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To:	Regeneration and Economic Development Policy Overview and Scrutiny Committee - 19th January 2010
Subject:	Digital Strategy
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Summary

This report provides an update to Members on the Digital Strategy

1. Executive Summary

1.1 The governments report on Digital Britain was published in summer 2009. The report was aimed at bringing both a focus and stimulus to this sector. By creating an effective partnership for the Digital Economy; it is hoped to drive the upgrading of the digital network, significantly enhance our national competitive position in these critical markets, secure competition for choice and quality in content, connect with the interests of the rising, digital generation and improve access, affordability and inclusion for all.

1.2 Based on the experience of the role out of current generation infrastructure the concern is that while the *Digital Britain* report proposes a number of actions to accelerate the roll out of Next Generation Access Networks, it appears to under-estimate the challenges faced by non metropolitan areas. The cost of deployment is significantly greater in rural areas, and was highlighted by a report for the Broadband Stakeholders' Group which stated:
"*However, the costs of deploying in more sparsely populated areas will be significantly higher, making the prospect of commercial deployment to the last third of UK households much more difficult*."

1.3 The report also produced information showing that the cost per household for fibre to the cabinet deployment was significantly higher in rural compared to equivalent sized urban areas and for the small rural communities in Kent, where most such communities have less than 1,000 properties, the cost per household was nearly three times the national average.

1.4 These concerns raised in response to the interim report were acknowledged by the author Lord Carter. The absence of any

immediate solutions to address these concerns within the final report highlights the requirement for the development of regional strategies to be developed in support of the national vision. The purpose of this report is to reference the work undertaken on the development of a Digital Strategy for Kent & Medway.

2. Why does it Matter?

2.1 Background

2.1.1 The very invasiveness of digital technology and the way it impacts on all aspects of day to day activity has been increasingly apparent over the past five years. Even with the relatively low broadband speeds achieved across the UK, the availability of even modest levels of digital infrastructure have seen dramatic changes in how individuals communicate with each other and how they live.

2.2 Social media

2.2.1 The origins of Facebook and similar sites mirror the availability of broadband infrastructure. The first version was developed as a college project for use on campus within a closed college network. This was within the same time frame as the first telephone exchange in Kent was being digitally enabled.

- Facebook now has 300m users (in population terms this equates to 4th largest country)
- Facebook accounts for 6% of all Internet web-site visits in the UK (Second place to Google which has 8.6%)

2.3 Internet and Mobile Technologies

2.3.1 Arguably it is the breathtaking growth of cellular technology that is doing more to change society, particularly in developing countries where a lack of effective communications infrastructure has traditionally been one of the biggest obstacles to economic growth.

- A survey, by the International Telecommunications Union (ITU), an agency of the UN, found that nearly a quarter of the world's 6.7 billion people use the internet.
- By the end of 2008 there were an estimated 4.1 billion mobile subscriptions. Including a significant proportion in regions without fixed line internet access
- Total number of text messages (SMS) sent in UK during 2008 = 78.9 billion (Average number of text messages sent per person: 1,213 based on 65 million active UK mobile devices) – source Mobile Data Association
- The convergence of internet and cellular technologies will lead to another notable increase in internet use.

2.4 Online Retail

2.4.1 Survey responses and consumer profiling confirm that by the end of 2009 over 50% of the UK population are using online shopping on a regular basis, alongside more traditional outlets, a total that Forrester Consulting previously predicted would not be reached until 2011.

2.4.2 In December 2009 the accountancy firm, Deloitte assessed that the UK online retail market will hit £25bn in 2010, a massive increase of £16bn in just 5 years (2005 UK online retail market £9bn). There are a number of other interesting findings that can be taken from the report. Firstly Deloitte state that nearly 7 out of 10 people will have purchased some of their Christmas gifts online over Christmas. They also found that 46% of people now buy more products online compared to last year. The report goes on to suggest that retailers need to offer a more flexible service, as 61% said they wanted options such as in-store collection when purchasing online.

- Department stores and supermarkets have been the biggest beneficiaries of the shift towards online shopping, Marks and Spencer, John Lewis, Tescos and Littlewoods all achieving significant market share alongside the internet only retailers such as Amazon and Play.
- Figures from Experian show higher percentage take up of online services in non urban areas. The further you are from major shopping outlets, the more appealing the additional choices offered by online retail become
- This channel opens up the SME market to pan Europe competition with the majority of sites in continental Europe hosting English language pages and shipping services to the UK.

2.5 Advertising

2.5.1 The global software market is estimated to be in the region of $308b, considerably less than the value of global advertising. This consideration alongside the success of social media sites has driven a trend towards ‘software as a service’. Major suppliers such as Google now offer services such as email, electronic file storage and other back office functions for zero or minimum cost, relying on revenue from advertising to drive profits. References to ‘c loud computing‘ are also based on this concept which has the potential to change the cost base of large scale computing resource and deliver capacity on demand to any individual or business.

- Worldwide advertising revenue is $650b
- $123b (21.9%) is now spent on online advertising

2.6 Communication and Marketing

2.6.1 There are numerous examples of how the communication power of the internet can influence behaviours in a way unachievable through other channels.

- The number1 music single in the UK at Christmas was determined by an online campaign which succeeded in preventing the X Factor winner taking top spot despite the extent of the traditional media support for this participant.
- While the film Bruno was the top grossing movie in the United States on its opening weekend, receipts fell away very sharply from $14.4m (£8.95m) on the Friday to $8.8m (£5.5m) on the Saturday. The reason - Adverse comment on Twitter.
- A pantomime actor playing Prince Charming in Cinderella at Lowestoft, Suffolk has been booed after making derogatory remarks about the seaside resort on Twitter.

2.7 Regeneration

2.7.1 These examples illustrate the pace of change and the capacity not just to embrace digital technologies but the parallel development of new forms of communities and expanding opportunities for existing groups. The same considerations are relevant to business where there is both the opportunity to respond in the provision of new services and products, but also in meeting the market expectations by being digitally enabled.

2.7.2 Emergence from recession arising from a major collapse or financial crisis has typically been characterised by explosive growth and structural change as the unrealised potential of new technologies becomes fully exploited. The rapid introduction of new 'knowledge' services and facilities based on the digital technology is becoming apparent but is far from fully realised. Post recession the probability is that those economies having invested in digital infrastructure will recover and grow fastest.

3. <u>What are our objectives?</u>

3.1 The relevance of digital information and communication is appropriately identified as the cornerstone of the future wealth, prosperity and sustainability of communities and citizens throughout the UK. Government must not only be effective in discharging its responsibilities as the guardian of national resources but also ensure that:

- Framework and incentives are in place to promote development of core infrastructure

- Safeguards are instigated to ensure availability as an equitable universal service to all parts of the community
- All public policy interests reference the knowledge economy and that this in turn is reflected in digital policy
- Implementation strategies assure alignment and delivery from policy, through infrastructure development to community outcomes

4. Priorities for Kent

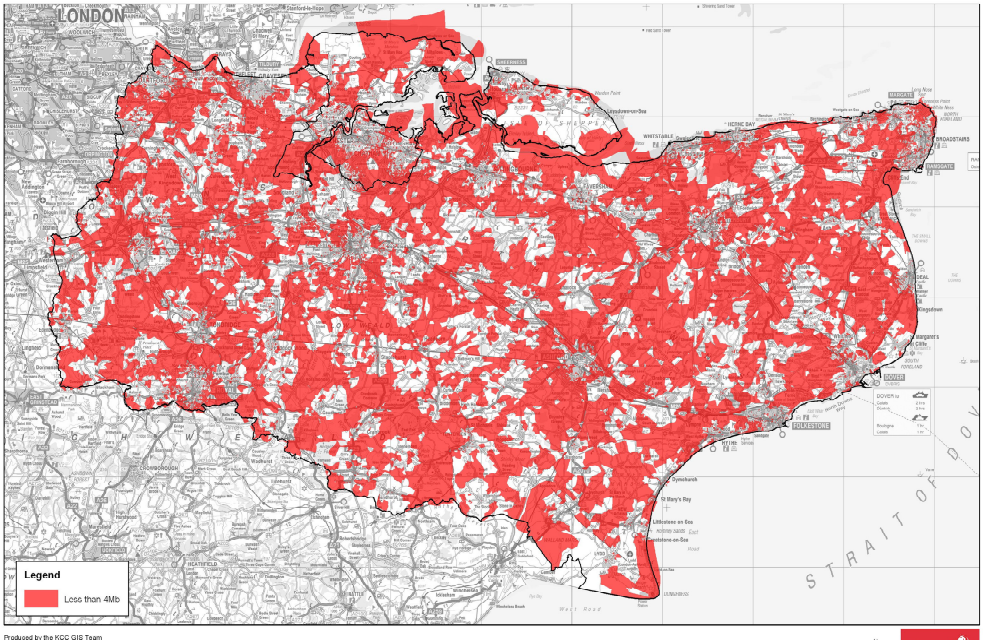
4.1 Foremost priority must be to ensure that appropriate attention is given to the development of the core infrastructure without which the other objectives are meaningless.

5. Status Report

5.1 The challenge is identified in the following schematic which highlights the existing lack of provision of broadband capacity measured against the council's assessment of a viable minimum of 4mb. This target needs to be seen in the context of South Korea where every property already enjoys 100mb access with many developed countries planning investment to achieve similar.

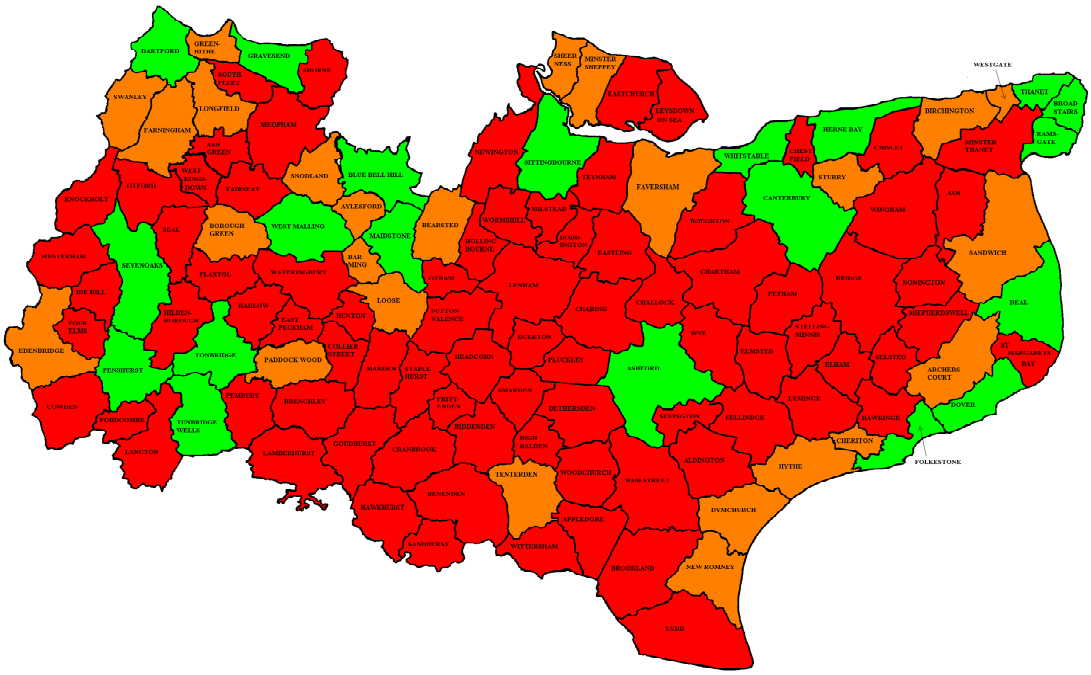
Digital Britain
The Challenge In Kent

- 39% (c280,000) properties cannot get 4Mb



5.2 This problem is exacerbated by planning for next generation broadband which clearly targets areas of maximum commercial return for the telecommunications providers. Investment through this route will address the majority of metropolitan and larger urban areas but for Kent leave 60% of properties with inadequate provision. It should be noted that this issue is not confined to what are traditionally regarded as rural areas as provision is dictated by of distance and which telephone exchange serves the property.

Next Generation Broadband
The Map Of Kent



5.3 A current area of concern for example is Kings Hill and the West Malling region where growth has not been supported by existing inadequate telecommunications infrastructure. While this will be addressed by planned rollout of Next Generation broadband investment, business will be unlikely to benefit from this before 2012 if the market is left to its own devices.

6. Cost Assessment

6.1 The shortfall in investment to deliver fibre (effectively unlimited bandwidth) to all properties in Kent is in the order of £1.1 billion. This is the estimate for addressing those properties across Kent where it is considered that the market will either respond too slowly or not at all.

- 59% properties (c362,000) covered by 19 large exchanges
  - We think that the market will address these
- 22% properties (c138,000) covered by 23 exchanges
  - Estimated costs £105 million for interim solution (fibre to street cabinets), £452 million for fibre to premises
  - Market failure likely (defined as not addressed within 5 years)

- 19% properties (c118,500) covered by 83 small exchanges
  - Estimated costs £106 million / £670 million
  - Market failure almost certain

7 Digital Strategy

7.1 The Digital Britain report proposes limited intervention for public funded investment in broadband infrastructure. The income raised nationally will be in the order of £150M per annum. With investment shortfall for Kent alone of over £1 billion, local initiative/intervention will be required if any significant progress is to be made within an acceptable time scale.

7.2 The digital strategy being developed as part of the regeneration framework comprises three primary elements:

- Encourage and facilitate private sector investment
  - This element of the action plan recognises the need to encourage investment in infrastructure based on the potential for commercial return. With the bulk of Kent's economy driven by SME's, the opportunities being considered are the development of services that could be consumed by these businesses as a means of reducing their overheads, at the same time as establishing a new market for the potential providers of such services.
  - Another approach considers Kent's commuter population. As environmental and considerations become increasingly sophisticated, London based institutions will become increasingly concerned with avoiding the overheads associated with city based accommodation, staff productivity and carbon trading. With transport estimated as accounting for 29% of carbon emissions, methods of enabling employees to work from home or near home locations are likely to increase in relevance and attract investment.
  - Engagement to achieve individual sign up for software services is becoming an increasingly competitive market. As avoiding digital exclusion across Kent's communities is another of our public service targets there is an opportunity in progressing this agenda to influence private sector investemt for mutual benefit.
- Reduce investment cost

- The most significant element of cost associated with delivery of next generation broadband is the dig cost of laying fibre. There are an increasing number of companies interested in developing innovative solutions to overcome the high capital cost of traditional methods. Wireless and satellite are possibilities for the future, although currently utilising alternative utilities infrastructure offers the most promising options E.g. data over power of using existing sewage networks as fibre conduit.

- There is constant refresh and renewal of all elements of Kent's infrastructure. Outside of growth areas much of the planning for this investment is ad hoc and uncoordinated. A more comprehensive and inclusive approach across government and private sector has the potential to reduce the cost of laying down new infrastructure if more closely linked to existing unrelated works.

- Make better use of public infrastructure

  - The Kent Public Service Network (KPSN) delivers high quality/capacity bandwidth to 1200 public sector sites across Kent. The use of this purchasing power can be harnessed to influence the investment behaviour of telecommunications suppliers. The more extensive the use of this common solution across public agencies the greater the benefit to be derived by local communities and businesses.

  - Direct use of the KPSN in delivery of wider public broadband access where market failure can be identified.

  - Direct intervention through grant funding to resolve specific 'not spot' low bandwidth locations across Kent. Application of the proposal in both this and the previous bullet point has to be within the provisions of State Aide Regulation.

  - Kent's topology and the broadband challenges this gives rise to are not unique. By working in cooperation with other shire counties our joint lobbying and influence is increased.

7.3 None of these strategies are mutually exclusive and it is essential to recognise the relationships and interdependencies. E.g. Identifying an opportunity for reduced investment cost could be key to making the business case for development of a new service. Making use of reinvestment in associated utilities might only be viable where interim

use could be made to a point of presence on the public service network in the short term.

8 Progress to date

8.1 The strategies outlined in this report expand and build on programmes of work on going since 2004. Publication of the regeneration framework has been an opportunity to review this activity and integrate it within the overarching framework.

8.2 Pro active engagement by the council has been extensive and continues to be essential if significant parts of the region are not to be bypassed by the knowledge economy. For example, although 19 Kent exchanges have now been enabled to provide enhanced broadband services over copper technology (referred to as ADSL 2+), the telecommunications industry has targeted this investment at the larger population clusters which invariably already enjoy the best provision, while elsewhere investment is minimal other than where KCC has intervened.

8.3 The connecting Kent capital programme has reduced the number of Kent households without access to broadband from 37,958 to 14,669 since 2007. The council continues to work with local communities to address these 'Not Spots' by identifying alternative solutions through tender and then providing parish councils with grant funding to support implementation. This initiative continues to attract extensive interest and support. When included on the agenda for meetings of the local parish council attendance is typically over 100 participants. An additional benefit has been that all parishes to have been through this process to date have awarded contract to Kent based companies.

8.4 The opportunity to capitalise on the procurement capacity of the council has been extensively exploited. The design and implementation of Kent Public Service Network has resulted in a 55% increase in availability of business broadband in Kent with the number of exchanges delivering this service having increased from 31 to 53.

8.5 Increasing the number of public sector sites making use of KPSN will have a direct impact on the number of localities where there would be a benefit in our service supplier establishing a presence in the local telephone exchange, introducing the opportunity to improve business/community services at the same time. Discussions are underway with the cabinet office, DWP, Kent Fire & Rescue and Kent's 3 Primary Care Trusts to explore opportunities to deliver this outcome.

8.6 Availability of infrastructure is not the only consideration that needs to be addressed. Mapping of social deprivation shows a strong correlation with that of digital exclusion. These are typically most prominent in urban areas which are known to enjoy reasonable broadband capacity. Through public service network links and terminals in schools, libraries, adult education centres and gateways it is estimated that over 30% of Kent's population, across all social groups, enjoy internet access through public service provision.

8.7 Work is being progressed with a number of private sector companies who have expressed interest in the strategies outlined and have committed resource to helping develop proposals to deliver the stated outcomes. This work is being undertaken with the regeneration team to ensure alignment with priority areas for growth in Kent.

8.8 Joint discussions are held on a regular basis with East Sussex CC and Hampshire CC. A separate dialogue is also taking place with Surrey. Such discussions are useful in both sharing best practice but also in lobbying for beneficial outcomes with both industry and central government. On 7th January, Peter Mandelson announced that rural communities and hard to reach areas that do not have access to next generation broadband will benefit from a share of £1billion of Government investment from the Next Generation Fund. Preparation of a response from stakeholders across Kent is already underway.

9 Recommendation

Members are asked to note and comment on the content of this report.

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