

Innovation for Growth

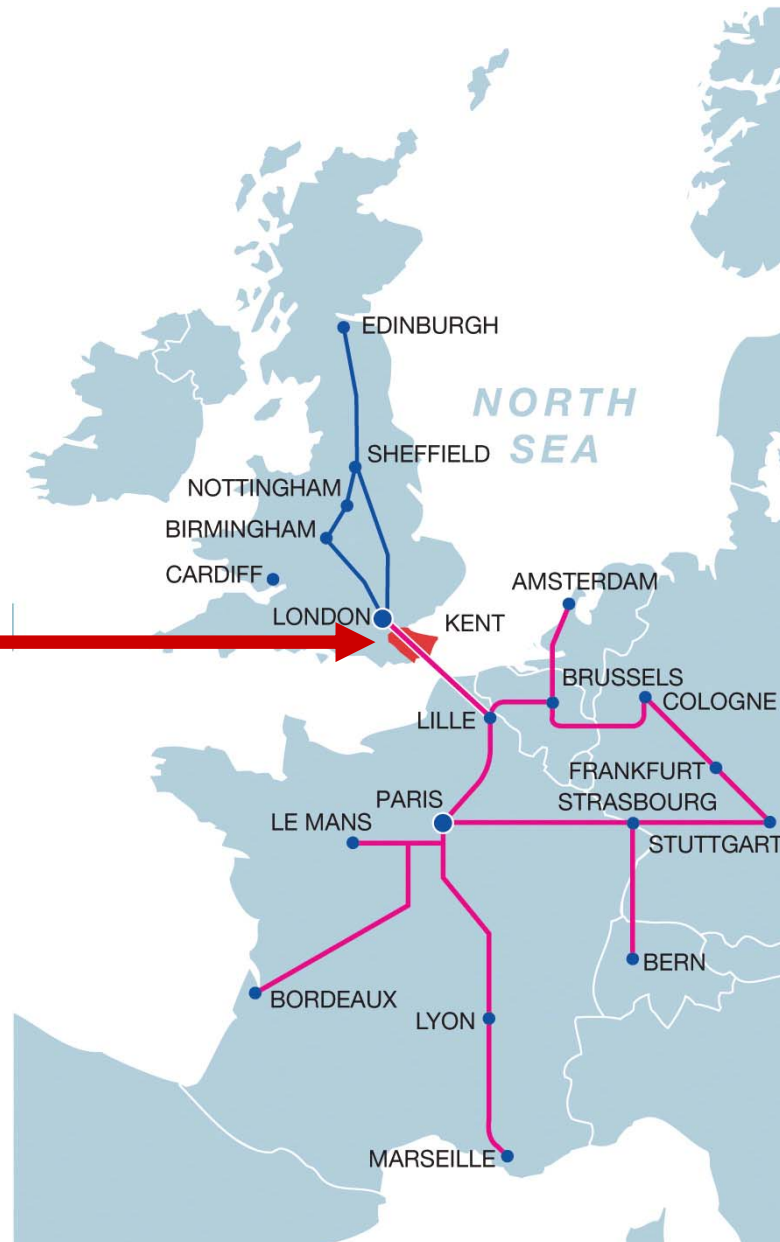
Towards a new approach to innovation in Kent

Kent's emerging approach to Smart Specialisation

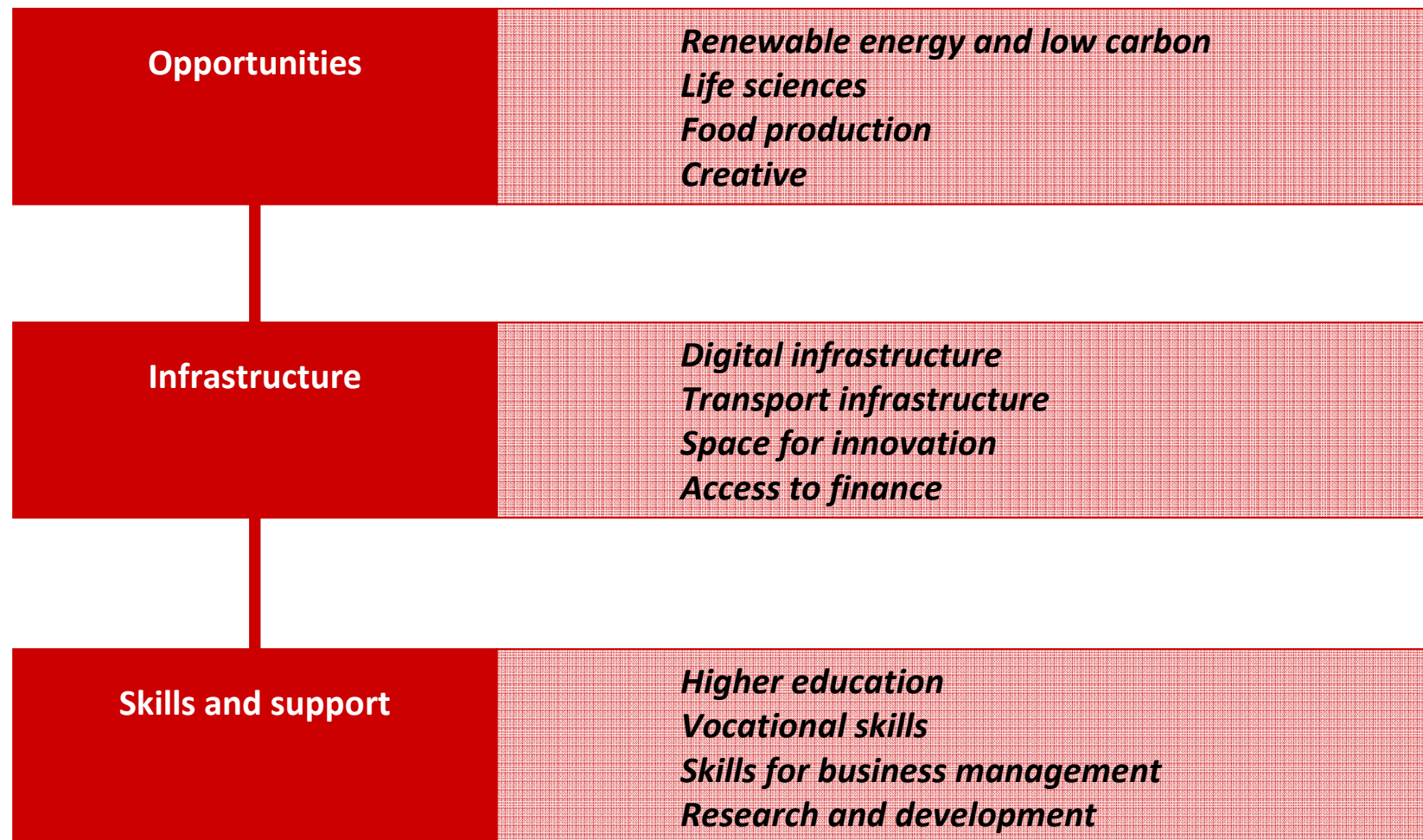
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Welcome to Kent: At the heart of Northwest Europe



Overview: Towards a new approach to innovation



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Innovation for Growth: Towards a new approach to innovation in Kent

Innovation is crucial motor of economic growth. Today's economic outlook is challenging – but we know that the places that are able to capture and exploit new ideas will drive economic recovery and be best placed to benefit from it.

The European Union recognises the importance of innovation, pledging to invest more in research, innovation and entrepreneurship. As part of this, the EU is keen to support the development of **innovation strategies** at regional level, setting out how 'smart growth' and innovation can be unlocked. These strategies will be key in determining how European Structural Funds will be used in the future.

At the same time, there is an increasing focus in Kent on how we can maximise our innovation potential. We have significant strengths in key sectors, such as life sciences, renewable energy and the land-based economy and we are well placed between London and continental Europe. But we also face challenges in the supply of technical skills and digital connectivity which we are working hard to overcome.

So there is now an opportunity to develop a coherent approach to innovation in Kent, combining the county's natural advantages and priorities with the potential for national and European investment. Ahead of the European Regional Innovation Strategy summit in January 2012, this prospectus sets out the case for a coordinated approach to innovation in Kent, and outlines how we could move forward to create a better environment for growth.

The innovation challenge

Innovation is critical to future prosperity – and there is a key role that local and regional partnerships can play in creating the best possible environment for innovation and growth. This prospectus sets out the potential for a new strategic approach to innovation for Kent.

What is innovation – and why does it matter?

Innovation means doing things better in new ways. It might be the result of years of research – or the outcome of trial and error. It might involve the creation and exploitation of a completely new product – or it might involve new applications for existing products or services.

It isn't always easy to measure innovation. But we do know that since the 1970s, economies worldwide have become much more knowledge intensive, with growth increasingly the result of the ability to generate and apply knowledge.

This means that more has been invested in skills and development. In 1970, UK firms invested just £4 in intangible investments (such as software, R&D, marketing and training) for every £10 they invested in buildings, plant and machinery. Today, the ratio is reversed – for every £10 in buildings, plant and machinery, UK firms are investing £13 in 'intangibles'. Over the same period, the proportion of knowledge workers has doubled. The drive to innovate to increase competitiveness is inexorable.

This matters locally because those places that can develop the best environments for innovation will be best placed to benefit from future growth. So if we can increase collaboration between higher education and business,

improve access to finance and premises and raise our stock of knowledge-intensive skills, the benefits will be felt throughout the economy.

Why we need a new approach

Although the shift towards increasing knowledge-based employment has taken place across the world, different places have different opportunities to take advantage of it. Not everywhere will share the same sector mix, the same initial skills endowment, the same access to markets and networks or the same anchor firms or higher education institutions. So any new approach to innovation needs to start from an understanding of local opportunities and challenges – an approach the European Union calls 'smart specialisation'. This is even more important in the current economic climate, with the associated contraction in local public sector driving a need to develop new, private sector goods and services.

So this prospectus sets out an approach for Kent based on focusing on our assets, maximising our strengths and setting out what we could do to overcome the challenges to realise our innovative potential

The innovation challenge

Kent's economy today

Kent is Britain's gateway to Europe, and Europe's gateway to Britain. The county has a pivotal position between London and the Continent, reinforced by the presence of the UK's only high speed rail link, connecting London with Brussels and Paris and the world's busiest passenger port at Dover.

Recent decades have seen the decline of some of the county's traditional extractive, mass-production and domestic tourism industries. However, this has been accompanied by rising strengths in services and higher-value manufacturing. In particular, the county has significant advantages in renewable energy, higher-value food production, life sciences and creative industries – sector strengths that will be explored in the next section of this prospectus.

Kent's population is rising rapidly, with an increase of over 9% over the past decade, ahead of the national average. In particular, the county contains nationally-significant **growth areas** at Ashford and in the Thames Gateway – both associated with high speed international rail connections and the potential for major employment expansion.

A local policy base for innovation

In 2011, the UK Government published the **Innovation and Research Strategy for Growth**. This focuses on supporting business R&D in sectors in which the UK excels, within the context of making the broader business environment

conducive to innovation and growth. This approach is followed locally in Kent's **Regeneration Framework**, which sets out the county's priorities for investment in skills and infrastructure, and focuses on the broad sectors with the greatest future growth potential.

Since the Regeneration Framework was published, a series of conversations with Kent's leading and fast-growing businesses has helped identify barriers to growth and innovation. This provides a solid base of intelligence to support a future innovation strategy, and is the starting point for the focus areas set out in this prospectus.

Kent's economy: Key indicators

	Kent	UK
GVA per head	£16,454	£21,103
Unemployment rate	3.9%	3.4%
% employees in knowledge economy	15%	18.3%
% workforce qualified to NVQ4 (degree level)	33.4%	35.8%
New businesses as % of stock	11.8%	11.3%
Business survival rates (after 3 years)	65.1%	66.1%

Unlocking Kent's innovation potential



Unlocking Kent's innovation potential

To develop a new approach to innovation in Kent, the county needs to focus on its strengths and address its challenges.

What are our opportunities and challenges?

A recent UK think tank report said that successful places are those *which have developed innovation ecosystems where networks of firms, universities, government and other institutions come together to develop new products and services*". (Work Foundation, 2011)

Taking this as a starting point, what are the key opportunities and challenges that Kent faces in expanding our innovation potential?

Opportunities

Emerging growth **sector strengths** in renewable energy and low carbon technology, life sciences, food production and creative industries

Strong links to **concentrations of innovation** – especially London (just 17 minutes from North Kent by high-speed rail)

Excellent **international connections** – 1 hour to the main London airports, and direct international rail links

Strong **university** presence, with four universities based at Canterbury and three at Medway and good industry-university links

High quality **space for R&D and innovation**, including one of Europe's largest scientific research park and extensive employment land and the UK's only horticultural R&D centre

Improving **business support networks** focused on innovation and growth

Growing **entrepreneurial culture** and good business start-up rates

Universal **superfast broadband** within the next three years

Challenges

Limited **access to finance** to support innovation – especially since the 2008 crisis

Skills shortages in key specialist and technical areas

Loss of some **anchor employers** at the core of the local innovation system – such as the significant contraction of Pfizer's presence at the Sandwich R&D facility

Dispersed **geography** – no single urban centre of innovative activity

Unlocking Kent's innovation potential

Towards a strategic focus

Based on this brief analysis of the county's key opportunities and challenges, there are **three key areas** on which an innovation strategy for Kent could focus:

1. Innovation opportunities for growth

Opportunities to support the growth potential of our key sector strengths.

2. Innovation infrastructure for growth

Maximising our advantages as Britain's gateway county and overcoming the innovation challenges presented by limited digital connectivity

3. Innovation skills for growth

Making the most of our research and higher education potential and addressing the technical skills challenges that hold back innovation.

Theme 1: Innovation opportunities for growth

There are opportunities for innovation in *every* sector of the economy. However, a 'smart specialisation' approach is about identifying where Kent has a comparative advantage: where the prospects for growth are unique and where the long term benefits for the Kent economy are greatest.

Why focus on sectors?

Although innovation can happen in any sector, some sectors are more innovation intensive – with greater concentrations of knowledge-intensive employment – than others, and the added value generated by an expansion of knowledge-intensive activity can spill over into the wider local economy.

Our focus is on those areas of the economy which have high potential for increasing knowledge-intensive employment and in which Kent has distinct advantages on which it can capitalise.

Although further work needs to be done to determine the specific sectoral focus of a future Kent strategy, our initial analysis points to **four key sector groups** in which Kent has clear opportunities for growth.

Renewables and low carbon goods and services

The global market for low carbon goods and services is expanding rapidly, and strong growth within the sector is forecast over the next few years. Already, the UK is the world's sixth largest producer of low carbon goods and services, and the sector employs around 17,500 people in Kent.

Particular opportunities in Kent include:

Unlocking Kent's innovation potential

Offshore renewable energy: New offshore wind farms within 200 miles of the Kent coast will offer over 13,000MW of generating capacity, putting Kent at the heart of one of Europe's most important locations for offshore renewables.

Already, the county is a major centre for operations and maintenance. However, with proposals by Vestas to develop a major high-value manufacturing facility on the North Kent coast, there is an opportunity to develop the local supply chain to support the development of the world's largest wind turbines – with huge R&D input.

Energy efficiency: As the costs of carbon rise, the market for new technologies and techniques to reduce consumption is growing. Kent is well placed to take advantage of this in two ways:

Firstly, with some of the UK's most ambitious plans for urban development in the Thames Gateway and at Ashford, Kent has great potential for piloting innovation **in new building techniques** and less carbon-intensive forms of service delivery. SusCon, a new centre of excellence in building technologies, has already opened at Dartford, demonstrating new approaches and providing skills training to support the delivery of over 50,000 new homes in North Kent over the next twenty years.

Secondly, good transport connections, easy access to the high-value South East market and a strong presence in the

wider environmental sector, Kent is an important location for resource efficient consultancy and R&D.

Case study: Ecologia

Based at Kent Science Park near Sittingbourne in North Kent, Ecologia is a rapidly growing environmental consultancy and contractor. The company provides high quality site investigation and remediation through an in-house team of scientists, engineers, chemists and geologists.



Demonstrating the potential to grow through innovative solutions to rising environmental costs, Ecologia has expanded from its Kent base and now operates throughout the UK as well as in Italy and Ireland.

www.ecologia-environmental.com

By providing a supportive skills and planning environment for the renewables industry and by raising demand for low carbon goods and services, Kent can build on its real potential in this growing sector

Unlocking Kent's innovation potential



Product of innovation: Wind turbine manufacturing

Life sciences

Kent has had a strength in pharmaceuticals and life sciences for many years. But with massive changes in the global structure of the industry, the county is having to adapt to an innovation-intensive future.

In recent years, two of Kent's major pharmaceuticals manufacturing plants have closed, and in 2011, Pfizer announced that it was exiting its world-class R&D facility at Sandwich.

However, Kent still has a huge advantage in the continued presence of a highly-skilled, high-value scientific workforce. At Sandwich, over 700 jobs are being retained in R&D in diverse range of R&D companies – with individual entrepreneurs driving innovation in place of the old 'big pharma' model. The site has already been designated an **Enterprise Zone** with additional freedoms and tax incentives to support business growth

This reflects the transition experienced in other places with major pharmaceutical sectors, such as Michigan and New Jersey, and demonstrates Kent's continuing ability to retain skilled staff and grow new companies.

With an opportunity to build on the legacy of pharmaceutical investment and grow new business and ideas, Kent County Council is already investing in grants to business and early-stage support to promote and develop the sector.

Unlocking Kent's innovation potential

Food production

Kent's food sector is worth around £2.6 billion, and the county contains some of the UK's most productive horticultural industry.

Innovation is central to the sector's success, with an increasing need to develop new solutions to water scarcity and competition and demand driving a search for new crop varieties.



Kent already has a centre of excellence in crop research at East Malling Research Centre – the only one of its type in the UK - which has plans to expand its activities, and a number of businesses are at the forefront of raising productivity. The county also benefits from strong networks within the land-based sector, linking research and agricultural production.

Creative industry

The creative industries are inherently innovative and new channels of communication have led to the emergence of products and markets that a few years ago just didn't exist.

Creative and media industries tend to cluster in metropolitan areas. But Kent has a different offer with potential to grow. Businesses in the sector have told us that what they value about Kent is its proximity to the London airports and international rail routes combined with its high quality natural environment – space to develop new ideas, combined with access to global networks.

Employment in the creative industries has doubled in Kent in the past decade, with over 35% of creative employment – and the fastest rise – in the computer games and software design sub-sector.

Kent also benefits from the University of the Creative Arts, with three campuses around the county, supporting access to a skilled future workforce.

An innovative public sector

The public sector can also drive innovation. Kent has a long history of innovation in new service provision to drive new markets and in engaging with transnational programmes to unlock growth

Unlocking Kent's innovation potential

Theme 2: Innovation infrastructure for growth

As well as focusing on key innovative sector groups, an innovation strategy for Kent also needs to concentrate on the infrastructure that the county needs to support their growth.

Communications infrastructure

Positively, Kent is unique in the UK in having an international rail connection, and easy access to continental Europe is one of the county's defining features. Transport infrastructure has also improved in recent years, with major road improvements and the introduction of high-speed rail services to London. All this is important in increasing the county's attractiveness to high-value business.

However, significant shortfalls remain in our **digital infrastructure** which present a brake on Kent's innovative potential. Much of rural Kent lacks fast broadband access – a particular constraint on the county's key land-based and creative sectors and on the often highly creative and innovative businesses based in rural areas.

With UK Government support, Kent is about to embark on a £43 million programme to provide superfast broadband to those parts of the county to which the market will not deliver – and ensuring the success of this will be a cornerstone of our innovation strategy.

Space for innovation

Innovation can take place anywhere – but evidence shows that where there is greater potential for collaboration, there are more opportunities to exploit new ideas.

As a diverse county, with many medium-sized towns and cities and a large rural area but no single metropolitan centre, it is even more important that our approach to innovation incorporates physical space for collaboration.

Innovation centres already exist at Medway, Dartford and Canterbury, with a specialist facility for creative businesses at Chatham. However, Kent County Council has plans to expand the range of facilities across the county..

Access to finance

Following the credit crunch of 2008, access to finance to support innovation remains a critical issue. Public sector financial support can never substitute for the commercial market, but through the **Expansion East Kent** scheme, R&D and investment aid will help unlock bank lending and venture capital investment over the coming years.

Unlocking Kent's innovation potential

Theme 3: Innovation skills for growth

Kent needs to support an innovative workforce – through university and technical skills and in business management

Higher education

With four universities concentrated at Canterbury and Medway, Kent's higher education provision is a strength. The role of Kent's universities in commercialising research and developing spin-outs is also important – at the University of Kent for example, support is offered in accommodating new businesses and brokering commercial opportunities. However, more could be done to link university support for innovation across the county and integrate it with financial and other support provided by national Government, such as that offered via the Technology Strategy Board.

Vocational skills

The UK has historically tended to lag behind many competitors in the quality and commercial relevance of vocational skills provision. Research suggests that this hampers innovation: fewer people with high-level technical skills can drive forward process innovations, and weaknesses in skills for manufacturing, engineering and science have driven the exploitation of many British inventions elsewhere.

If we are to make the most of our potential in the key sector areas highlighted earlier, we need to improve our technical skill levels. Industry has raised this locally with, for example



the creative sector demanding higher-level technical computer programming skills. Building on excellent existing practice in delivering a much better technical offer for the offshore wind sector, a key aspect of our innovation strategy will be supporting the workforce needed to deliver tomorrow's new ideas.

Skills for business

Not all good ideas become good products – but bringing knowledge to the market demands strong business skills. In Kent, investment in the High Growth Kent team is providing business mentoring and coaching for firms with the potential to expand, including new businesses and established companies. Integrating this with access to finance (as highlighted on the previous page) and national and sector-specific support products could be a key focus of a Kent innovation strategy.

Moving forward

Towards a smart specialisation strategy

This document sets out an overview of a potential new approach to innovation in Kent, consistent with the county's economic development priorities and the concept of 'smart specialisation' set out in the European Union's Regional Innovation Strategy guidance.

Over the coming months, Kent County Council will be exploring the potential for developing this approach with:

Businesses in Kent via the Kent Chambers of Commerce, Kent Business Advisory Board (a panel of leading businesses from across the county established to inform economic strategy) and local business consortia.

Business support agencies, in particular the High Growth Kent service funded by Kent County Council to support businesses with significant potential to grow.

Sector-specific business development groups where these are relevant to our emerging priority sectors. In particular, we will engage with Kent Rural Board (the strategic body for the land-based sector), the Kent Offshore Renewables Working Group, Creative Kent and the life sciences cluster at Discovery Park and Kent Science Park.

Higher education, building on the strengths of the county's four universities

Government at national and local level – working with the twelve Kent District councils within the county, and linking with the Department for Business, Innovation and Skills and Department for the Environment, Food and Rural Affairs at national level.

In taking this work forward, we will examine the potential for a new approach to innovation to unlock public and private investment and build on the focused approach we are developing.

More information

For more information on Kent's approach to innovation and our links with the European RIS3 process, contact:

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