



HEART OF THE SOUTH WEST **LOCAL INDUSTRIAL STRATEGY**



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FOREWORD

‘Every day some new fact comes to light - some new obstacle which threatens the gravest obstruction. I suppose this is the reason which makes the game so well worth playing.’ - Robert Falcon Scott CVO (Scott of the Antarctic, born in Plymouth)

We believe this spirit still exists today amongst our entrepreneurs, our academics and visionaries. This Local Industrial Strategy is a springboard for the modern explorers - to drive sustainable growth in the region, through inspirational work into new technologies and future opportunities.

The UK is at an extraordinary point in its history. The Covid-19 pandemic is having a significant, demonstrable effect on health, wellbeing and the economy. Furthermore, the prospect of a future outside the European Union opens up new opportunities for businesses of all sizes, alongside the well-reported challenges it might generate. These two dynamics alone represent seismic shifts in the way we work and live our lives, but we also face other global challenges, such as the UK's commitment to achieve net zero carbon emissions by 2050, and the need to adapt to demographic and technological change.

For too long this wonderful part of the country has lagged behind other parts of the UK in its economic performance. This continues to have a real and direct impact on the prosperity and quality of life of the people who live here. Our challenge is to grow prosperity in a rapidly changing world, to ensure all areas and people have the opportunity to contribute to that growth, and to enable the benefits from increased prosperity reach all parts of our region.

This Local Industrial Strategy rises to the challenge, setting out a comprehensive plan to make the most of the distinctive opportunities within the Heart of the South West area. It brings together local government, businesses, education and other major employers and communities, to shape our collective economic future. It is unashamedly ambitious. Realising the ambition set out in the strategy requires not just strong local partnerships; it demands a step change in the relationship with central government, and a shift in culture with the freedom to do things differently.

Based on our strong track record of close collaboration, supported by robust evidence, the region has prioritised three areas of focus that will underpin the ambition to grow the economy in a clean, inclusive and sustainable way.

THIS LOCAL INDUSTRIAL STRATEGY
RISES TO THE CHALLENGE, SETTING
OUT A COMPREHENSIVE PLAN TO
MAKE THE MOST OF THE DISTINCTIVE
OPPORTUNITIES WITHIN THE HEART
OF THE SOUTH WEST AREA



These priorities build on the wealth of expertise and distinctive assets that the Heart of the South West already has, whilst seizing new opportunities to move the economy towards a greener future.

They are:

- ▶ **energy**; stemming from the construction, and legacy benefits, of one of Europe's largest infrastructure projects – the UK's first nuclear power station in twenty years at Hinkley Point C – and pioneering the development of the next generation of marine renewables;
- ▶ **engineering**: leading on the development and commercialisation of marine autonomy, and supporting the sustainable aviation challenge through development of rotary technologies and electric planes; and
- ▶ **digital**; specifically through environmental intelligence, the marine geospatial innovation market, and health and agri-technologies.

This strategy sets out how the Heart of the South West Local Enterprise Partnership with local authorities and education will support businesses and people to take action to support these priorities and build back better, strengthening the foundations of productivity in our area. This means enhancing its innovation ecosystem; supporting a skilled workforce through the Skills Escalator; future proofing its physical infrastructure to support long-term prosperity through clean and inclusive growth; creating a dynamic business environment; and focusing on the distinctive characteristics of each place and community.

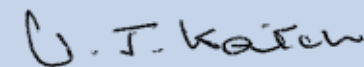
The strategy also commits to raising economic performance in all areas of Devon, Somerset, Plymouth and Torbay, including underperforming towns, peripheral areas and coastal communities; to grow the economy and minimise the gap between the best and worst performing areas.

Our area boasts some of the most beautiful landscapes and coastlines in the UK. These natural assets not only support much of the Heart of the South West economy, but also ensure the health, wellbeing, and social cohesion of the population. These valued assets will continue to be protected and enhanced.

The Heart of the South West area has played a key role in our national story for hundreds of years. It will continue to do so, and this document helps to set out how. We invite everyone to play their part, and we encourage central government to join with us and commit to supporting our ambition.



Karl Tucker, Chair Heart of the South West Local Enterprise Partnership



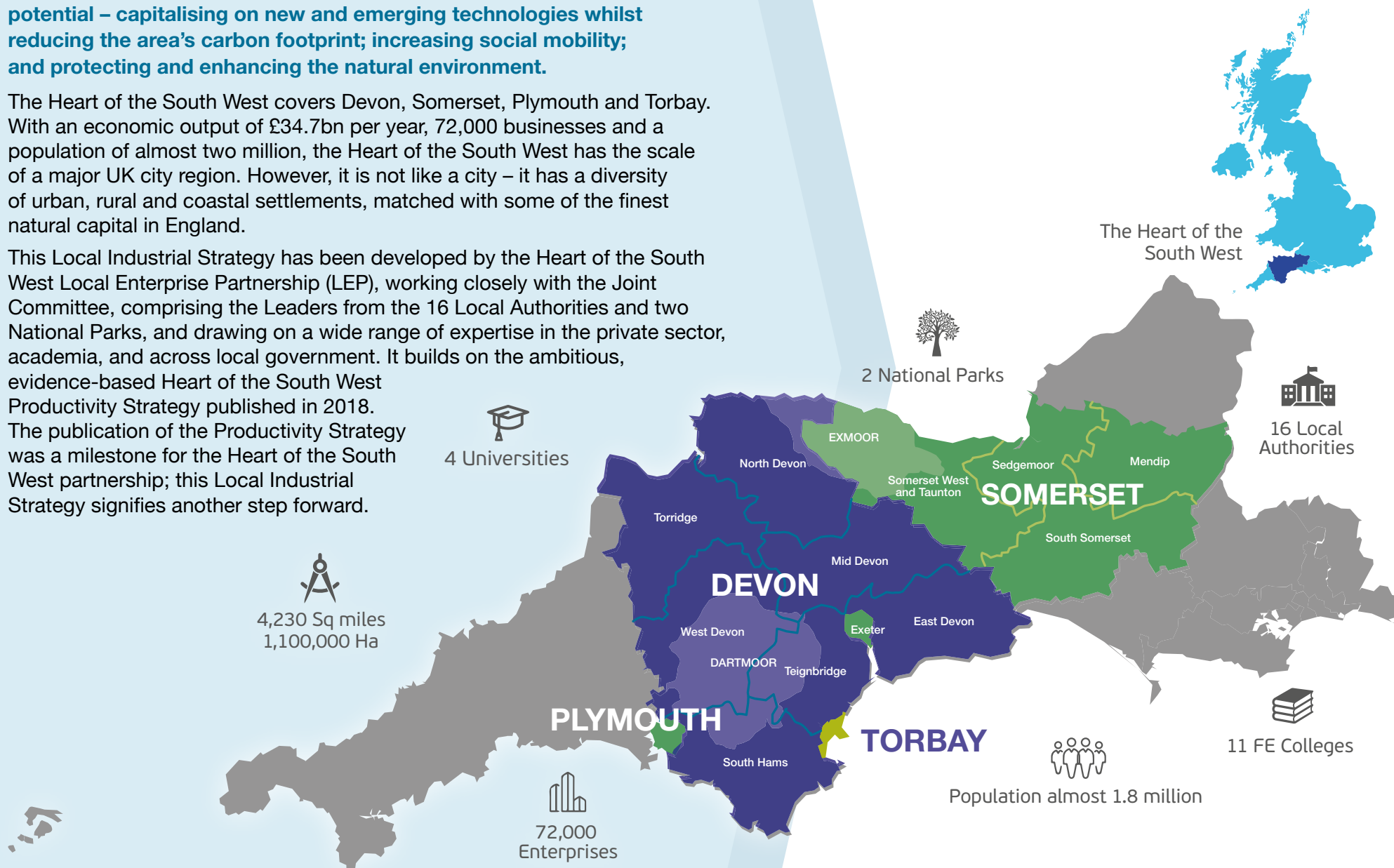
Councillor Val Keitch, Chair Heart of the South West Joint Committee, Leader, South Somerset District Council

EXECUTIVE SUMMARY

This Local Industrial Strategy sets out how we can realise the area's potential – capitalising on new and emerging technologies whilst reducing the area's carbon footprint; increasing social mobility; and protecting and enhancing the natural environment.

The Heart of the South West covers Devon, Somerset, Plymouth and Torbay. With an economic output of £34.7bn per year, 72,000 businesses and a population of almost two million, the Heart of the South West has the scale of a major UK city region. However, it is not like a city – it has a diversity of urban, rural and coastal settlements, matched with some of the finest natural capital in England.

This Local Industrial Strategy has been developed by the Heart of the South West Local Enterprise Partnership (LEP), working closely with the Joint Committee, comprising the Leaders from the 16 Local Authorities and two National Parks, and drawing on a wide range of expertise in the private sector, academia, and across local government. It builds on the ambitious, evidence-based Heart of the South West Productivity Strategy published in 2018. The publication of the Productivity Strategy was a milestone for the Heart of the South West partnership; this Local Industrial Strategy signifies another step forward.



EXECUTIVE SUMMARY...

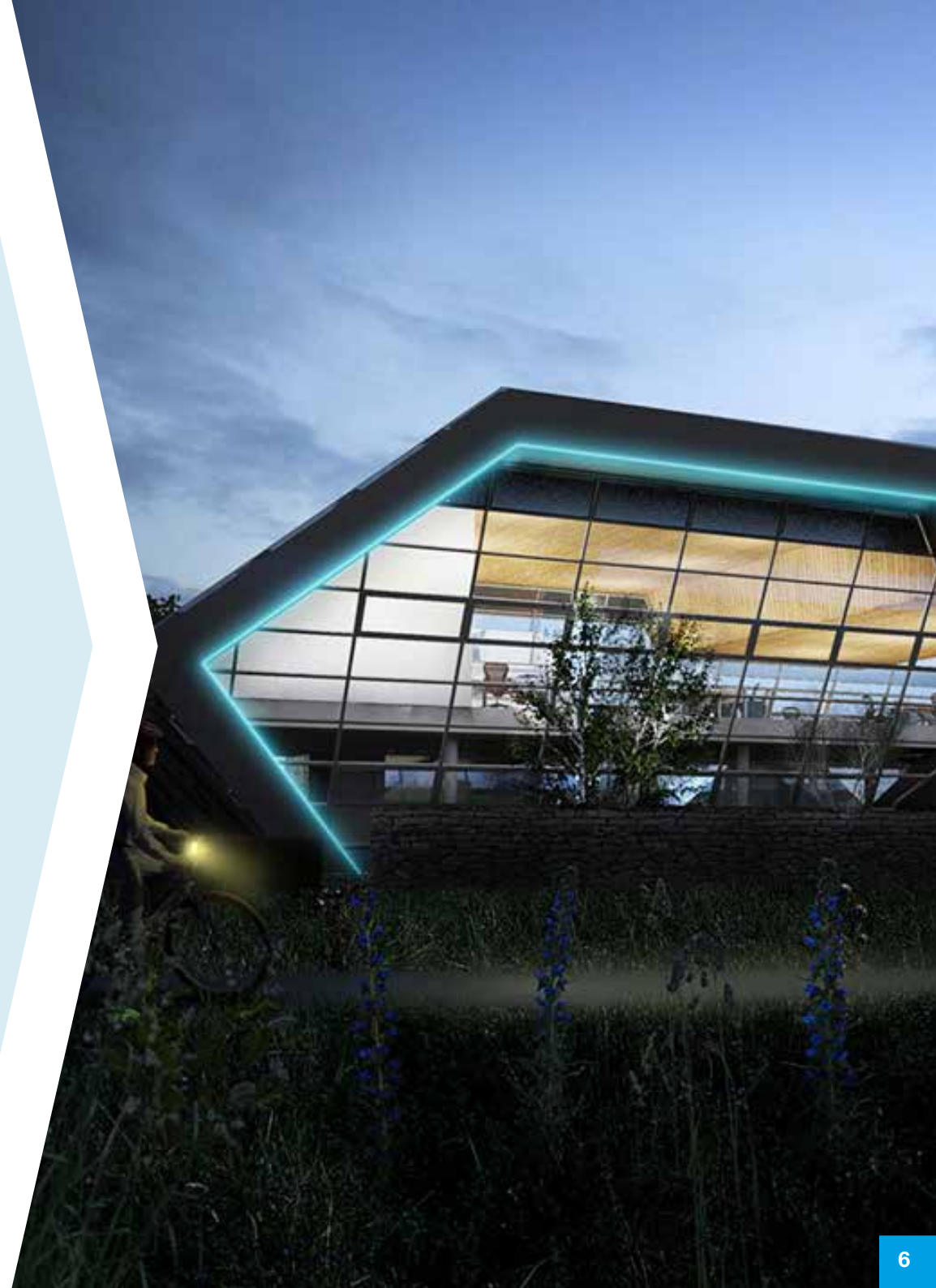
The Heart of the South West has a number of globally competitive industrial assets and strengths, providing exciting high growth opportunities. The area is home to the largest construction project in Europe, the first new nuclear power station in the UK for a generation; Hinkley Point C, as well as the largest naval base in Europe with unique nuclear defence capabilities. Aligned with opportunities in decommissioning, defence, and marine renewables, this is providing a multi-billion pound clean energy opportunity that spans both the energy and engineering sectors including primes and supply chains. As part of this clean energy focus, the area hosts a community of world class business and research assets in marine renewables and marine autonomy, where the opportunity for further growth through commercialisation is significant.

These inter-link with a wider advanced manufacturing sector that includes nationally significant capabilities in aerospace and defence, as well as photonics. The Heart of the South West is also home to the Met Office, which has one of the most powerful super computers in the world, providing long-term, detailed global climate prediction using big data; and the UK Hydrographic Office, which is a global leader in marine geospatial data.

The area boasts 230 miles of coastline, two of the UK's 15 National Parks, eight of the UK's 46 Areas of Outstanding Natural Beauty along with 382 Sites of Special Scientific Interest and hundreds of National Nature Reserves and Local Nature Reserves, Marine Conservation Areas, a biosphere reserve, a UNESCO geopark, as well as two World Heritage Sites and the UK's first proposed National Marine Park.

All of these assets underpin the bedrock industries of farming, food, fishing and the visitor economy.

These natural assets, as well as those outside designated areas, not only support much of the Heart of the South West economy, but also the health, wellbeing and social cohesion of the population; this is the very essence of why so many people want to live, work and visit the Heart of the South West.



EXECUTIVE SUMMARY...

Approximately sixty-three million people visit the area each year and spend £3.4bn in the local economy. This accounts for 92,000 jobs and £1.45bn gross value added (GVA), and with its strong multiplier effects to other sectors, such as food and drink, the visitor economy is important, especially in rural and coastal areas where it represents a greater share of employment.

Despite these strengths and assets, the economy is not as strong as it could be. Although employment levels are amongst the highest in Europe, annual real growth rates have flat lined in the last five years and recent growth has been almost entirely fuelled by growing employment. This has resulted in higher levels of in-work poverty with more people in jobs – but more people doing more than one job – and more people working longer hours. Economic performance varies significantly across the area and whilst some parts of the Heart of the South West are amongst the best performing local authorities in England for social mobility (e.g. East Devon), others are among the worst.

There are significant disparities in productivity within the LEP area and the Heart of the South West performs poorly on a number of productivity indicators, which directly impacts on the area's cities, towns and villages. Global trends and issues such as climate change, ageing and digitisation also present challenges and opportunities that this strategy responds to.

Given the economic environment and ageing demography ahead of the rest of the UK, the Heart of the South West will actively explore options for trialling new ideas and innovative solutions to the Grand Challenges facing the UK.

A Clean Approach to Growth

This Local Industrial Strategy provides the opportunity to transform the economy through clean and inclusive growth. The Heart of the South West will develop a new approach to growth in urban, rural and peripheral areas, in which economic growth is decoupled from emissions growth and where the proceeds are shared across people and communities.

To develop this Local Industrial Strategy, the LEP commissioned an independent review of the evidence to identify which parts of the economy had the greatest potential for delivering productivity improvements, as well as contributing to the national Grand Challenges. This review concluded that there are three key areas for the 'Dynamic Heart' of the economy, where there are significant local assets and global potential. These reinforce the clean and inclusive growth agenda (and vice versa) and are focused on energy, engineering and digital opportunities and the overlaps between them.

Energy

'The Heart of the South West will increase the critical mass of businesses operating within or supplying to the energy sector in order to create a globally recognised cluster by 2038.'

This priority is focused on seizing the future opportunities for clean growth associated with:

- ▶ **the nuclear industry** – centred on Hinkley Point C and its legacy, the UK's first new nuclear power station in 20 years, and aligned with the Nuclear Sector Deal;
- ▶ **next generation marine renewables** – building on the substantial natural capital, research and commercial assets that already exist in the area which have the potential to provide a clean growth dividend for the area and the UK; and
- ▶ **improvements to energy infrastructure** – which has some of the highest installed renewable energy capacity in the UK and benefits from significant renewable resources including solar, wind, geothermal, marine and biomass.

Engineering

'The Heart of the South West will increase the value and productivity of its engineering and high value manufacturing sector by 2038 through developing clean technologies and solutions.'

This priority is focused on seizing future opportunities associated with:

- ▶ **advanced manufacturing and engineering clusters** – to, anchor, grow and attract high value manufacturing and engineering clusters in the area to form a low carbon technology cluster;
- ▶ **marine autonomy** – to capitalise on major new global markets, leading in the development and commercialisation of marine autonomy technologies;
- ▶ **sustainable aviation** – to contribute to the sustainable aviation challenge through development of rotary technologies and electric planes; and
- ▶ **industrial digitisation** – to unlock productivity from the manufacturing sector through automation and harnessing of data, aligned with ambitions in the AI Sector Deal.



EXECUTIVE SUMMARY...

Digital

'The Heart of the South West will pioneer clean growth by harnessing datasets and the application of artificial intelligence (AI) to become a globally recognised centre of excellence by 2038.'

This priority is focused on pioneering clean and inclusive growth opportunities through harnessing data sets and the application of AI to:

- ▶ **grow the environmental intelligence market** – through an Environmental Intelligence Accelerator;
- ▶ **reduce emissions from agriculture** – through the development of more sustainable agri-food systems;
- ▶ **maximise the potential from the marine geospatial innovation market** – through the Geospatial Innovation Centre and Digital Innovation Hub; and
- ▶ **invest in health technology** – through capitalising on the area's ageing demographic and health research assets to position the area as a health technology pioneer.

These opportunities relate closely to the Grand Challenges of Artificial Intelligence and Data, Clean Growth, and the Future of Mobility. The demographic challenge within the Heart of the South West and the identified strength in digital and advanced manufacturing also offers an opportunity to address the Ageing Society Grand Challenge. The areas of overlap between these sectors offer links to wider parts of the Heart of the South West economy, as well as opportunities for innovation and cross-over which will be delivered through the lens of clean and inclusive growth.

Supported through the foundations of productivity

Underpinning the strategy will be actions on each of the foundations of productivity.

Ideas

The Heart of the South West area has substantial and internationally significant R&D assets, sitting alongside distinctive terrestrial and marine environments. These provide unparalleled place-based opportunities for innovation, commercialisation and the dissemination of ideas that have commercial and societal value.

'The Heart of the South West will strengthen the area's capacity for innovation, commercialisation and the application of new ideas by enhancing its innovation ecosystem.'

This will be achieved by:

- ▶ securing further investment in R&D and innovation through developing and exploiting research assets and connecting businesses with the area's knowledge and R&D base;
- ▶ exploiting strengths in clean growth to position the Heart of the South West as a focus for innovation, and bringing green technologies and approaches to market; and
- ▶ becoming a test bed for innovation to address societal and environmental challenges in rural, peripheral and dispersed communities, supporting inclusive growth.

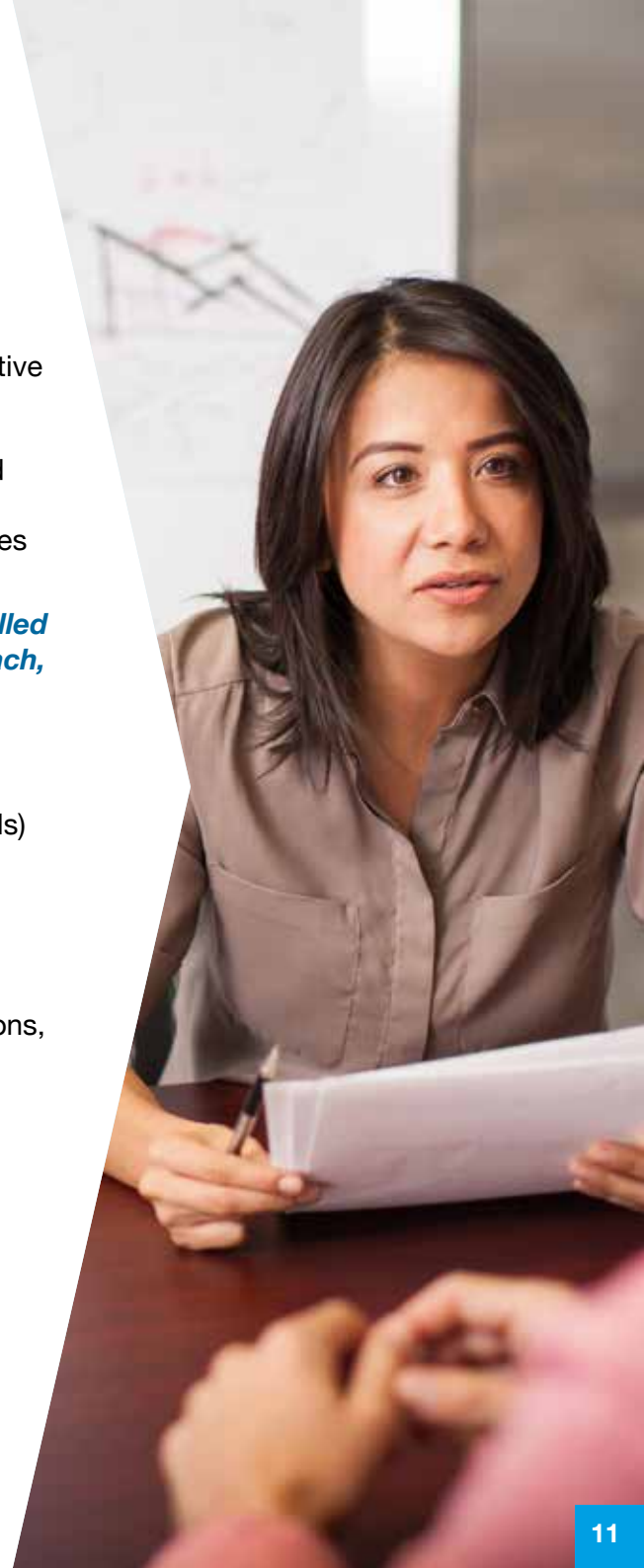
People

Supporting people is critical in a modern, innovative and creative economy. Through the leadership of the Skills Advisory Panel, local partners and government will work together to enable a skilled workforce fit for the opportunities of the future, supported by a clear pipeline of talent that enables all to reach their potential.

'The Heart of the South West will ensure a skilled workforce through the Skills Escalator approach, securing the opportunities of the future.'

This will be achieved by:

- ▶ championing STEM courses (including T levels) to increase take-up;
- ▶ ensuring all residents have the employability skills they need to progress;
- ▶ increasing the take up of technical qualifications, and improving retention and recruitment of those with technical and higher-level skills;
- ▶ increasing employer investment in workforce development;
- ▶ working with institutions to ensure that the Heart of the South West's learning facilities and teaching capacity are fit for purpose and meeting future need; and
- ▶ mainstreaming an inclusive approach so all residents can benefit from future prosperity.





Infrastructure

To support long-term prosperity and clean growth, the infrastructure in the Heart of the South West must address the challenges of today as well as tomorrow.

‘The Heart of the South West will future-proof its infrastructure to support long-term prosperity and clean and inclusive growth.’

This will be achieved by:

- ▶ creating fast, resilient and clean transport networks that connect people with opportunities, including through ultra-low emission and electric vehicles, aligned with the Automotive Sector Deal;
- ▶ delivering improved connectivity across the area by securing significant levels of gigabit-capable infrastructure and at least 30Mbps services for all by 2025;
- ▶ accelerating housing delivery (including affordable housing) whilst halving energy use in new buildings by 2030, contributing to the realisation of the government’s Buildings Mission; and
- ▶ ensuring there is sufficient employment land to support growth.

Business environment

The Heart of the South West’s businesses are vital in driving forward the growth agenda, providing the basis for the area’s goods, services, jobs and productivity. The world is changing and businesses need to be able to adapt to maximise productivity and create new opportunities.

‘The Heart of the South West will create an environment that stimulates business investment and competitiveness, making it one of the best areas in the UK to start and grow a business.’

This will be achieved by:

- ▶ sustaining and developing a strong business port infrastructure, centred around the provision of an Information, Diagnostic and Brokerage service, to stimulate a culture of entrepreneurship and scale-up, improving business competitiveness;
- ▶ driving internationalisation through supporting inward investment and exporting; and
- ▶ supporting businesses to manage resources more efficiently to achieve clean and inclusive growth.

Places

The Heart of the South West is characterised by its diverse urban, rural and coastal settlements and outstanding natural capital, which attracts many visitors to the area. However, economic performance varies significantly and many of the natural capital assets that underpin much of the economy are in poor condition or at risk of degradation.

'The Heart of the South West will lift economic performance in all areas, including underperforming towns, peripheral areas and coastal communities, to grow the economy and minimise the gap between the best and worst performing areas.'

This will be achieved by:

- ▶ protecting and enhancing the natural capital assets and facilitating a new model of natural capital-led growth;
- ▶ improving the productivity of the visitor economy and generating higher value tourism, aligned with the Tourism Sector Deal;
- ▶ improving the productivity of the farming, food and fishing sectors whilst maintaining and enhancing ecosystem services; and
- ▶ ensuring that all places become clean growth settlements.



A PRODUCTIVE, CLEAN, INCLUSIVE FUTURE

With an economic output of £34.7bn per year, 72,000 businesses, and a population of almost two million, the Heart of the South West has the scale of a major UK city region. However, it is not like a city – it is home to a diversity of urban, rural and coastal settlements, matched with some of the finest natural capital in England. This offers an exceptional

environment in which to trial new ideas and be a test bed for innovative solutions that can contribute to the realisation of the Grand Challenges identified by government. This Local Industrial Strategy provides the opportunity to build on the area's natural, industrial and research strengths to deliver productivity through the lens of clean and inclusive growth.



The Industrial Base – Building on Strengths

The Heart of the South West benefits from a number of assets and strengths, providing exciting growth opportunities. The area is home to one of the largest construction projects in Europe, the first new nuclear power station in the UK for a generation; Hinkley Point C. Aligned with opportunities in decommissioning, defence, and marine renewables, this is providing a multi-billion pound clean energy opportunity that spans both the energy and engineering sectors, including primes and supply chains. As part of this clean energy focus, the area hosts a community of innovative business and research assets in marine renewables and marine autonomy, where the opportunity for further growth through commercialisation is significant. These inter-link with a wider advanced manufacturing sector that includes nationally significant capabilities in aerospace and defence, as well as photonics.

The Heart of the South West is also home to the Met Office, which has one of the most powerful super computers in the world, providing long-term, detailed global climate prediction using advanced data analytics.

As a result, and alongside climate change expertise at the University of Exeter, the city of Exeter has more contributors to the Intergovernmental Panel on Climate Change Fifth Assessment Report than any other area in the world. In addition to the Met Office, the UK Hydrographic Office in Taunton is a global leader in marine geospatial data. Capitalising on the commercial opportunities arising from the presence of these assets is a vitally important part of this Local Industrial Strategy.

Alongside these transformational opportunities, the bedrock sectors of farming, food and fishing and the visitor economy are critically important to the area. With approximately sixty-three million people visiting the area each year and spending £3.4bn in the local economy, the visitor economy accounts for 92,000 jobs and £1.45bn GVA. It has strong multiplier effects to other sectors, such as food and drink, and is especially important in rural and coastal areas where it represents a greater share of employment. Likewise, the Heart of the South West has a higher than average concentration of farmers, fishers, and food producers. It is home to more cattle than any other LEP area in England; and Brixham and Plymouth sit alongside Newlyn in Cornwall amongst the top fishing

ports in England. These sectors are intrinsically linked to the area's natural capital, depending upon it as well as maintaining and enhancing it. However, productivity is below average in the bedrock sectors and addressing this challenge is an important part of this Local Industrial Strategy.

The Heart of the South West economy is not currently as strong as it could be.

Although employment levels are amongst the highest in Europe (78.7 per cent), annual real growth rates have flat lined in the last five years, and without intervention are projected to sit below national average levels between now and 2038. Recent growth has been almost entirely fuelled by growing employment, but this has resulted in higher levels of in-work poverty, with more people in jobs, but more people doing more than one job, and more people working longer hours. With high employment levels, future economic growth must come from increasing productivity where the area lags behind.

There are significant disparities in productivity within the LEP area, ranging from £41,344/FTE in Mid Devon to £54,700 in Exeter, and £57,226 in the former West Somerset. When considering performance against the five foundations of productivity, the LEP area performs poorly on a number of indicators.

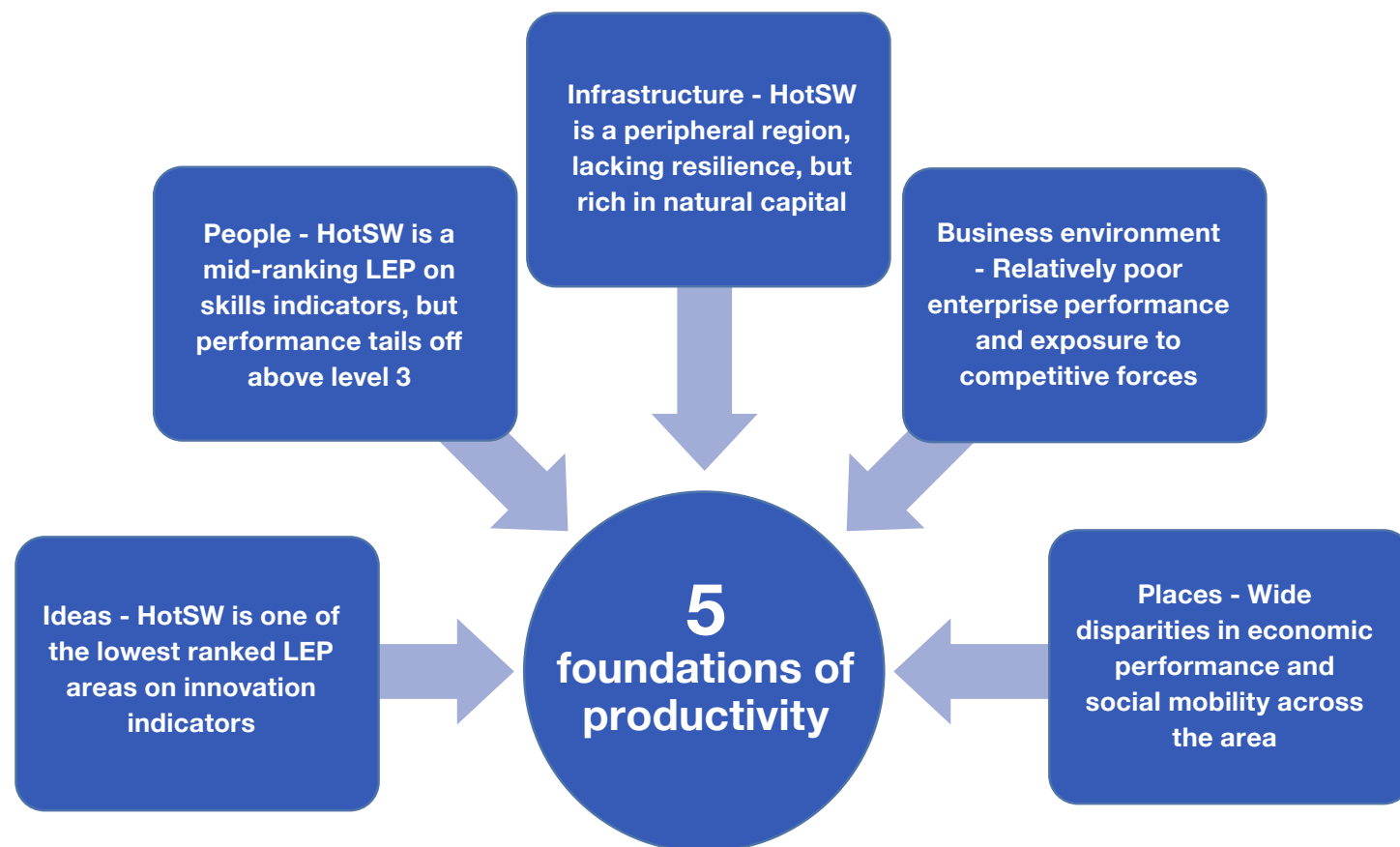


Figure 1: The Foundations of Productivity

A Strategy for the Long Term

It is not enough to just look at the current state of the economy, this strategy must make preparations for the future. The 2017 Industrial Strategy identifies a number of Grand Challenges that will radically shape the future of the UK economy. The impacts, opportunities and challenges of these will manifest in the Heart of the South West in different ways:

▶ **Artificial Intelligence and Data Driven Economy**

– the world is undergoing a technological revolution which will transform everyday life, the world of work and the economy. In the Heart of the South West, this presents an opportunity to grow a digital economy that capitalises on environmental big data to catalyse the development of a multi-million pound global market for big data. Equally, ensuring businesses are ready to seize the opportunities of the fourth industrial revolution to improve productivity remains a challenge for the area.

▶ **Clean Growth** – the move to cleaner economic growth through lower carbon technologies and the efficient use of resources is one of the greatest industrial opportunities of our time. The Heart of the South West has an unrivalled set of industrial, academic and research assets that are aligned with clean growth, and

the political will to lead on this agenda, pioneering a new model of environment-driven productivity growth.

▶ **The Future of Mobility** – driven by innovation in engineering, technology and business models, the UK is on the cusp of a profound change in how people, goods, and services are moved around the nation's towns, cities and countryside. The Heart of the South West's expertise in marine autonomy, as well as photonics (an underpinning technology for autonomous vehicles) will contribute to addressing this challenge. However, as a more peripheral area with dispersed communities, fast and resilient transport systems are critical to economic growth now and in the future. The Heart of the South West must be prepared to capitalise on the opportunities to create cleaner, faster, more resilient transport systems through the adoption of innovative transport solutions.

▶ **Ageing Society** – the UK population is ageing and people are living longer than ever before. This will create demands for different products and services, including new health and care technologies, new housing models, and innovative savings products for retirement. Nationally one in four people will be over 65 by 2046, but the Heart of the South West has already

reached this milestone and by 2046, one in three people in the area will be over 65. It is therefore significantly ahead of the UK's ageing curve. Whilst this represents a challenge for the Heart of the South West, it also presents an opportunity for the area to test innovative solutions to contribute to the UK's response to this Grand Challenge.

These challenges and opportunities, whether of today or a decade hence, demand responses that define how the Heart of the South West will thrive in the future. No part of life will be immune. Every industrial sector will be impacted and will have to find ways to innovate.

The Heart of the South West aims to use this Local Industrial Strategy to seize the opportunities that will be generated by change. The area's diversity of urban and rural settlements, matched with some of the finest natural capital in the England, makes it an exceptional environment in which to trial new ideas and be a test bed for innovative solutions to the Grand Challenges facing the UK.

Heart of the South West Productivity Strategy

The LEP and the Joint Committee of the local authorities and National Parks have ambitious plans to accelerate productivity growth, which are set out in the area's Productivity Strategy – Stepping Up to the Challenge, which was published in March 2018.

This set out an ambition to 'Raise productivity to drive prosperity for all'. This remains the overarching plan for the Heart of the South West area and forms the starting point for the Local Industrial Strategy which focuses on those aspects of the delivery plan where we can make the most difference.

The Strategy

This Local Industrial Strategy sets out how partners, working together, will realise the area's potential. At the core of the Heart of the South West Local Industrial Strategy is a commitment to grow the economy in specific ways that will capitalise on new and emerging technologies, whilst protecting and enhancing the environment.

This Local Industrial Strategy provides the opportunity to transform the economy through clean and inclusive growth. The Heart of the South West will develop a new approach to growth in urban, rural and peripheral areas, where economic growth is decoupled from emissions growth and where the proceeds of economic growth are shared across people and communities.

Through its local ambition to become a leader in the delivery of clean and inclusive growth, the Heart of the South West will pioneer a new model of environment-driven productivity growth, working to help meet the government's 2050 net zero emissions target. The Heart of the South West will support the shift to net zero carbon emissions and environmental resilience.

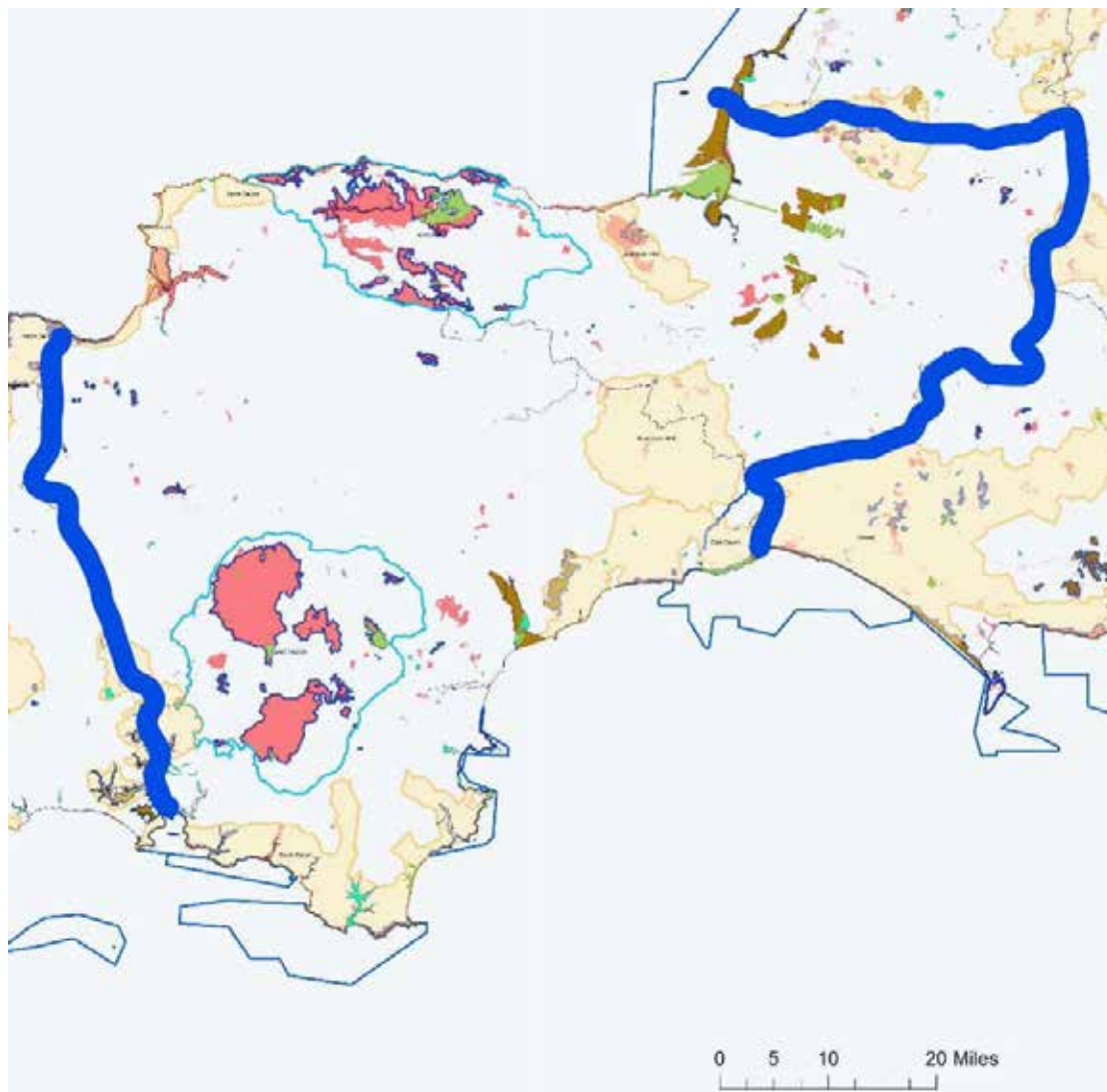
Why is Clean Growth important?

The government is committed to growing national income while cutting greenhouse gas emissions. Doing so presents a huge economic opportunity for new, high value jobs, disruptive businesses ideas and innovative technologies, whilst also protecting the climate and environment upon which we and future generations depend. There is no more important challenge.

The Heart of the South West is in a unique position to take a lead on this. As well as its unrivalled set of industrial, academic and research assets aligned with clean growth, there is a growing political will among the Heart of the South West's constituent local authorities, and public sentiment associated with the climate emergency which is stimulating the development of collective processes to achieve net zero carbon emissions. Efforts will capitalise on the area's abundance of natural capital including: 230 miles of coastline, two of the UK's 15 National Parks, eight of the UK's 46 Areas of Outstanding Natural Beauty along with 382 Sites of Special Scientific Interest and hundreds of National Nature Reserves and Local nature Reserves, Marine Conservation Areas, a biosphere reserve, a UNESCO geopark, as well as two World Heritage Sites and the UK's first proposed National Marine Park, as illustrated in Figure 2 on the next page.

These natural assets, as well as those outside designated areas, support much of the Heart of the South West economy including agriculture, food and drink and the visitor economy; they are why so many people want to live and work in the area and they provide important eco-system services – carbon sinks, flood management, pollination, clean air and health benefits which all support economic growth.

Conservation of the natural capital base and the benefits derived from it is a vital factor for sustainable local economic development. If these crucial assets on which society and the economy depend are maintained and enhanced, it will bring continued dividends now and into the future.



Designations in the South West



Figure 2: HotSW Area Environmental Designations

Why is inclusive growth important?

Greater productivity will enable more people to contribute to and benefit from future growth. In an era of high employment the historic tactics of more jobs and output growth will not achieve prosperity for all.

The solution is to embrace the concept of inclusive growth embedded within this strategy.

The Heart of the South West aims to use Inclusive growth will be 'mainstreamed' across the foundations and Grand Challenges as a cross-cutting theme to ensure that projects and activity can be developed with a clear and direct focus on inclusion priorities, both socially and spatially. To achieve this, the LEP will create an Inclusive Growth Expert Panel to accelerate and mobilise its plans. Led by a senior level Inclusive Growth Champion, this Panel will also bring a rural aspect to the Heart of the South West's activities, effectively rural-proofing the area's inclusive growth plans.

The Panel will ensure an inclusive growth focus to any funds flowing through the LEP but will also seek to leverage the size and scale of regional anchor organisations from across the public, private and military sectors in a collective commitment to pursue, support and contribute to an inclusive growth agenda. Internal structures and methodologies will be put in place to provide a route-map for taking this work forward using a consistent, inclusive

approach throughout project lifecycles. It will guide project inception, development, procurement or commissioning, delivery, and ultimately the evaluation of interventions.

Beyond this, best practice will be shared demonstrating why inclusive growth is important for the people and economy of the Heart of the South West. This will provide the platform to extend and integrate inclusive growth across all LEP activity, strengthening and progressively building the Heart of the South West LEP's reputation as an inclusive growth leader. These actions will enable more people across the whole area, and from all sections of the labour market to benefit from and contribute to increased productivity, addressing inequality of opportunity.

Focus for the Future: The Dynamic Heart

To develop the Local Industrial Strategy, the LEP commissioned an independent review of its recently developed, substantial evidence base to identify which parts of the economy had the greatest potential for delivering transformational productivity improvements over the next 20 years, as well as contributing to the Grand Challenges. This review concluded that there are three areas where there are significant local assets and global potential – the Dynamic Heart.

This includes the following:

- ▶ **Energy:** seizing the opportunities for growth associated with the nuclear industry (centred on HPC), marine renewables and improvements to energy infrastructure.
- ▶ **Engineering:** building on the area's advanced manufacturing and engineering clusters in aerospace, nuclear, marine, and photonics, as well as cross-sectoral opportunities such as autonomy, high value design and defence.
- ▶ **Digital:** pioneering clean growth through the harnessing of data and unlocking insights through the application of AI technologies particularly in the fields of health and environment.

These opportunities relate closely to the Clean Growth Grand Challenge, as well as the challenges of AI and Data, Ageing Society and Future of Mobility.

The areas of overlap between these sectors offer links to wider parts of the Heart of the South West economy, as well as opportunities for innovation and cross-over which will be delivered through the lens of clean and inclusive growth.

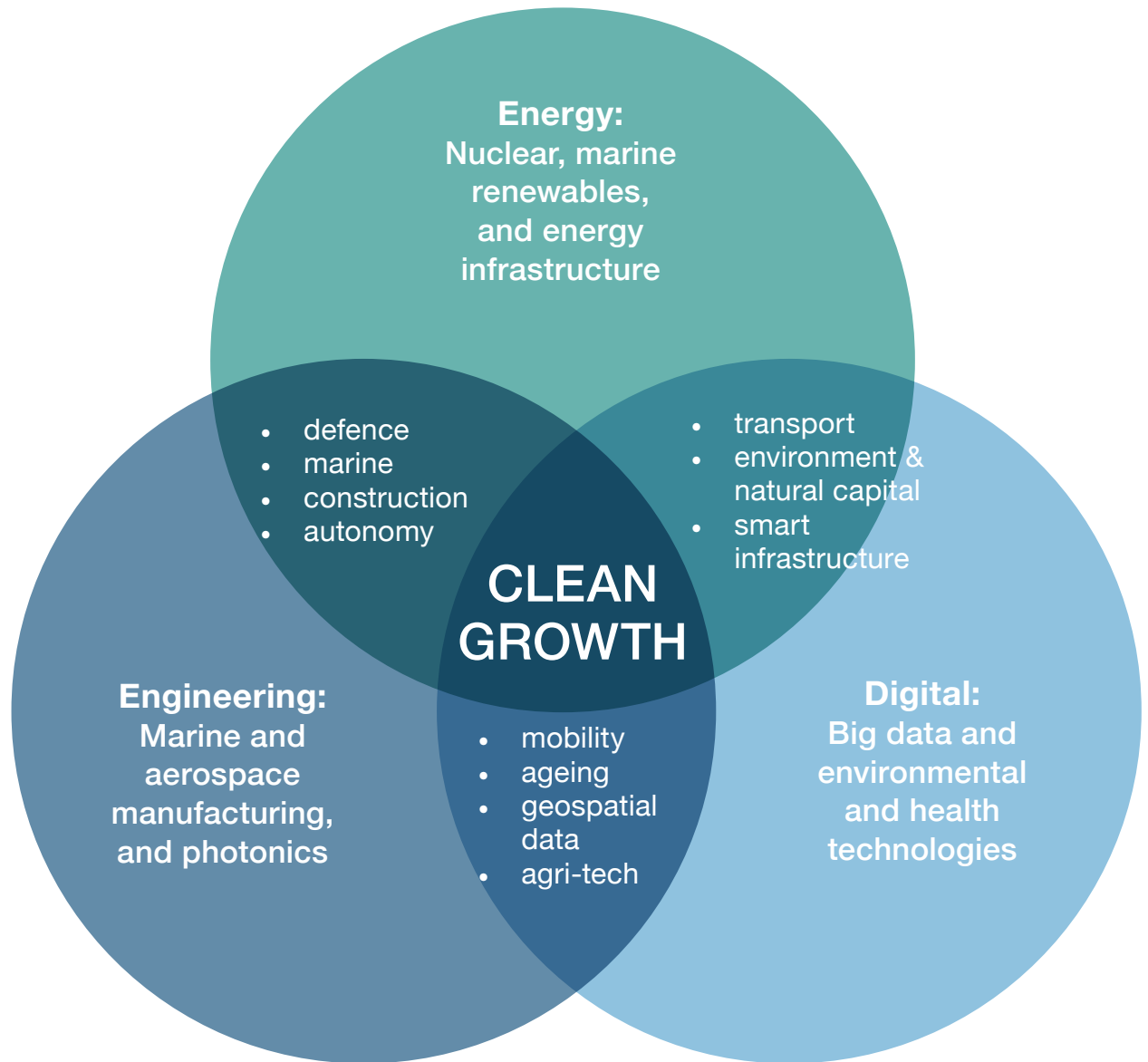


Figure 3: Heart of the South West's Focus for the Future – the 'Dynamic Heart'

The Foundations of Productivity

Underpinning this strategy will be actions on each of the five foundations: Ideas, People, Infrastructure, Business Environment and Places. The overall structure of this Local Industrial Strategy is summarised below.

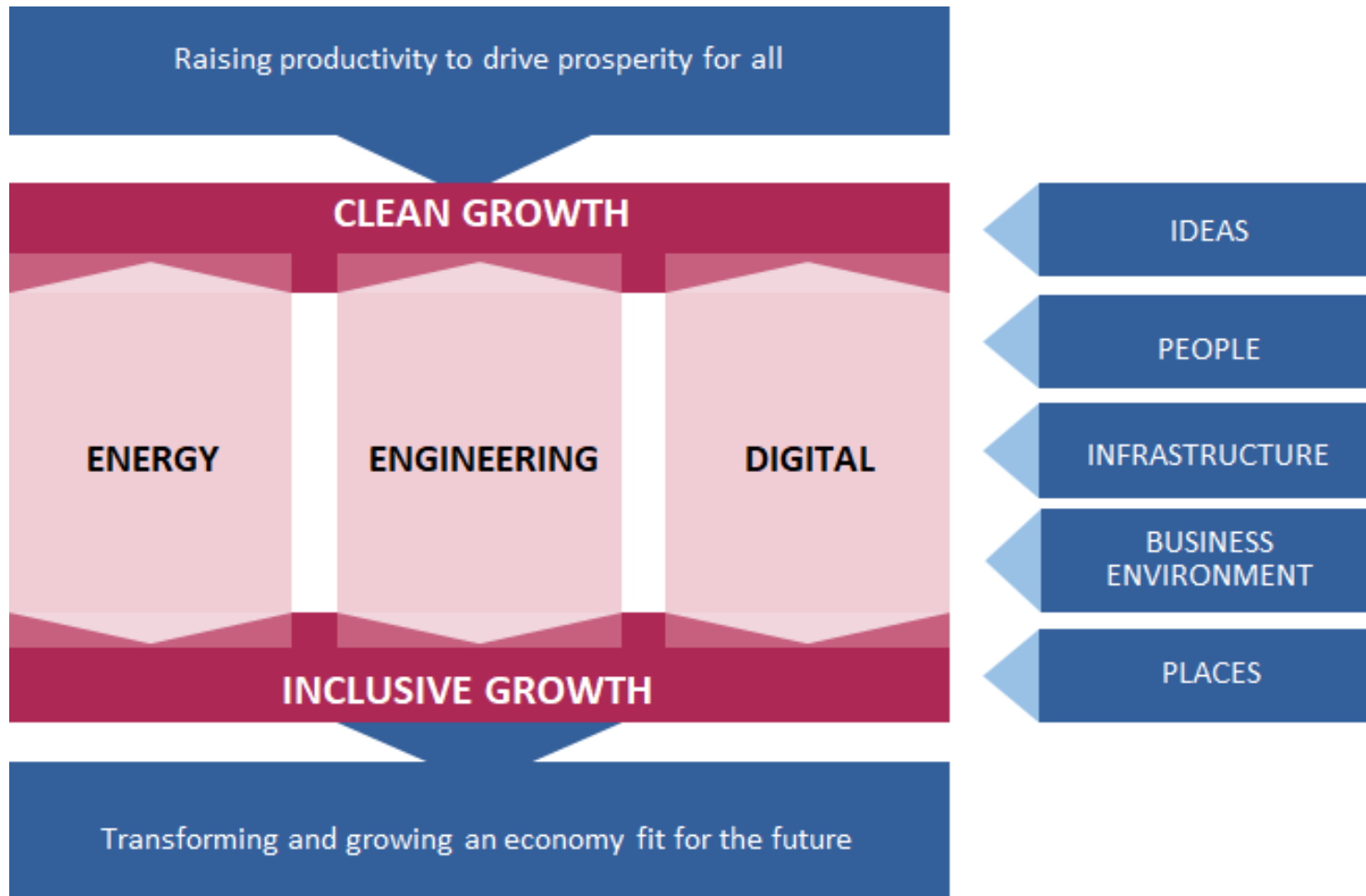


Figure 4: Heart of the South West Local Industrial Strategy Structure

DELIVERING CLEAN AND INCLUSIVE GROWTH

	Clean Growth	Inclusive Growth	Industrial Strategy
Energy <i>The Heart of the South West will increase the critical mass of businesses operating within or supplying to the energy sector in order to create a globally recognised cluster by 2038</i>	<ul style="list-style-type: none"> ▶ Driving innovation in advanced nuclear technologies ▶ Driving innovation in marine renewables and other low carbon technologies for use worldwide ▶ Becoming a net exporter of electricity by 2030 ▶ Transforming the energy system to meet carbon targets 	<ul style="list-style-type: none"> ▶ Providing job opportunities across the full range of skills levels with opportunities for progression for all ▶ Providing opportunities for enterprise and business start-ups in the clean energy sector ▶ Potentially delivering lower cost energy solutions that address fuel poverty ▶ Potentially delivering community energy solutions that bring income into communities 	<ul style="list-style-type: none"> ▶ Contributing to the Clean Growth Grand Challenge ▶ Contributing to the Clean Growth Strategy ▶ Contributing to the national target to increase R&D investment to 2.4 per cent of GDP by 2027
Engineering <i>The Heart of the South West will increase the value and productivity of its engineering and high value manufacturing sector by 2038 through developing clean technologies and solutions</i>	<ul style="list-style-type: none"> ▶ Developing innovative products and services to serve clean growth markets (e.g. marine autonomous systems) ▶ Developing a sustainable aviation cluster ▶ Developing cleaner manufacturing processes by driving efficiencies through Industry 4.0 digitalisation technologies 	<ul style="list-style-type: none"> ▶ Providing job opportunities across the full range of skills levels with opportunities for progression for all ▶ Providing opportunities for enterprise and business start-ups in the engineering sector 	<ul style="list-style-type: none"> ▶ Contributing to the Clean Growth and Future of Mobility Grand Challenges ▶ Contributing to the Defence Growth Partnership and Aerospace Growth partnership ▶ Contributing to Maritime 2050
Digital <i>The Heart of the South West will pioneer clean growth by harnessing datasets and the application of AI to become a globally recognised centre of excellence by 2038</i>	<ul style="list-style-type: none"> ▶ Developing an environmental intelligence cluster by unlocking the power of data sets and applying AI technologies to optimise environmental decision making ▶ Developing digital products and services that enable clean growth across a number of sectors (e.g. agriculture, tourism, health etc.) 	<ul style="list-style-type: none"> ▶ Providing job opportunities across the full range of skills levels with opportunities for progression for all ▶ Providing opportunities for enterprise and start-ups in the digital sector ▶ Improving the experience of end users through digital initiatives in sectors such as health and social care 	<ul style="list-style-type: none"> ▶ Contributing to the Artificial Intelligence and Data Grand Challenge ▶ Contributing to the Ageing Society Grand Challenge ▶ Contributing to agri-tech strategy through 'sustainable intensification'

ENERGY

‘The Heart of the South West will increase the critical mass of businesses operating within or supplying to the energy sector in order to create a globally recognised cluster by 2038.’

To realise this ambition, the Heart of the South West aims to:



Secure the nuclear sector and its supply chain in the South West beyond 2025 and capitalise on the legacy of Hinkley Point C



Increase R&D activity to position the South West’s marine cluster at the forefront of marine renewable innovation in support of Government’s 2.4% R&D target



Significantly reduce net carbon emissions by testing and commercialising clean energy solutions such as local energy markets and distributed systems

Nuclear sector and supply chain

The Heart of the South West will be home to the first new nuclear power station in decades: Hinkley Point C in Somerset. This project has stimulated the growth of the nuclear sector in the area, providing an opportunity to secure a transformational economic legacy after the project is complete through a high value supply chain. It is also integral to realising the national strategy for energy, and the Nuclear Sector Deal.

The South West region has the largest number of nuclear licensed sites and several reactors that are in production or decommissioning phases, as well as a longstanding nuclear defence sector based in Devonport (the largest naval base in Western Europe and the only facility in the UK licenced for submarine refit, refuel and defuel). These opportunities are estimated to be worth £50bn to the region.

At a global level, the nuclear market is expected to grow as countries look for secure, reliable and affordable energy sources. By anchoring the nuclear sector and supply chain in the Heart of the South West, the region will be well positioned to seize global export markets and create high value jobs in the sector. Partners are therefore working towards increasing the proportion of jobs in the region that are in the high value-added nuclear sector.

EDF Energy, local partners and the government have co-invested in skills facilities, including capital investment in college training facilities (£6m), the National College for Nuclear (Southern Hub, £15m), alongside EDF investment in its National Learning and Development Centre.

Furthermore, well over 3,000 businesses have been supported to win more than £75m of contracts so far through the Hinkley Supply Chain project (see case study on the following page).



Figure 5: Panorama of Hinkley Point C Build

Businesses are also able to benefit from the Somerset Energy Innovation Centre, and from 2020, the 635 acre Gravity Enterprise Zone. In the wider region, assets such as the South West Nuclear Hub at Bristol University, the Hinkley Point C (HPC) Supply Chain Innovation Lab at Bath University as well as the Office for Nuclear Regulation in Cheltenham, combined with those in the Heart of the South West to support a regional nuclear cluster. This regional cluster is supported by Nuclear South West (NSW), which provides a vital collaborative asset in order to maximise the economic legacy.

The construction of HPC provides the opportunity to pilot new approaches to address critical skills gaps within the nuclear construction and wider

engineering sector through Centres of Excellence. An example of this is in the field of high integrity welding, where proposals for a Centre of Excellence will establish mechanisms for ‘training the trainer’ and curriculum development to widen the talent pipeline within the UK and reduce reliance on imported labour.

The Nuclear Sector Deal represents a significant opportunity for the South West to grow the region’s nuclear economy and it is important that the South West capitalises on these opportunities by working collaboratively with industry to roll-out regional activity, including supply chain and skills development. This will also support inclusive growth objectives by providing jobs across the full range of skills levels with opportunities for progression.

The South West Nuclear Energy Technology Pipeline Project

This is a proposal supported by Nuclear South West, with an aim to create a seamless pipeline for nuclear technology across the region, and is illustrated below. Businesses will be supported through adaptable facilities across the region, with multiple entry points appropriate to the full range of technology-readiness levels. Supplemented by an important link to fusion through the Bristol-Oxford Nuclear Research Centre, it will also leverage innovation in nuclear fission to help the UK win a greater share of international fusion projects.

Building on the supply chain and skills legacy of HPC and the full range of existing nuclear assets, including licenced sites and research capabilities, partners in the South West have an ambition to host the world’s first commercial fusion power plant, establishing the UK as the de facto global leader in fusion power technology. This would complement the SW Nuclear Energy Technology Pipeline project.

Case Study: Hinkley Supply Chain

The Hinkley Supply Chain Programme has:

- ▶ engaged with over 90 Tier 1 and Tier 2 contractors to the HPC project to identify 350 work packages;
- ▶ matched over 3,000 companies against opportunities linked to HPC;
- ▶ helped 800 companies to start the support journey through the programme;
- ▶ provided intensive support to 120 companies; and
- ▶ supported 23 companies to invest in the region.

As a direct result of the support, over £75m of contracts have been won by local firms to date. In addition, supported companies are currently in the bidding process for over £400m of contracts, with some at preferred bidder status. As the outcomes of these procurements become known, the impact is expected to rise.

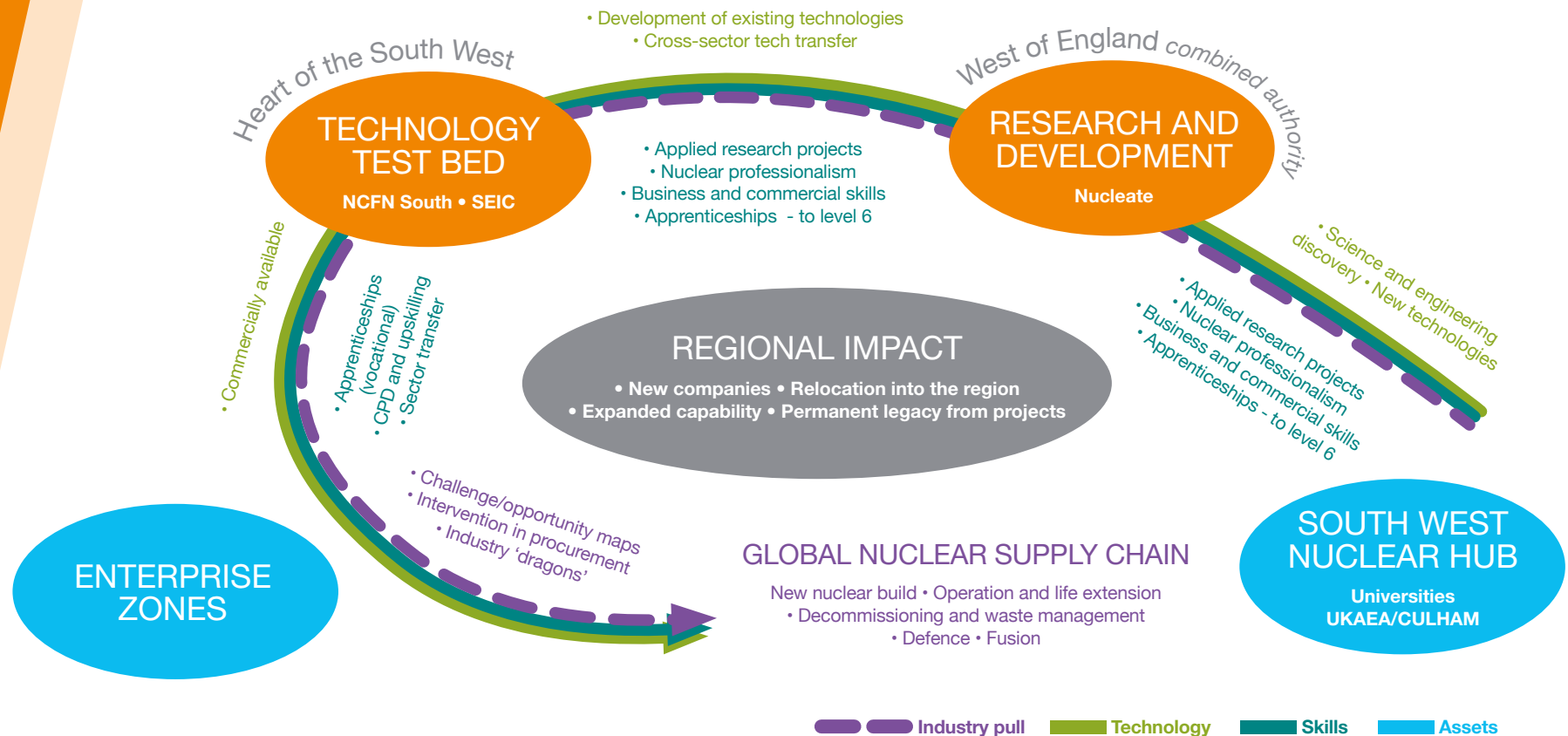


Figure 6: The South West Nuclear Energy Technology Pipeline

Heart of the South West's ambition – Nuclear

The nuclear sector and workforce in the South West is highly dependent on the HPC project and there is a risk the legacy potential will not be realised; there is therefore a need to anchor this high value sector in the area in the long term and provide opportunities for re-deployment of the HPC supply chain workforce beyond the initial build phase (2025). This includes facilitating a pipeline of long-term opportunities such as decommissioning, defence and fusion, as well as wider deployment into other energy and engineering sectors in the South West.

Securing the sector in the area will:

- ▶ safeguard productivity, as jobs in the nuclear sector are high value-add;
- ▶ contribute to clean growth through the development of low carbon energy;
- ▶ allow businesses to seize lucrative global export markets; and
- ▶ support inclusive growth within the wider engineering and energy sectors in the area by providing a range of job and business start-up opportunities.



Figure 7: University of Plymouth COAST Laboratory Wave Tank (Courtesy of University of Plymouth)

Marine Renewables

The ocean economy is estimated to be worth £47bn to the UK economy and the OECD estimates that the global ocean economy will reach US\$3tn by 2030. For the Heart of the South West, output from the marine sector is 25 per cent higher than the national average, and ten times higher in Plymouth with higher than average productivity.

Within the ocean economy, the offshore wind sector is expected to be one of the biggest areas of growth globally, providing opportunities for technologies such as marine autonomy and robotics where the Heart of the South West has expertise and capabilities (see Engineering). As well as offshore wind, UK waters have the potential to be amongst the best in the world for providing energy in other ways, including through floating offshore wind, waves, tidal, ocean currents and temperature and salinity gradients.

The UK is currently leading the development of marine renewable technology. The innovation opportunity is significant, which in turn will grow the sector and exports of UK products and expertise. Born out of the aerospace and yacht building industry, the Heart of the South West

has developed significant expertise and capability in design and manufacturing for marine environments.

The Heart of the South West is home to major marine research centres and testing facilities relating to marine renewable and marine autonomy. Both Exeter and Plymouth universities regularly collaborate on marine energy projects and the University of Plymouth is currently leading the national effort in Offshore Renewable Energy (ORE), through the EPSRC funded Supergen ORE Hub which brings together ten UK universities with industrial expertise.

The University of Plymouth's COAST Engineering Research Group has an unrivalled global track-record in the development of offshore renewable energy (ORE), evidenced by securing over £20 million in research grants since the unique COAST Laboratory was established in 2012. This facility allows for the testing of ORE devices across wind, wave and tidal technologies. This research base, as well as development sites for floating offshore wind and tidal streams across the North Devon, Somerset and Cornish coasts means that the region is well placed to respond to this opportunity.

The Mayflower Centre for Offshore Renewable Energy (MCORE) is a proposal to exploit the University of Plymouth's research excellence in offshore and coastal engineering to build a vibrant community of international researchers who, by collaborating across disciplines and working with industry primes and small and medium-sized enterprises, will generate innovative and impactful advances of global significance, as well as enabling the burgeoning ORE sector in the UK to become truly world leading. Development of this Centre will complement existing research investment and facilities in the Heart of the South West and wider region (including the Oceansgate Enterprise Zone at South Yard, Devonport and the Wave Hub in Cornwall and the Isles of Scilly).



Oceansgate Enterprise Zone at South Yard, Devonport

Heart of the South West's ambition – Marine Renewables

The Heart of the South West has an ambition to increase and coordinate R&D activity to position the South West's marine cluster at the forefront of marine renewable innovation. Plymouth and Exeter Universities are combining their respective strengths in environmental data, marine autonomy, and in-sea test facilities to accelerate the development of offshore renewables for the whole region, as demonstrated by the MCORE proposal (above). This will build on the substantial natural capital, research and commercial assets that already exist in the area and have the potential to provide a clean growth dividend for the area and the UK. Commercialisation of these technologies

within the South West will lead to clean growth opportunities for the area's marine and wider engineering businesses and contribute to the development of the UK supply chain.

Research and development activity will contribute to the ambitions set out in the Offshore Wind Sector Deal to develop new technologies, and innovative applications of existing technologies, to further reduce the costs of offshore wind. In addition, the upgrading of R&D activity will contribute to the government target to increase R&D expenditure to 2.4 per cent of GDP.

Energy Infrastructure

The whole of the South West's energy system needs to undergo a radical transformation to be fit for the future and support government's ambitious carbon targets. Electricity will have a much stronger role in the future, with electricity generation doubling by 2030, and doubling again by 2050, whilst the role of the gas network is much less certain. To respond to this, the system will need to move from one that is siloed and centralised, to one that is localised, flexible, smart, and integrated, using technologies to unlock synergies.

This transition is expected to create potential opportunities for businesses in the area, creating over 500,000 high value jobs for the South West region.

At the current time, the region is importing 88 per cent of its energy and spending £9bn in the process, resulting in higher energy bills for domestic customers as well as businesses. However, the area has the opportunity to flip from being a net importer of electricity to become a net exporter by 2030.

The Heart of the South West has some of the highest installed renewable energy capacity in the UK and benefits from significant renewable resources including solar, wind, geothermal, marine and biomass. Development of innovative technologies (including energy storage), business models, and systems, provides an opportunity to commercialise products and services that can be sold throughout the UK and the world, whilst also addressing key issues such as fuel poverty.

The current centralised system was not designed for distributed generation in homes and communities, and increasing levels

of distributed generation has resulted in the grid becoming congested, constraining the further roll-out of renewables. However, these constraints can be alleviated if energy is managed and used smartly through active network management, demand-side response, flexible connections, energy storage and virtual networks.

The area is already pursuing innovative projects in this field. For example: The Local Energy Market in Devon and Exeter (LEMDEx) project, which is funded by the BEIS 'Prospering from the Energy Revolution Programme', will be testing new regulatory regimes, commercial and business models, and smart energy trading technology, in order to make it easier to design a system that would allow local energy markets to be piloted in Exeter and Devon during 2020. There is a desire amongst local partners to go further and extend this concept to become a distributed systems test zone, piloting new approaches and integrated systems in the Heart of the South West, where there are locally specific grid constraints which will be explored in partnership with government.

The South West Energy Hub has been funded by the Department for Business, Energy and Industrial Strategy to work with LEPs and Local Authorities across the region. The Hub will have a small team of energy project managers with access to technical, legal and financial expertise, who will provide practical support and specialist advice to LEPs and Local Authorities to help them undertake the initial stages of development for priority energy projects, up to the point where they are able to secure finance.



Heart of the South West's ambition – Energy Infrastructure

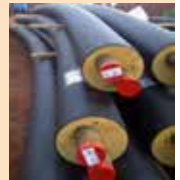
The Heart of the South West has an ambition to reduce net carbon emissions by testing and commercialising clean energy solutions such as local energy markets and distributed systems. This will create an energy future that is low carbon and more affordable, whilst maximising the benefits in the region. This will drive up productivity by supporting the growth of a high value, innovation-led sector, as well as contribute to national net zero carbon targets. In addition, building on local community experience and expertise, the aspiration is to work towards becoming energy self-sufficient. This will also pave the way for lower cost energy solutions and the opportunity to bring income into communities.

Case Study: Cranbrook Heat Network

District heating forms a key part of the infrastructure serving both the Cranbrook new community and Skypark strategic employment site, as part of the Exeter and East Devon Enterprise Zone. With no gas on site, all hot water and heating needs are met from the heat network which connects to each building – enabling the large-scale delivery of a zero carbon development.

Today there is over 100km of heat pipe in the ground, representing an investment of over £50m by energy company E.ON. An energy centre at Skypark has been operational since 2013. Whilst currently gas fired, including combined heat and power, work is underway to determine the future alternative zero carbon energy source. A second energy centre at Monkerton is due to be commissioned by the end of 2020.

Together the two networks are expected to serve over 10,000 homes and two million square feet of commercial space, which will make it one of the largest, zero carbon development areas in the country.



Energy: Next Steps

To achieve its Energy ambitions, the Heart of the South West and its partners will work to:

- ▶ maximise the impact of the Nuclear Sector Deal by:
 - o seeking opportunities to extend the successful work of the South West Nuclear Supply Chain project as a major economic driver for the Heart of the South West and the UK; and
 - o facilitating the development of critical skills requirements for nuclear (e.g. welding).
- ▶ look at accelerating the area's contribution to advanced nuclear technologies to meet aspirations for global nuclear intellectual property leadership for the UK; and
- ▶ capitalise on the opportunities and capacity within communities for local energy initiatives in both urban and rural contexts across the area, to explore planning and commercial opportunities to transform the energy system, including through renewable energy and the development of a distributed system test zone to overcome grid constraint;
- ▶ identify investment opportunities to support the South West Nuclear Energy Technology Pipeline Project;
- ▶ build on existing work with partners in the Peninsula to co-ordinate regional marine renewable initiatives in order to position the South West's marine cluster at the forefront of marine renewable innovation and increase international profile;
- ▶ identify funding sources to deliver the Mayflower Centre for Offshore Renewable Energy (MCORE); and
- ▶ leverage the benefits of the South West Energy Hub and explore the financing options for a potential revolving loan fund or green deal to deliver innovative energy projects where there is market failure.



ENGINEERING

‘The Heart of the South West will increase the value and productivity of its engineering and high value manufacturing sector by 2038 through developing clean technologies and solutions.’

To realise this ambition, the Heart of the South West aims to:



Anchor, grow and attract high value manufacturing and engineering clusters through a place-based approach, to develop a low carbon technology cluster



Lead the UK in the development and commercialisation of marine autonomy technologies and be recognised as a national Centre of Excellence for Marine Autonomy



Contribute to the sustainable aviation challenge through development of rotary technologies and electric planes



Unlock engineering productivity through industrial digitisation, aligned with ambitions in the AI Sector Deal

The Heart of the South West has an above average concentration of businesses within the aerospace, marine, nuclear and defence sectors, as well as assets and capabilities that can be exploited to access a number of significant market opportunities such as autonomy, high value design and photonics. These sub-sectors have a geographical footprint, centred on different places for different elements as illustrated in Figure 8 below.

2.6 times the GB average for the whole area rising to 6.2 times the average in Somerset and 21x in S.Somerset. Part of the SW Aerospace Cluster, £447m of GVA, 6,405 FTE jobs.

Leonardo, Honeywell, Thales, Tods Aerospace, BAE Systems, Flybe

Centred on HPC and Somerset and Plymouth and Plymouth for Nuclear Defence. Energy sector worth £649m GVA; 3,537 FTE jobs

Nuclear Industry Association (NIA) record approx 2250 people employed by NIA members across the areas especially in Bridgwater and West Somerset. Over 3,500 businesses have registered through the Hinkley Supply Chain portal

Across the area, the GVA from marine is 25% more concentrated than nationally, but rising to 10x more concentrated in Plymouth. £1.3b GVA; 26,000 direct FTE jobs

Photonics cluster is centred primarily in S. Devon, but also extends into Somerset. Photonics and micro-electronics worth £751m GVA; 13,080 FTE jobs.

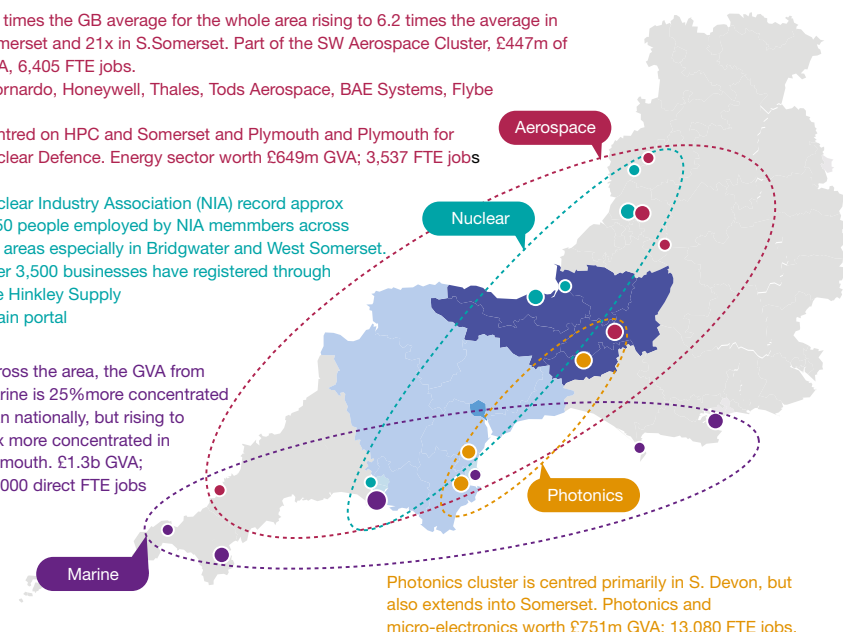


Figure 8: Map of South West Sector Specialisms (Science and Innovation Audit 2016)

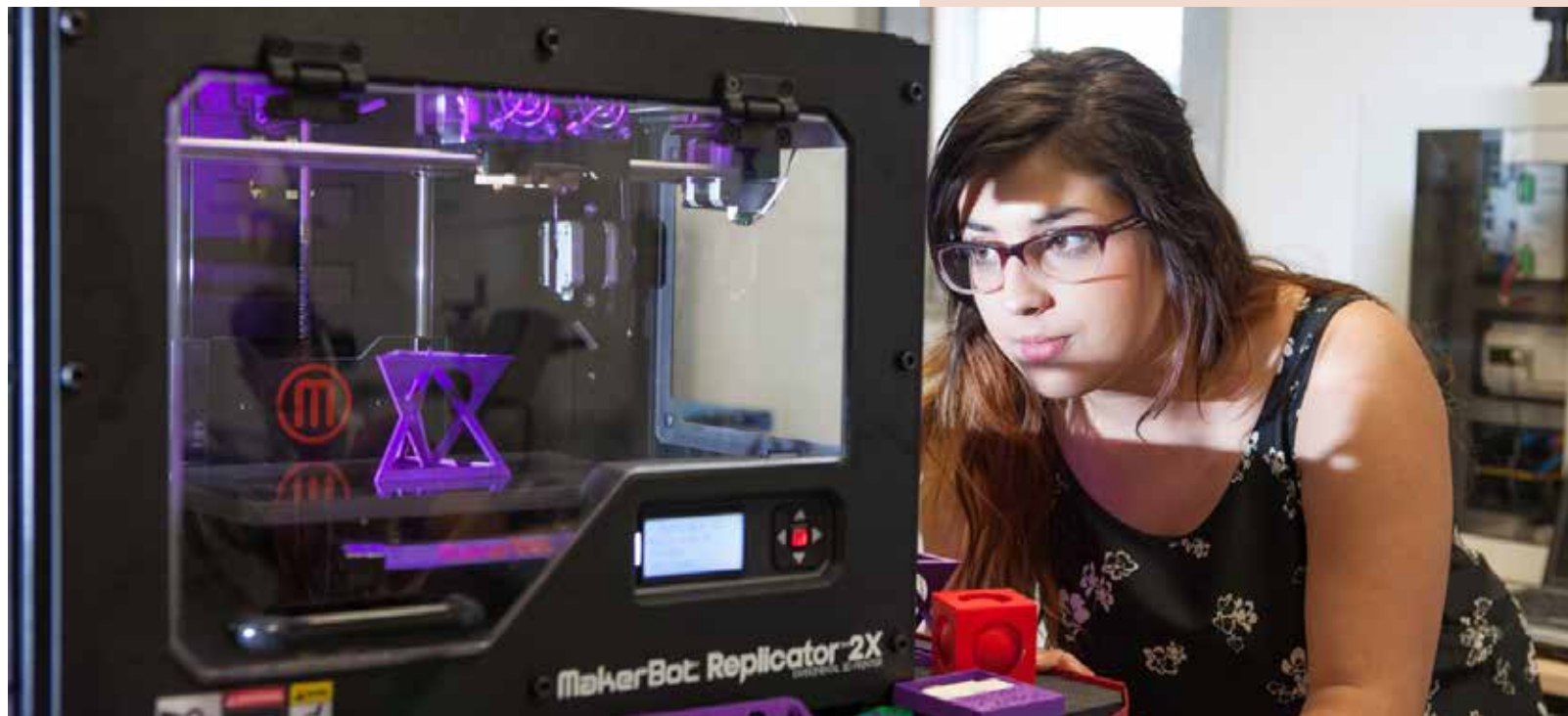
High Value Manufacturing and Engineering Clusters

There is an identified need to anchor, grow and attract businesses to these highly productive clusters, building on local assets and capabilities to maximise local economic impact as well as mitigating against potential loss or longer-term decline. In recent years government and local partners have made significant investments in place-based assets and infrastructure to support these clusters including, three enterprise zone locations (Oceansgate in Plymouth, Gravity near Bridgwater, and in Exeter and East Devon) as well as innovation centres in Bridgwater (Energy), Yeovil (Aerospace) and Torbay (Electronics and Photonics).

These collectively have a low carbon focus, and together can become more than the sum of the individual parts. Inward investment is an important lever and the designation of photonics and microelectronics as a high potential opportunity by the Department for International Trade is a valuable approach.

Heart of the South West's ambition – Engineering Clusters

The Heart of the South West has an ambition to maximise the economic impact of these clusters through the continuation of its place-based and spatially inclusive approach to anchor, grow and attract high value manufacturing and engineering companies. Local partners will continue to provide the necessary business support, facilities and infrastructure to encourage business growth and investment in these areas, including through inward investment, exploiting the opportunity to become a low carbon technology cluster (a concentration of businesses that are supplying low carbon goods and services). This will provide jobs and progression routes for local people as well business start-up opportunities



Marine Autonomy

Marine autonomy is a growing, disruptive technology that has the potential to transform the marine sector. It is forecast to be worth £136bn globally over the next 15 years, with the UK expected to secure ten per cent of this market.

The Heart of the South West has a strong commercial base to exploit this opportunity with a concentration of defence primes (e.g. Thales and Babcock), marine platform manufacturers, as well as supply chain companies for sensors, navigation and communication equipment. Accompanying this is a strong photonics sector that is at the heart of developing failure-intolerant applications for land, sea and air autonomous technologies.

Research assets such as Smart Sound (see case study below), Plymouth University's Marine Systems Research Group (including the UK's first undergraduate and Master's degrees in autonomous systems), and the UK Hydrographic Office providing geospatial data, complement the commercial base to create a unique proposition in marine autonomy.

Proposals to further develop the 'in-sea test range' in Plymouth Sound with a 5G high-speed data network will enhance the development of sovereign defence capability, support significant innovation and the development of Smart Ports, and unlock trade and investment with potentially transformational economic potential. As the benefits are 'non-excludable', the business case for investment would be unviable for any one organisation currently. That is why a collaborative approach between all key sectors is crucial.



Figure 9: Marine Autonomy Vessel

Case Study: Smart Sound Plymouth

Launched in 2019, Smart Sound Plymouth is a distinctive test site for designing, trialling and developing cutting-edge products and services for the marine sector, and is ideally suited for building and supporting the next generation of advanced marine technologies including marine autonomy. With one thousand square kilometres of authorised, de-conflicted water, access to state-of-the-art offshore and onshore facilities, and world-class research partners, Smart Sound puts the Heart of the South West at the forefront of global marine autonomy growth.



Heart of the South West's ambition – Marine autonomy

With an exceptional proposition in marine autonomy, the Heart of the South West has an ambition to lead the UK in the development and commercialisation of these technologies, and to be recognised as a national Centre of Excellence for Marine Autonomy (in both defence and civil applications). This will unlock public and private investment in this highly productive sector.



Figure 10: Leonardo AW139

Sustainable Aviation

The Aerospace Sector Deal looks to position the UK to take advantage of the global moves toward cleaner aircraft, as well as to exploit new markets such as drones. The Heart of the South West, in partnership with neighbouring LEPs through iAero is well placed to support this challenge, being host to key industry players including Leonardo, Honeywell, Thales, Tods Aerospace and BAE Systems. Leonardo is the only industry prime in the UK with a complete end-to-end capability in rotary technology and is currently developing the Rotary Wing Unmanned Air System for the MOD. Exeter is an important regional airline hub with comprehensive maintenance, repair and operational capabilities.

Research indicates that integration and collaboration between industry primes and their supply chain is vital to successful high value design. Therefore, the iAero Innovation Centre in Yeovil (opening late 2020) will support the commercialisation of technologies within the local small- and medium-sized enterprise community.

Similarly, innovation is supported through the University of Exeter's Centre of Excellence for Additive Layer Manufacturing (CALM) as well as expertise and facilities in the West of England, such as the National Composites Centre.

Ensuring Heart of the South West businesses are able to access this, and other open-access technology infrastructure in the West of England will ensure the region and UK can reap the economic benefits.

Heart of the South West's ambition – sustainable aviation

With partners in the wider South West aerospace cluster and working alongside national organisations such as the Aerospace Technology Institute, the Heart of the South West has an ambition to make a specific contribution to the sustainable aviation challenge in rotary technology and electric planes. This will contribute to clean growth objectives and ensure the area is positioned to capitalise on major new global markets, as well as anchoring this high value sector in the area.

Industrial Digitalisation

The Made Smarter Review highlighted how digital technologies can unlock productivity from the UK's manufacturing sector through automation and harnessing data. Industrial digital technologies are known to improve industrial productivity by more than 25 per cent, but the opportunity to apply digital technologies to the area's industrial sectors has not been exploited. The Industrial Digital Technology Centre is a proposal that spans the Heart of the South West and Cornwall and Isles of Scilly LEP areas which will bridge the gap between lower level TRL and commercialisation, focusing on autonomous systems, Manufacturing 4.0, machine learning and AI, by responding to the needs of industry.

Engineering: Next Steps

To achieve its Engineering ambitions, the Heart of the South West and its partners will work to:

- ▶ secure designation of Plymouth as a national Centre of Excellence for Marine Autonomy to:
 - o explore the opportunity of Navy X innovation for submarine autonomy;
 - o provide advisory support to the broader development of autonomous marine technologies in civil applications; and
 - o build on the development of the in-sea test range (Smart Sound) and explore potential for a high-speed data network across the test range
- ▶ work with Maritime UK and partners to capitalise on the opportunities for the South West cluster of MUK's Coastal Powerhouse network;
- ▶ promote the High Potential Opportunity in photonics and microelectronics to attract inward investment supporting this thriving cluster; and to ensure that potential FDI investors are aware of the range of opportunities; and
- ▶ develop an overarching strategy to support South West Aerospace, with the aim of securing:
 - o designation of Somerset as a national Centre of Excellence for Rotary Technologies and further development of Yeovil and the Aerospace cluster in South Somerset; and
 - o further development of the sustainable aviation cluster in Exeter and East Devon working with local and private sector partners;
- ▶ create a low carbon technology cluster around strategic employment sites, including the acceleration of existing Enterprise Zones (Oceansgate in Plymouth, Gravity in Bridgwater, and Exeter and East Devon), as well as further development of the aerospace, energy, marine and photonics clusters; and
- ▶ work with partners in the Cornwall and the Isles of Scilly LEP to secure funding for the proposed Industrial Digital Technology Centre across the two LEP areas.

DIGITAL

‘The Heart of the South West will pioneer Clean Growth by harnessing data sets and the application of AI to become a globally recognised centre of excellence by 2038.’

To realise this ambition, the Heart of the South West aims to:



Exploit the area’s data and research capability to capitalise on the rapid growth of the environmental intelligence market



Harness data and use the application of AI to significantly reduce emissions from agriculture whilst boosting productivity



Work collaboratively with the UK Hydrographic Office and SMEs to commercialise opportunities and develop the Heart of the South West’s geospatial innovation market



Capitalise on the combination of big data, research capability and demographics to position the area as a health technology pioneer

The Science and Innovation Audit identified that there is a:

‘huge opportunity for the area to lead development of new technology and innovation that will be required to live sustainably, underpinned by the need for better integration of digital capacity’

The Heart of the South West sits at the centre of this opportunity, with two national

capability government labs with a focus on environmental and geospatial data (the Met Office and the UK Hydrographic Office), expertise in the universities of Exeter and Plymouth, and a growing commercial capability in the application of data and machine learning. These assets attract partnerships with global organisations such as Amazon Web Services, Microsoft, Google, IBM, the World Health Organisation and NASA, as well as talented academics from around the world (Exeter has a higher number of contributors to the UN IPCC Fifth Assessment Report than any other area in the world). The combination of assets, people and partnerships will play a key role in the translation of foundational research into commercially viable solutions, catalysing the development of a multi-billion pound global market for big data, particularly in the environmental intelligence market and its application into AI.

The Heart of the South West has an ambition to apply its growing digital and analytical expertise to tackle key economic and societal challenges in the Heart of the South West, where digital approaches have the potential to deliver a transformative effect, namely:

- ▶ environmental intelligence;
- ▶ agriculture and food;
- ▶ marine geospatial data; and
- ▶ health technology and healthy ageing.

This will enable the Heart of the South West to act as an exemplar region for data and AI driven clean growth, both in the UK and internationally. It will lead to the creation of better-paid jobs, raise productivity, grow inward investment, and ensure businesses and people across the Heart of the South West are in the vanguard of growing a new economy.

Environmental Intelligence

Businesses and government increasingly need to use environment-related information in their operations to understand risks, benefits or to reduce pollution. Environmental intelligence involves the translation of big data and scientific evidence into 'intelligence' that organisations can use to inform their decision-making. The global market for environmental intelligence is estimated to be worth £100bn. Development of 'environmental intelligence' involves the collection, integration, analysis and communication of multiple types of data and information from many different sources and domains. Rapid advances in technology, data availability and digital applications, such as artificial intelligence, offer unprecedented opportunities to transform the market for this type of information.

This area of growth is supported by a recent World Economic Forum Report 'Harnessing Artificial Intelligence (AI) for Earth' – which represents the application of environmental intelligence to support environmentally responsible growth. Examples of services that will drive market growth, and in which Heart of the South West partners are able to demonstrate on-going research and innovation activity, include:

- ▶ sensor systems that measure efficacy of carbon sequestration;
- ▶ AI and machine learning systems that enable smart preparation, and response to natural disasters;
- ▶ data and remote sensing systems for water system leak detection; and
- ▶ economic modelling tools that enable efficient and integrated Payment for Ecosystem Services (PAS) schemes.

The Environmental Intelligence Accelerator is a proposal to unlock the power of the data and the application of AI to optimise environmental related decision making. By enhancing the capacity to undertake innovation activities, translational research, and skills transfer, it will remove barriers to commercial exploitation (including the 'valley of death' in the translation of foundation research to a commercially viable environmental intelligence solution). This will ensure the Heart of the South West leads on the development of a global market for environmental intelligence solutions. Headquartered in Exeter with regional hubs in Plymouth, Taunton and Falmouth (in Cornwall), the Accelerator will develop a region-wide network across the Heart of the South West and Cornwall and Isles of Scilly LEP areas.





Figure 11: Exeter Science Park, Preferred Local for the Environmental Intelligence Accelerator

Environmental Intelligence Accelerator

The Accelerator would help to significantly enhance the R&D facilities and innovation capacity at the Exeter Science Park Building (currently the preferred location) alongside the existing Big Data and Environmental Futures Impact Lab. The proposal will focus on developing Exeter Science Park as a place-based approach to meet the Heart of the South West's ambition for a sustainable, critical mass of innovative and entrepreneurial STEMM (science, technology, engineering, mathematics and medicine) businesses by 2027.

Heart of the South West's ambition – Environmental intelligence

The Heart of the South West has an ambition to exploit the area's data and research capability to capitalise on the rapid growth of the environmental intelligence market. This will contribute to both the Clean Growth, and AI and Data Grand Challenges.

Reducing Emissions from Agriculture: Sustainable Intensification

If current patterns of food consumption persist, sixty per cent more food will need to be produced globally by 2050. At the same time, there is a pressing need to reduce greenhouse gas emissions within agriculture, which currently account for ten per cent of UK total greenhouse gas emissions. 'Sustainable intensification' will be needed in which yields are increased without adverse environmental impact and without the cultivation of more land.

The UK Agri-tech Strategy identifies multiple approaches to achieving sustainable intensification, but underpinning all of these will be better analysis of data to anticipate new challenges, identify potential solutions, and make better-informed decisions on resource allocation.

The Heart of the South West has a strong agri-food sector, with a higher than average concentration of farmers, fishers and food producers. It is home to more cattle than any other LEP in England; and Brixham and Plymouth sit alongside Newlyn in Cornwall amongst the top fishing ports in England.

The sector is intrinsically linked to the area's natural capital, depending upon it as well as maintaining and enhancing it.

However, productivity is below average. Therefore a key challenge for the Heart of the South West is to improve productivity whilst reducing emissions and environmental impact, achieving sustainable intensification.

There are a number of existing knowledge-based assets in the Heart of the South West, including several land based colleges and considerable expertise within the area's universities. For instance, the North Wyke Farm Platform (Rothamsted Research) is a unique national and global research facility that is linked to real-world farming.

As a founding member of the Global Farm Platform Network, the facility has recently been recognised by the UN Food and Agriculture Organisation as an exemplar facility. In addition, government investment in the Agri-Epi Centre in

Somerset (see case study below) demonstrates new dairy technologies and the use of data and AI in farming.

The area also has a growing portfolio of innovative agri-tech businesses that are developing technologies and systems to help farmers and producers achieve better yields, reduce their impact on the environment, and improve animal welfare.

However, the South West Rural Productivity Commission found that despite high calibre research institutions in the region, innovation is not 'percolating' down to producers. Building out from these existing assets is therefore key.

The South West Agri-tech Network was established in April 2019 and members include agri-tech research organisations from across the whole South West region. Its initial focus will be the development of a detailed understanding of the agri-tech sector capabilities and opportunities, improving collaboration, and ensuring dissemination of innovation to ensure a more cohesive approach to agri-tech research in the South West.

A key focus will be on the challenges of reducing greenhouse gas emissions from the dairy and livestock sectors. Heart of the South West's ambition is for this network to grow into a community for spreading best practice and adoption of new technologies

across a wider set of agricultural businesses than is currently the case.





Case Study: South West Dairy Development Centre

Agri-EPI's dairy farm of the future tests and demonstrates new and emerging technologies. Designed, built and operated by dairy specialist Kingshay, the state-of-the-art dairy research facility was funded by Innovate UK and industry partners.

The centre provides cutting edge demonstration facilities, with visitor access and high-speed connectivity to exploit the benefits of remote access.



Heart of the South West's ambition – Sustainable Intensification

The Heart of the South West has an ambition to use data and AI to boost productivity while significantly reducing emissions from agriculture, with a particular focus on the dairy and livestock sectors. Key to addressing this challenge will be working together with government and sector representatives, as well as the area's world class research organisations through the South West Agri-tech Network. The Network will significantly improve the sharing of experience and promotion of new technologies across the region's agricultural businesses, and act as a focal point for the sector.

This will contribute to clean growth through the development of more sustainable agri-food systems in the area, and increase productivity through the development of new agri-tech products and services. It will contribute to inclusive growth by providing job opportunities and progression pathways, thus reducing the earnings gap for people working within this important bedrock sector.



Figure 12: UK Hydrographic Office

Marine Geospatial Innovation

The global marine autonomy and robotics market is predicted to be worth US\$136bn by the early 2030s, transforming monitoring and mapping, and maintenance of offshore infrastructure and shipping. Growth of this market is underpinned by scientific, spatial and shipping data, significant amounts of which are collected in the UK. The ability to generate accurate and comprehensive marine geospatial data is the key to unlocking the value of the blue economy, particularly through the autonomy and robotics market. However, alongside this global opportunity are increasing threats associated with marine cyber-attacks, which can cost companies millions, but which also present opportunities to develop technologies and products that combat it.

The UK Hydrographic Office (UKHO) in Taunton is the UK's leading centre for hydrography, recognised globally and providing leading-edge marine geospatial data to inform maritime decisions. It provides access to a wide range of marine location-based information that enables customers around the world to make better use of the constantly changing marine environment, unlocking a more comprehensive understanding of the world's oceans.

To further capitalise on the UKHO asset, local authorities in Somerset and the Heart of the South West LEP are developing plans for a Geospatial Innovation Centre and Digital Innovation Hub in Taunton. The aim is to work with UKHO to best utilise its data science expertise and geospatial information and their application to new markets, and to develop the local digital economy. Local authorities, supported by the Heart of the South West LEP, have a strategic role to play in enabling these new facilities,

including the identification and leveraging of funding. The facilities will provide an environment where businesses working in the blue and digital economy, especially autonomy, robotics and navigation, will be able to trial new business concepts, stimulating innovation in the wider economy, as well as creating high value jobs.

Alongside the UKHO, the area benefits from marine autonomy expertise, in addition to the University of Plymouth Maritime Cyber Threats Research Group and Centre for Security, Communications and Network Research. To respond to growing marine cyber threats, the University of Plymouth has proposals to establish a specialised Maritime Cyber Lab (Cyber-SHIP Lab) that will address the risks associated with maritime-cyber. The primary objective of this project is to deliver a functioning maritime-cyber lab to research security in hardware, software, and protection development. The Cyber SHIP Lab will be a distinctive facility that is already attracting interest from industry, including key players such as Lloyds register, Babcock, BT, BP Shipping, Kelvin Hughes, Inmarsat, BMT, Nettitude and AMI Marine UK.

Heart of the South West's ambition – Marine Geospatial Innovation

The Heart of the South West has an ambition to utilise these assets to develop a strong business sector that competes in the rapidly growing marine geospatial market, ensuring that UK companies can play a prominent role in these internationally important big data and AI opportunities. This will contribute to both productivity improvements and clean growth, as well as wider national objectives outlined in Maritime 2050.



Figure 13: University of Plymouth Cyber-SHIP Lab

Health Technology

By 2046, one in four people in the UK will be aged 65 or over. In 2018, 24 per cent of the Heart of the South West population was over 65 and by 2041 it will be 31 per cent. The Heart of the South West is therefore significantly ahead of the UK's ageing curve. An ageing society presents significant challenges to the economy, including greater caring demands on those of working age, and increased health and social care costs. As a result, health and care expenditure nationally is expected to rise from 5.9 per cent of GDP in 1990 to an estimated 8.5 per cent of GDP by 2060.

Therefore, there are significant national and global market opportunities for medical technologies as well as big data analytics and digital tools in the healthcare market.

The opportunity exists to exploit the region's assets in digital health applications to make the Heart of the South West, alongside Cornwall and Isles of Scilly a key centre for the development and testing of new technology in the field of healthy ageing.

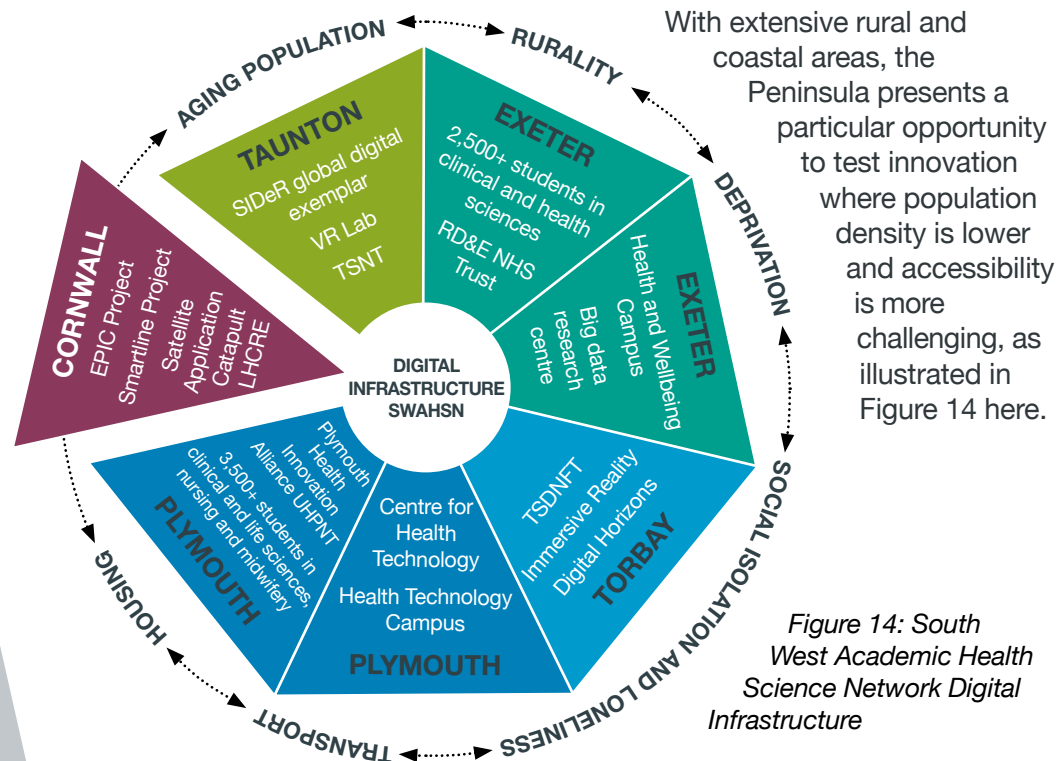


Figure 14: South West Academic Health Science Network Digital Infrastructure

Partners in the South West are already pursuing interventions in this area with projects such as:

- ▶ the Digital Accelerator South West, which was launched in September 2018 by the South West Academic Health Science Network to speed up access to the latest digital technologies by working intensively with five companies to support, innovate, and grow; and
- ▶ the ERDF-funded Innovation in Healthy Ageing Project which will drive transformation on how healthcare services are delivered, allowing the NHS and councils who have responsibility for adult social care to change the way they do business by engaging with small- and medium-sized enterprises (and social enterprises) in the UK life sciences sector.

Building on these projects are proposals to establish a Healthy Ageing Demonstrator programme, bringing together partners across the region including the South West Academic Health Science Network and the University of Plymouth, in coordination with national initiatives such as the Healthy Ageing Grand Challenge through the Industrial Strategy Challenge Fund.

The area's ageing population, rurality and established health and technology research strengths within Exeter and Plymouth Universities creates an ideal location to establish this, creating new jobs, driving up productivity, and increasing exports. A health innovation ecosystem will be established across the Heart of the South West centred on Med-Tex in Exeter, and a Health Technology Innovation Campus in Plymouth. These will form two distinct parts of the Demonstrator, bringing together researchers, health and care businesses, academics, patient groups and health and care providers to test, refine and implement solutions to societal challenges.

Opportunities for further developing global connections are being explored through SWITCH and the European Health Alliance.

Heart of the South West's ambition – Health Technology

The Heart of the South West has an ambition to capitalise on the challenges presented by the area's ageing demographic and its existing health research assets to position the area as a health technology pioneer. This will improve productivity as well as supporting local and national NHS transformation plans. It will also contribute to inclusive growth objectives within the context of the UK Ageing Society Grand Challenge mission 'to ensure that people can enjoy at least five extra healthy, independent years of life by 2035, while narrowing the gap between the experience of the richest and the poorest'.

Digital: Next Steps

To achieve its Digital ambitions, the Heart of the South West and its partners will work to:

- ▶ examine options to accelerate the economic growth opportunities from the Met Office and UK Hydrographic Office. Heart of the South West and UKHO will continue designing a proposed Geospatial Innovation Centre and Digital Innovation Hub in the Heart of the South West to capitalise on economic opportunities arising from UKHO's presence and expertise;
- ▶ continue to prioritise the development of Exeter Science Park and work to secure funding for the proposed Environmental Intelligence Accelerator for the Heart of the South West;
- ▶ accelerate development, commercialisation and dissemination of data analytics and AI technologies to reduce emissions from agriculture;
- ▶ continue to develop and deliver a new Centre for Maritime Cyber Security, including the creation of a specialised Cyber-SHIP lab; and
- ▶ work to implement the recommendations of the LEP-commissioned report on establishing a Healthy Ageing Demonstrator Programme, focussed especially around better use of data and AI.

This will seek to test and commercialise new innovative health and care solutions through collaboration with local and private partners, including Med-Tex in Exeter, the Plymouth Health Technology Campus and the South West Interdisciplinary Technology Consortium for Health and Care (SWITCH).

FOUNDATIONS OF PRODUCTIVITY

The drivers and enablers of clean and inclusive growth

The following chapters in this Local Industrial Strategy set out detailed commitments across the five foundations of productivity. The table below summarises the actions to support clean and inclusive growth across these foundations.

	Actions to support Clean Growth	Actions to support Inclusive Growth
IDEAS <i>The Heart of the South West will strengthen the area's capacity for innovation, commercialisation and the application of new ideas by enhancing its innovation ecosystem</i>	<p>Innovation and R&D will capitalise on clean growth opportunities from the area's unique terrestrial and marine environments as well as addressing key challenges facing the area</p>	<p>Maximise knowledge flows and the diffusion of great ideas to spread the benefits of innovation across the entire geography</p>
PEOPLE <i>The Heart of the South West will ensure a skilled workforce through the Skills Escalator approach, securing the opportunities of the future</i>	<p>Skills and capabilities to support the area's clean growth future will be delivered through the Skills Escalator</p>	<p>Opportunities will be created for individuals to access new and better jobs through the Skills Escalator, reducing poverty and promoting workforce diversity</p> <p>The Inclusive Growth Expert Panel will champion the agenda and embed it across all activities</p>
INFRASTRUCTURE <i>The Heart of the South West will future-proof its infrastructure to support long- term prosperity and clean and inclusive growth</i>	<p>Key infrastructure systems will be future-proofed, for instance:</p> <ul style="list-style-type: none"> ▶ Working to improve digital connectivity to avoid transport emissions and allow smart- working development ▶ Working to make road and rail corridors ready for low carbon and autonomous vehicles ▶ Working to reduce emissions from housing stock 	<p>Increased connectivity will help to reduce geographic barriers to accessing opportunities</p> <p>Projects will be developed from commissioning to delivery with inclusive growth objectives</p>
BUSINESS ENVIRONMENT <i>The Heart of the South West will create an environment that stimulates business investment and competitiveness, making it one of the best areas in the UK to start and grow a business</i>	<p>Businesses will be supported to become more resource efficient. In addition to existing support from the Manufacturing Advice Service, new clean growth products and services will be developed with the British Business Bank</p>	<p>Businesses will be motivated and enabled to support inclusive growth, delivering better and higher paid jobs, and career progression</p> <p>The area's growing social enterprise sector will be further strengthened</p>
PLACES <i>The Heart of the South West will lift economic performance in all areas, including underperforming towns, peripheral areas, and coastal communities, to grow the economy and minimise the gap between the best and worst performing areas</i>	<p>Places will be supported to raise prosperity for all through:</p> <ul style="list-style-type: none"> ▶ Creating a low carbon technology cluster ▶ Development of a Natural Capital Plan ▶ Clean growth action plans for different types of settlements 	<p>Prosperous and inclusive communities will be built at a spatial level, drawing on the principles of social value and maximising the area's natural capital including:</p> <ul style="list-style-type: none"> ▶ Working with coastal towns and resorts at risk of being left behind ▶ Future-proofing productivity in the vital tourism sector

IDEAS

‘The Heart of the South West will strengthen the area’s capacity for innovation, commercialisation and the application of new ideas by enhancing its innovation ecosystem.’

The Heart of the South West area has unparalleled place-based opportunities for innovation, commercialisation and the dissemination of ideas that have both commercial and societal value.

The Heart of the South West Innovation Landscape

The Heart of the South West is home to a number of important marine and terrestrial assets. These assets provide unparalleled place-based opportunities to develop, test and disseminate innovative solutions to the Grand Challenges facing the UK, in urban, rural, coastal and dispersed communities. The Heart of the South West also has many of the ingredients necessary to capitalise on these opportunities, including demonstrable research excellence in technologies and sectors closely aligned with this Local Industrial Strategy, and a vibrant community of research-intensive businesses in key technology areas.

The Heart of the South West’s Strategic Objectives

To drive R&D, innovation and commercialisation the key strategic objectives will be to:

1. Secure further investment in R&D and innovation through developing and exploiting research assets and connecting businesses with the area’s knowledge and R&D base.
2. Exploit strengths in clean growth to position the Heart of the South West as a focus for innovation and bring clean technologies and approaches to market.
3. Become a test bed for innovation to address societal and environmental challenges in rural, peripheral and dispersed communities, supporting inclusive growth.

The commitments outlined in this chapter will contribute to delivering these objectives.

However, despite these strengths and opportunities, businesses in the Heart of the South West exhibit lower levels of innovation activity, with lower than average R&D expenditure. Whilst the area is roughly mid-table for Higher Education R&D (HERD), it is in the bottom quartile for business expenditure on R&D (BERD), at only £350 per FTE. It also performs poorly on other measures such as business spend on innovation as a proportion of company turnover. There are fewer firms engaged in product and process innovation and fewer graduate start-ups. Firms in the Heart of the South West are less likely to secure government funding for innovation and when they do, it tends to be for lower value projects. Local evidence points to challenges for businesses in bringing ideas to market, driven by the region’s dispersed geography and limited networking opportunities.



There is a recognised need to strengthen how these assets and opportunities interact to form the 'local innovation ecosystem.' This will capitalise on the Heart of the South West's assets and opportunities to drive productivity growth. Developing a supportive culture in which business are encouraged to innovate, engage in R&D and bring their ideas to market, will contribute to government targets for increasing R&D spending and will also support the diffusion of great ideas.

Strengthening the Innovation Ecosystem

Inspired by the ground-breaking Brainport concept in Holland, the Heart of the South West will strengthen its innovation ecosystem by further developing its physical assets; but also, by facilitating the cross pollination of ideas. At its core will be a triple helix of cooperation and collaboration between public bodies, industry and research organisations. Key components will be the Heart of the South West's Science Parks, Innovation Centres and Innovation Hubs, along with its world- class research expertise and vibrant community of businesses. These will be strengthened through facilitating multi-disciplinary collaboration, open access platforms, a talent pipeline, and effective support for businesses to innovate.

Following the Brainport model, the Heart of the South West will be able to address the Grand Challenges facing the area, effectively creating living laboratories for innovation and the application of solutions that have both commercial and societal value.

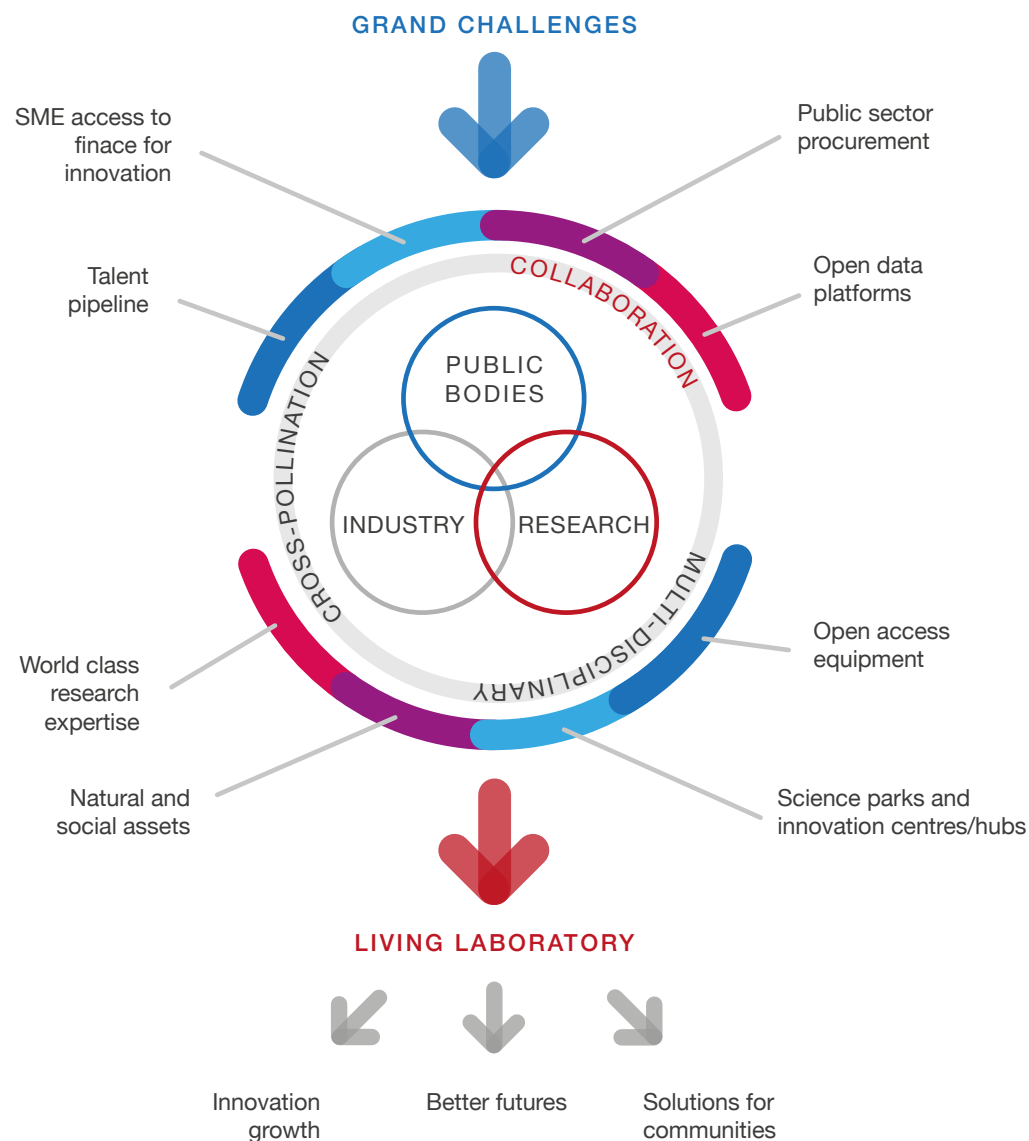


Figure 15: Using Collaborative Innovation and Living Laboratories to Address the Grand Challenges

Case Study: City Science

Industrial Research Fellows from the Environmental Futures and Big Data Impact Lab (a partnership of seven world class Devon-based research organisations) are working with City Science to use autonomous vehicles to solve the difficult 'last mile problem' of getting travellers to and from transport hubs, such as train stations. In the near future, this problem could be addressed using self-driving vehicles, with 'connected and autonomous vehicles' (known as CAVs) able to ferry people on short journeys quickly, safely and affordably.

City Science in Exeter is enabling this future by building a data-driven strategy for bringing CAVs into transport systems. A key challenge to delivering this solution is the need to

optimise the distribution of the vehicles to maximise the convenience to users. Bringing their Last Mile project to the Impact Lab for support has allowed City Science to access the skills of machine learning specialists, who are experts in solving optimisation challenges. By combining the subject matter experts and data sets gathered by the team at City Science, with this machine learning capability, City Science has been able to build a more robust and reusable optimisation system. The optimisation software under development will make the Last Mile CAV solution a more commercially viable service that urban planners and transport authorities can deploy to reduce congestion in cities across the UK and around the world.

Whilst digital technology increases connectivity, there remains an important role for physical assets where co-working spaces, casual 'water cooler conversations' and the sharing of 'tacit' knowledge are important facilitators of innovation. The Heart of the South West has an ambition to develop its network of innovation infrastructure to ensure the benefits of innovation are distributed across the whole geography, building on existing investment, and centred on:

- ▶ **three Clean Growth Enterprise Zones** (see also the Places Foundation);
- ▶ **Torbay Innovation Campus** – bringing together HE, FE and Local Authority partners to support electronics, photonics and marine science businesses;
- ▶ **a University Enterprise Zone in Exeter** – to support the commercialisation of research and start-ups; and
- ▶ **a network of Innovation Centres** – with the intention of every town having its own hub. Whilst the LEP has already funded some of these, far more needs to be done, and this work needs to be supported by an overarching approach for sharing best practise, achieving critical mass, and promoting greater partnership working.

These place-based and spatially inclusive developments will be strengthened by the area's Science Parks and Innovation Centres (including on university campuses), and linked to developments in the Catapults, such as Offshore Wind and Satellite Applications where businesses can access facilities that will ensure the wider rollout and adoption of technology, products and ideas which are starting to move into the mainstream. As key anchors for the commercialisation of research, Science Parks and Innovation Centres will also support the retention of graduates and young talent.

World class research expertise within the area's universities, colleges and wider research organisations will also be maximised, including marine technologies, autonomous systems, advanced engineering, and the application of AI and data analytics to solve place-based challenges. The area's two National Laboratories (the Met Office and UK Hydrographic Office) collectively provide facilities and expertise, as well as exclusive opportunities for commercialisation. As highlighted in the Digital chapter, with support from government partners, the Heart of the South West will work with the Met Office and UK Hydrographic Office to ensure that the opportunities to exploit and commercialise their assets are realised. It is essential that the benefits arising from this are felt locally through the development of spill-over opportunities, specifically through globally recognised innovation facilities such as the Environmental Intelligence Accelerator and the Geospatial Innovation Centre and Data Hub. These will enable the Heart of the South West to develop products and services to support and promote clean and inclusive growth across key sectors of the economy, such as agri-tech, tourism and health.

Building on these assets, the innovation ecosystem will be strengthened through greater use of:

- ▶ **Open Data Platforms** – making datasets available across a whole spectrum of interests from health to agriculture, transport and climate change, to address challenges and form the basis of commercially viable solutions;
- ▶ **Open access equipment** – providing businesses, entrepreneurs and young people with access to equipment that is outside their reach, such as multi-million pound super-computers, electron microscopes and laboratory space, as well as smaller scale kit such as 3D printers, and laser cutters;
- ▶ **Public Sector Procurement** – acting as a demand-side driver of innovation activity;
- ▶ **The Heart of the South West Skills Accelerator** – providing a strong pipeline of talent especially in science, technology, engineering and maths (STEM) (see People chapter); and
- ▶ **Effective Business Support** – including leadership and management, peer-networking, access to finance for innovation etc. (see Business Environment chapter).

The first step in this process will be to establish an Innovation Board whose role will be to develop a coherent strategy for harnessing the potential of the area's innovation assets and making them more than the sum of the individual parts.

Comprising key representatives from relevant public bodies, research, and industry, the terms of reference for this board will be developed collaboratively.

Additionally, efforts will be made to work closely with Innovate UK to ensure wider rollout and adoption of technology, products and ideas which are starting to move into the mainstream. Innovate UK has pledged to work collaboratively with the LEP to drive greater take-up of Innovate UK support.

Having developed an informed understanding of the barriers for local businesses in accessing Innovate UK funding, on-going work developed through the existing Memorandum of Understanding will help to provide the solutions required to harness the potential of the region.

This will align closely with core business support activities to help businesses adopt and develop new, innovative services and technologies (see Business Environment chapter).

There is strong alignment between the Grand Challenges and local areas of expertise, particularly in relation to clean growth. Through its universities, the Heart of the South West will support and develop bids into competitive UKRI funds (such as the Industrial Strategy Challenge Fund and Strength in Places Fund) to help businesses make the most of opportunities from national competitions. Local partners will bring forward a range of high-level research, development and innovation projects in the fields of autonomy, marine renewables, and industrial digital technology that will significantly raise the Heart of the South West's capability and capacity to support R&D and innovation. This will help to develop capacity for cross-sector collaboration in the development of new technologies and their applications, providing further opportunity for new demonstrator projects and collaborative, cross-sectoral approaches to innovation. It will also enable the Heart of the South West to plug gaps in the diffusion of technology and ideas across key sectors, supporting businesses to innovate and bring ideas to market.

Ideas: Next Steps

The Heart of the South West has an ambition to strengthen the area's capacity for innovation, commercialisation and the application of new ideas by enhancing its innovation ecosystem for both commercial and societal value.

The Heart of the South West and its partners will work to:

- ▶ establish locally **an Innovation Board** in the short term to advise on the development of the innovation ecosystem. Longer-term intentions are to create a network of innovation demonstrator/diffusion sites around key opportunities in support of Heart of the South West businesses, in order that they can exploit the opportunities for innovation to enable business growth. The Heart of the South West will work with Innovate UK to raise awareness of funding and support for innovation through the existing Memorandum of Understanding;
- ▶ leverage the area's world-class knowledge base to increase innovation levels in business;
- ▶ ensure that the commercial benefits arising from the Met Office and UK Hydrographic Office are felt locally through the development of local supply chains; and
- ▶ develop the local innovation ecosystem by bringing together key partners to tackle Grand Challenges in the Heart of South West with a particular focus on rural, coastal and peripheral areas.





PEOPLE

‘The Heart of the South West will ensure a skilled workforce through the Skills Escalator approach, securing the opportunities of the future.’

In a modern, innovative and creative economy, people are an area’s most significant asset. Through the leadership of the Skills Advisory Panel, local partners and government will work together to develop the Skills Escalator approach.

This is essential to meeting the area’s inclusive growth challenge and will secure a skilled workforce fit for the opportunities of the future, supported by a clear pipeline of talent that enables all to reach their potential.

The Heart of the South West’s Strategic Objectives

1. Champion science, technology, engineering and maths (STEM) courses (including T levels) to increase take up.
2. Ensure all residents have the employability skills they need to progress.
3. Increase the take-up of technical qualifications and improve retention and recruitment of those with technical and higher-level skills.
4. Increase employer investment in workforce development.
5. Work with institutions to ensure that the Heart of the South West’s learning facilities and teaching capacity are fit for purpose and meeting future need.
6. Mainstream an inclusive approach to growth so all that residents can benefit from future prosperity.

The commitments outlined in this chapter will contribute to delivering these objectives.

The Current Position

The Heart of the South West is home to almost two million people and its population is ageing at a faster rate than the UK. The high employment rate and demographic profile of the area means there is an extremely tight labour market. Employers are struggling to find the skilled labour they need, particularly within the energy, engineering and digital sectors, which require people with STEM skills. Employer feedback also indicates that these sectors are particularly vulnerable to the loss of ageing talent. Currently these sectors employ in the region of 60,000 individuals, seven per cent of the area's total workforce. Demand for roles within these sectors is rising. There are 6,000 estimated new entrants into these careers each year, however, a further estimated 40,000 trained individuals will be needed over the next decade if these opportunity sectors are to fully achieve their ambitions. The LEP has responded to this challenge and focused its capital skills investments into new STEM facilities working with FE providers. Joint initiatives with government such as the National Nuclear College, the South West Institute of Technology and the Digital Skills Partnership are also starting to have some impact on creating a new pipeline of talent. Maintaining this momentum will be essential to delivering a step change in the availability of STEM skills.

In addition to technical skills there is significant demand for core employability skills. There are 10 per cent fewer young people from the area that go on to study at a higher education institution, and although the area's universities attract students from around the world, the Heart of the South West struggles to retain graduates, with an overall graduate retention rate of 38.2 per cent, over ten per cent lower than the national average.

Whilst unemployment rates are low, levels vary by four to five per cent, with some of the area's most deprived wards sitting adjacent to some of the more prosperous. Parts of the area have social mobility challenges; low aspiration levels amongst young people combine with transport, finance,

childcare, cultural, and other challenges, as well as a lack of career opportunities in some areas. This means that individuals and communities continue to be held back by a range of cultural, aspirational or practical barriers. Working with government, partners in the Heart of the South West have developed a number of initiatives to support unemployed individuals, as well as those looking to progress in the labour market, including an innovative Wage Progression Pilot and the West Somerset Opportunity Area.

Despite employment growth, a lack of productivity growth means that wages have flat-lined and in-work poverty is also a rising issue. Average wage levels remain below the national level, and there is significant variation across the area, with wages fluctuating by around £120 - 22 per cent per week by workplace across the Heart of the South West. Sector performance remains heavily mixed, with social care, the visitor economy, and retail skills and pay levels trailing behind other sectors.

The LEP has worked with government and partners to up-skill the workforce through initiatives such as the Career Learning Pilot (CLP), and by designing ESF programmes to support career progression for those in work. Evaluation of the CLP shows a healthy uptake and a positive impact on career opportunities (and by implication, wage levels). Future developments such as proposals under a bid to become a Tourism Zone and a focus on digital capability within the sector are being taken forward by partners to support up-skilling and improved productivity of this sector.

Case Study: West Somerset Opportunity Area

In West Somerset, the Department for Education-funded Opportunity Area Programme has delivered additional investment in initiatives and infrastructure to boost skills for employment and business.

For individuals, this has included: an extension to the Access to Employment and Learning grant, supporting individuals to overcome some of the barriers that prevent them from taking up employment and learning; a range of new learning opportunities for adults and young people delivered locally via the New Routes into Work Programme; Children's University and Studio Digital project; a new website, 'Study-Up', which provides an overview of Somerset's Higher Education offer; and a Western Somerset Careers Fair.

For business, the fund has enabled the creation of a new Small Business Network to support the engagement of small- and medium-sized enterprises in careers and skills development activities, and additional workshops to encourage take-up of digital technologies that support business productivity. This is alongside the creation of Skill-Up West Somerset, a free and impartial Apprenticeship and Skills Advisory Service for individuals and businesses in West Somerset.

Case Study: South West Institute of Technology

The two Institutes of Technology in the area are collaborative ventures covering the Heart of the South West and the Cornwall and Isles of Scilly LEP areas, as well as parts of the West of England.

The South West Institute of Technology partnership includes the following anchor education institutions: Universities of Exeter and Plymouth, Exeter College, Petroc, Bridgwater and Taunton College, City College Plymouth, Truro College and Penwith College, supported by Oxygen House, Babcock, Met Office and TDK as anchor employers.

The South West Institute of Technology aims to:

- ▶ provide employers with the workforce skills that they need to succeed, now and in the future;
- ▶ provide learners with excellent technical education; and
- ▶ enable the South West to become one of the world's leading regions for digital, engineering and manufacturing technologies.

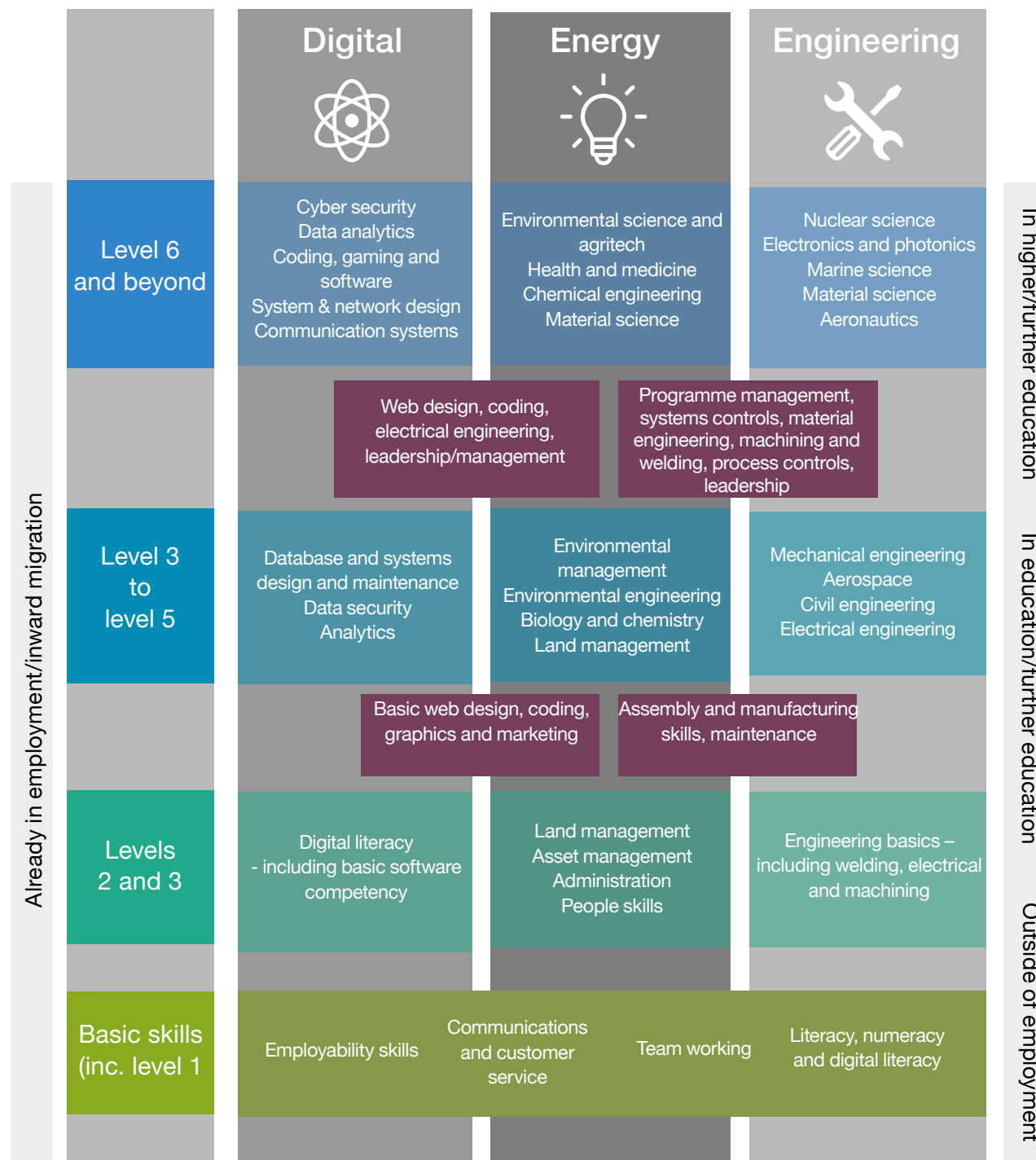
More generally, the Heart of the South West benefits from a number of gold standard colleges and universities alongside a significant number of high-quality private training providers, adult community learning services, an array of secondary level technical academies, and specialist schools. This includes Exeter Mathematics School jointly sponsored by the University of Exeter and Exeter College, which is an Ofsted 'Outstanding', state-funded sixth form college specially designed for young people who love maths, physics and computing. Two-thirds of the area's FE institutions are currently piloting T levels, whilst the recently confirmed Institute of Technology will help to deliver higher-level technical education and training to address technical skills gaps.



Figure 16: Student at City College Plymouth

Building on this, the Skills Escalator, through a series of layered interventions, seeks to accelerate and focus efforts to increase the availability of higher level and technically trained individuals, supporting every individual to play an active part in the future prosperity of the area. It will:

- ▶ mobilise, inspire and empower young people both in and out of education to train and learn through academic, apprenticeships, T levels and other routes into opportunity sector roles;
- ▶ engage and support those outside the labour market to access relevant opportunities within the Heart of the South West growth sectors, and develop the basic and intermediate skills they need to progress;
- ▶ enable those already in work to up-skill and access new opportunities through both in-work training, apprenticeships and other vocational opportunities, and including wider career-jumping approaches between sectors;
- ▶ maximise and retain the talent of older people and those seeking to leave the labour market in key roles, including teaching to support a pipeline of talent for all sectors; and
- ▶ interact and support the business community to optimise their existing workforce and better prepare and contribute to creating the workforce of the future.



Heart of the South West Skills Advisory Panel

Following government guidance, the Heart of the South West established a Skills Advisory Panel (SAP) in July 2019 to help inform current and future skills needs and labour market challenges. The panel brings together lead partners from across the public, private and provider sectors within the area, to align and agree a shared understanding of local labour market intelligence and dynamics, as well as to provide a forum to explore and agree local solutions to shared skills challenges and opportunities.

Figure 17: HotSW Skills Escalator Model

People: Next Steps

The Heart of the South West has an ambition to ensure a skilled workforce, securing the opportunities of the future. The Skills Escalator provides the area's response to this. Achievement of the Skills Escalator approach requires alignment of both government and local partner resources to address gaps in the labour market and improve impact through a joint set of commitments. Through this approach and the work of the Inclusive Growth Expert Panel, opportunities will also be created for individuals to access new and better jobs, thus reducing poverty, promoting social mobility, and improving equality of opportunity.

The Heart of the South West and its partners will work to:

- ▶ develop opportunities, working with the Careers Enterprise Company and National Careers Service, to better align national and local programmes to strengthen Careers Information, Advice and Guidance for young people and adults;
- ▶ continue to support the Skills Advisory Panel to work with local providers to shape education provision, looking at options to align adult education resources to ensure that it better meets local labour market need;
- ▶ implement the Heart of the South West's National Retraining Scheme;
- ▶ jointly take forward the South West Institute of Technology and Digital Skills Partnership;
- ▶ engage, including through Jobcentre Plus, with the Heart of the South West's Inclusive Growth Expert Panel to take forward specific activity to support those furthest from the labour market;
- ▶ deliver the Heart of the South West Skills Escalator including: effective Careers Advice and Guidance through the Careers Hub, promoting Apprenticeships, T level, and Technical Skills take up and provision;
- ▶ establish an Inclusive Growth Expert Panel to support all residents to reach their potential and contribute to the future prosperity of the area. This includes pathways into learning and between further and higher education; and
- ▶ develop the Growth Hub as a single gateway for businesses to access advice and guidance on skills, aligned with other business support strands to encourage employers to increase investment in workforce development.





INFRASTRUCTURE

‘The Heart of the South West will future-proof its infrastructure to support long-term prosperity and clean and inclusive growth.’

To support long-term prosperity and clean growth, the infrastructure in the Heart of the South West needs to be upgraded, addressing the challenges of today as well as tomorrow.

This will underpin the others goals set out in this Strategy: transport and digital infrastructure will help develop the

networks, innovations, and enterprise opportunities discussed above; and achieving net zero carbon emissions will require a rethinking of transport (responsible for around 40 per cent of emissions), homes (responsible for around 30 per cent) and industry (responsible for the final 30 per cent).

The Heart of the South West’s Strategic Objectives

1. Create fast, resilient and clean transport networks which connect people with opportunities including through ultra-low emission and electric vehicles, aligned with the Automotive Sector Deal.
2. Deliver improved connectivity across the area by securing significant levels of gigabit- capable infrastructure and at least 30Mbps services for all by 2025.
3. Accelerate housing delivery (including affordable housing) whilst halving energy use in new buildings by 2030 contributing to the realisation of the government’s Buildings Mission.
4. Ensure there is sufficient employment land to support growth.

The commitments outlined in this chapter will contribute to delivering these objectives.

Transport

Poor journey times and resilience of the transport network in the area have a detrimental impact on productivity and climate change is likely to further weaken the resilience of the transport network.

Severe weather events similar to those seen in 2014 at Dawlish are likely to be witnessed every one in four years as a result of climate change. Poor connectivity also contributes to people's geographic barriers to accessing opportunities. In 2016, transport accounted for 43 per cent of carbon emissions from the Heart of the South West and between 2005 and 2016 emissions only fell by three per cent from this source. The South West Energy Strategy pointed to several key opportunities to reduce emissions from transport. These included increasing the use of ultra-low emission vehicles (such as biogas or hydrogen) and increasing the deployment of electric vehicles, aligned with the Automotive Sector Deal.

However, the UK is on the cusp of a profound change in how people goods and services are moved around. The Heart of the South West must be prepared to capitalise on these opportunities to create a cleaner, faster, more resilient transport system through the adoption of innovative transport solutions.

The Peninsula Sub-National Transport Body (currently in shadow form) will enable more effective dialogue between the

partner authorities and the Department for Transport about the challenges between growth ambitions and the associated strategic investment needs of the area. This puts in place a clear mechanism for engagement on strategic transport investment matters on a wider geographical basis, complementing the work of transport authorities in the wider South West, including the Western Gateway SNTB.

Digital

Ofcom data show that just 89 per cent of premises in the Heart of the South West can access superfast broadband compared with 95 per cent across the rest of the UK. Similarly, only 29 per cent of properties can access ultrafast broadband compared to 54 per cent across the rest of the UK – though this varies significantly across the region, with Exeter and Plymouth having coverage of 80-90 per cent but rural areas having coverage in the single digits.

On completion of the current roll-out plans, approximately 100,000 premises will still not be connected to superfast broadband (measured at 30Mbps download speed).

This will have to be addressed to meet the government's target of gigabit capable broadband nationwide by 2025. These premises are expected to span the entire region, in a highly fragmented pattern, with small pockets (and in some cases just isolated dwellings) dispersed throughout the region, presenting significant

implications for delivery. Digital improvements will be crucial to help to connect people, businesses and communities to opportunities, reducing the impact of isolation and peripherality.

Housing

Housing (including affordable housing) is of fundamental importance to achieving local economic growth priorities, as well as having the potential to contribute to clean and inclusive growth ambitions. The total number of houses planned in the Heart of the South West Local Plans (including joint plans) which expire at various times between 2030 and 2040 is 146,980. This equates to delivery rates of around 8000 houses per year. However, delivery across the area is currently around 91 per cent of annualised targets (though there are notable exceptions). A report by the Joint Committee identified a number of barriers to housing delivery including specialist skills and capacity, policy challenges, and investment in vital infrastructure to support housing growth.

Whilst domestic carbon emissions have fallen by 35 per cent since 2005, the domestic sector still accounts for 28.5 per cent of all carbon emissions in the Heart of the South West area. The South West Energy Strategy highlighted that the region has one of the highest proportions of 'hard-to-treat' homes in the UK at 44 per cent, and fuel poverty is also high. Opportunities to address this include retrofitting existing

buildings as well as testing and deploying low carbon new build developments.

Given the desire to see quality housing growth delivered across the HotSW Joint Committee area, a Housing Task Force was established to overcome barriers to delivery.

Employment Land

There is strong demand for industrial workspace across the area and evidence that there is insufficient supply to meet demand. Despite this, there are barriers to development associated with infrastructure; the cooperation of landowners; viability gaps; and utilities access. The shortage of employment land prevents companies from expanding and relocating to the area and therefore acts as a constraint on growth.

The Heart of the South West has recently commissioned research to understand these issues more fully.

Finance for Infrastructure

Exeter has been pioneering a new approach to 'sustainable finance' which involves a programme to leverage the city's existing assets base across its public sector institutions and, via a City Fund vehicle, obtain commercial borrowing to create a subsidy-free and commercial city-wide financing and development capability.

Exploring and developing innovative funding vehicles such as this could provide the key to unlocking much of the infrastructure delivery requirements outlined in this chapter.

Infrastructure: Next Steps

The Heart of the South West has an ambition to future-proof its infrastructure to support long-term prosperity and clean growth. Additionally, under the guidance of the Inclusive Growth Expert Panel, the LEP will ensure that capital infrastructure projects are developed from commissioning to delivery with inclusive growth objectives.

The Heart of the South West and its partners will work to:

- ▶ design a sustainable transport strategy in the short term, through the Peninsula SNTB and working closely with the Western Gateway SNTB which will in the longer-term improve the resilience and capacity of strategic transport routes in the area;
- ▶ consider the national 'outside-in' approach to the deployment of gigabit-capable networks, recognising the challenges of achieving this within rural locations, to achieve a significant uplift in provision of gigabit-capable coverage across the Heart of the South West;
- ▶ explore implementation approaches over the longer-term such as fibre connection hubs, building on the Rural Gigabit Connectivity Programme and Local Full Fibre Network Programme and testing alternative approaches to improve coverage particularly where current speeds are below that of the Universal Service Obligation;
- ▶ pilot 5G solutions across urban and rural areas, building on the work of Rural First programme in DCMS, targeting specific business clusters and bidding into relevant national competitions;
- ▶ develop a strategic approach to housing delivery, prioritising high quality design of homes and places – as set out in the National Design Guide – that are welcomed by communities, as well as standards including energy efficiency, and exploring innovative construction techniques that support the Clean Growth Grand Challenge mission to reduce carbon emissions; and
- ▶ explore options for funding vehicles to unlock infrastructure delivery;
- ▶ develop strategic plans to significantly reduce carbon emissions from transport, building on existing work including the Transforming Cities Programme in Plymouth, and NIC work in Exeter;
- ▶ aim to implement the Heart of the South West Local Broadband Plan, complementing national and industry-led plans; and
- ▶ aim to implement recommendations from the Strategic Employment Land review, in collaboration with local partners and responding to the National Planning Policy Framework.

BUSINESS ENVIRONMENT

‘The Heart of the South West will create an environment that stimulates business investment and competitiveness, making it one of the best areas in the UK to start and grow a business.’

The Heart of the South West’s businesses are a vital asset in driving forward the growth agenda, providing the basis for the area’s goods, services, jobs and productivity. However, the world is changing, and businesses need to be able to adapt to maximise productivity and create new opportunities. Having the right business support environment is also essential for connecting businesses across all sectors to the transformational potential of the area’s dynamic heart.

The Heart of the South West’s Strategic Objectives

To help realise the ambition of making the Heart of the South West one of the best areas in which to start and grow a business the key strategic objectives will be to:

1. Sustain and develop a strong business support infrastructure, centred around the provision of an Information, Diagnostic and Brokerage service, to stimulate a culture of entrepreneurship and scale-up, improving business competitiveness.
2. Improving the resilience of the region’s economy, to respond dynamically to changes in the global and regional economy.
3. Drive internationalisation through supporting inward investment and exporting.
4. Support businesses to manage resources more efficiently to achieve clean and inclusive growth.

The commitments outlined in this chapter will contribute to delivering these objectives and link to the People Foundation.



The Heart of the South West Business Base

The Heart of the South West is home to 72,000 businesses across a wide range of sectors and industries. This includes a number of high-profile businesses that exhibit best practice and have transformative potential. It also includes a growing social enterprise sector, providing an important opportunity to support inclusive growth.

Despite its strengths, however, the area faces a number of challenges. The business birth rate in the Heart of the South West is lower than the national average and the area also has fewer larger businesses. Whilst there are 135 scale-ups in the Heart of the South West, which collectively employ 17,000 people and generate £2bn turnover, the area has a lower proportion of scale-ups than other LEPs.

Research shows that scale-ups are more productive than their peers and generate half the total turnover of all small- and medium-sized enterprises, therefore the LEP has recently launched a dedicated programme to target this group and will strengthen this further through having a scale-up champion on the LEP board.

The evidence also points to a lower than average proportion of foreign owned businesses, with a significant (34 per cent) decline in the number of FDI projects landing in the South West during 2018.

Foreign investment has been shown to produce substantial economic benefits for

local areas and the Heart of South West is currently benefitting from an ERDF project to support inward investment.

Businesses in the Heart of the South West are supported by the knowledge base, including higher and further education as well as privately led research organisations. The area also benefits from an established Growth Hub which provides signposting and brokerage services to support both new starters and existing businesses from any sector, including social enterprises, alongside a wide network of business support organisations (public and private).

Enablers for Growth

The evidence base shows that within the Heart of the South West the key enablers for firm-level growth are:

▶ **leadership and management skills** – local scale-up research identified the need to focus on the development of the business AND the capabilities of the business leader(s) to drive productivity. Firms grow by being aspirational, generating new ideas, taking risks and allocating resources efficiently, which are all key determinants of firm-level productivity and differentiate scale-ups from other small- and medium-sized enterprises. UK businesses underperform on the adoption of effective management practices relative to top performing countries, and recent research shows how the Heart of the South West is especially affected by this, requiring concerted efforts to improve practice.

▶ **innovation and technology adoption** – the adoption and diffusion of technology, including digital technology is transforming how businesses operate. This represents an opportunity for improving productivity growth by enabling innovation, access to markets and more efficient business processes (especially in sectors such as the visitor economy and farming, food and fishing which are core bedrock sectors in the Heart of the South West, but which typically have lower levels of productivity). Leaders and managers need the knowledge and awareness of how to drive through change efficiently and effectively and maintain their competitiveness in the fourth industrial revolution.

▶ **peer networking** – alliances, partnerships and collaboration are important considerations in improving firm-level productivity. The firms that grow successfully need to engage with their business ecosystem (customers, suppliers etc.) in order to both leverage external resources and grow more internal resources. Many of these engagements take the form of formal alliances between the entrepreneurial firms and established companies. National resources such as 'Be the Business' may complement local efforts to foster collaboration and benchmark performance.

▶ **financial readiness** – a recent Growth Hub evaluation identified access to finance as well as the skills and abilities of businesses to secure funding as barriers to business growth. Local consultations have identified a lack of confidence by small- and medium-sized enterprises in applying for finance, and in particular from alternative non-bank sources. The Heart of the South West is working closely with the British Business Bank to undertake a review of finance products and investor readiness in the South West and to identify any gaps.

▶ **exporting** – whilst the number of businesses exporting goods and services internationally compares well to regional averages, the value of exports per enterprise is significantly lower in the Heart of the South West than regionally (although sub-regional variation hides pockets of high export propensities within Plymouth and Somerset). A UK Trade and Investment survey found that 85 per cent of clients felt exporting had led them to achieve growth that would not otherwise have been possible.

Therefore, by increasing the volumes and value-added of firms that export, the region's overall growth potential will be improved.

Case Study: Heart of the South West Inspire Elite Scale Up Service

Launched in May 2019, the Inspire Elite programme is a new service that delivers dedicated support to scale-up businesses across the Heart of the South West. The programme is run by the not-for-profit company Inspire, which has been endorsed as a provider by the Scale-up Institute. Inspire partners with the Goldman Sachs 10K small business programme that provides 100 hours of fully funded support to scale-up businesses, and typically sees its graduates growing revenues and creating jobs at rates that outperform the broader economy.

The Inspire Elite Programme provides:

- ▶ Quarterly Peer to Peer networking and education, facilitating shared learning and mentoring amongst scale up business leaders;
- ▶ A seminar programme consisting of regular twice monthly educational half days presented by experts on topics relevant to scaling businesses, but focusing on the key barriers to growth identified by the Scale Up Institute;

▶ Intensive support in creating a three to five year strategy for growth through workshops, one to one support, and Senior Management team mentoring led by experts with relevant business experience; and

▶ A referral service to signpost all publicly funded programmes and commercial expertise available from the private sector through a network of professional partners. This is aimed at creating an ecosystem of support through a carefully selected but wide-ranging group of 80 partner organisations.

Fully integrated with the Heart of the South West Growth Hub, each Inspire client is allocated a dedicated Business Expert to work with them. Unlike many support programmes, this expert stays with the client throughout their journey, focusing on outcomes rather than activities.

Inspire aims to support 55 businesses within the current programme which comes to an end in September 2020.

Clean and inclusive growth

For clean growth specifically, 32 per cent of carbon emissions arise from industrial and commercial sectors, highlighting the importance of decarbonizing business operations. Research in the Greater Exeter area identified opportunities to reduce energy demand by nine per cent in the commercial sector and 16 per cent in the industrial sector using existing technologies and therefore reducing bottom line business costs. However, the Carbon Trust has found a number of barriers to small- and medium-enterprise energy efficiency including information and capacity challenges, and a lack of financial mechanisms or economic incentives.

The growth of the social enterprise sector in the Heart of the South West provides an important opportunity to support inclusive growth, with evidence showing that social enterprises are more likely to innovate, grow and survive than standard small- and medium-sized enterprises, as well as being more likely to pay fairly. Alongside this, approaches such as employer standards and charters provide opportunities to embed good employment practices within firms, creating both safe and fair workplaces, which can improve performance and competitiveness.

Business environment: Next Steps

The Heart of the South West has an ambition to create a business environment that stimulates business investment and competitiveness, making it one of the best areas in the UK to start and grow a business.

To achieve this ambition, the Heart of the South West and its partners will work to:

- ▶ promote the area's strong and emerging sectors, in partnership with the Department for International Trade, and ensure businesses receive the right support at the right time so they can invest and grow;
- ▶ access international expertise, starting with government-sponsored engagement between the LEP and M.I.T. through the MIT REAP Lite programme;
- ▶ review financial products with the British Business Bank and other funders to meet business needs, where appropriate designing new products to support scale-up businesses, clean growth and social inclusion in accordance with LEP priorities;

- ▶ ensure the business support provision reflects the focus on productivity-driven clean and inclusive growth including provision of an Information, Diagnostic and Brokerage service;
- ▶ ensure that business support is optimised to increase start-ups, support scale-ups, respond to economic shocks and support all businesses to access new market opportunities through clean and inclusive growth and other Local Industrial Strategy opportunities;
- ▶ provide an enhanced co-ordination and simplification role through the Growth Hub, building and strengthening relationships with the key local players across the public and private sectors to exploit new opportunities for collaboration and to further join up and simplify the local business support ecosystem for the benefit of businesses;
- ▶ work with Be the Business to explore options of integrating initiatives around firm-level productivity into the Heart of the South West business support offer; and
- ▶ promote Employer Standards and charters for social inclusion.

PLACES

‘The Heart of the South West will lift economic performance in all areas, including underperforming towns, peripheral areas and coastal communities, to grow the economy and minimise the gap between the best and worst performing areas.’

The diversity of urban, rural and coastal settlements and outstanding natural capital define the identity of the Heart of the South West. It is this relationship which underpins the clean and inclusive growth opportunity – and characterises its challenge. However, economic performance varies significantly and many of the natural capital assets that underpin much of the economy are in poor condition or at risk of degradation.

The Heart of the South West’s Strategic Objectives

To ensure prosperity for all places, the key strategic objectives will be to:

1. Protect and enhance the natural capital assets and facilitate a new model of natural capital-led growth.
2. Improve the productivity of the visitor economy and generate higher value tourism aligned with the Tourism Sector Deal.
3. Improve productivity of the farming, food and fishing sectors whilst maintaining and enhancing ecosystem services.
4. Ensure that all places become clean growth settlements.

The commitments outlined in this chapter will contribute to delivering these objectives.



The Importance of Place

The Heart of the South West has a diverse network of settlements, including growing cities such as Exeter and Plymouth, industrial towns such as Bridgwater and Yeovil, and market and coastal communities such as Torbay and Barnstaple. However, 38 per cent of the population live in rural towns, villages and settlements across 4,230 square miles, reflecting the rural nature of much of the area. Whilst this diversity is a strength which protects the area from economic shocks, it also poses a challenge in terms of securing agglomeration effects.

Partners in the area have responded to this challenge with the creation of three clean growth Enterprise Zones across the geography: Exeter and East Devon, Oceansgate in Plymouth, and Gravity in Somerset. Whilst these already exist, more is needed to bring them fully on line.

Oceansgate, for example needs significant funding to unlock the third phase of development. Together these provide an opportunity to create a low carbon technology cluster, as set out in the Engineering section above.

Complementing these sites are the area's international transport routes, with an international port in Plymouth and the airport in Exeter linking the region directly to global markets. Efforts to boost high value manufacturing linked to low carbon technology may benefit from the introduction of Free Trade Zones after the UK exits the European Union, and local partners are keen to explore Freeport opportunities with the Freeport Advisory Panel.

The M5/A38 corridor provides an economic spine that runs through the core of the area from Bridgwater to Plymouth, with arterial roads such as the A30/303 supporting growth and productivity to the East.

However, peripherality and distance from markets poses a challenge for significant parts of North and West Devon and Western Somerset, and the gap between coastal communities and non-coastal communities is widening. Analysis by the Social Market Foundation found that Torbay, North Devon and Torridge all fall within the bottom 20 per cent of local authorities in Britain for mean employee gross salaries.

Economic performance and wages vary significantly, as the map in Figure 18 illustrates. However, even within urban centres such as Plymouth and Exeter where there are higher than average wages, there are also some of the most deprived wards in England.

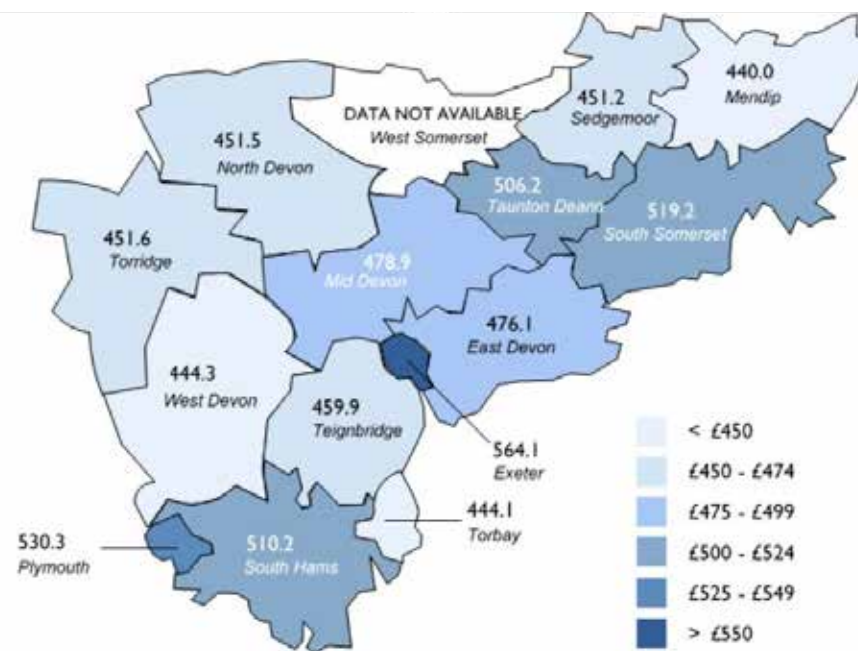


Figure 18: Gross Weekly Pay – Workplace Data (Nomis 2018)

This inequality in economic performance is strongly linked to social mobility and life chances for individuals. Whilst some parts of the Heart of the South West are amongst the best performing local authorities in England for social mobility (e.g. East Devon), others are among the worst. The Social Mobility Index found that the former district of West Somerset is the worst performing local authority area in England. As such it has been designated as one of twelve opportunity areas launched by government to raise education standards and provide every child and young person with the chance to reach their full potential.

Partners locally are developing a network of rural work hubs and enterprise centres which will provide an opportunity to stimulate enterprise in more rural and peripheral areas, thus contributing spatially to the Heart of the South West's inclusive growth ambitions.

Growth in the Heart of the South West economy is underpinned by its outstanding natural environment, providing ecosystem services that contribute value to the economy and society as illustrated below and set out in the document 'Investing in Natural Capital for the Heart of the South West, 2019' which was jointly developed by the LEP and Local Nature Partnership.

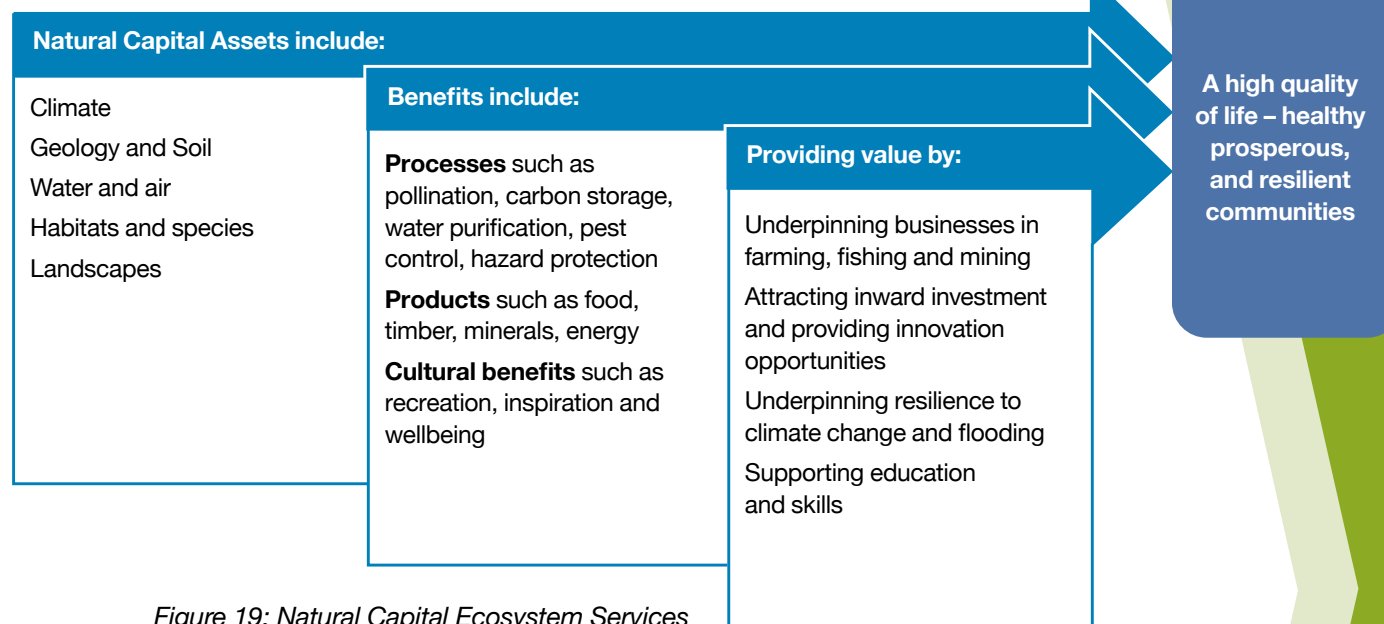


Figure 19: Natural Capital Ecosystem Services

Whilst economic and social well-being is dependent on the benefits provided by healthy natural capital, many of the natural capital assets in the Heart of the South West are in poor condition or at risk of degradation. Local partners will develop a Natural Capital Plan to protect and enhance the area's natural capital assets. This will include measures to work towards the UK's net zero carbon ambition, including offsetting emissions, as well as measures to improve environmental resilience by ensuring habitats are able to continue to provide the ecosystem services described in Figure 19. Detailed proposals will be developed in the Plan. This will include examining steps that local authorities can take to improve natural capital in the built environment, such as prioritising 'garden settlements' or different forms of settlement to promote carbon neutrality.



Figure 20: Branton Burrows, North Devon UNESCO Biosphere Reserve

Case Study: North Devon Landscape and Marine Pioneers – UNESCO Biosphere Reserve

To inform the Natural Capital Plan, four innovative pioneer projects were set up by Defra nationally, with two of these being hosted by the North Devon Biosphere – the Landscape and Marine Pioneers. These trial new approaches to manage farmland, natural habitats, watercourses, coasts and urban environments in a better way for people and nature, looking at new methods of funding environmental improvements and improving the capacity of resources.

These Pioneers are testing the use of natural capital in determining environmental priorities and agreeing actions to target them. At their heart is an innovative process for creating a shared plan that identifies where investment in natural capital is most needed, and securing new investment for those projects.

The farming, food and fishing sectors are important parts of the economy in the Heart of the South West and inextricably linked to the area's natural capital. Farmers and fishers play a vital role in managing the area's ecosystems, as well as providing high quality produce which in turn supports a wider food and drink processing sector.

The Natural Capital Plan (described above) will be developed in consultation with the farming, food and fishing sectors, ensuring these sectors are able to boost productivity as well as maintaining and enhancing ecosystem services.

The Heart of the South West's National Parks, coast path, and beautiful beaches, when combined with key cultural assets and attractions attract 63m visitors to the area each year, spending £3.4bn in the local economy. This accounts for 92,000 jobs and £1.45bn GVA and

with its strong multiplier effects to other sectors, such as food and drink, the visitor economy is important, especially in rural and coastal areas where it represents a greater share of employment. However, productivity is lower than average, providing considerable scope for improvement for both the businesses and individuals working within this sector to progress, through better jobs and higher wages. Whilst both urban and rural areas have benefited from investment in tourism development through the DCMS Discover England Fund, as well as Defra's Rural Development Programme for England, much more needs to be done. Partners in the Heart of the South West are therefore collaborating with neighbouring LEPs to develop a skills and data-led proposal for a tourism zone aligned with the Tourism Sector Deal.

This will bring together a coherent regional proposal to boost productivity by extending the season, reaching a more diverse market (including accessible tourism) and capitalising on the area's wider digital expertise. Business performance within the sector will also benefit from proposals detailed within the Business Environment and People chapters of this Local Industrial Strategy.

As well as protecting and enhancing natural capital, clean growth will require action to be taken across all types of settlement to achieve net zero carbon status. Whilst cities like Exeter are leading the way with the production of a roadmap to City Scale Energy Independence, further work is needed to develop locally appropriate and inclusive measures to reduce carbon emissions through the development of Clean Growth Action Plans for all places.

Case Study: Exeter Energy Independence

Exeter has grown rapidly and is now the fastest growing city in the UK by population, accompanied by the creation of 30,000 new jobs and the emergence of new knowledge-based industries. However, the Greater Exeter area consumes 10TWh of energy every year, enough to drive round the earth one and a half million times. This use is expected to grow, and existing energy consumption patterns cost residents and businesses over £900m each year, money that is lost to the region.

Exeter already has a world-class reputation in climate change and environmental research, but partners have an ambition to make Exeter globally recognised for a wider contribution to environmental futures and to make Greater Exeter energy independent by 2025. Work has started to implement this vision, with the production of a 'roadmap for city scale energy independence' that provides a detailed assessment of potential energy resources to aid the planning and delivery of this ambition.

Places: Next Steps

The Heart of the South West has an ambition to ensure all parts of the area can benefit from clean and inclusive growth.

This will lift economic performance and wages in those parts of the Heart of the South West economy to minimise the gap between the best and worst performing areas, levelling up within the area by removing barriers to access, and ensuring young and old have high quality opportunities to fulfil their potential.

The Heart of the South West will:

- ▶ design integrated approaches to transforming towns, learning from best practice to develop proposals for the government's Town Deals and Future High Streets Fund, with measures to improve liveability, connectivity and local accountability. The Heart of the South West will take this learning locally and apply it to other towns in the area;
- ▶ explore, with partners, the benefit of a Freeport in the Heart of the South West and develop, as appropriate, proposals for Freeport status;
- ▶ aim to accelerate delivery of the clean growth

enterprise zones within the Heart of the South West to lead the development of an integrated low carbon technology cluster;

- ▶ develop a local Natural Capital Plan to protect and enhance natural assets and facilitate a new model of economic growth, building on the high-level actions set out in the document 'Investing in Natural Capital for the Heart of the South West' (2019);
- ▶ develop, in collaboration with neighbouring LEPs, a skills and data-led proposal for a Tourism Zone. This will aim to increase the productivity of this vital bedrock sector by extending the season and diversifying the offer;
- ▶ develop clean growth action plans for different types of settlement, outlining locally appropriate and inclusive measures that will make a real contribution to achieving low/zero carbon status; and
- ▶ deliver pre-approved and explore options for new garden settlements that have strong clean growth credentials.



IMPLEMENTATION AND EVALUATION

This Local Industrial Strategy sets out the Heart of the South West's priorities and goals to accelerate productivity and inclusive growth across the LEP area.

Governance

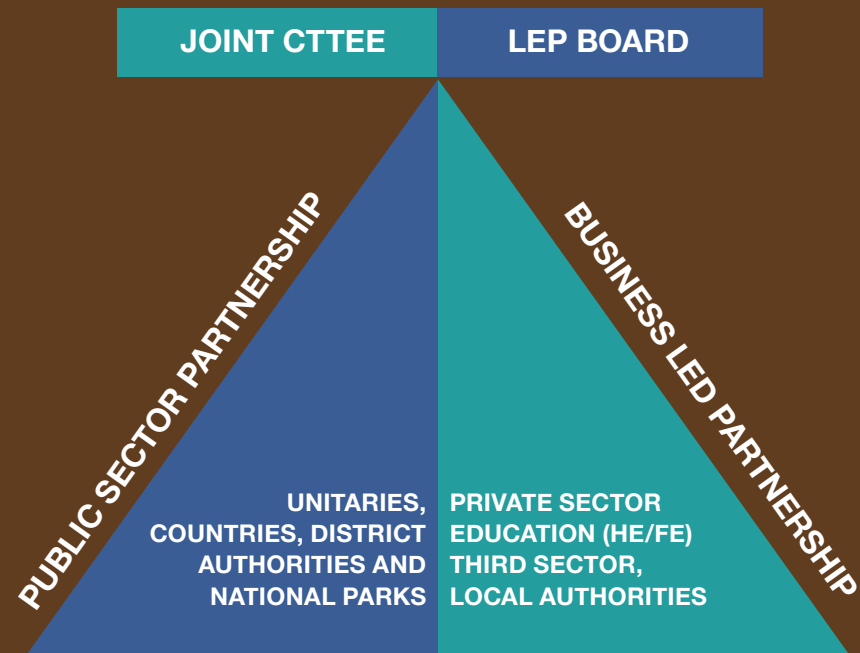
Successful implementation of the Local Industrial Strategy will require close partnership working both within the Heart of the South West area and with other partners across the country.

The Strategy is owned locally by:

- ▶ The Joint Committee, consisting of all Local Authorities and National Parks; and
- ▶ The business-led Local Enterprise Partnership.

This shared responsibility between all Local Authorities, the National Parks and the business-led LEP represents a strong commitment to the Strategy and the delivery of its priorities.

It forms a crucial part of the work to develop the economy of the Heart of the South West area. Broader priorities are set out in the jointly owned Productivity Strategy, and the LEP and Joint Committee will also work together to take these forward.



Funding and Implementation

This Local Industrial Strategy does not include any new spending commitments outside of existing budgets. Instead, it will inform the strategic use of local funding streams. It will also help the Heart of the South West decide on its approach to maximising the long-term impact of other national funding opportunities.

The actions set out here will be implemented alongside the Heart of the South West Productivity Strategy as well as existing workstreams such as the Housing Task Force and Sub-National Transport Body. The Heart of the South West will regularly review the latest evidence to continue designing the most effective approaches and interventions to seize the opportunities and challenges outlined in this Local Industrial Strategy.

This Strategy sets out long-term ambitions and will continue to evolve as the economy changes.

Successful implementation of this Strategy will require the coordinated efforts of a wide range of partners, including local government, business, wider public services, universities, and community and voluntary organisations. The Local Industrial Strategy is therefore a further route to strengthening the focus of the strong partnerships in place within the region.

Implementation will also depend on collaboration with partners outside of the immediate area. The Heart of the South West will continue to engage with partners in neighbouring LEP areas in the South West and beyond to take forward initiatives at the most appropriate scale.

Monitoring and Evaluation

This Local Industrial Strategy is built upon a clear evidence base which will be refreshed as required. The monitoring and evaluation procedures for the Local Industrial Strategy will follow those developed for the Heart of the South West's Productivity Strategy and include two components:

- ▶ Monitoring and analysing high-level economic trends relating to the key themes within the Strategy, to be undertaken annually; and
- ▶ Monitoring and evaluating the impact of interventions 'on the ground.' All projects funded as part of the Local Industrial Strategy will be subject to robust monitoring and evaluation, in accordance with individual project timelines.

Furthermore, output data from on-going project monitoring will be reported to the LEP quarterly and will feed into the LEP annual progress report. As well as evidencing progress, partners will seek to learn lessons from delivery to improve implementation and the development of future strategies.

FURTHER INFORMATION

In preparing this Local Industrial Strategy, and the broader Productivity Strategy published in 2018, 'Stepping up to the Challenge', the Heart of the South West has developed a substantial evidence base, identifying the region's current position and opportunities against the five foundations of productivity.

The full reports can be found here:

<https://heartofswlep.co.uk/understanding-our-economy/clean-inclusive-growth/>

OTHER SOURCES

<https://heartofswlep.co.uk/understanding-our-economy/productivity/>

<https://gw4.ac.uk/wp-content/uploads/2017/11/SWW-SIA-MainReport-Final.pdf>



