WORCESTERSHIRE
LOCAL INDUSTRIAL STRATEGY
A CONSULTATION PROSPECTUS
Worcestershire has a strong economic and business base, with specialisms in cyber/IT and advanced manufacturing. It is exploiting the potential of its proven 5G Testbed along with its Industry 4.0 expertise within these sectors and more widely to develop its capabilities in Agri-Tech and a potential extension into Health and Care Digitisation as well. The agreement of a Local Industrial Strategy with government provides an important opportunity to pursue a set of propositions that exploit Worcestershire’s most significant economic assets to boost productivity and prosperity locally and nationally. The Worcestershire Local Industrial Strategy will be the product of a true partnership with government and support co-ordinated action around a coherent vision and agreed common objectives and outcomes.

This prospectus sets out the LEP’s approach to developing the Local Industrial Strategy in collaboration with key local and regional stakeholders. It is intended to provide an opportunity for stakeholders to comment on the proposed approach, agree the description of the area’s economic assets and help to define a set of core propositions. This in turn will support the development of those assets which are intended to form the core of the strategy. This is the first stage of the Local Industrial Strategy production with many routes to collating feedback and further evidence as part of the consultation. Stakeholders are invited to continue to work with the LEP to develop this strategy and ensure that collaboration with government can drive Worcestershire’s economy forward on a local, national and international stage.

The Worcestershire Local Industrial Strategy (LIS) will have two starting points. It should be seen as the local chapter of the Government’s national Industrial Strategy. It will also help deliver Worcestershire LEP’s 2040 vision which is:

TO BUILD A
// connected
// creative
// dynamic
ECONOMY
To build a connected, creative, dynamic economy

CORE PROPOSITIONS

Connected
1. Deliver significant rail improvements to strengthen mobility within the county and links with neighbouring areas, including the West Midlands conurbation, London, Gloucestershire and the South West.

Creative
2. Ambitious for skills, a programme to raise aspirations and skill levels among learners, workers, employers and businesses.
3. A creative places programme to increase provision of commercial premises and support scale up business growth.

Dynamic
4. Becoming a trailblazer for the use of super rural digital technology in a rural county building on 5G capability.

Enabling the use of digital connectivity and multiple technologies including artificial intelligence to digitise businesses and develop an entrepreneurial ecosystem and increase productivity.

SECTOR STRENGTHS

Challenger Sectors
Advanced manufacturing
A strong base of significant businesses and important supply chain links with major businesses in the West Midlands Conurbation.
CyberSec, IT, Defence
Significant potential for growth building on assets such as QinetiQ and the Malvern Hills Science and Technology Parks. Importance of the Cyber Valley with Marches, Gloucestershire and Swindon and Wiltshire LEPs.
Agri-Tech
Significant potential to develop this sector given the importance of agriculture and horticulture including the distinctiveness of the Vale of Evesham. Opportunities to build on the area’s current advanced manufacturing and digital strengths, maximising existing assets such as Pershore College’s Agri-Tech Research Centre and exploiting the county’s proximity to strategic assets such as Hartpury and Harper Adams.

Cornerstone Sectors
Business administration and professional services
An important sector in the county, the growth of which is constrained by a shortage of commercial space.
Construction
Challenge of retaining construction skills in the area and supporting the introduction of modern methods of construction.
Health and care
A crucially important sector given the volume of jobs and manifestation of the ageing society in Worcestershire.

ACTION TO MOBILISE THE FOUNDATIONS OF PRODUCTIVITY

Ideas
Action to meet the national R&D investment target. A collaborative approach to developing a research capability to commercialise ideas. Creation of an innovation ecosystem for high growth and innovative businesses.

People
Action to improve school performance, enable social mobility, mobilise businesses and employers and scale up the LEP’s current work on careers and enterprise.

Infrastructure
Improve rail services with good access to stations by foot, cycling and public transport. Action to improve access to ultra-fast broadband county-wide and develop the commercial roll out of 5G.

Business Environment
Increase supply of commercial premises to enable business growth sector to grow and help local businesses to scale up and enabling inward investment.

Place
Promote new uses to town centres – including business services and digi-businesses. Maximise culture, sport and heritage offer. Effective use of “water as a resource” to support sectoral growth, place planning and flood resilience.

Its focus will be on action to support the development of the county’s most significant economic capabilities to boost productivity and prosperity locally and nationally. The LIS is not intended to replace the Worcestershire Strategic Economic Plan (SEP) which will be refreshed and identify a wider base of priorities and actions. Rather, the LIS should be seen as part of a family of strategies including the SEP, identifying the collaboration opportunities with strategies produced by neighbouring LEPs and the West Midlands Combined Authority, and complementary strategies produced by the local authorities in the county.

The proposed key elements of the LIS include:

> Four core propositions to raise productivity in Worcestershire and deliver the LEP’s 2040 vision;
> The county’s sector strengths and the potential for developing them;
> The action required to mobilise the foundations of productivity in the county.

The key elements of the LIS are summarised on the page opposite.

The rest of this prospectus:

> Summarises the economic and social context in Worcestershire;
> Provides a commentary on manifestation of the foundations of productivity in the county and the issues that require attention in the LIS;
> Identifies Worcestershire’s sector strengths and economic assets and the ways in which the LIS could support the growth of those sectors;
> Scopes out the four proposed core propositions;
> Explains the proposed next steps in developing the strategy and seeks views on the proposed approach.

To the left of the LIS: Scopes out the four proposed core propositions; Provides a commentary on manifestation of the foundations of productivity in the county and the issues that require attention in the LIS; Identifies Worcestershire’s sector strengths and economic assets and the ways in which the LIS could support the growth of those sectors; Scopes out the four proposed core propositions; Explains the proposed next steps in developing the strategy and seeks views on the proposed approach.
Worcestershire is strategically located at the centre of the national motorway network (M5, M42, M50) providing access to major cities including Birmingham, Bristol, Cardiff, Oxford and London as well as Birmingham Airport.

It has good links with the West Midlands conurbation. The county’s rail services do not match its economic ambitions as the physical infrastructure and service offer do not correspond. Worcestershire suffers from poor connectivity as many Cross-Country services pass through but do not call in Worcestershire and there is significant overcrowding on local services into Birmingham during peak periods. Despite improvements such as the opening of the new Worcestershire Parkway Station later in 2019, connectivity to London remains slow and with limited frequency.

Worcestershire has a long history of manufacturing which has included carpets, needles, porcelain and world-famous condiments and this remains a local strength. There is still a comparatively high proportion of employment in high technology manufacturing and a higher than average concentration of local residents employed in this sector. There are opportunities to transform current local specialisms in ‘automotive manufacturing’ into clean growth technology to support the Grand Challenges. Worcestershire also has a diverse business base with cross-cutting capabilities in digital and defence through cyber technology and security by design specialisms.

Emerging from the activities of the Worcestershire 5G Testbed and strong cyber focus on security technologies, economic specialisation and activities complement the rural topography of Worcestershire. Agri-tech is growing, building on the area’s agriculture and horticultural strengths, which includes investment at Pershore College’s Agri-Tech Research Centre in the Vale of Evesham and a burgeoning relationship with Harper Adams University in Shropshire and Hartpury University and College in Gloucestershire. Technologies related to health and medicine, that provide more effective process solutions and products also present a growing opportunity to build upon Worcestershire’s digital and health capabilities. Pivotal to this are the creation of digitally facilitated knowledge networks linked to the University of Worcestershire Association for Dementia and its proposed medical school.

Worcestershire has areas of deprivation which are mainly located in urban areas and are some of the most deprived nationally. There is also low social mobility. Its rural nature, with approximately 40% of its population residing in rural parts of the county, means it is an attractive place for retirement, reinforcing the trend towards a growing, older population which presents both challenges and opportunities. Its rural landscape, the natural springs of the Malvern Hills Area of Outstanding Natural Beauty, and its proximity to the Cotswolds, all contribute to its high levels of natural capital. Canals, locks and basins, wooded areas and leisure opportunities in the northern parts of the county attract a wide demographic and support our health and wellbeing agenda.

Whilst the overall population is highly skilled and there are very low levels of unemployment, the working age population continues to fall while population profiles to 2041 suggest that approximately 30% of the local population at that time, will be 65+ years old. This tightening of the labour market must be addressed to ensure employers can fulfil their growth ambitions by attracting talent, particularly as 53% of students in the area leave and do not return to the area to work. Upskilling and reskilling of the local population, raising levels of aspiration, will be required with an increasing digital skills focus. Central to reversing this trend is the need to deliver affordable and accessible housing to attract and retain younger people and families as despite strong housing performance over the past few years, housing remains unaffordable for many. Housing affordability ratios across the county range from 6.85 in Worcester City to 9.77 in Malvern Hills.

1 Worcestershire has 50 Lower Super Output Areas in the worst 15% of all areas when considered at a national level.
2 Housing Affordability Ratio = x times average, full-time annual workplace-based earnings is required to purchase a home.
**THE FOUNDATIONS OF PRODUCTIVITY**

In recent years both overall GVA and employment has grown in Worcestershire, but GVA per head, at £22,600, is 82 per cent of the national average and current economic forecasts suggest that the gap is expected to increase over the next 20 years.

Central to the LIS will be action to mobilise the five foundations of productivity – Ideas, People, Infrastructure, Business Environment and Places – to enable Worcestershire’s economic assets to make a bigger contribution to productivity and prosperity than they currently do. The following paragraphs begin to scope out what that action might comprise.

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**IDEAS**

Overall R&D spend in Worcestershire across business, higher education and government, at one per cent of GVA, is well below the national target of 2.7 per cent. Spend by businesses is higher than by education institutions, in part due to the small number of higher education institutions and the nature of specialisms within those institutions.

However, the investment made by business has not led to high levels of patent registrations which is identified through low levels of new product innovation and innovation specialisms in new business practices. Worcestershire ranks poorly compared with other LEPs for the registration of patents (32 out of 38 LEPs) and grants drawn down through Innovation UK (35/38).

A key challenge is to explore ways of embedding an innovation culture within the local business base and providing a research capability in subjects which have most potential to add value to the economy.

It is noted, however, that Worcestershire has a growing number of assets to support R&D and innovation, including research specialisms at the University of Worcester, the Cyber Valley, the Malvern Hills Science Park and the opportunities associated with the 5G Testbed and BetaDen, the county’s first Technology Accelerator. It is also well placed to access the R&D and innovation capacity more broadly across the West Midlands conurbation.

Strategic regional and national alliances in Agri-Tech and Digitisation of Health are also possible. Collaboration with Innovate UK’s ‘Agri-Tech Centres’ provides a unique opportunity between government, academia and industry to drive greater efficiency, resilience and wealth across the Agri-Food sector. Nationally the medical technology sector is a thriving ecosystem of researchers, scientists, engineers, designers and National Health Service (NHS) clinicians working in an established industrial base. In Worcestershire there is significant potential to leverage the area’s proximity to the ten universities within an hour of the county, as well as the West Midlands conurbation’s Life Sciences sector, and build on WLEP’s contribution to the wider Midlands Engine economy.

Given Worcestershire’s advanced manufacturing base, which shows a higher proportion of total employees than the national average (14% compared to 12%), and its unique role as a 5G Testbed for Industry 4.0, there is significant potential for the development of more test facilities. Such innovative approaches could support the use of 5G applications within health and social care and in innovative Agri-Food production including reducing inefficiencies in ‘farm to shelf’ supply chains.

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**AREAS THAT REQUIRE ATTENTION IN THE LIS:**

- Action to meet the national R&D investment target
- A collaborative and coordinated approach to developing research capability sub-regionally to exploit the commercialisation of ideas
- Creating an innovation ecosystem to match a support package for high growth and innovative businesses
Building on a strong base of higher levels of qualifications, and a lower than average number of residents without any qualifications, Worcestershire has economic strength in its local resident base.

Significantly, over half of the student base does not return to the county after completing qualifications and with an increasingly ageing population and a falling working age population, Worcestershire has a challenge to fulfil the labour and skills needs of its local economy. Attention must be paid to both stimulating growth in the number of students remaining in Worcestershire, and in those coming back to Worcestershire following their studies.

The University of Worcester’s strengths are in subjects allied to medicine (25%); Biological Sciences (21%); and Education (21%). Graduate employment data shows that Health and Social Work is the primary graduate employer, followed by wholesale, retail and motor, then education and professional services. In 2017, the subjects with the highest number of acceptances for applicants living in Worcestershire in 2017 were for Nursing (420), Psychology (195) and Sport and Exercise Science (160).

There are five further education colleges in Worcestershire - the Heart of Worcestershire, Malvern Hills, Kidderminster, Evesham and Pershore - plus a sixth form college in Worcester. Three of the colleges - Malvern Hills, Pershore and Evesham – are part of the Warwickshire College Group (WCG). As part of the WCG students have access to a wide range of courses with flexible learning approaches. Each of the WCG colleges specialises in different areas.

Between 2016/17 and 2017/18 Worcestershire’s uptake in apprenticeships decreased in a number of areas:

- Business Administration;
- Law, Education and Training;
- Engineering and Manufacturing;
- Health Public Services and Care;
- Information and Communication Technology;
- Leisure Travel and Tourism; and
- Retail and Commercial Enterprise.

The percentage change between the number of people starting in 2016-2017 and 2017-2018 in Worcestershire and England by Subject Area shows that in Construction, Planning and the Built Environment, Worcestershire outperformed the national level, while the declines in Business, Administration and Law and Engineering and Manufacturing Technologies are generally in line with the national level. There was a steeper decline in Health, Public Services and Care and Leisure, Travel and Tourism. Notably in Information and Communication Technologies Worcestershire underperformed by 23% compared to the national level.

Through the Worcestershire Skills Framework, the Worcestershire Apprenticeships Hub is a vital digital asset to promote the uptake of apprenticeships. Central to this is the Heart of Worcestershire College offers a range of innovative apprenticeships including at advanced levels such as Software Development Technicians, Mechanical Manufacturing Engineering, Engineering in Advanced Manufacturing and Digital Marketing.

In Worcestershire, residents’ earnings are much higher than workplace earnings (full-time weekly pay is around £500 compared with £580 in Coventry and Warwickshire). Overall school performance was mixed in 2018 compared with national averages as 42.5% at KS4 gained grades 5 or above in both English and Maths in 2018 compared to 43.3% nationally.

However, attainment B increased in the county from 46.42 to 46.52 suggesting that pupils may have achieved slightly higher grades than last year in other qualifications.

Post 16 performance has also fallen below the national average and the average point score per entry for A levels is 28.9 (C) compared with 33.3 (C+) for England. The proportion of pupils achieving AAB or higher in 2 subjects is similarly lower at 9% compared with 16.2% for England. Overall, the performance does not match the aspirations of the county.

There has been a fall in the number of apprenticeships starts from 5,580 in 2016/17 to 4,070 in 2017/18. Comparatively low proportions of students stay to study and work in the area (15.7 per cent compared with 29.3 per cent nationally) or return to the area having left to study elsewhere (26.3 per cent compared with 30.4 per cent).

Sixty-two per cent of employers have reported the need for upskilling and training of their workforce in the next 12 months – a demand which is seen as critically important given the changing demographics and technological change impacting all jobs.

There is significant potential to match the specialisms of higher education in Worcestershire, its economic base and the challenges faced by the ageing population in Worcestershire. This includes, for example, investment in a proposed new medical school to serve three counties of Gloucestershire, Herefordshire, and Worcestershire, or skills development programmes focused around meeting the needs of an ageing society and the consequential demands of rural healthcare. Worcestershire is, in terms of its resident skills base in a strong position to do this. Health and Social Care is already a strong employer and university data supports targeting the Grand Challenge of an ageing society.

Such a drive will help enable and deliver information sharing and stronger engagement around technologies related to health and medicine.

The LEP runs a number of effective programmes, including the Careers and Enterprise Hub, the Inspiring Worcestershire Programme and the Technical Skills Partnership, the impact and benefits of which could be scaled up considerably if more resources were made available.

### AREAS THAT REQUIRE ATTENTION IN THE LIS:

- School performance that does not match assumptions about the county
- The need to enable members of the existing workforce to re-train and/or upskill
- The low level of investment on the part of many employers in workforce development
- The need to attract and retain graduates and better skilled employees from a wider catchment area
INFRASTRUCTURE

Centrally located in the UK, Worcestershire is a county in the West Midlands and strategically placed with the M5 and the M42 connecting it to Birmingham and the north as well as London and Bristol.

Part of the Midlands Engine economic geography Worcestershire connects the Midlands with Wales and the South West. Worcestershire is more dependent on the private car for travel to work than the national average (46.3 per cent of journeys compared with 36.9 per cent), but it also has a slightly higher proportion of people working from home (4.3 per cent compared with 3.5 per cent).

There is significant potential for rail to play a bigger part in supporting the delivery of Worcestershire’s economic ambitions. Too many rail passengers use the M5-M42-M40 to access services from Birmingham International and Warwick Parkway. There is a real danger that Worcestershire passengers will also access HS2 at Birmingham Interchange via the M5 and M42 adding further pressure to an already congested section of the motorway network. Freight will also need to be a consideration with links to Bristol, Cardiff, Birmingham and the East Midlands.

Birmingham, Bristol and in particular Heathrow Airport are also of strategic importance for the county. The Western Rail Access to Heathrow will connect Worcestershire enabling better access and shorter travel times.

Connectivity to London from Worcestershire itself is slow and of limited frequency. Restricted rail infrastructure, outdated signalling and limited investment in its two existing stations mean that Worcester suffers from poor rail connectivity. Links to London and the South from Kidderminster, Redditch and Bromsgrove are limited. They are well served by local services to Birmingham but suffer from overcrowding during peak periods.

The opening of Worcestershire Parkway later in 2019 will provide better accessibility to the North Cotswold Line and Cardiff-Nottingham Cross Country services. However, other cross-country services pass through but do not stop at stations in Worcestershire, significantly limiting the county’s connectivity to the economies in the South West, North West and North East.

Although Worcestershire has a high level of superfast broadband (UK >24Mbit/s or EU >30Mbit/s) coverage, the percentage of premises served by ultrafast broadband (>100Mbit/s) is behind the wider West Midlands and the UK. This is also the case for action on full fibre: only 2.8 per cent of premises have access compared with 8.2 per cent nationally and 6.1 per cent across the West Midlands. Coverage is variable across the county, with lower levels of ultra-fast broadband in Worcester and Malvern Hills compared with Redditch.

Worcestershire spends over £1.2bn on energy annually across all sectors – approximately 10 per cent of the county’s GVA. Much of this spending leaves Worcestershire, but the level of renewable energy generation has increased over the last ten years. The capacity of the electricity grid is a constraint in some areas and fuel poverty is an issue particularly in some rural areas which are “off the grid.” The LEP has three objectives in relation to energy by 2030:

> a 50 per cent reduction in carbon emissions;
> doubling the size of the low carbon sector;
> tripling the amount of renewable energy generated in the county.

Water infrastructure also has an impact on productivity in Worcestershire. Businesses in sectors such as agriculture, horticulture and food production are heavily dependent on the future security of water. The natural environment, including the county’s rivers, is a major asset, but the county is impacted by flood risk which has implications for business continuity and housing and economic growth. There has already been significant investment in flood risk management infrastructure and the LEP, county council, the Environment Agency and Severn Trent Water are collaborating on the development of a Water Infrastructure Investment Framework for the county.

AREAS THAT REQUIRE ATTENTION IN THE LIS:

> Digital Connectivity including Broadband and wireless improvements for urban and rural areas
> Consideration of best alternative energy sources to support needs of agriculture and rural communities
> Making the case for significant improvements to the rail infrastructure and services in Worcestershire
> Highlighting the importance of the Water Infrastructure Investment Framework
BUSINESS ENVIRONMENT

The West Midlands is the best performing region for foreign direct investment outside London and the South East. Worcestershire has secured 51 FDI projects in the last three years, generating over 1,500 new jobs and safeguarding 900.

The county has a higher share of employment in Manufacturing, Transport and Storage compared to the GB, West Midlands and Midlands Engine average. Business density has been consistently higher in the county compared to UK averages, with Bromsgrove, Malvern Hills and Wychavon realising higher densities over the last five years.

Significantly, the two top sectors by business base are Professional, Scientific and Technical (4,615, 15.5%), including Advanced Manufacturing, and Business Administration and Support Services (3,915, or 13.2%). If you include Construction (3,280 or 11%) the three industry groups form just under 40% of the business base.

There are just under 30,000 businesses in Worcestershire, 90 per cent of which are micro businesses. Business density has been consistently higher in Worcestershire compared with the UK and survival rates also compare well (the 5 years survival rate is 46.8% for Worcestershire and 43.2% for the UK).

In terms of scale up the area performs less well. There were 340 scale up or high growth businesses in 2018 which identified their main constraints on growth as being: talent, access to markets, infrastructure and premises, leadership skills and the need for upskilling.

Low levels of office stock and commercial premises are a major constraint on the growth of Worcestershire’s high growth potential business scale ups. Only 8.9 per cent of business premises in the county are office premises, compared with 15.7 per cent nationally. On the other hand, the county’s supply of industrial stock has seen an increase in supply and low vacancy rates. Investment by Worcestershire LEP in business accommodation and testbeds for 5G for example, is leading to business innovation and development.

AREAS THAT REQUIRE ATTENTION IN THE LIS:

> Increasing the supply of office and commercial space to support volume and value sectors
> Developing a joined-up business support offer to enable increase scale up and R&D investment
> Promotion of internationalisation activities including exports and tourism
> Targeted Industry 4.0 support for SME sector

PLACES

There are concentrations of deprivation across the LEP geography including 50 Lower Super Output Areas in the worst 15% nationally including within Wyre Forest, Worcester City, Redditch and Wychavon.

A diverse and fragmented tourism market is underpinned by a high quality natural and built environment, the highlights of which include the Cotswolds and Malvern Hills Areas of Outstanding Natural Beauty, the river valleys of the Avon, Severn and Teme, the canals network, locks and basins around Droitwich, Bromsgrove and Redditch and Worcester Cathedral along with the historic cores of the many attractive towns and villages across Worcestershire.

Promoting Worcestershire’s strategic natural and urban assets will promote sustainable use of the region’s strong transport network and add value to local economies. The tourism sector could be strengthened by creating a more coherent offer maximising the cultural, sporting and heritage assets, providing opportunities for the rural economy and meeting inclusive growth ambitions.

Recent housing growth is above average and ahead of the SEP’s trajectory of 21,500 additional homes by 2025, but affordability remains a key concern, especially with the need to attract and retain young people and families to fuel the local economy. The diversification of High Streets with higher density developments provides an important opportunity for additional housing.

Worcestershire LEP, in conjunction with Worcestershire County Council has progressed the strategic employment or ‘Gamechanger’ sites which, once complete, will support the sub-regional ecosystem and provide much needed employment stock:

> Malvern Hills Science Park
> Redditch Gateway
> Worcester Six Business Park
> Kidderminster Silverwoods

AREAS THAT REQUIRE ATTENTION IN THE LIS:

> Transformation of town centres including provision of diverse, modern commercial office space along with a vibrant cultural offer and housing for younger people
> Action to raise aspirations in areas of deprivation

The Foundations of Productivity
SECTOR STRENGTHS AND ECONOMIC ASSETS

Worcestershire has a diverse economy with an array of businesses across many sectors.

Worcestershire LEP has identified four challenger sectors which provide opportunities for driving high-value jobs and growth and three cornerstone sectors which represent high volume employment sectors and high value for the economy and employment. The challenger sectors were selected on the basis of an assessment of relative strengths, potential to grow, the assets and capabilities in the county and resonance with the national Industrial Strategy. In this section we provide a short description of the challenger sectors and the issues relating to them that require attention in the LIS. We also highlight the significance of the health and care sector, the business services sector and the construction sector (the cornerstone sectors) and their potential contribution to the LIS.

ADVANCED MANUFACTURING

Sector analysis and economic forecasts demonstrate that Worcestershire’s most significant sectoral strengths with competitive advantage are in manufacturing.

With a higher proportion of total employees in high technology manufacturing compared with the regional and national averages (14% compared with 12% for GB), this employment base has a higher concentration of residents employed in manufacturing roles than national levels. This is driven, in part, by the high level of skilled local labour in areas of the county where there are clusters of manufacturing activity such as Redditch.

The local asset base includes world class employers such as Mettis Aerospace, Halfords, Morgan Advanced Ceramics, GKN, Thurlux, Kimal, Barton Firtop, Handelsbanken, Oakland, Lear, Heller Machine Tools, Amada, Beakbane, Indra, Worcester Bosch, Kanes Foods, Yamazaki Mazak, Sanctuary Housing, Malvern Panalytical and Morgan Motors. Worcestershire’s specialisms lie in manufacturing related to transport equipment which is offsetting a decline in manufacturing of textiles and clothing.

The challenge presented is a recent decline in employment in the sector and a lack of investment. Businesses cite a lack of available funding and limited investment in workforce development as two of the key issues. Investment is also required in R&D, to innovate and connect the local 5G advanced capabilities to build smart factories, automate technology and develop augmented reality to solve modern issues.

Worcestershire LEP and the government are currently exploring opportunities at the Malvern Hills Science Park to pursue a range of initiatives including increased productivity in manufacturing, machinery fault detection, remote training, and ‘security by design’.

AREAS THAT REQUIRE ATTENTION IN THE LIS:

> Maximising supply chain opportunities of proximity to the West Midlands conurbation
> Use of AI and digitech to increase productivity
> Increasing investment in R&D and increased collaboration with educational institutions
With growth in cyber/IT businesses across all of Worcestershire's districts over the last five years, cyber security is becoming an even more important aspect of its overall economy.

While the overall cyber employment base is relatively small compared to more traditional sectors in the county, its ability to generate high-value employment, elevates its position within our economic ambition. Worcestershire has long-established clusters of cyber security businesses based in Worcester and Malvern Hills including QinetiQ. The wider area around Great Malvern, including parts of Herefordshire and Worcestershire, is referred to as the Cyber Valley. It was identified by the UK Information Economy Strategy (2013:49) as "one of the primary locations in the UK for the research, development and commercialisation of cyber security products and services". The area includes more than 80 cyber security businesses which cooperate on a range of initiatives to grow and develop new products.

In support of the sector across a wider geography, the Cyber Valley is a recent collaboration between the Worcestershire LEP, The Marches LEP, Gloucestershire LEP and Swindon and Wiltshire LEP with a strong focus on cyber security. The collective opportunity lies in the ability of the alliance to deliver on an international scale. The UK government’s Cyber Export Strategy identifies significant opportunity to export goods and services across six sectors in order to raise productivity and ensure innovation.

The importance of the sector as a techno-economic enabler across multiple industries (including in Advanced Manufacturing, Health, and Agriculture) is pronounced and could produce significant GVA growth. Security is now a primary feature in the design of new systems and products. The core challenge therefore for the sector locally is the need to develop digital skills for the new workforce. 48% of employers anticipate the need for new digital skills to satisfy their business demand. High job vacancy rates and lack of commercial space are also reducing the sector’s ability to grow. Investment is therefore required in this part of the economy.

**AREAS THAT REQUIRE ATTENTION IN THE LIS:**

- Collaboration with other LEPs via the Cyber Valley to put Cyber Technology and Services on a global map
- Provision of suitable business/working spaces/places in order to support growth ambitions and promote a culture of collaborative innovation and investment in R&D

Worcestershire is a strong agricultural performer against regional and national levels, including as a proportion of total employment and employment as a proportion of businesses.

These agricultural business strengths are focused in Wyre Forest, Wyche and Malvern Hills. At the same time this has stimulated burgeoning growth in Agri-Tech/Agri-Food and the number of employees involved in these sub sectors are outperforming GB and the West Midlands. Wycheon is the heart of Agri-Tech jobs (66.7%) in Worcestershire. The Vale of Evesham, Wyre Forest and Teme Valley are also well recognised as parts of the county that are providing opportunities for Agri-Tech business.

It is recognised that Agri-Tech provides an important opportunity to improve agricultural processes and move the UK to the forefront of the global move to high efficiency agriculture and being more self-sufficient in terms of food production. At an education and research level, Pershore College’s Agri-Tech Research Centre has elevated the Worcestershire Agri-Tech offer, is improving the skills base (through the college’s Foundation degree in Agri-Tech (Horticultural Production)) and is providing opportunities for greater collaboration between employers and improving sectoral engagement around research and development. The sector will benefit from the promotion of skills complementarity/hybrid roles focused on STEM, digital and technical skills.

Business investment is supporting the growth of this sector. Saturn Bioponics were the recipient of Innovate UK Funding to work on a collaborative project with leading fresh produce growers ValeFresco, to prove and showcase the benefits that the Saturn Grower vertical growing system offers in a commercial growing environment. The project enables a step change in the economics of high-value crop production. Other key actors include Biocell (a specialist in the field of applied microbiology in animal nutrition); the only pure live yeast product on the UK market approved for Dairy Cows, Beef, Pigs, Sheep, Goats and Horses. Similar competitive advantage emerges from DLF Seeds and Science, DLF are the world’s largest producer and distributor of grass seed and received R&D funding for research into developing sugar beet resistance to viruses. This Syr pre-breeding project will accelerate the production of new virus yellows resistant sugar beet varieties bringing significant economic benefit to the UK.

Likewise, the growth in Agri-Tech success could leverage the strength of Worcestershire’s advanced manufacturing core. A key challenge is to attract international investment by recognising and promoting Worcestershire as an ideal and diverse testbed location for leading Agri-Tech and Agricultural firms. To do so will involve much more cross region engagement between agricultural assets (including between Pershore, Harper Adams University, and Hartpury University College) connecting researchers, business and entrepreneurs.

**AREAS THAT REQUIRE ATTENTION IN THE LIS:**

- Potential for alliances with local institutions and centre of excellence – such as Harper Adams University / Warwick Crop Centre, 3 Counties Agricultural Society and Hartpury University College
- Collaboration with other LEPs through Agri-Tech West
- AI Learning for industrial and agricultural machinery
DIGITISATION OF HEALTH AND CARE

The digitisation of health and care in Worcestershire is an area that will grow as a result of improvements to the skills base, yielding higher GVA growth in health.

While it is understood that the health and care sector is broader and different from the scope of the Med-Tech sector it is also recognised that the former will be a key contributor to high volume and high value growth. Health is expected to experience significant GVA growth (75.6%) throughout 2019-2039. Likewise, the manufacture of pharmaceuticals is also a key expected GVA growth industry (67.7%).

Subjects allied to medicine and biological sciences are the two strongest specialisms at the University of Worcester. There is a high degree of training provision among health and social care employers which are above the England and West Midlands totals for both the percentage of establishments training staff over the last 12-months and percentage of total staff who received training. Worcestershire’s Health sector has increased its stock of business over the period 2013-2018 by 450 and the emergence of key business assets includes the construction of the £120m Worcester Six Business Park. This investment is intended to generate 1,845 jobs and has secured Kimal Plc as an anchor tenant on the site. This firm is a market leader in manufacturing and supplying a range of innovative products for the healthcare sector. The West Midlands performs strongly in Life Sciences and this is demonstrated in Worcestershire particularly in Redditch, including Redditch Medical.

Assets also include the National Research Centre for Dementia Studies at the University of Worcester and its new proposed medical school with coverage across Gloucestershire, Herefordshire, and Worcestershire. A challenge for Med-Tech as with Agri-Tech, is to leverage the strong advanced manufacturing base and at the local level improve processes and technologies to respond to the ageing population.

AREAS THAT REQUIRE ATTENTION IN THE LIS:

- Identification of opportunities to exploit proximity to the West Midlands conurbation and strengths in life sciences across the wider Midlands.
- Supporting the ‘Future of Medicine’ and delivery of NHS services in the digital era through trailblazing innovative technologies
PROFESSIONAL SERVICES AND BUSINESS ADMINISTRATION

The two sectors with the largest number of businesses are professional, scientific and technical (15.5 per cent) and business administrative and support services (13.2 per cent).

The proportion of business support businesses in the county is higher than in the wider West Midlands and nationally.

It is also significant, however, that:
> As noted above, while Worcestershire has a high business density and good survival rates it has a comparatively low level of scale-ups and exports;
> Expenditure on R&D is well below the national average;
> There is a lack of high quality, modern, flexible office space for this sector.

An issue for exploration in the LIS is whether action could be taken to support the development of a modern business services sector in Worcestershire in a way that supports the development and growth of other sectors in the county.

CONSTRUCTION

The construction sector in Worcestershire, despite being below UK, West Midlands and Midlands Engine levels, has seen healthy growth in new business formation with high concentrations of resident employment, above the national trends.

There is a particular specialism in building completion and finishing. Higher levels of employment in Bromsgrove and Wychavon have been supported by growth in new businesses in the same districts.

Training within the sector is high among construction employers with more off the job training being delivered. Recent investment of £2m in skills training is set to further upskill the local workforce with a focus on employees in key priority sectors as identified in the LEP’s strategic economic plan including construction.

The opportunity for the Local Industrial Strategy is to work with the sector to maximise the advantages for UK industry shifting to clean growth by transforming construction techniques to dramatically improve efficiency.

7 Source: 2017 Employers skill survey
Four core propositions have been identified to secure an increase in productivity in Worcestershire and contribute to the delivery of the vision to build a connected, creative and dynamic economy:

> **CONNECTED**
A transformative and vital role for rail.

> **CREATIVE**
Raising aspirations and re-skilling the workforce;
A creative places programme.

> **DYNAMIC**
A super rural digital technology rural digital and 5G technology trailblazer.

**1. A TRANSFORMATIVE AND VITAL ROLE FOR RAIL**

Worcestershire’s rail services do not match the county’s economic ambitions. Many of the steps required to enable the growth of Worcestershire’s economic assets require enhanced connectivity with other areas including the West Midlands conurbation, London, Oxfordshire, The Marches, Shropshire, Gloucestershire and the rest of the South West. Sustained investment in the rail network is essential in order to provide this increased connectivity while reducing reliance on motor vehicles.

At the core of our vision for transformative rail services are:

> Significant improvements in rail connectivity:
  - Between Worcestershire and London and the Thames Valley;
  - Between Wyre Forest/Kidderminster and London Paddington;
  - To the South West, North West and North East England;
  - Between Worcestershire and Cheltenham, Gloucester and Bristol.

> Major investment to enable that improved connectivity, delivering:
  - Increased capacity on the North Cotswold line;
  - Increased capacity for services through Shrub Hill, Foregate Street and on Droitwich-Stoke Works line;
  - New car park capacity and or new stations to accommodate passenger growth of up to 100 per cent by 2043.
2. AMBITIOUS FOR SKILLS

A programme to raise aspirations and ambitions among learners, workers, businesses and employers. The issues that require attention include:

► School performance that does not match assumptions about the county;
► The need to enable members of the existing workforce to re-train and/or upskill;
► The low level of investment on the part of many employers;
► The pull of London and other cities for graduates and better skilled employees.

The proposition will include:

► Scaling up the LEP’s current activity on careers and enterprise and action to provide people leaving education with the softer skills that employers need;
 ► Action to develop digital skills in the area building on assets such as the Hive, the 5G Testbed, the university and Heart of Worcestershire College;
  ► Action to enable social mobility and retain graduates and skilled workers in the area.

3. A CREATIVE PLACES PROGRAMME

Town centres in Worcestershire are facing the same pressures as many other areas. The county has comparatively large business support and professional services sectors, yet the growth of these sectors is constrained by a shortage of commercial premises. At the same time the county has a rich business base but relatively poor performance in terms of businesses growing and scaling up.

Our proposition is intended to address this set of issues by enabling the growth of a modern business support sector. This would include the provision of additional modern commercial space in town centres. Our ambition is that this proposition will enable the growth of this sector, support the revitalisation of town centres and provide businesses with access to the advice and support they need to grow.

This could include establishing the commercial infrastructure for a self-sustaining fund-of-funds to bring together investment for real estate, business support, tech hubs and flexible grow-on space in collaboration with private and public sector investors.

4. A SUPER CONNECTED RURAL DIGITAL AND 5G TRAILBLAZER, EXPLOITING THE POTENTIAL OF ARTIFICIAL INTELLIGENCE

Through the 5G Testbed, Worcestershire is already at the forefront of applying digital technologies. This is critically important in the county given its economic strengths and ambition relating to the cyber sector, its predominantly rural geography with challenges around connectivity – digital and transport related – and the ambition to develop an entrepreneurial eco-system to encourage and attract young talent to the county.

Worcestershire has existing and potential economic strengths in key sectors including Advanced Manufacturing, Cyber, MedTech and Agri-Tech. Its main challenge is its demography and ability to reskill and refresh its workforce which is forecasting fluctuations in its working age population followed by a net decrease. Steps can be taken to attract and retain graduates and enable younger people and families to live and work in the county, but this must be driven by better connections and opportunities for developing the entrepreneurial eco-system.

The increased use of artificial intelligence also has a potentially important part to play in addressing this issue and enabling the county to retain substantial capabilities in these sectors. Advances in AI across a range of sectors will provide new career pathways and opportunities for greater commercialisation.

Our proposition is that building on its experience as a 5G Testbed, Worcestershire should become a trailblazer for the application and development of new digital technologies and smart city concepts in the context of a shire county. It draws on much of the thinking about the application of digital technologies and smart city approaches which up to now has mainly taken place in an urban context. Yet the opportunities to benefit from them are at least as strong, if not stronger in more rural areas. Our plan is to develop a programme of activity to help businesses in the county to exploit the potential of digital technologies, including AI to grow and increase their productivity. This could include:

► Rural digital connectivity project utilising multiple technologies to support small and micro-business creation and growth in rural areas;
► Projects to define digital solutions to respond to the diverse needs of a rural community and fragmented markets (including tourism) using AI/Robotics/IoT/I4;
► Exploration of a healthy ageing testbed for delivery of future medicine in collaboration with leading Universities for health and medical technologies.
The geography of Worcestershire is important in terms of the focus and delivery of the Local Industrial Strategy and action to mobilise its economic assets and the foundations of productivity.

Worcestershire is a functional economic geography with 74% of the local population living and working in the county. It is helpful to think of Worcestershire as four distinctive geographical areas:

- The North of the county with a strong manufacturing base and close links economically and in terms of transport with Birmingham and the Black Country;
- Worcester, the University City at the centre of the county;
- The rural South East of the county, including the Vale of Evesham and close links with Warwickshire and Oxfordshire;
- The South West of the county, with the Malvern Science Park and cyber sector links with Gloucestershire and beyond.

**PLACE: THE GOLDEN THREAD**

**NORTH WORCESTERSHIRE**

Advanced manufacturing is strong with potential for growth in digitisation of health and care benefiting from close links with the West Midlands conurbation and its Life Sciences strengths.

Action to raise aspirations in the area’s deprived communities is important as is rail investment to reduce overcrowding in services to Birmingham and improve connectivity from Kidderminster, Bromsgrove and Redditch.

**MALVERN AND THE SOUTH WEST**

An important area for mobilising the Ideas foundation with the location there of the science park and cyber businesses. This plus Malvern’s associations with music, drama and literature are essential features of Worcestershire’s attractiveness as a place to live, work, visit and invest. Improved connectivity to the South West is important.

**WORCESTER**

A priority is to strengthen the contribution of the university to driving innovation and R&D in the city and across the county, including in the digitisation of Health and Care. There is significant potential for the creative places programme to provide high quality premises and digital innovation in the city centre. Improved rail connectivity is key to exploiting the economic potential of the city.

**VALE OF EVESHAM AND THE SOUTH EAST**

This is an important and distinctive agricultural and horticultural area, with important ideas and assets, including Pershore College’s Agri-Tech Research Centre.
This prospectus represents our initial thinking for Worcestershire’s emerging Local Industrial Strategy. It builds on our successful track record, our evidence base, stakeholder engagement and conversations with government departments around our local specialisms and ambitions. We intend to use this document to continue to build in views and ideas from business, local authorities and wider stakeholders to further develop and agree our core propositions as well as challenger and cornerstone strengths. We will deliver this consultation through September and October.

1. Do you agree or disagree that we have identified the right focus for the Worcestershire Local Industrial Strategy? Please explain your answer.

2. Do you agree that the four challenger sectors we have identified are the right ones? If not, which sectors would you include?

3. Are the areas we have identified for action on the five foundations of productivity the right ones? If not, what actions would you include?

4. Do you agree that the four core propositions we have identified will help raise productivity in Worcestershire and contribute to building a connected, creative, dynamic economy?
   a. A transformative and vital role for rail.
   b. Raising aspirations and re-skilling the workforce.
   c. A creative places programme.
   d. A super rural digital technology trailblazer.

5. Are there any other sources of national competitiveness which should feature in the Worcestershire Local Industrial Strategy?

6. How could you or your organisation contribute to delivering an ambitious Local Industrial Strategy for Worcestershire and what would enable you to do so?

7. Is there anything else you would like to say about the development of the Worcestershire Local Industrial Strategy?
Get involved with Worcestershire LEP:

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