and robotics:** the clustering of the aerospace defence industry and the robotics sector has the potential to create a widespread zone of economic excellence in these fields through Swindon and Wiltshire extending through to Bristol and South Wales and south to Bournemouth.

3. **Cyber security**: linking the national assets in defence-related cyber security at Corsham and Porton with assets in Gloucestershire, Herefordshire and Worcestershire.

4. **Keeping people safe:** the use of science, defence technologies and emerging preparedness around the Porton-Boscombe nexus and the development of a centre of excellence in defence aerospace and security technologies including a developing partnership with Cranfield University in Oxfordshire.

5. **R&D and higher skills development:** addressing degree level and technical skills gaps in Swindon and Wiltshire to support our growth aspirations in industries of the future.

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6. **Strategic infrastructure investment:** enabling the delivery of our fast growth aspirations through the delivery of road, rail, regeneration and digital infrastructure investment.

We propose that as the nation enters Brexit negotiations Government clearly communicates the SMART outputs and outcomes it wants to achieve through implementing the Industrial Strategy through to 2030. In addition, the business community needs reassurance regarding access to appropriately skilled labour now and in the future with particular regard to the status of migrant workers in the short to medium term whilst home grown replacement talent is nurtured. Greater clarity regarding the implementation of the T levels and lessons learnt from Institute of Technology pilots would also be warmly received prior to implementation.

We have worked with Swindon Borough Council and Wiltshire Council to develop our response to this consultation, both organisations will submit their own responses to provide granulated detail. Together we are confident that we can deliver economic growth of national significance in partnership with Government and the private sector and we would welcome the opportunity to discuss our plans to support the Industrial Strategy and the economic growth of Swindon and Wiltshire at the earliest opportunity.

John Mortimer

Chairman

Swindon and Wiltshire Local Enterprise Partnership

31March 2017

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Summary

1. Does this document identify the right areas of focus: extending our strengths; closing the gaps; and making the UK one of the most competitive places to start or grow a business?

Yes, the SWLEP agrees with this focus however the key to the addressing these three areas in the strategy will be in terms of what is delivered, where it takes place and whether there is the right level of resources to make a big enough impact.

We would however like to propose an additional focus which is 'unlocking potential' which we regard as different to both 'closing the gaps' and 'extending our strengths' and is more about future preparedness. We need to have a strong global outlook, developing over the two years of negotiation with the EU and firmly in place by 2019. At both a local and a national level, we need a significant expansion of growth- and export-oriented businesses.

In addition, the Green Paper is urban-centric in its identification of the economy and areas of growth. In fact, within agriculture we are seeing early adoption of autonomous vehicles, drones and satellite technology to increase the productivity of the industry. The Industrial Strategy needs to acknowledge the significant contribution of rural businesses, especially with the growth of dispersed working practices within high value knowledge intensive businesses.

2. Are the ten pillars suggested the right ones to tackle low productivity and unbalanced growth? If not, which areas are missing?

The ten pillars as identified on page 11 are all relevant and broad in scope. The application and phasing of activity to tackle low productivity and unbalanced growth will be the key to success. A visual representation of this system and the proposed timing and long term view of implementation and intervention would be beneficial. Additional issues which need to be considered include: corporate tax and other business related incentives for business investment; and planning for infrastructure. Whilst it is helpful to a solid framework of the pillars, innovation depends on cross fertilisation of ideas from a range of disciplines, so the implementation of the Industrial Strategy should not be constrained by pillars operating as siloes.

It is anticipated that initially the funds announced in the autumn statement will be the means by which investment will be achieved. The way in which funds are allocated and the criteria against which they will be appraised will be critical to success.

A long term view is required as there are inter-regional differences across the south of England where the economy is managing to grow but this is constrained due to structural issues and lower levels of productivity than across the South East. These issues will only become worse if neglected and will constrain growth further in the medium to long term. The Industrial Strategy as presented does not have a date on it.

A balanced approach is also required to ensure that the non-metropolitan areas outside of the South East, Northern Powerhouse and Midlands Engine areas do not experience disproportionate economic difficulties through lack of investment. We need clarity from the government about its future direction and policy for devolution in England and its view on regional investment and development in areas that do not naturally have major conurbations as their focal point. For example, Swindon and Wiltshire has several urban centres but swathes of villages and rural areas. The food and drink sector is worth a £1bn per annum in our area and requires a vibrant rural economy; the Industrial Strategy fails to acknowledge the contribution of the rural economy to UK PLC.

Productivity across Swindon and Wiltshire is projected to increase by 39%-40% between 2015 and 2030[1], despite this growth, ONS data has shown that our historic growth in GVA has been below the national average. In terms of addressing our own productivity issues therefore, we have identified a number of key economic development and investment opportunities for Swindon and Wiltshire which will also benefit the economies of neighbouring LEPs. These are presented as a series of case studies in Appendix 1.

At the Westminster Business Forum event on 16 March, speakers suggested that businesses, particularly in the manufacturing sector have been very successful in improving the performance and productivity of their workforce however in this sector, labour costs represent just 10% of overall costs. As a result, attention needs to be given to reducing the costs of the remaining 90% of inputs which includes materials, distribution and energy costs. The Industrial Strategy therefore needs to acknowledge this in tackling productivity performance and measures to address it should be interwoven across all of the ten pillars.

3. Are the right central government and local institutions in place to deliver an effective industrial strategy? If not, how should they be reformed? Are the types of measures to strengthen local institutions set out here and below the right ones?

The Industrial Strategy sets out the institutions considered necessary for growth (pages 120 and 121) and the SWLEP would not disagree with this list. The issue is having the combination of these institutions in the right places and operating effectively and collaboratively. Under question 36, we present the picture for Swindon and Wiltshire and

[1] Oxford Econometrics – 39% to £23.648bn, Cambridge Econometrics – 40% to £24.525bn

would welcome discussing how we could access support in addressing some areas of weakness locally.

We welcome the work of the National Infrastructure Commission to produce a national infrastructure assessment. We would welcome the development of a strategic investment plan arising from the assessment because the key issue for the UK comes down to having a clear and consistent long term view of policy and action and the right structures in place to support delivery. Business likes certainty and to know which institutions it needs to work with and that they will continue to be in operation long enough to justify the time and resource required to engage and build relationships with them,

There is the danger that there are too many administrative models in operation which lack national cohesion from Engines and Powerhouses, Combined Authorities and Mayors and LEPs. We feel there is benefit in drawing up a national plan regarding the operation of these models which is clear and can be implemented consistently and transparently.

4. Are there important lessons we can learn from the industrial policies of other countries which are not reflected in these ten pillars?

We do not know enough about the industrial policies operating internationally but we are aware that there are varying degrees of state support and intervention. We are aware that economies such as Germany, South Korea and Singapore have made heavy investment in skills development, educational quality and research and development resulting in them being some of the highest performing economies in the world. We recognise that the UK is the 7th best place in the world to do business[2] however Denmark and Norway rank above us and have greater equality in terms of the spread of economic gains across their population than in the UK.

[2] World Bank 2016

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Pillar 1: Investing in science, research and innovation

5. What should be the priority areas for science, research and innovation investment?

The ability to commercialise the science, research and innovation collateral of the UK is a priority and can have a significant impact on productivity improvement and economic growth whether the knowledge is developed by academic institutions or public research organisations either independently or in partnership with business. This will result in a range of additional benefits including enhancing all parts of the UK as an attractive inward investment location.

Key areas to focus on are: developing partnerships with Higher Education Institutions; creating research-based capacity; developing an 'open innovation environment' and engaging businesses and especially business leaders in the process of innovation. For example, the Dyson approach connects students and learning with businesses and opportunities for real life learning. We are keen therefore to develop the Higher Education offer in Swindon and Wiltshire as well as to support the development of technical skills to support the commercial application of research and innovation.

The SWLEP has interests in this area as shown in our case studies in Appendix 1. This includes:

- advanced engineering and aerospace;
- cyber technologies;
- defence and security technologies,
- emerging low carbon energy technologies such as smart, flexible and clean energy technologies; and
- health and life sciences including nationally important capabilities in emergency response (infectious disease, vaccinology and high-level containment).

In addition, The SWLEP is a party to the South West and South East Wales Science and Innovation Audit (SIA) which has reported to government on priorities for R&D and innovation. Its main theme is maintaining industrial, intellectual and entrepreneurial capability in digital innovation and advanced engineering. However, the SIA is a cross-regional study and overlooks local nuances; for example in the Swindon and Wiltshire area, our lack of higher education and associated research infrastructure is a R&D and innovation priority and the SIA does not acknowledge the level of R&D and innovation which takes place amongst our businesses.

6. Which challenge areas should the Industrial Challenge Strategy Fund focus on to drive maximum economic impact?

A robust innovation support environment is already operational through Innovate UK; effective knowledge transfer networks; catapults and R&D investment funding and the SWLEP supports the continuation of these structures. Innovate UK and the Research Councils have already undertaken a lot of work and consultation on the industrial strategy challenge areas and the SWLEP supports the themes which have been proposed through this process. Additional consideration however does need to be given to support for market readiness and investment to take technologies from proof of concept stage to marketable product.

The SWLEP is particularly interested in supporting work around the biosciences (defence and security); digital industrialisation; low carbon energy generation and storage; and advanced engineering especially automotive, autonomous vehicles and defence technologies as set out as case studies in Appendix 1. We also support the inclusion of sustainable communities as an additional challenge area. Commercial and public sector activity in the defence sector and by Dstl in Swindon and Wiltshire will be significant here:

Spin offs from defence:

- Robotics and artificial intelligence including connected and autonomous vehicles and drones;
- Satellites and space technologies; and
- Manufacturing processes and materials of the future.

Dstl:

- Transformative digital technologies including supercomputing, advanced modelling, and 5G mobile network technology;
- Bioscience and biotechnology including food technology, supply and production;
- Smart, flexible and clean energy technologies such as storage, including batteries, and demand response;
- Leading-edge healthcare and medicine at Porton; and
- Quantum technologies.

A long term vision is required in terms of the use of driverless vehicles to make sure the full benefits are reaped both socially and environmentally; there could be opportunities for collaborative technology development with the MoD; and the ability to connect residents with new emerging businesses around on-demand travel. As an area with a strong agriculture base we already acknowledge the existing application of driverless vehicles within the land-based sectors and the potential for the rapid expansion of this technology. Using the dispersed nature of our rural areas, the digital technology needed for autonomous vehicles could be used as a way of linking our communities together drawing on the MOD's highly developed mapping and GPS systems. As a result we are investing LGF3 funding in a significant agri-tech facility at Wiltshire College Lackham in collaboration with the College's

university partners to deliver higher level provision.

7. What else can the UK do to create an environment that supports the commercialisation of ideas?

In order to support the commercialisation of ideas, there needs to be a thorough awareness of the skills and expertise resident across the UK. The Science and Innovation Audits have gone some way to achieve this but they are too University-centric and have not captured the full range of capabilities beyond the Higher Education sector. The SWLEP therefore suggests that a broader capability audit is undertaken involving a wider range of organisations.

The UK has always had a reputation of performing radical research which it fails to commercialise so a culture shift from the very earliest point is required to address this. At the other end of the scale therefore the SWLEP recommends that additional education and practical commercial experience is built into the national curriculum on entrepreneurialism and the creation of an entrepreneurial culture starting in primary schools.

Evidence from other areas such as the Alba Centre in Livingston, Scotland, suggests that creating the conditions to facilitate the transfer of ideas and a market for intellectual property transfer may help stimulate commercial innovation. In Swindon and Wiltshire, we are uniquely placed to help drive commercialisation of ideas as we have both research and manufacturing capability and we look to central Government to help us broker this to maximum benefit.

Other approaches which could be used include:

- changing the way that businesses are viewed and funded away from the traditional banking investments and offering responsive local banks; investment banks and bespoke finance;
- making funding (revenue and capital) available, specifically for bringing R&D to market and for the scaling up of pilot projects;
- developing 'Commercialisation UK' drawing on the Innovate UK model and the Heat Network Delivery Funding model i.e. where there are defined and known phases to the process and where businesses and institutions can bid into the right stage or phase necessary to bring their product to market;
- funding support for collaboration and partnership work;
- offering access to safe spaces to test ideas in confidence;
- access to Higher Education Innovation Funding (HEIF);
- access to crowd funds or specific and local stock exchanges with shareholding or community shares; and
- Local authorities can also promote the use of novel investment models for example Swindon Borough Council, working with Abundance, has developed the country's first ISA linked investment for a solar farm. Residents are now directly investing in

the local infrastructure to improve their quality of life.

8. How can we best support the next generation of research leaders and entrepreneurs?

Building on the approach we set out under question 7, it is important that we foster a culture of creativity and invention amongst our younger generations. To build a sustainable future in a post Brexit environment, we need to look at being creative in terms of our use of resources. Approaches which could be considered include:

- supporting businesses to release the time and resources they need to work with research institutions on innovation development;
- offering financial support for collaborative partnership working;
- encouraging businesses to offer research placements;
- ensuring business and commerce is taught in school;
- considering ways in which SMEs can compete with large firms in recruiting bright and talented graduates and school leavers;
- developing coding and digital skills as well as business and enterprise skills;
- providing access to start-up funding;
- maintaining EU structures for Erasmus and Lifelong Learning and funding to encourage collaboration between academics and scientists with business and enterprise; and
- rolling out the lessons learnt from BEIS activity concerned with entrepreneurial education under the leadership of the Department's Entrepreneurial Adviser.

In Swindon and Wiltshire, we need enhanced higher education facilities to support the next generation of our entrepreneurs and research leaders. We are developing links with universities with renowned expertise in teaching and research into strategic and technical leadership. Often it is worth exposing aspirant and practising business leaders to experience in other sectors in order to open new ways of thinking. For this reason we are developing links with the Defence Academy at Shrivenham on leadership under pressure and adapting to rapid change and with Cranfield University on resilient technical leadership.

9. How can we best support research and innovation strengths in local areas?

The capability audit we proposed under question 5 is a good starting point in terms of identifying key strengths and the potential for knowledge transfer and the sharing of best practice. Locally LEPs, working with their partners, are best placed to identify their area's expertise and unique selling points.

The SWLEP supports the need for a strong innovation support environment and we in favour of supporting existing structures rather than introducing new organisations or dismantling EU structures which support innovation. However, we do wish to embed a Higher Education Institution in our area and we are working with the University of Bath to,

in part, achieve this and to strengthen the links our private sector has with academic and research organisations.

The SWLEP is keen to support research and innovation activity within our area, for example:

- exploring the potential establishment of the University of Bath's Institute for Sustainable Technologies Innovation;
- promoting the University of Bath's Hive at Wroughton which undertakes research into sustainable construction techniques;
- developing a Swindon and Wiltshire Higher Education Strategy in response to the absence of a university within our area;
- promoting the clustering of defence related businesses at Boscombe Down building on collaborative work between QinetiQ and Boeing;
- establishing a science park at Porton building on connections with Dstl in the life sciences sector to further develop the cluster;
- supporting the development of a digital hub at Corsham; and
- working closely with Hydrogen Hub.

Pillar 2: Developing skills

10. What more can we do to improve basic skills? How can we make a success of the new transition year? Should we change the way that those resitting basic qualifications study, to focus more on basic skills excellence?

More investment is required in primary and early secondary school teaching in maths and also in English. This also requires investment in teaching methods research for college lecturers teaching year 12 students.

For the transition year to be successful it needs to include good quality work experience which in turn needs the support of local employers. This engagement and on-going long term involvement of the private sector can be challenging in terms of delivering a quality work placement experience. High quality, consistent, careers education, information, advice and guidance (CEIAG) at local levels is also required. Information on the progression pathways through the sectors at a local level needs to be available in order to allow for students, including those on transition years, to have aspirations.

The funding structure to support the continued study of English and maths beyond 16, where a GCSE grade A*-C has not been achieved places increased logistical challenges for colleges and deviates attention and resources away from developing technical education. The number of resits is expected to increase this year with the introduction of the new GCSEs. Reformed functional skills qualifications should be made available as an alternative to GCSEs. If this is not the preferred route then work needs to be undertaken ensure the notion of repeating a year of study is more acceptable as a response to an individual's needs.

11. Do you agree with the different elements of the vision for the new technical education system set out here? Are there further lessons from other countries' systems?

Yes the SWLEP agrees with the Government's vision for the new technical education system. The current system needs simplifying and the new system needs to be straightforward to implement. A clear message that came through the Westminster Business Forum workshop on 16 March was that in order to deliver good quality technical education to meet the needs of business in the future, educationalists at all levels also need to be trained or re-trained to deliver the new technical education system.

We support the creation of Institutes of Technology as examples of good practice in the further education sector which can be used to complement existing provision. What is critical in Swindon and Wiltshire is the provision of progression routes through to higher and degree level learning but without a university presence locally, there is limited provision

in our area but high demand for these skills amongst our business community. We would also like to highlight that the use of the term Institute of Technology can be misleading in the marketplace given that the term is synonymous with high level research based organisations such as the Imperial College London, the Massachusetts Institute of Technology and the University of Bath's Institute of Sustainable Technologies Innovation.

More clarification and detail around the new technical system and its outputs is required as well as lessons learnt from the pilots that have been in operation before any bidding starts. As a starting point we are not clear about:

- whether all jobs lie within scope of the 15 routes;
- maintaining simplicity when the skills plan refers to an additional 12-15 pathways within the routes; and
- how to ensure that the system is rigorous and SMART.

12. How can we make the application process for further education colleges and apprenticeships clearer and simpler, drawing lessons from the higher education sector?

The system is too fragmented as it currently stands. The SWLEP supports the principle of a single organisation to manage the application process to take students on from the age of 15/16 along the same lines as UCAS operates with regard to higher education applications. However, we are aware that previous attempts to implement this approach have not worked and we would suggest that the barriers to implementation in the past needs to inform our approach moving forward. We also strongly believe that these students will continue to need access to face-to-face advice and guidance and these structures should not be dismantled. As we stated under question 10, high quality, consistent, CEIAG at local levels is crucial in supporting young people on their education and career choices.

13. What skills shortages do we have or expect to have, in particular sectors or local areas, and how can we link the skills needs of industry to skills provision by educational institutions in local areas?

The SWLEP has identified a number of areas which need attention:

- Skills shortages at NVQ level 3 and above in STEM skills are, and will continue to be, an issue which needs to be addressed.
- Similarly there are issues in the health and social care sector at level 2 and above which are expected to get worse as the population continues to age at an increasing rate.
- The incidence and scale of these skills shortages could be addressed through the introduction of an impartial skills brokerage model which brings businesses together

to pitch for commissioned services.

- Locally we also need to ensure that we can provide the skilled workers required to support the programme for growth planned the in defence aerospace and security technologies sectors which will be based around Boscombe Down and the Porton Science Campus.

In order to meet these demands we need to ensure the provision of a local workforce with the required technical and higher skills to support the continued growth of our economy. This entails access to both further and higher education provision. Our Post 16 Area Review and our Local Growth Fund 3 investments in our further education campuses at Salisbury and Lackham will go some way to delivering our requirements but there are further investments which we need to make. In addition, given we lack a University presence, we are keen to develop our higher education offer in order to deliver end-to-end education and training options for local people and businesses. At present, our businesses have very limited options for engaging at higher levels.

14. How can we enable and encourage people to retrain and upskill throughout their working lives, particularly in places where industries are changing or declining? Are there particular sectors where this could be appropriate?

This could be addressed through the use of the local adult education budget which amounts to £17m per annum across Swindon and Wiltshire in the following way:

- devolving the budget to bodies that can ably set out the local skills needs, shortages and future requirements of business;
- requiring providers to evidence that they are meeting local needs and not duplicating provision;
- LEPs and local authorities should work with providers to drive strategic priorities and fill skills gaps such as in English, maths and IT;
- retaining the current flexibility of the option for accredited and non-accredited provision to meet local need;
- utilising the budget to engage and upskill adults to meet sector needs, for example in health and social care, construction and teaching, as well as access to retraining opportunities in response to redundancy or a return to work after a break etc.;
- acknowledging that this funding is able to respond to the social inclusion agenda reducing the level of unemployment due to low skills, mental health or lack of confidence etc.; and
- acknowledging the benefit of additional EU funding in the engagement and progression of adults which will need to be addressed in a post Brexit environment.

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Pillar 3: Upgrading infrastructure

15. Are there further actions we could take to support private investment in infrastructure?

There are a number of issues to be addressed to help support private investment in infrastructure:

- the current management system does not encourage private sector investment in highways other than for some very specific and small schemes such as bridges;
- the franchise model for rail delivery encourages some private investment but the current franchise length disincentivises this going any further. The east-west rail model might provide a template for future franchises by covering the management of infrastructure and rail services in an area;
- in terms of digital investment, there is the need to address the planning restriction challenges such as carrier build work on unadopted roads and objections to masts;
- funding could be ring-fenced to support mobile intervention areas;
- build on the work carried out by Ofgem in 2014, which explored Non Traditional Business Models to expedite grid upgrade; capacity building; and increased connectivity;
- explore ways in which the business model of the Distribution Network Operators can be changed to enable a more forward thinking, growth orientated approaches to energy provision;
- rethink finance modelling, investment and ownership by exploring crowd funding, joint ventures, ownership arrangements and local authority investment;
- continue to invest in a long-term, transparent regulatory framework which is recognised by private business;
- demonstrate a track record of completed infrastructure projects, supported by case studies to showcase successful delivery;
- promote and increase public and private sector collaboration in infrastructure development;
- learn from international best practice, for example the United States where the use of municipal bonds is by far the most developed of its kind in the world and facilitates easy access to decentralised capital planning, financing, and delivery; and
- open up the digital communications infrastructure and smart energy infrastructure markets to new providers; or alternatively the government could enter the market to deliver the public infrastructure needed.

As part of our Rail Strategy, we are including the opportunity to build new station capacity where residents show demand for additional services using third party finance.

16. How can local infrastructure needs be incorporated within national UK infrastructure policy most effectively?

The policy framework needs to be overhauled for example national policy is fragmented and is not set out in a single place which is in contrast to local transport policy which is and takes a holistic view of local policy.

There needs to be greater recognition of Highways England and National Rail as strategic network managers and their role in facilitating and delivering local growth. Their impact needs to be re-enforced in their business planning.

The cost of transport improvements could be offset through identifying the uplift in land and property values as well as tax revenues as a means to understanding where investment has the greatest impact and to fund infrastructure possibly through using revolving loans funds in local areas.

There is the need to recognise and quantify the cumulative benefits resulting from local schemes which could be greater than investing in a few major national schemes and thereby redress the balance of investment between 'national' versus 'local' schemes.

In terms of digital infrastructure, policy makers need to solve the market stimulation of superfast and ultrafast broadband retail. In addition, universal service needs have to be addressed.

The simplification of rights of way, power and national infrastructure for planning is required to support the rollout of local infrastructure improvements.

Ensuring there is a joined up approach for bringing forward housing and infrastructure developments.

Ensuring devolution does not create complexity and is rolled out to ensure there is better co-ordination between local authorities, LEPs and the business community.

More financial support is needed to offset the infrastructure costs associated with ambitious regeneration schemes in town centres because commercially-led schemes on brownfield sites are marginally viable at best without the infrastructure burden. In locations where there are low housing and commercial values, brownfield developments in town centres are even less viable.

The right planning tools need to be in place to ensure new development is designed to cater for further, rapid advances in technology (5G) and to ensure high quality design (including public realm). This includes tools to enable the transformation of town centres to meet 21st Century requirements. Mechanisms must be put in place to ensure 'doubling the speed of traditional house building' does not compromise quality.

The £1.7 billion Accelerated Construction fund must be matched to 'regional need' (as

Housing Infrastructure Fund).

Physical transport infrastructure is clearly critical to connectivity and some road improvements are under way to improve the east-west and north south physical connections in the SW LEP area.

The Heathrow decision will in due course significantly benefit the international physical connectivity of the SWLEP particularly if it joins a mooted "Great Western Corridor" between South Wales and London, with the Bristol City Region as the hub.

The possible components of the corridor are:

- The next generation of rail investment (HS4: London, Swindon, Bristol, Cardiff, and Plymouth, Exeter, Bristol, Birmingham).
- North – South road links – including the A350 / A429 route from the Midlands to South Coast.
- Avonmouth as an International Gateway port
- Additional Crossings of the Severn Estuary
- Bristol Airport as an International Gateway.

Good physical connections are vital to enhance the attractiveness of the region.

17. What further actions can we take to improve the performance of infrastructure towards international benchmarks? How can government work with industry to ensure we have the skills and supply chain needed to deliver strategic infrastructure in the UK?

As set out under question 16, the UK would benefit from a single national transport plan with set performance indicators and we should not be afraid of fully adopting international practice.

There has been a lack of central investment in R&D for the transport sector which needs addressing. There has also been a lack of investment in this area by universities and higher education resources for STEM skills in the transport sector. SMEs need to be encouraged to offer apprenticeship and training schemes in this field and follow the lead of the large consultancy companies.

There is the requirement to address the lack of continuity and of career progression opportunities in this area in both the public and private sector. The public sector is driven by resource budgets and driving costs down whilst the private sector is focussed on workflow issues both of which act to deter investment in training the next generation. Funding could be targeted at specific education and skills development delivery.

In terms of energy infrastructure, there are opportunities for the National Grid to have

national oversight of Distribution Network Operators to ensure there is collaborative forward planning.

Pillar 4: Supporting businesses to start and grow

18. What are the most important causes of lower rates of fixed capital investment in the UK compared to other countries, and how can they be addressed?

There are a range of causes which impact on capital investment including:

- investment tends to be focussed on the short-term rather than the long term and this will continue to be the case in the context of Britain leaving the European Union (EU). The UK is already in competition with the EU in terms of lower salaries and the availability and skills levels of workers;
- the availability of credit also affects levels of investment in the UK. For instance, banks do not invest in businesses who want to buy specific advanced manufacturing equipment as these assets are not easily resalable which undermines overall investment and growth;
- the impact of exchange rates on build costs also impacts on capital investment; and
- the cost of labour has been relatively cheap in recent years so businesses have not invested in capital equipment to make productivity returns.

These issues could be addressed through:

- making the UK more attractive as an investment location through: place marketing; promoting exporting; skills development; and effective trade deal negotiation as part of Brexit;
- offering capital investment tax breaks;
- targeting capital release schemes at inward investors; and
- changing the emphasis from business rate relief targeted at companies which are struggling to supporting businesses which are looking to expand and grow. Deals could be made for those businesses which want to invest in skills, exporting, business expansion etc.

In our area, we need a strong private sector investment network given the notable recent closure of the largest private individual investment organisation. In response the SWLEP is developing a public-private investor network using its Growing Places Infrastructure Fund and the resources of high net worth individuals to support growth-orientated SMEs.

19. What are the most important factors which constrain quoted companies and fund managers from making longer term investment decisions, and how can we best address these factors?

The most important factors are that:

- business is operating in a short-term environment focussed on a quick return and at present there is a lack of appetite for taking risks either through investment at home or overseas;
- the stock market does not invest for the long term, what is needed is 'patient capital' but generally shareholders aren't patient;
- the tax system which could be amended to incentivise longer term investment;
- there are better investment opportunities overseas where investors have access to incentives, skills and talent support and better exchange rates; and
- there is significant variation in economic performance across the UK which is dominated by London which in turn operates in its own price bubble.

To address these issues work could to be undertaken to:

- address the perception of the UK overseas;
- encourage growth outside of London for example Swindon and Wiltshire is highly competitive in terms of the cost of office and industrial space and is connected well to London and Heathrow by electrified rail.
- address housing market instability and an over-reliance on housing as an investment asset;
- address political uncertainty; and
- help business meet its own finance needs through better investment banking and providing alternative options to businesses other than having to turn to short-term solutions for finance.

20. Given public sector investment already accounts for a large share of equity deals in some regions, how can we best catalyse the uptake of equity capital outside the South East?

This could be supported through:

- the relocation of public services out of the South East;
- offering incentives to support the relocation of organisations across the UK;
- investing in better connectivity with the rest of the UK and between LEP areas;
- recognising regional strengths in terms of UK place marketing;
- ensuring that regional development strategies and sector development approaches are aligned;
- supporting cross LEP collaboration to build a greater understanding of other localities; economies and strengths;

- making it more difficult to invest in the South East;
- developing the transport infrastructure to grow the regional economy; and

21. How can we drive the adoption of new funding opportunities like crowdfunding across the country?

These funding opportunities are driven by necessity and tend to happen organically. Interventions which could be undertaken include:

- developing trustworthy platforms with light touch regulation in place to offer reassurance to investors that the opportunity is reliably managed and low risk;
- introducing tax breaks for individuals (not businesses) investing in crowd funding schemes.
- marketing campaigns and educational activity to raise the awareness of investing small levels of funding;
- offering a matching or partnering service; and
- empowering LEPs to sponsor the creation of funding schemes and even run their own crowd funds.

22. What are the barriers faced by those businesses that have the potential to scale-up and achieve greater growth, and how can we address these barriers? Where are the outstanding examples of business networks for fast growing firms which we could learn from or spread?

The barriers include the ready availability of good quality employment land, access to credit and underwriting and mitigating the risks associated with scale-up. There is a challenge to local councils to identify sufficient employment land to meet growth needs and allow for unplanned extra capacity. Strategic planning for business growth needs to take into account the life cycle of business growth, enabling a pathway to employment sites meeting the needs of start-ups, scale-ups, medium and large businesses. One way to manage this is to have fast build, click and grow office space, making use of custom-build approaches for knowledge intensive businesses. There is a significant challenge to provide office and manufacturing facilities to accommodate growing businesses.

Tech City is a good example of a network which has been effective in supporting high value start-ups. There are also good examples of innovation hubs run by entrepreneurs who have an interest in fast growth or quickly recognised failure.

There is a plethora of public sector funded business support, but the landscape is confusing for growing businesses. The Growth Hub brand is gaining traction; in each area the Hub can provide the managing and co-ordinating function to be a genuine one-stop shop for public-sector funded support and programmes delivered by private-sector partners.

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Pillar 5: Procurement

23. Are there further steps that the Government can take to support innovation through public procurement?

Given the importance of public spending on national contracts to the UK economy, the SWLEP supports the Government's approach to drive innovation through procurement, the proposed balanced scorecard approach and procurement in key industries. Government spending departments and regulated utilities could work closely with other government departments and sector bodies such as Innovate UK to challenge industry through procurement.

Given the approaches set out and the scale of the work proposed in the Industrial Strategy we suggest these methods are trialled before further innovation procurement tools are piloted. Concentrating on a small number of key initiatives and new ways of working is likely to be more effectively implemented than rolling out a wider set of schemes. Not only is this likely to stimulate innovation, it is more likely to eliminate waste.

The development of a national public procurement strategy for a post Brexit environment is also recommended to understand whether, when and how any changes to procurement regulations will be implemented across the whole of the public sector.

24. What further steps can be taken to use public procurement to drive the industrial strategy in areas where government is the main client, such as healthcare and defence? Do we have the right institutions and policies in place in these sectors to exploit government's purchasing power to drive economic growth?

The issue with innovation is that although the long term payback may be good, the upfront costs can be high and there is the danger that the intervention may fail. It is imperative therefore that there is the resource available and appetite to fully commit to new ways of working and that there is public backing at a time when there continues to be wholesale spending cuts. Effective programme, risk, reputation and press and communication management will be crucial in the rollout of these initiatives.

A review needs to be undertaken to understand whether there are entrenched or inefficient ways of working which need to be addressed first within the defence and health sectors which left untouched may undermine the efficacy of innovation in procurement and supply chain management.

The broader question of public procurement policy needs to be addressed. The post Brexit

environment offers the opportunity to amend EU regulations regarding support for local products which would be beneficial, particularly in the food and drink sector.

The public sector in general is overly focussed on cost when procuring services or products. The sector fails to place the risk on prospective suppliers when managing a major procurement exercise. The sector does not procure to deliver innovation as the specifications are often overly-prescriptive, depressing the opportunity for an innovative solution from a prospective supplier willing to take a risk. Working through LEPs with their strong business connections, the government should support innovation through procurement through trials to deliver public sector savings and industrial strategy products. The SWLEP has experience of working across all public sector bodies to simplify procurement for public sector contracts, work which was recognised in local government awards in 2015.

Pillar 6: Encouraging trade and investment

25. What can the Government do to improve our support for firms wanting to start exporting? What can the Government do to improve support for firms in increasing their exports?

Step 1:

- greater clarity is required by businesses regarding the terms for Brexit and assurances that working with the EU in the future will be simple;
- maintain a customs union with the single market to support export activity;
- improve the knowledge base locally of who is already exporting in order to target interventions effectively; and
- explore the potential for establishing regional or sector focussed export agencies acting on behalf of businesses overseas to sell their goods e.g. to manage shipments, licensing, tariffs and transport and take the sting out of entering new markets or exporting for the first time.

Step 2:

- there is the need to engage with medium sized businesses in particular which tend not to engage in support or be the focus for it. For example moving into bigger premises or breaking into new export markets requires additional upfront investment and incurs additional costs thereafter such as higher business rates. There is therefore the potential for business rate relief to be granted to businesses which are expanding or entering new business markets or grants awarded to establish new footholds in export markets to support this expansion; and
- There needs to more awareness raising about the business benefits of exporting supplemented by significantly more engagement in, and training on, how to export with sector specific campaigns; peer-to-peer support and the sharing of commercial best practice across sectors.

26. What can we learn from other countries to improve our support for inward investment and how we measure its success? Should we put more emphasis on measuring the impact of Foreign Direct Investment (FDI) on growth?

With Brexit negotiations imminent, the UK will need to resolve its future approach to trade i.e. whether to take the route to protect and subsidise industries or open more free trade agreements and encourage greater foreign direct investment.

In addition, we need to know what the likely impact is of the new US administration in pulling back from overseas trade given its importance to the UK's balance of trade.

Other countries offer more state support and undertake aggressive marketing, for example by offering support or subsidised premises as sweeteners for investment or infrastructure investment subsidies.

The UK Government could make it harder for firms to be acquired by overseas firms and then asset stripped.

The UK regulation environment and labour market regulations are attractive to investors but we could offer more in terms of capital funding.

In terms of measurement, overseas investment projects should be steered or targeted to locations where they will offer the most impact in terms of regional growth or impact on GVA. This would need to be complimented with better soft landing packages to offset the draw of the South East as an investment location.

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Pillar 7: Delivering affordable energy and clean growth

27. What are the most important steps the Government should take to limit energy costs over the long-term?

This could be achieved through:

- the development of a national energy policy;
- Government designing and implementing a co-ordinated system for energy prices where costs are reasonable and equally spread across the UK and are paid for on an as-per-consumption basis. This would address the situation where under-utilisers are overcharged especially in areas where there is a monopoly in terms of supply.
- supporting private sector infrastructure by helping projects to raise finance from the capital markets through Treasury-backed guarantees for infrastructure bonds and loans;
- reinstating the building regulation code for sustainable homes or realising the ambition for zero carbon homes;
- having a locally smart grid market base approach; and
- promoting the use of mobile technology for controlling heating etc.

28. How can we move towards a position in which energy is supplied by competitive markets without the requirement for on-going subsidy?

There has been some progress towards a post-subsidy environment but this is in danger of stalling because the cost of solutions, such as battery storage, have yet to reduce in order to create a viable offer. Further investment in innovative solutions and incentives for early adopters would aid the faster development of technology and increase take-up, causing prices to fall.

It may be necessary in the short term to keep an element of subsidy to maintain the momentum of local energy schemes and set this approach within a long term plan. Any strategy might also need to consider relaxing planning laws and to make the use of clean and renewable energy mandatory for new housing and employment developments.

29. How can the Government, business and researchers work together to develop the competitive opportunities from innovation in energy and our existing industrial strengths?

Hydrogen technology has an increasing presence in Swindon & Wiltshire with the installation of a second hydrogen refuelling station; the work of Johnson Matthey, Honda, Hyundai and BOC; and the work of the Hydrogen Hub to bring innovative applications to market, both automotive and stationary involving over 30 businesses. There is a strong base in Swindon and Wiltshire to create a "test bed" environment and use funding competitions to drive innovation and increase early adoption. The SWLEP area has a number of innovative companies that could benefit from a growing new energy ecosystem. Some examples include Spinetic Ltd with a new unobtrusive design for efficient low cost small scale (farms etc) wind energy capture and Advanced Plasma Power which generates gas from a variety of feedstocks including waste into gas for power and transport together with an innovative range of rural businesses.

The Energy Technologies Institute has recently highlighted the opportunity for hydrogen storage in salt caverns (ETI 2015) as a grid balancing system. The proximity of Hinkley C, the SW's extensive renewable energy generation and the Somerset salt formations is an opportunity to store electrical energy as hydrogen that a regional energy demonstrator, proposed in the South West and South East Wales Science and Innovation Audit could address. Using the hydrogen for high value applications such as transport as being promoted by the hydrogen hub as well as peak power and energy storage could make such systems economic earlier and show the value of connecting the different energy initiatives in the region.

Advanced Plasma Power has started work on a £25m energy from waste plant that produces a hydrogen rich gas from the waste which is to be used for transport. The current hydrogen refuelling station uses solar power to produce hydrogen but extending the ability to produce hydrogen from waste links the circular economy to the new energy economy and its transport dimension.

The current energy system finds it hard to engage SMEs using centralized market based initiatives. SME's have neither the time nor expertise to engage in this way.

Regional and local leadership of the new energy economy should be encouraged in the Government's new Industrial Strategy. Industrial Strategy should enhance the ability of communities to invest in, finance or act as a lead customer for innovation that values the environmental and social benefits of the new energy economy properly.

There are pockets of internationally significant research and development underway on battery technology and energy storage solutions including work by Dyson and IXYS in Swindon and Wiltshire. Innovate UK could have an active role in stimulating additional commercial R&D in battery technology whilst Government could take a lead on tackling national grid components. In such a way, the development of regional clusters of energy

specialisation and the commercialisation of MoD energy projects could be developed to the benefit of the wider public.

The National Grid could be brought together with Distribution Supply Organisations in order to break down the geographical barriers which exist between them. This would ensure a coherent pricing policy and clear timetabling for grid connections, making it easier to identify and model viable schemes.

30. How can the Government support businesses in realising cost savings through greater resource and energy efficiency?

There have been a range of initiatives which have been trialled over the years. In Swindon and Wiltshire for example, ERDF funding is being used to address this issue, using a competitive call to low carbon specialist businesses for projects to the value of £3.5m, including advice, guidance and grants to improve resource and energy efficiency within the SME community. However there is the need for longer term investment, beyond the demise of European funding if we are to reach carbon reduction targets and improve the efficiency of SMEs which form the backbone of employment and growth in our area and in the UK. The sharing of best practise will enable us to understand how this can be taken forward in the longer term.

Pillar 8: Cultivating world-leading sectors

31. How can the Government and industry help sectors come together to identify the opportunities for a 'sector deal' to address – especially where industries are fragmented or not well defined?

To be effective, the definition of the sectors to be prioritised needs to be clear and transparent in order to maintain focus and identify SMART outputs and outcomes.

There needs to be clarity as to whether the sector deals are to operate nationally or whether they are geographically targeted as this will determine how to develop them and who to involve;

Sector based bodies and associations could be resourced to identify specific opportunities to come together and negotiate deals;

At this stage it is not clear what the incentives are for businesses to come together to take part in or negotiate a sector deal and further information could be included in the Industrial Strategy.

Skills institutions could be linked with sectors and resourced to undertake research and development activities.

32. How can the Government ensure that 'sector deals' promote competition and incorporate the interests of new entrants?

The Brexit trade negotiations will be an important consideration in each of the sector deals and will need to address the impact and opportunities which arise as a result. The deals could:

- offer competitive 'growth' funds for the sector to bid into against specific themes. These competitions should not duplicate those run by organisations such as Innovate UK or the themes already identified for the Industrial Strategy Challenge Fund.
- promote and support work in emerging technologies;
- include support for intellectual property protection for new developments and technologies;
- relax regulation depending on the nature of the call or competition to incentivise involvement in the deals; and
- build on working with research and education institutions drawing on existing structures such as Knowledge Transfer Networks to support R&D activities.

33. How can the Government and industry collaborate to enable growth in new sectors of the future that emerge around new technologies and new business models?

This collaboration could be achieved by:

- developing closer links between education and R&D institutions and industry, as identified in the proposed approach to using the monies from the Industrial Strategy Challenge Fund;
- understanding the barriers to growth nationally and locally and put in place mechanisms to overcome them working with a range of new and existing support networks and organisations;
- helping to create and enhance geographic clusters and specialisms through targeting investment and support in infrastructure, skills and business support etc.;
- investing in R&D, tax breaks and relaxing regulation; and
- delivering incubation workspace facilities with access to technical expertise and adequate amounts of finance.

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Pillar 9: Driving growth across the whole country

34. Do you agree the principles set out above are the right ones? If not what is missing?

The SWLEP supports the aspirations set out in the Industrial Strategy to drive growth across the whole of the country. We acknowledge that there are significant structural issues to address to revive underperforming areas in the north and the Midlands. However we also wish to see areas such as Swindon and Wiltshire, who occupy the thriving middle ground, but which also operate within constraints, continue to prosper under this strategy. Therefore we would like to discuss how an industrial strategy for Swindon and Wiltshire could be taken forward with targeted Government investment.

There should be greater recognition that spatial planning is part of the solution to transforming the economic landscape, rather than being viewed as a problem and the enemy of enterprise. However, to be effective it needs to transcend geo-political boundaries based on city-regions or growth corridors and not simply rely on the duty to co-operate. This is particularly relevant in the context of increasing the GVA output of the rural economy. Proper strategic planning at the appropriate scale and long-term time horizons would create certainty to encourage development activity and private investment in roads, rail, energy etc.

There should be an emphasis on upscaling good economic growth and transforming infrastructure. Land values are a commodity in themselves and are driving investment decisions as much as, in some cases more, than the economic justification of the business enterprise itself. Development land is a finite resource and in sustainable locations will be subject to competing uses: housing, retail, warehousing and manufacturing. Whilst planning can allocate land for each use, it is on the basis that is deliverable and viable. The emphasis on housing growth has made the long-term protection of employment sites problematic.

Whilst there are likely to be political sensitivities with a boundary review, there are precedents such as the devolution discussions involving Bournemouth, Poole and Christchurch in Dorset and the SWLEP is supportive of democratic boundaries aligning closer with larger functional economic areas. In addition, the SWLEP is engaged in developing partnerships with other LEPs in the south west, to the east in Oxfordshire and the Thames Valley and to the north through Gloucestershire to the Midlands. The SWLEP is committed to developing effective strategic partnerships that have a significant positive impact on economic growth.

Planning along transport corridors would take into account the content of the strategic plans at the city-region scale, but would also encourage cities to work together to deliver synergistic benefits either through agglomeration or ensuring growth is complementary. This should, and must avoid the pitfalls of a competitive funding process to ensure shared

benefits across the wider area. For example, Oxford and Swindon are the opposite of one another in terms of earnings, qualifications, private and public sector employment, house prices, demographics, environmental constraints to development. If the two areas are properly integrated with transport improvements along the A420 and the Great Western Mainline, this would allow Swindon to access high-skilled labour, young professionals and greater spending power locally; whilst 'Oxford' could access land for light industrial, R&D and high value manufacturing. Clearly connectivity is critical to this.

In this context, consensus can be achieved about unlocking real barriers to growth; Hindhead is a good example where £1.1 billon was allocated to address bottlenecks on the highway network. We therefore suggest that key pinch points are mapped and strategic investment is brought forward.

35. What are the most important new approaches to raising skill levels in areas where they are lower? Where could investments in connectivity or innovation do most to help encourage growth across the country?

The introduction of the apprenticeship levy is an important approach to raising skills levels providing employers with the incentives and means to focus on their workforce and their skills and training needs. The increased awareness of apprenticeships and affordability for SMEs on the 90:10 basis coupled with standards being industry and sector-led allows for greater accessibility. The more widespread accreditation of prior learning as an enabler to progression in areas of low skills may also play an important role in raising skills levels.

The localism approach to skills funding in areas that are devolved will allow for a more targeted approach for raising skills where they are lower. Whilst not a new approach, the use of European funding locally for growing skills provision where there are shortages, albeit time bound, provides huge capacity for raising skills levels, as does the local City Deal programme across Swindon and Wiltshire. The continuation of funding from UK resources following exit from the EU is very important to maintain sustained impact.

Pillar 10: Creating the right institutions to bring together sectors and places

36. Recognising the need for local initiative and leadership, how should we best work with local areas to create and strengthen key local institutions?

The Industrial Strategy clearly sets out the range of institutions for local growth; the issue is that not every area benefits from the full range of institutions to really catalyse and capitalise on growth. A place-by-place response is therefore required to strengthen areas of weakness. In Swindon and Wiltshire, we have the following structure

1) **anchor businesses and, local financial institutions**

We benefit from being home to of a wide range of internationally and nationally significant companies such as BMW, Dyson, Honda, Nationwide etc. and are soon to be joined by Boeing Aerospace.

We lack local venture capital networks and individuals to support scale-up activity amongst our SME community. This could be addressed through the creation of new loan funds or by encouraging and facilitating the creation of locally dedicated venture capitalists and investment funds. We would welcome guidance and support to achieve this ambition in Swindon and Wiltshire.

2) **local leadership institutions such as local authorities, LEPs and Mayoral Combined Authorities**

We benefit from having two successful and strong local authorities operating in the SWLEP area and our political landscape is not fractured by operating in a two-tier model with a number of District Councils as is the case with many LEP areas. We are therefore able to reach consensus quickly on most issues, without the SWLEP there would be no imperative to reach a joint view. The SWLEP focusses on pulling together the strategic view of the whole area whilst we look to our partners to deliver which avoids the duplication of effort and allocation of resources.

The SWLEP has a Board with a minimum of 70% private sector representation. We need Government to help sell the benefits of being a private sector Board Member in our area through showing that meaningful investment is available to us to address our constraints.

In order to operate effectively, we need confirmation from government regarding its long term intentions for, and commitments to, LEPs as strategic economic development partners. If it is committed to LEPs, it should give consideration now, after many years of successful development, to creating them as statutory bodies. We also seek clarity regarding the government's intentions regarding the devolution of powers to non-mayoral combined authorities which may regarded as inappropriate in non-metropolitan areas. In addition, we

also need Government to commit to core funding the long term future of LEPs not just to March 2018.

3) Interest groups and local advocacy groups

SWLEP partners have good links with a wide range of chamber networks which extend beyond our borders and even overseas and we have an active FSB network.

The geographic coverage and engagement of our local chambers of commerce is focussed on town based issues rather than the addressing or promoting the strategic priorities of the wider area. We would benefit therefore from chambers of commerce which are not currently linked from coming together to operate strategically and co-ordinate their work and engagement not only with businesses but also with the SWLEP.

We have amazing natural assets and we recognise the challenge of reconciling the views of local communities, conservation and preservation interest groups with the need for sustainable growth and we seek to work constructively with them.

4) Innovation institutions including universities, research councils, science parks catapults etc.

We are home to national assets with unique capabilities in driving innovation and research. These include: 7 research councils and Innovate UK which is soon to be merged under UK Research and Innovation and based in Swindon; QinetiQ at Boscombe; and Dstl and Public Health England at Porton. We are building the Porton Science Park with a focus on the life sciences sector; and working with the University of Bath on the potential establishment of the Institute for Sustainable Technologies Innovation in Swindon. In addition businesses support providers in Swindon have called for the establishment of an advanced manufacturing catapult to be established to support local innovation activity.

We suffer from the lack of a University presence and a limited higher education offer in our area and as such we do not benefit from the multiplier benefits a higher education institution brings to a locality in terms of knowledge transfer, innovation and graduate retention. We are currently seeking to address this by preparing a Higher Education Strategy to identify how we can best respond to our needs and realise opportunities in research and the delivery of higher education.

5) Cultural, sporting and quality of life institutions

We have an excellent quality of life offer and partly as a result we are consistently in the top 5 locations in the UK for investment.

Our cultural and sporting offer would benefit from strategic investment. We have pledged

LGF investment to two significant museums, the Swindon Museum and Art Gallery and the Salisbury Plain Heritage Centre, in the firm belief that quality of place and quality of life have a direct relationship and potential for economic growth.

6) Connectivity institutions such as ports and airports

We are geographically close to ports and airports, the M4 runs through the north of our area and we are only an hour away from London and 30 minutes away from Bristol and Reading on the train.

Our north – south connections are poor and act as a constraint on our growth potential. We have invested LGF to make improvements where we can on our road and rail infrastructure but additional investment is required to unlock significant growth and support the development of defence-industry; life sciences and cyber technologies clusters.

7) Summary

We have a range of world class or nationally significant assets which can contribute significantly to the delivery of the Industrial Strategy but our growth and productivity potential is constrained by a number of capacity issues which are in need of investment. This investment would not only benefit our own area but also neighbouring areas north to the Midland, East through Oxford and onwards to Cambridge, south to Dorset and the south coast and West to Bristol and south Wales.

37. What are the most important institutions which we need to upgrade or support to back growth in particular areas?

We are not best placed to comment on other areas but we have articulated our own strengths and weaknesses under question 36.

From our own perspective, our priorities would be:

1) to have a University or Higher Education Institution in our area as over the long term this would address a whole range of issues we face in terms of R&D; knowledge transfer and business engagement; higher education skills development; and graduate retention which would enhance our reputation as a great place to live, learn and do business.
2) to be the home to a range of university-led research establishments including the Institute for Sustainable Technologies Innovation;
3) the delivery of networked cyber security institutions and further business cluster development;
4) support to accelerate the delivery of a cross border defence –related aerospace and

advanced engineering cluster based around a global centre of excellence in defence aerospace and security technologies with Boscombe Down and the Porton Science Campus at their core;

5) strategic north-south road infrastructure improvements to connect the world class activities across our area; and
6) for Her Majesty's Government to show continued commitment to help develop the role of LEPs, which are best placed to deliver on the government's growth agenda.

38. Are there institutions missing in certain areas which we could help create or strengthen to support local growth?

Please see our answers to questions 36 and 37 which relate to the needs of Swindon and Wiltshire.

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Appendix 1: Case Studies in Swindon and Wiltshire

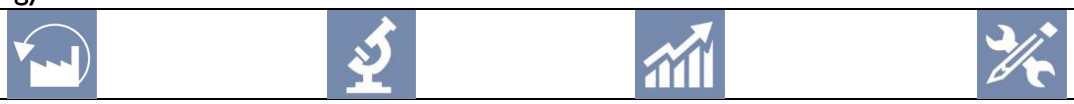
Case study 1: innovation in emerging low carbon energy technologies

The SWLEP considers that innovation in low carbon energy technologies will contribute to the delivery of multiple pillars of the industrial strategy and offers significant opportunities for our local economy to develop and grow. The opportunities we have already identified include energy generation, distribution and battery technologies which will support planned growth and attract inward investment in Swindon and Wiltshire, benefitting both urban and rural areas.

- Research into battery technologies and storage is already well underway here including work by Dyson for commercial applications and by Dstl for military use.
- We are the 3rd largest generator of photo voltaic energy in the country and we are also leading the UK in the provision of hydrogen hubs potentially in association with Osaka Chamber of Commerce in Japan. In addition, we are international partners with the Europe-wide Fuel Cells and Hydrogen 2 Joint Understanding to collaborate on research and promotion of hydrogen as a fuel source.
- The University of Bath is potentially establishing its Institute for Sustainable Technologies Innovation in Swindon. In the first instance this will be a business facing facility translating state of the art PhD level research into business application.
- We are home to Public Power Solutions which provides sustainable power and waste solutions that help meet carbon reduction targets and reduce landfill by up to 97%.
- Work undertaken to produce the South West Science and Innovation Audit has led to a South West Energy Demonstrator being established.
- We have an active business base in the energy field; according to the Smart Specialisation Hub[3] Innovate UK investment in business innovation in Swindon and Wiltshire was ranked 5th across all LEP areas.
- The SWLEP is working with the Local Energy Unit at BEIS to shape the Clean Growth Plan and we are keen to develop a local Low Carbon Energy strategy.

Combined these activities will support the development of skills at the highest levels. Our challenge will be to fill the gaps in skills and education training provision and progression to ensure businesses can recruit workers qualified levels NVQ 3-6 to implement these new technologies effectively and productively.

We consider that this combination of assets has the potential to create a catalysis corridor running through Swindon and Wiltshire extending to Cardiff to the west through to Cambridge to the east with the ability to deliver disruptive technology applications for UK PLC in the low carbon technology sector.



[3] http://smartspecialisationhub.org/observatory/framework-pages/

Case study 2: advanced engineering, the aerospace defence sector and robotics

The development of automotive and autonomous vehicles sector process technologies has the potential to revolutionise logistics and distribution from the use of drones through to innovation in agri-tech and energy applications. We see that defence industry-related activity in this area will be the catalyst for growth and new technology development in this field in Swindon and Wiltshire and relates well to the foci of the Industrial Strategy Challenge Fund:

- Boeing Defence has recently announced its investment at Boscombe where it will work with QinetiQ on defence-related aerospace activity creating 1,500 jobs in the first instance. We see this as the first step in the development of a commercial defence technology site in the south of our area.
- The Boeing investment could be complemented by the potential for other defence industry activities moving to Boscombe Down which will link the application of drones and autonomous vehicles with activities at Dstl at Porton including its research into cloud seeding technologies.
- The Wroughton airfield is a secure site with the potential for the testing of autonomous vehicles.
- We already have a wide range of world class advanced engineering companies operating across Swindon and Wiltshire including Honda which has recently invested £250m in its plant at Swindon and has employment levels back above pre-crash numbers.
- Dyson, one of the UK's leading high technology engineering companies and the country's largest investor in robotics, is creating a new campus at the Hullavington Airfield, increasing its footprint in the UK by ten-fold. This is in addition to its £560m commitment to its existing campus at Malmesbury and is a significant vote of confidence in the Swindon and Wiltshire area and the UK. Dyson already employs 3,500 people in the UK, half of which are scientists and engineers.
- Innovate UK investment in in this sector in SWLEP area was ranked 4th across all LEP areas
- Swindon and Wiltshire has a range of education and skills facilities to support the expansion of the advanced engineering sector including: the Defence School of Electronic and Mechanical Engineering at Lyneham; QinetiQ Apprentice Training School at Boscombe Down; the Empire Test Pilots School also at Boscombe Down; the South Wiltshire Technical College (UTC) in Salisbury; and apprenticeship opportunities at Dstl at Porton.

The combination of these assets and their supply chains will lay a firm foundation for additional skills development in defence engineering and aerospace across central southern England. This will require the teaching and research work across a range of colleges and Universities and will support other private sector businesses operating in the advanced manufacturing and aerospace sectors. In the future we see these assets being enhanced by the co-location of defence and public-private defence-related activity as an unique feature of our area which has the potential to transform not only our economy but that of neighbouring areas linking activity in Swindon and Wiltshire with Bristol and Bournemouth and beyond. The advanced engineering workforce at higher levels is mobile however we need to ensure that we are also cultivating home grown talent to deliver the technical and higher level skills needed to support accelerated developments in this field.


Case study 3: cyber security

Digital connectivity is fundamental to the operation of all major economies and globally we are at the brink of what could be an explosive and revolutionary application of digital technologies. This will open up a raft of opportunities as well as vulnerabilities and the ability for the UK to protect itself and its assets is a fundamental requirement of the modern age.

- Dstl, at Porton, has been advising Government on protecting the UK's infrastructure as well as developing cutting edge cyber capabilities for military operations. Dstl has been increasing its investment in this area and in 2015 opened its Cyber Evaluation and Assessment Laboratory on site to evaluate and assess cyber threats.
- The SWLEP sees the potential for linking our cyber security assets with those in Gloucestershire, Worcestershire and Hereford not only in terms of public sector national security activity but in terms of spurring the clustering of commercial activity in this field. This would be based on building on existing security activity at MOD Corsham at its core which is a unique facility in the UK and is home to the Defence Global Operations Security Control Centre, Joint Security Co-ordination Centre, the Joint Forces Command's Information Systems and Services and a range of businesses operating behind the wire on site.
- We have the opportunity to capitalise on the capabilities of big data expertise in Corsham which is home to the Human Genome Mapping Project and hosts security networks critical to operation of the financial services sector. The transformative aspect goes beyond our boundaries and would be enhanced through links to activity based around GCHQ at Cheltenham, QinetiQ at Malvern and the Special Forces Communications Centre at Hereford.
- There is a shared desire to forge stronger links with the Cranfield University Defence and Security's Cyber School based at the Defence Academy, Shrivenham.
- Research and operational activity at Corsham has already led to spin-off companies locating in the area and along the A350 Growth Zone. There are also additional opportunities in this area through the development of the Porton Science Park which is expected to create a further 2,000 jobs in the life sciences sector with spin-outs clustering on site and along the A303 Growth Zone.

We see the impact of these assets operating as a network as nationally significant in terms of business and organisational networking and clustering but also in terms of national security and wellbeing, GVA and job creation. Opening up access to the biggest and most secure fibre pipe in Europe, which runs through Corsham, is regarded as key to this transformation as is the development of the right specialist skills and education infrastructure from technical through to undergraduate and postgraduate levels.

Case study 4: Using science to keep people safe; defence technologies and emergency preparedness around the Porton / Boscombe nexus

Swindon and Wiltshire is home to a quarter of the British Army and has major assets in defence and security technologies. The Defence Science Technology Laboratory (Dstl) is headquartered at Porton is investing over £170m in consolidation of its facilities in this location with the relocation of around 600 staff to the area.

The MoD facility at Boscombe Down is an established centre of excellence for aerospace defence and security technology with key assets including one of the UK's longest runways. The recent announcement by Boeing Defence UK that it has selected Boscombe Down as its preferred choice for its new UK headquarters, delivering 1,500 jobs and millions of pounds of investment, further reinforces the asset base in south Wiltshire.

Public Health England (PHE) is also based at Porton along with its commercial spin-out Porton Biopharma Limited (PBL). Although some activity at PHE will be relocated to the South East, significant elements of its operation will remain at Porton. There is an on-going investment programme in its Porton site of circa £100m linked to PBL and the retained PHE legacy which presents major opportunities for the future alongside repurposing laboratory, office and science facilities vacated as part of the PHE move.

All of these investments coming together present a unique and timely opportunity for the United Kingdom: The potential to develop a world class centre of excellence in defence aerospace and security technologies underpinned by the objective of using science to keep people safe. This opportunity includes the potential to establish:

- a Defence Technologies Enterprise Zone, or similar, based around the Boscombe Down and Porton sites;
- a nationally recognised defence aerospace cluster around Boscombe Down drawing upon the significant planned investment by Boeing and QinetiQ's further plans for growth linked to its MoD contracts; and
- a nationally recognised defence science cluster around the Porton Science Campus – drawing upon Dstl's growth plans, the Science Park and the opportunities linked to the repurposing of PHE assets.

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Case study 5: R&D and higher skills development

In our consultation response we have outlined a number of potential transformative developments for our area. Fundamental to realising these clusters is having the workforce with the right skills and education to deliver them.

- The clustering opportunities associated with the developments at Porton and Boscombe Down, Swindon, Malmesbury and Corsham, as well as the functional economic links to the north, south, east and west will drive demand for higher skilled people to support higher-value activity based around defence technologies; cyber security; big data application, industrial digitisation and life sciences.
- The erection of the power station at Hinkley Point and Terminal 5 at Heathrow will draw specialist construction workers to these areas from across southern England and the Midlands and we will need to meet replacement demand in the construction sector to ensure that the new and specialist facilities we need to be built are supported.
- In part we will achieve this through the novel investment by the University of Bath in postgraduate research into sustainable technology and construction at The Hive at Wroughton and skills development through the potential investment by the University of Bath and partners to establish the Institute for Sustainable Technologies Innovation in Swindon.

We need to take action to develop skills at the right level to deliver our aspirations. We are therefore setting plans in place to try and offset the lack of a higher education establishment operating in our area to meet skills demand at NVQ 7-9. What we also need to deliver is pathways to deliver NVQ 3-6 education and training to meet the demand for trade, technical and construction skills which are different to standard training to meet our development aspirations. The key recommendation from our post 16 area review is to establish an Institute of Technology which will focus on NVQ Levels 3 to 5 and we are very supportive of this proposal being brought forward.



Case study 6: strategic infrastructure investment

Swindon and Wiltshire is a very attractive location in which to live and work. In achieving our clustering, jobs growth and GVA aspirations we will need to meet the demand for accelerated housing growth which will require investment in infrastructure developments for example:

- In excess of £500m investment on Network Rail and associated land will take place at Chippenham and Swindon in the next few years. These towns are located just 13 minutes apart by train and are in close proximity to the M4 motorway. These developments will act as a catalyst for economic growth, new jobs and the delivery of new homes. It is anticipated that this will also lead to the construction of high quality office space and further employment land development in the M4 Growth Zone.
- Through Swindon Borough Council, we are linked to the Fast Growth Cities Network supported by the Centre for Cities. Our focus is to enable the extension of the existing National Infrastructure Commission's' investment planned for the Cambridge-Milton Keynes-Oxford tech corridor through to Swindon:
    - We are seeking significant improvements to the A420, working with OxLEP on promoting common interests in housing and economic growth.
    - There is significant economic growth potential to be realised through unlocking rail capacity constraints and station improvements between Bristol–Bath–Chippenham–Swindon–Oxford–Cambridge. This would lead to the attraction of additional innovation-led activity to the west along from the Oxford to Cambridge Expressway tech corridor.
- Investment allocated to the regeneration of Salisbury will create an attractive and competitive city centre; support significant housing growth; deliver a step change in the city's retail and leisure offer; and will act as a catalyst to the delivery of further phases of development.
- Additional infrastructure investment is required running north to south on the western and eastern boundaries of the LEP area. To the west, we require support to develop a whole 'corridor' investment on the A350 to link effectively the commercial port at Poole through to the M4 and on to the Midlands. To the east, we wish to remodel and significantly improve existing north-south links from Swindon and routes to the London and Cambridge to the potential new defence technology science park covering Boscombe Down and Porton.
- We are currently investing in ultrafast broadband provision but we see the benefits of hyperfast broadband to support cluster development especially in digital, big data and genomics fields.

There will be significant added benefits in strengthening these east-west and north-south routes which could be supplemented with the development of state of the art digital infrastructure and high quality premises to support the development of all of the clusters we have identified, as well as those not on our horizon yet. This would act to strengthen the cross border movement of knowledge, goods, people and autonomous vehicles and open up access to and from the south coast ports and UK motorway network to develop a fast growth, innovative and productive corridor of international significance.