

Realising the Benefits of Next Generation Access
for Northamptonshire

Superfast Northamptonshire:

Next Generation Strategy



Extending access to superfast broadband - A Consultation

Contents

EXECUTIVE SUMMARY	3
CHAPTER 1: GROWTH POTENTIAL IN NORTHAMPTONSHIRE	16
Why Invest in Northamptonshire?	16
CHAPTER 2: NORTHAMPTONSHIRE'S AMBITION	18
Vision and Targets	18
Purpose of the Strategy	19
CHAPTER 3: UK ENVIRONMENT FOR INTERVENTION IN BROADBAND	22
Incentivised Investment in the UK	22
Why Intervene in the Broadband Market?	23
CHAPTER 4: STEPS TOWARDS FULL COVERAGE AND DEFINING THE INTERVENTION AREA	25
Key Elements of Deployment up to 2017	25
Commercial Deployment	25
Investment Partnership with BT	26
Securing Deployment Solutions for the Final Premises	27
Defining the Intervention Area	27
CHAPTER 5: COMMISSIONING APPROACH FOR THE FINAL DEPLOYMENT AREA	30
Overview of Northamptonshire Approach	30
Key Principles	31
Technologies	31
Understanding the Final Deployment Area	34
Opportunities	36
Investment Enablers and Resources	36
Portfolio of Investment Models	36
Stakeholder Inspired Investment Models	38
Funding	38
Securing Funding and Potential Sources	38
Intelligent Commissioning	40
STAGE 1: NGA Prospectus	40
STAGE 2: Commissioning	41
SWOT Analysis of the Approach	43
CHAPTER 6: GOVERNANCE AND CONTROLS	44
Governance	44
Controls	45
CHAPTER 7: PROGRAMME AND TIMESCALES	46
CHAPTER 8: WE WANT TO HEAR FROM YOU	48
How to Respond to our Consultation	48
Questions to Local Partners and Stakeholders	49

LIST OF FIGURES:

FIGURE 1	SUPERFAST NORTHAMPTONSHIRE NEXT GENERATION STRATEGY OVERVIEW	21
FIGURE 2	GROSS DIRECT ADDITIONAL GVA	24
FIGURE 3	BDUK FRAMEWORK SUMMARY	26
FIGURE 4	SUPERFAST NORTHAMPTONSHIRE EXPECTED COMMERCIAL DEPLOYMENT AND INTERVENTION AREA MAP	28
FIGURE 5	DEPLOYING SUPERFAST BROADBAND IN NORTHAMPTONSHIRE	29
FIGURE 6	SUPERFAST NORTHAMPTONSHIRE EXPECTED DEPLOYMENT PROGRAMME AND COVERAGE MAP	35
FIGURE 7	NORTHAMPTONSHIRE COMMISSIONING APPROACH FOR THE FINAL DEPLOYMENT AREA	42
FIGURE 8	SUPERFAST NORTHAMPTONSHIRE PROJECT GOVERNANCE	44
FIGURE 9	KEY COMPONENTS OF THE NEXT GENERATION STRATEGY FOR THE FINAL DEPLOYMENT AREA	51

Executive Summary: Introduction

The County Council is setting out its proposals to help secure access to superfast broadband for all businesses and homes in Northamptonshire by 2017.

This Executive Summary outlines the scope of the Next Generation Strategy including the Vision for Northamptonshire, the purpose of the Strategy, and our ambition and delivery targets. Importantly, it sets out our proposed approach to secure coverage for those premises yet to secure a committed solution – this is the ‘final deployment area’. Access to superfast broadband is a key theme of Northamptonshire’s 10 Point Plan for growth.

A **Prospectus** will be launched in the autumn of 2013 to attract market investment and help us to achieve our goals. It will promote competition, innovation and new investment to extend access to fibre based broadband to all.

We would like your views on our proposals to help us shape this Prospectus. Information on how to respond is provided in Chapter 8.



Executive Summary:

Why Invest in Northamptonshire?

Northamptonshire is an area with bold ambitions for growth.

The approach is outlined in a robust set of Plans: including Northamptonshire's **10 Point Plan** (March 2013) and the **Northamptonshire Arc** Prosperity Plan (October 2011).

Our goal is for Northamptonshire to continue building on the success stories of the past few years and place itself firmly on the national and international business map. We want to be the place of choice for ambitious small and medium-sized businesses looking to grow in an innovative, supportive and enterprising environment, for multinational companies looking to build their businesses in the UK, and for people wanting to settle and contribute to national economic prosperity.

We want to ensure that the residents of Northamptonshire are given every opportunity to contribute to and benefit from economic prosperity. Access to leading-edge digital connectivity is crucial to this aim.



Northamptonshire
'Most Enterprising Place in Britain'



Winner of two top awards in the Enterprising Britain
Competition 2012

Most Enterprising Place in Britain
Promoting Export



Northamptonshire
County Council

Executive Summary:

Vision and Targets



Northamptonshire has a clear Vision for the county to be at the leading edge of the global digital economy.

Providing access to superfast broadband for all businesses and homes by 2017 is the ultimate ambition and ensuring that benefits are maximised. The Northamptonshire Next Generation Strategy provides the framework to achieve this. It is being delivered through the 'superfast Northamptonshire' Project overseen by a cross-sector Partnership Board and led by the County Council.

The Strategy has a clear set of targets which aim to deliver:

- fibre based Next Generation Access (NGA) to all premises across the county by 2017, enabling the provision of superfast broadband services capable of providing access line speeds of 30Mbps or more;

Plus interim targets for:

- at least nine out of ten premises to have access to superfast broadband by 2015; and
- all remaining premises in the county to have minimum access line speeds of 2Mbps by 2015.

The County Council encourages investment in other technologies (such as 4G) where these can help deliver better connectivity and choice and meet our speed and coverage targets.

Executive Summary:

Steps towards full NGA Coverage

A number of elements will contribute towards the achievement of our 2017 target.

These include:

- The existing commercial footprint of network suppliers currently enabling access to superfast broadband and their future plans to extend that deployment commercially in the period up to 2015. This commercial deployment will provide almost three quarters of premises in the county with access to superfast broadband by 2015.
- The County Council's co-investment partnership with BT, the contract for which was signed in March 2013. This was procured under the Government's Broadband Delivery UK (BDUK) Infrastructure Framework. This will extend coverage up to around 90% of premises by 2015 (when combined with commercial deployment); and
- Commissioning NGA solutions to provide access to superfast broadband for those premises in the final deployment area. These are mostly associated with the rural areas of the county but also include parts of some town centres and business parks. This is now a key priority for the County Council and the Partnership Board.



Executive Summary:

Purpose of the Strategy

The Next Generation Strategy provides a framework to guide activity in Northamptonshire towards success.

These are in terms of securing the physical deployment of broadband infrastructure to meet our demanding NGA targets, but also to add value to the outcomes and impacts enabled by access to superfast broadband and the technology and applications this supports.

Maximising benefits for business will be a priority in this respect as NGA has the capability to transform business growth, efficiency and productivity.

The Strategy has two strands:

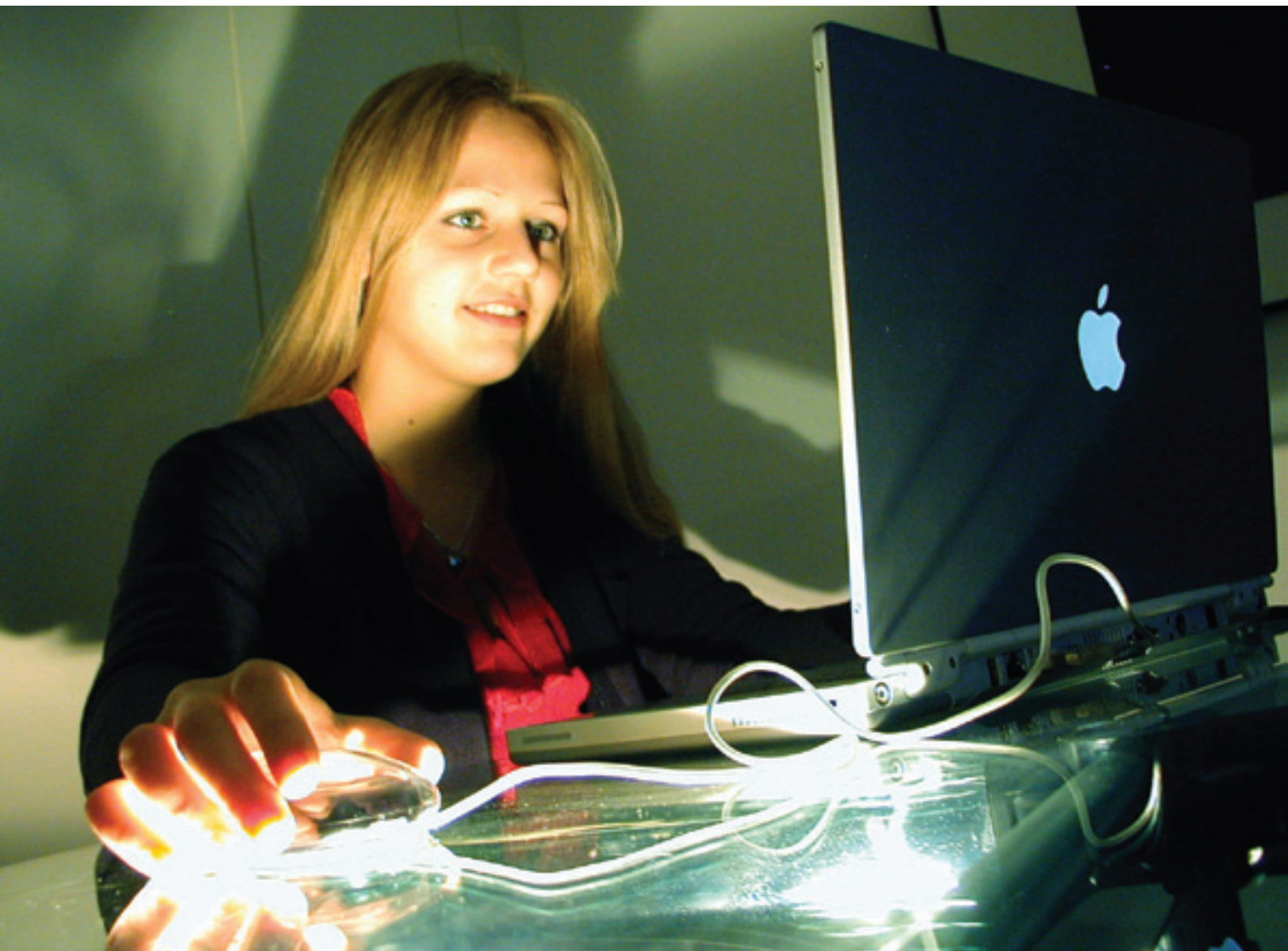
- **Next Generation Infrastructure** - commissioning physical NGA i.e. optical fibre based network capable of supporting access line speeds of at least 30Mbps; and
- **Maximising Benefits** - adding value to maximise the outcomes and impacts enabled through NGA deployment (including demand stimulation, optimising the application of technology (particularly for business), and aligning with other NGA enabled initiatives such as benefits for public sector service provision e.g. telehealth and virtual learning).

This consultation focuses on infrastructure and in particular the proposed approach to extend NGA to the final premises in the county for which provision has yet to be secured.

It is important to note that role of the public sector is limited under European State Aid law to only intervene in those areas where it is unviable for the market to deliver on a commercial basis (known as 'white' areas) or by exception, where only a single supplier is operating (a 'grey' area) and that supplier's solution is proven untenable following a thorough compatibility assessment i.e. where market failure is proven to persist.



Adding value to the outcomes and impacts enabled by access to superfast broadband and the technology this supports.



Executive Summary:

Scale and Characteristics of the Final Deployment Area

Northamptonshire is currently one of the few places in England which has more clarity on the geography of where the remaining premises requiring access are located.

These are shown on the map opposite (i.e. those areas within the 'by 2017' category of expected deployment). However, the ultimate make up of these final premises may still change during the lifetime of the Project. For example, deployment plans currently envisaged through the County Council's partnership with BT may require amendment once the outcome of survey and planning works is known; or the scope of the intervention area may change as a result of any future further consultation on suppliers commercial plans.

The total area for intervention for superfast Northamptonshire comprises around 87,200 premises located in 'white' areas across the county which would not otherwise support a commercial deployment. Of these, BT will be delivering NGA to around 53,100 premises including 3,000 businesses by 2015 with the support of County Council and BDUK 'gap funding'.

The remaining coverage area is estimated to include over 34,100 premises. These premises can be characterised into locations which include parts of:

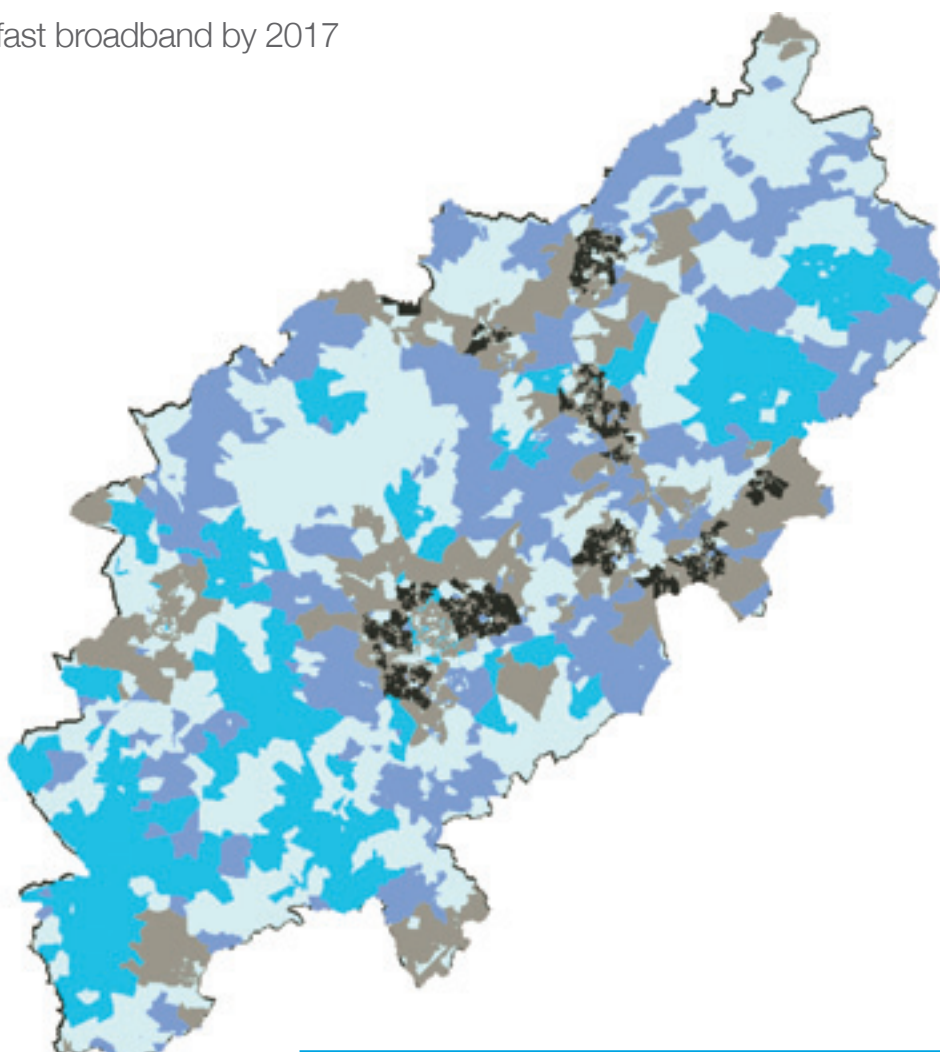
- the town centres of Northampton, Corby, Kettering and Wellingborough
- the Northampton Enterprise Zone
- a number of Business Parks/Industrial Estates; and
- some rural areas

Solutions for this final deployment phase will be developed in parallel to the mobilisation of the partnership contract with BT to ensure coverage is deployed at the earliest opportunity. Indeed, the County Council is already progressing a number of rural community proposals which if successful will help us boost coverage by 2015 and contribute to the final premises solution.

Superfast Northamptonshire: Expected deployment of superfast broadband by 2017

Purpose

- This map shows an overview of the expected roll out of superfast broadband in Northamptonshire including proposed commercial plans by 2015 and expected deployment in the Project intervention area up to 2017. It is based on information known at June 2013.
- This map is high level only. It is not accurate at premise or postcode level and should not be interpreted as such.
- The superfast Northamptonshire Project is at an early stage. Expected deployment plans as currently shown will be subject to change as further work is progressed including surveys and planning.
- Phased 'go live' announcements will be made on the Project website when confirmed. Visit www.superfastnorthamptonshire.net
- Your frequently asked questions are answered on the Project website
- The next edition of this map providing an update on deployment plans will be available by December 2013.



Deployment expected:

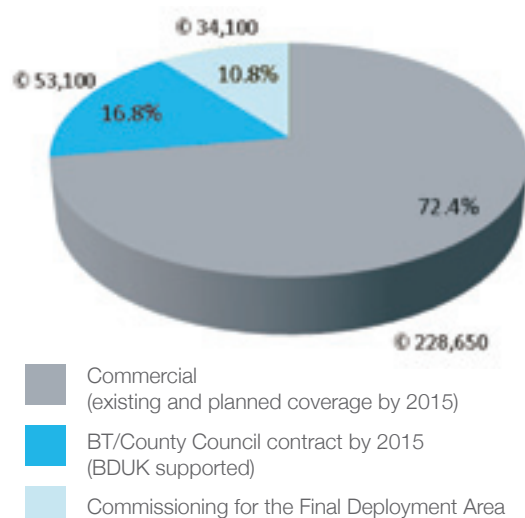
- To start in 2014
- To start in 2015
- Target completion by 2017

Existing and expected commercial coverage* of superfast broadband up to 2015

- One superfast broadband supplier
- Two superfast broadband supplier or more

**Information on commercial coverage collated through an Open Market Review and Public Consultation undertaken in 2012 (to be re-tested in 2014/early 2015)*

Deploying superfast broadband in Northamptonshire



Executive Summary:

Northamptonshire Approach for the Final Deployment Area

The County Council's proposal to extend NGA deployment towards full coverage by 2017 is based on a targeted and intelligent approach to commissioning.

This seeks to maximise competition, innovation and value for money. In summary the approach involves a number of elements:

- Understanding the final deployment area - key analysis
- Promoting local community and business surveys to understand levels of demand and 'hot spots'
- Market testing and the launch of a NGA Prospectus
- Outlining technical and other requirements
- Creating a Data Bank providing intelligence to the market
- Developing a portfolio of potential investment models to address barriers to the market
- Pursuing and aligning funding from EU, national & local sources to create a Next Generation Investment Fund to support the Investment Portfolio approach
- Working with local stakeholders to identify other assets/ resources e.g. buildings able to 'host' technology or potential anchor tenancies
- Understanding the appetite and capability of community projects including sel-build and other self-fund initiatives
- Managing State aid compliance and securing necessary approvals
- A multi-faceted but targeted approach to commissioning to enhance market competition

**Understanding the
Final Deployment Area**

**Resources & Investment
Models**

**Intelligent
Commissioning**

**Governance and
Approvals**

Executive Summary:

Market Opportunities in Northamptonshire and the NGA Prospectus

The proposed launch of a NGA Prospectus in the autumn will be a key stage.

This will provide more detailed information on the scope and characteristics of the likely final deployment area as well as identifying demand 'hot spots'. It will set out firmer details about the proposed commissioning approach, including the likely technical standards, qualities and key principles underpinning it. Whilst our ambition is for countywide fibre based NGA coverage, we also recognise that access for some premises may just be too costly. Alternative technology solutions with appropriate throughput capabilities and quality characteristics could be considered where the case for NGA is demonstrably unviable and other approaches provide better value for money. For example, advances being made in 4G connectivity could have an important role to play.

Importantly, the Prospectus will also consider the investment opportunity in Northamptonshire including the potential for multiple industry partners to take forward different 'lots' or perhaps a single industry partner or consortium capable of deploying to all of the final premises. It will provide further information on the proposed investment portfolio which the County Council could offer to address barriers to market investment; this may be grants or subsidies to fill gaps in commercial business cases, providing access to capital in the form of loans (commercial or soft), considering joint ventures or investing in different models such as Netco's or 'asset/op co' models. Procurement and State aid considerations in respect of different approaches will need to be managed.

Feedback from the market over the summer will help us to shape the Prospectus.

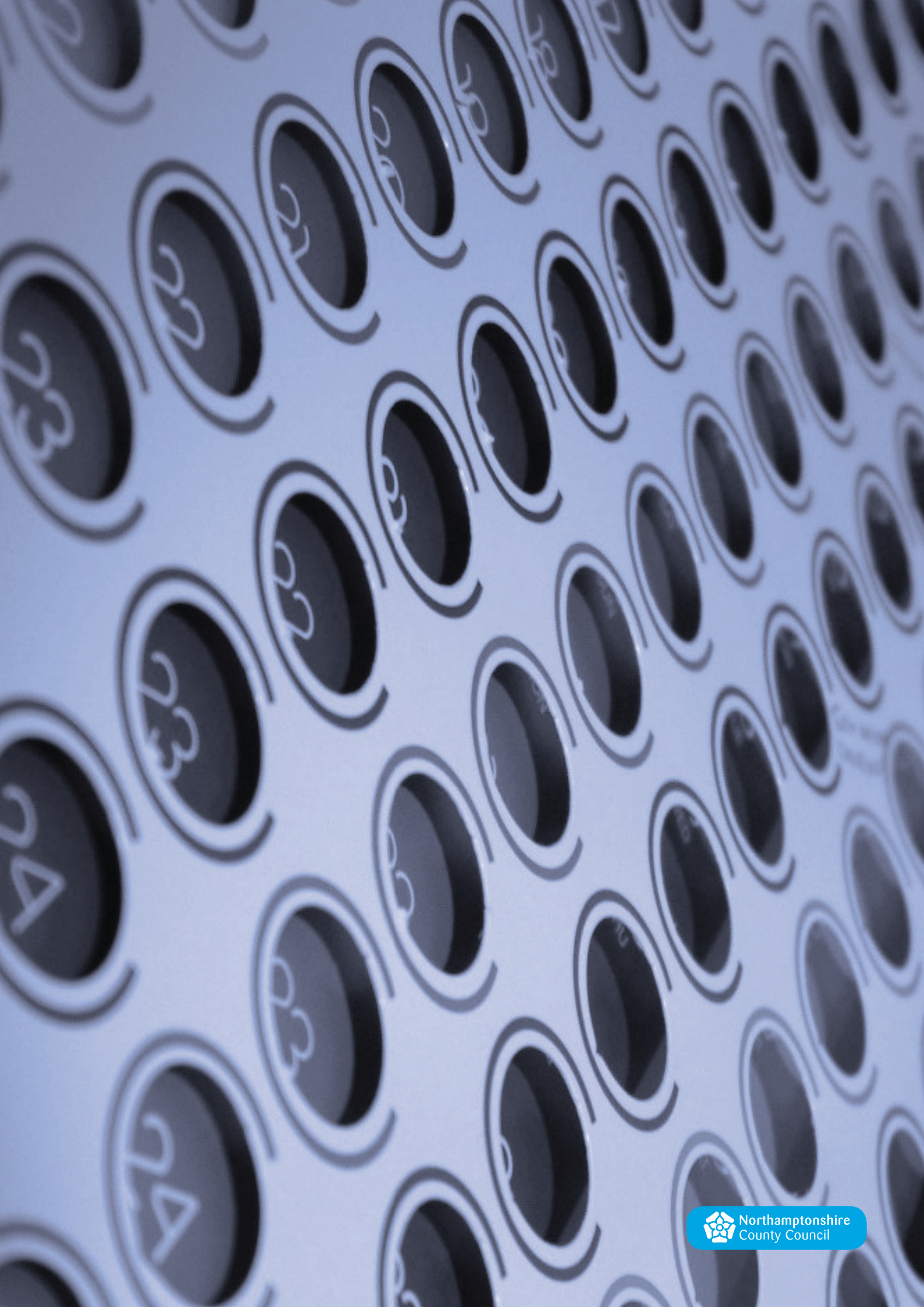


Executive Summary:

Programme and Timescales

Stage	2013
Partnership Board and Cabinet decision on proposal & commissioning approach	May – June
Consultation launched on the Next Generation Strategy (NGS) for the final deployment area	June – Aug
Understanding the characteristics of the final deployment area and demand - research data & analysis	June – Sept
Initial market warming	June – Oct
Funding & Resources progressed; NGA Investment Fund created	June – 2017
State Aid considerations & approval applications as required	July – 2017
NGA Prospectus and potential Market Day held in parallel with launch of the Open Data Bank providing intelligence to the wider NGA market; the Prospectus will set out the proposed final deployment area, outline technical & other requirements, investment models, and potential lots. It will invite Expressions of Interest (EOI's) from the market (Soft Market Testing).	Autumn
Review of Market EOI's; refinement of commissioning proposition	Winter
Cabinet decision on approach	Feb 2014
Public consultation with the market on commercial plans to confirm the eligible final deployment area	2014
Full commissioning approach launched	2014
Investment contracts secured – deployment to the final premises	2014 – 2017





Northamptonshire
County Council

Chapter 1:

Growth potential in Northamptonshire

Why Invest in Northamptonshire?

Fast Growing and Young Population

Northamptonshire is ready and able to help Britain in the 'global race'. It has one of the fastest rates of population growth in Britain and this is forecast to continue. This is being driven by an influx of younger people and higher birth rates – this growing population will contribute to the future customer base to drive demand for superfast broadband. The county already has a population of almost 700,000 and this is set to grow by 20% by 2025.

Strong Economy

Northamptonshire's economy is growing fast too. It contributes over £14bn to the national economy. Current projections indicate that its contribution will rise to £20bn by 2020 - we want to exceed this target.

The county is well located, at the crossroads of the national road and rail network and with strong international links. For this and other reasons, we are at the heart of Europe's largest concentration of logistics and distributions operations: the 'Golden Triangle'. We are keen to develop this competitive advantage further and create an additional 5,000 jobs locally by 2020.

Northamptonshire has a vibrant and diverse economy, combining tradition in the luxury shoemaking industry with innovation in a world-leading High Performance Technology (HPT) sector. The latter includes design and manufacturing of performance race cars and engines; low carbon technologies, and advanced development of lightweight materials and composites. The HPT network comprises more than 1,000 companies employing over 21,000 people and contributing £2 billion to the local economy, centred on the iconic Silverstone Circuit – the home of British motorsport. Our ambition is to double the number of jobs in this sector, and quadruple the contribution to the economy.

The strength of our economy is evidenced by its performance during the recession. The county has managed an impressive turnaround, bucking trends in export performance, growth in the food and drink industry and business survival rates. For example, while figures show a recent 3% decline in the food and drink sector, Northamptonshire has recorded a rise of 5%.

This view is backed-up by a recent report by the Centre for Cities 'think-tank' which showed that Northampton has made the biggest recovery from the recession in the country. Reasons for this included organic growth, an increase in business start-ups, and a higher business survival rate than the England average. The county has proved it can hold its own in difficult economic conditions, in part due to a package of initiatives, designed by the County Council and Northamptonshire Enterprise Partnership, to support small businesses.





Housing and Jobs Growth

Northamptonshire has an immediate pipeline of more than 35,000 new houses with planning permission. Associated infrastructure to facilitate growth has been identified and is ready to go. Emerging core spatial strategies have identified the potential to boost this figure to over 80,000 new houses, whilst targets to create 70,000 new jobs over the next 15 years have been set out.

We benefit from excellent access to higher education with the University of Northampton recognised as England's top University for Employability in 2012, and the world-renowned universities of Cambridge, Oxford and Warwick all less than an hour away.

Enterprise and Leadership

Northamptonshire also has a reputation for delivery. This was recognised by Government when it awarded the county the accolade of the 'Most Enterprising Place in Britain' as well as a top award for encouraging export.

There is a clear shared commitment between business and local authorities to support growth and a strong delivery focused Local Enterprise Partnership for the county (Northamptonshire Enterprise Partnership).

This local leadership and deliverability, coupled with the scale of new jobs and housing, and longer term potential, is unparalleled anywhere else in Britain outside of London.

Digital access is a key enabler and central to our growth plans. Through the Superfast Northamptonshire Project, the county has the ambition to be the first area in England with full Next Generation Access by 2017 – three years ahead of European targets.

Local Demand for Superfast Broadband

There is significant interest from local communities and business, with over 30,000 hits received on the Superfast Northamptonshire website to date. Interest in the Project is increasing and markedly so this year. This is expected to rise significantly more as the local deployment plan with British Telecommunications Plc (BT) commences, targeted demand stimulation and communications activities are heightened, and our strategy to secure network solutions for the last phase of premises in the county is launched.

There has already been local activity within a number of communities to register demand. The surveys undertaken showed a return of over 74% stating that the household would be 'very likely' to take up a superfast broadband service if it was available.

Importantly, we will be raising more awareness locally over the summer and encouraging further demand registration initiatives to inform 'hot spot' mapping. This information will be made available to suppliers in the market through a proposed Data Bank (see Chapter 5). The Project Team is also receiving a significant number of telephone and e-mail enquiries about the availability of superfast broadband from local residents and businesses, and increasingly so. It has also been a hot topic, especially for business, in our local press and media.

Chapter 2: Northamptonshire's Ambition

Setting out the Ambition and Progress to Date

Vision and Targets

Northamptonshire has a clear Vision for the county to be at the leading edge of the global digital economy. Providing fibre-based access to superfast broadband for all businesses and homes by 2017 is the ultimate ambition, and ensuring benefits are maximised.

The Northamptonshire Next Generation Strategy provides the framework to achieve this. We are already ahead of the game compared to many parts of the country and are making good progress towards securing our targets. The County Council is now the first authority to launch comprehensive proposals to secure solutions from the wider market to meet its superfast broadband 'access for all' goal.

The Next Generation Strategy is being delivered through the 'Superfast Northamptonshire' Project and is a key component of Northamptonshire's **10 Point Plan** for economic growth. The Project is overseen by a Partnership Board working with the County Council and involving key stakeholders from the public sector (including local government, further and higher education and health) as well as representatives from business and for local communities.

The Strategy has a clear set of targets which aim to deliver:

- fibre-based Next Generation Access (NGA) to all premises across the county by 2017, enabling the provision of superfast broadband services capable of providing access line speeds of 30Mbps or more;

Plus interim targets for:

- at least nine out of ten premises to have access to superfast broadband by 2015;
- and all remaining premises in the county to have minimum access line speeds of 2Mbps by 2015.

Whilst our ultimate ambition is for full NGA coverage, the County Council recognises that a small percentage of premises may simply be too challenging, too costly and ultimately unviable to provide fibre-based connectivity. It is expected that technology evolution, driven by market competition over the lifetime of the Project, will provide for alternative solutions to NGA capable of supporting broadband services of sufficient quality to meet end user requirements. These solutions will be a consideration for the Project. In addition, mobile services, and particularly 4G, will have an increasing and enriching role to play to complement NGA or as an alternative solution. This will become more significant as demand for connectivity on the move grows and 'smart' mobile devices become common place.



Purpose of the Strategy

The Next Generation Strategy provides a framework to guide activity in Northamptonshire towards success. This is not only in terms of securing the physical deployment of broadband infrastructure to meet our demanding NGA targets, but also to add value to the outcomes and impacts enabled by access to superfast broadband and the technology and applications this supports. Maximising benefits for business will be a priority as NGA has the capability to transform business growth, efficiency and productivity, as well as improving access to services.

It is important to note that the role of the public sector is limited under European State aid law to only intervene in those areas where it is unviable for the market to deliver on a commercial basis. Provision of broadband connectivity is not a public service. However, without public sector intervention in areas of demonstrable market failure, residents and businesses would be disadvantaged resulting in an increasing digital divide between the superfast broadband 'haves' and 'have nots'.

The Next Generation Strategy has two strands:

- **Next Generation Infrastructure** - commissioning physical NGA i.e. optical fibre-based network capable of providing access line speeds of at least 30Mbps; and
- **Maximising Benefits** - adding value to maximise the outcomes and impacts enabled through NGA deployment (including demand stimulation, optimising technology application and aligning with other initiatives such as broadband enabled public service delivery including telehealth and local authority services)

Feedback on the Strategy will help us to refine our approach in advance of the launch of an NGA Prospectus in the autumn and commissioning which is expected to commence in 2014.





LibraryPlus



Maximising Benefits

Figure 1 sets out the wider work streams across the two strands of the Next Generation Strategy. This is an evolving agenda, with the scale and focus of activity at any time being dependent on a managed work programme and effective resource deployment.

Work streams within the 'maximising benefits' strand of the Strategy include encouraging demand registration through community surveys, communication and engagement initiatives including demand stimulation to encourage increased take up of superfast broadband services; and other 'benefit enriching' initiatives to raise awareness and skills about how NGA enabled technology can be applied to transform the way we live, work, play, learn, access healthcare and do business.

This includes the 'Superfast Business' initiative due to be launched by the County Council later in 2013 with the support of Northamptonshire Enterprise Partnership. This aims to encourage increased take-up of superfast broadband services by business and to demonstrate how this can help transform business and support growth through enabling efficiencies. For example, this could be through enabling remote access to 'back at base' systems, and easier home working, increasing productivity, and providing access to new markets and suppliers, as well as a wider customer base.

Implementation of the Strategy will also support other local policy objectives including reducing the carbon footprint e.g. by providing access to technology which enables work practices which reduce the need to travel, and by driving other environmental efficiencies such as technology enabled 'smart' buildings for example. Northamptonshire already offers 'real time' roadside travel alert information in parts of the county and 'real time' bus service information at 'smart' bus stops both of which rely on good network connectivity.

The wider 'maximising benefits' work streams aligns with other local opportunities and initiatives such as the increasing use of the internet for the delivery of public services. This secures significant financial efficiencies for public bodies, whilst providing more flexible and easy access for the public. The County Council is increasingly signposting customers to its website as the first port of call. It is providing more internet enabled access to services. The website is a portal where many people can help themselves to council services and find the help they are entitled to. The 'Street Doctor' is an example of an on-line initiative where people can report highways issues – this might be potholes, street lighting problems, abandoned vehicles or even flooded roads.

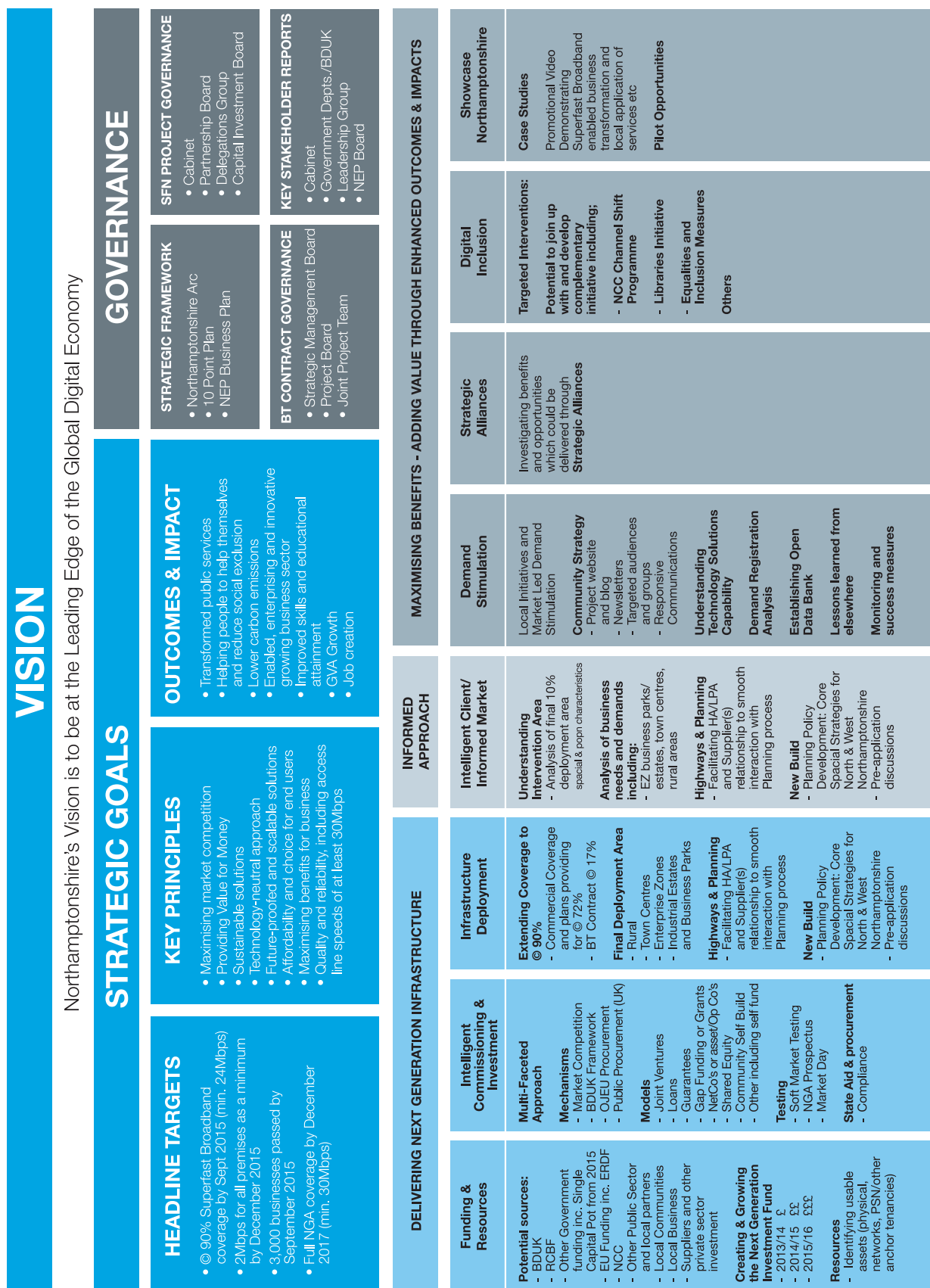
The County Council also provides free Wi-Fi in all of its libraries and, with the support of voluntary 'IT Buddies', offers advice to members of the public on how to use the internet and basic IT skills. More substantial IT skills training is also offered at selected libraries across the county from time to time (ask at your local library for details).

Other enriching initiatives may also be considered including the appetite for free access to Wi-Fi in Northamptonshire's town centres to provide a better experience for visitors to the locality. Corby in the north of the county is already offering this facility.

The provision of the physical network infrastructure is a fundamental strand of the Strategy. However, the test of success and the impact of the Project will be determined by the level of take up of superfast services, and how this broadband technology is used and applied to maximise the benefits of connectivity.

This consultation focuses on infrastructure and in particular the proposed approach to extend NGA to the final premises in the county for which provision has yet to be secured. Information on how to respond is provided in Chapter 8.

Figure 1: Superfast Northamptonshire – Next Generation Strategy: Overview (June 2013)



Chapter 3:

UK Environment for Intervention in Broadband

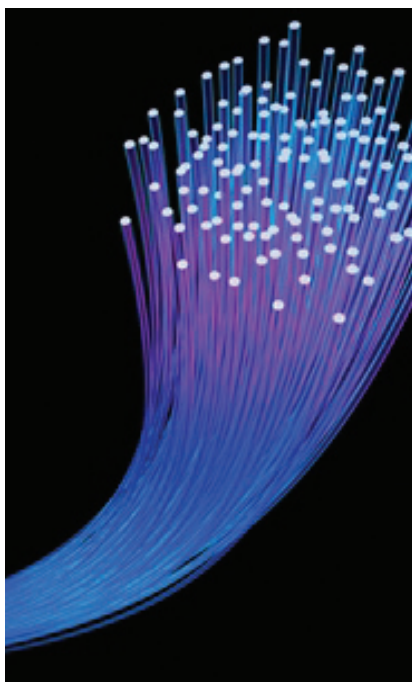
Incentivised Investment in the UK

The European Union (EU) and UK Government are responsible for establishing the high level broadband policy targets and the rules and tools for intervention. The approach within the UK to date has been to stimulate the broadband market through the application of a mix of funding from the EU (European Regional Development Fund), central government (BDUK) and local government grants to network infrastructure projects. The focus has largely been on funding the economic 'gaps' in an operator's business case for superfast broadband infrastructures. The Government's Broadband Delivery Framework, managed by BDUK, has supported this 'gap funding' commercial subsidy model. The £530m BDUK Rural Broadband Programme is largely being channelled through the Framework, although a number of authorities have opted to undertake an open EU procurement process.

In parallel, the Government's £150m Urban Broadband Fund (UBF) has been designed to accelerate ultrafast broadband rollout towards the Digital Agenda for Europe (DAE) 2020 targets. Twenty-two cities have been awarded funding via two Government announcements. To date, the principal towns in Northamptonshire, including Northampton itself, have not been eligible for this fund. Northampton is larger than many of the areas which currently qualify for UBF and the County Council has lobbied for the town's eligibility in this respect. However, progress on the UBF has been delayed and the Government is looking for alternative solutions for the Fund including potential 'voucher' schemes.

The Independent Networks Cooperative Association (known as INCA) recently put forward a research based set of proposals to Government on how a more competitive landscape for next generation infrastructure provision could be encouraged. INCA suggested that three principal issues were currently threatening market development:

- **Lack of competition** – that a 'gap funding' approach favours operators who have existing networks and can demonstrate the 'gap'. It neither provides the right type of financial support nor carries an acceptable risk profile for providers who are designing, building and operating new infrastructure.
- **Lack of innovation** – service providers have been the main producers of innovation in the digital economy and have looked for new ways to the market as well as new things to offer. INCA suggested that the commercially sensible approach for the incumbent BT is to focus on Fibre to the Cabinet (FTTC) technology which improves performance on its current assets, but this could inhibit innovation. Where network operators have implemented new infrastructure, it has been on too small a scale or too fragmented due to the investment constraints mentioned above. This has made it difficult for many service providers to adopt these networks. INCA has suggested that a way needs to be found to enable service providers to access and exploit any new infrastructure as effectively as existing networks. The County Council would welcome the opportunity to work with INCA, Government and suppliers in the market to help address this critical issue.



- **Lack of investment** – whilst the market continues to be perceived as dominated by BT and Virgin Media, without active intervention to support other suppliers, private investors are unwilling to fund new infrastructure models, despite them being traditionally ‘good bets’.

INCA's proposal to Government was based on 8 months of dialogue with key stakeholders to determine exactly what drives competition, investment and innovation from the perspective of the end users, the supplier market, the investment market and Government through BDUK. This knowledge base and experience will be a useful resource amongst others, to help inform and refine the County Council's commissioning approach.

A handful of other local authorities across the country are now looking to extend NGA coverage beyond the Government's 90% target, although none appear to have published a cohesive strategy approach to secure full NGA coverage. These ‘peer’ authorities will provide a useful sounding board, as well as those cities involved in the Urban Broadband Fund process which can share lessons in respect of deployment considerations and the market in core urban areas; this will be useful as ‘town centres’ is one strand of the market opportunity covering our final premises.

Why intervene in the Broadband market?

Unlike some other types of infrastructure provision, such as the construction of roads, broadband connectivity is not a public service responsibility; broadband infrastructure and services are driven by a competitive telecoms industry which also drives innovation and technology evolution. This means that infrastructure and services are normally delivered through private sector investment where suppliers will make a return.

Because of the competitive broadband infrastructure market, any intervention in that market is governed by strict State aid rules determined by the European Commission. These govern the type of public interventions which can be made and the circumstances under which such interventions are allowable, including in areas of market failure. This is to ensure that no single supplier in the market makes significant beneficial gains over its competitors as a result of access to State (public) aid – the latter could be funding or other interventions which provide competitive benefits.

A viable commercial investment and return is not possible in all areas. This may be due to difficult terrain or remoteness of premises for example, which makes infrastructure deployment involving lengthy or difficult civil works too costly; or the density of premises may be too low, which in turn means a small customer base for the take up services, and therefore insufficient revenues to cover capital investment. Left to market forces alone, these areas would not benefit from NGA and the superfast broadband services it supports.

However, NGA is increasingly transforming how we live, work, learn, do business and deliver public services. It is already viewed by many as a ‘must have’ service. This will increasingly become an essential requirement and it is already recognised as being fundamental to economic growth. The Government Department for Business Innovation and Skills (BIS) has stated that businesses with a strong web presence grow more than twice as quickly as those with minimal or no web presence and create more than twice the number of jobs. Gaining access to web based applications which rely on NGA can provide significant benefits to business performance.

NGA is increasingly transforming how we live, work, learn, do business and deliver public services.

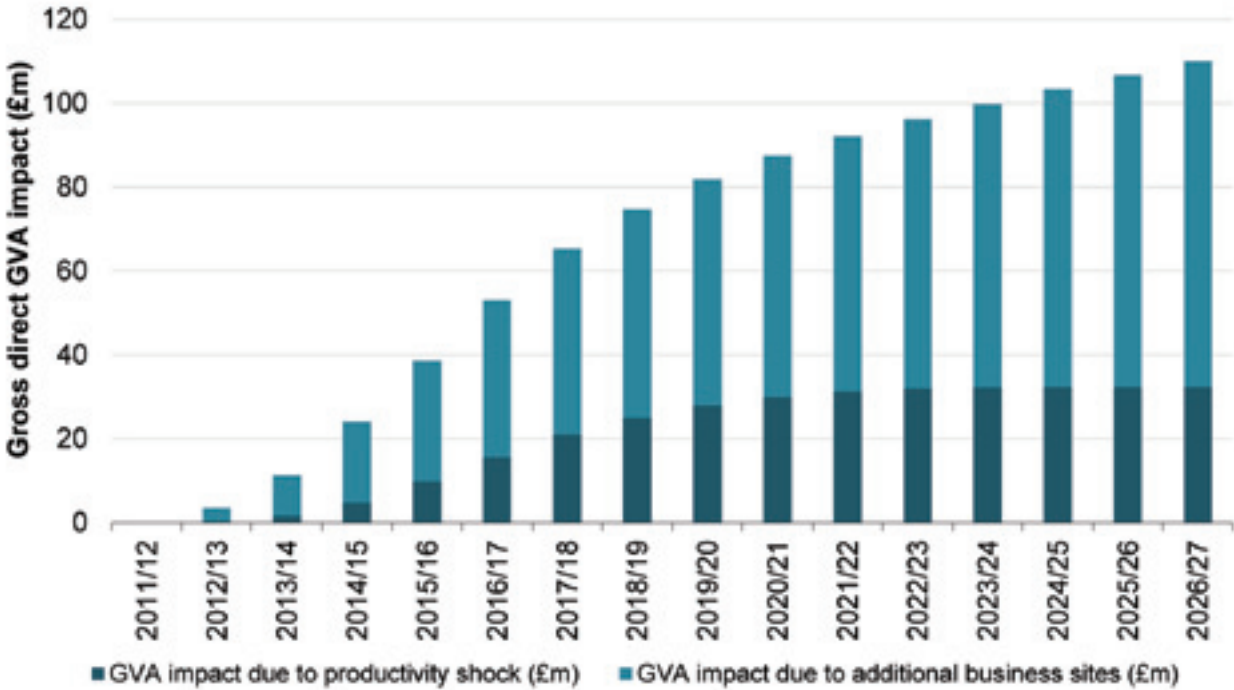
Figure 2: Gross direct additional Gross Value Added, due to the productivity shock for existing businesses, and due to additional business sites

Source: SQW economic impact model

The Economic Impact Assessment, commissioned by the County Council and produced by SQW in September 2011, suggested that NGA provision in the rural areas of the county alone could deliver around 1,700 new jobs and £110m in additional annual Gross Value Added by 2026/27. Evidence nationally and globally continues to mount about the critical nature of NGA to business and economic growth and performance. Cloud-based services are increasingly being adopted by business for storage, computation and wider network use. This is helping to transform business practice, driving efficiencies, reducing costs and changing working patterns, including increased home or remote working. This in turn is creating environmental benefits including reducing the need to travel. The technology is also enabling businesses to access new markets and to interact with customers in new ways; for example, social media connectivity which can provide for cheaper and more immediate market research. These business transformation mechanisms rely on NGA.

In addition, access to broadband is also becoming increasingly important for accessing public services, particularly for those people without a car, where public transport is difficult, or people with other mobility challenges such as physical disabilities.

In areas where it is clear that the market is not able to provide a supply commercially, the Government and local authorities are pursuing solutions to try and address this. The County Council's response along with the Partnership Board is set out in the Next Generation Strategy.



Chapter 4:

Steps Towards Full Coverage and Defining the Intervention Area

Key Elements of Deployment up to 2017

Northamptonshire has already taken significant strides towards its 2017 full NGA target. There are a number of elements which have contributed, and will continue to contribute, towards this. These include:

Commercial Deployment

The commercial market has a significant role to play towards achieving the first 90% NGA coverage target by 2015. Commercial deployment plans were established following two public consultations with suppliers in the market undertaken by the County Council in 2012. Network suppliers currently operating in the county include BT, Virgin, IFNL and Village Broadband amongst others.

The existing commercial footprint, plus the planned extension of commercial deployment in the period up to 2015, should provide for over 72% of premises in Northamptonshire to have access to superfast broadband. This equates to around 228,650 premises and will be achieved without the need for public sector intervention. As would be expected, commercial coverage particularly focuses on areas of higher population density where the customer base and demand for services is likely to be highest, including many but not all parts of the urban areas (see the 'black' and 'grey' areas illustrated in Figure 4).

A further consultation with the market will be undertaken by 2015 or sooner to inform the proposed commissioning approach. This will re-test commercial plans to see if they have changed since 2012 and to ensure that the plans of any new suppliers entering the county are acknowledged. This will ensure that the target area for intervention through the Superfast Northamptonshire Project remains focused on localities where the market is unable to deliver.

We hope that current market plans to serve almost three quarters of the county commercially by 2015 will exceed expectations as technology innovations come forward making more premises viable to reach, and as demand and market competition increases. The more the market is able to deliver the better as this reduces the need to invest public funds. The County Council's approach is to encourage the market to deliver and to work with it to create an attractive environment for investment.





department for
culture, media
and sport

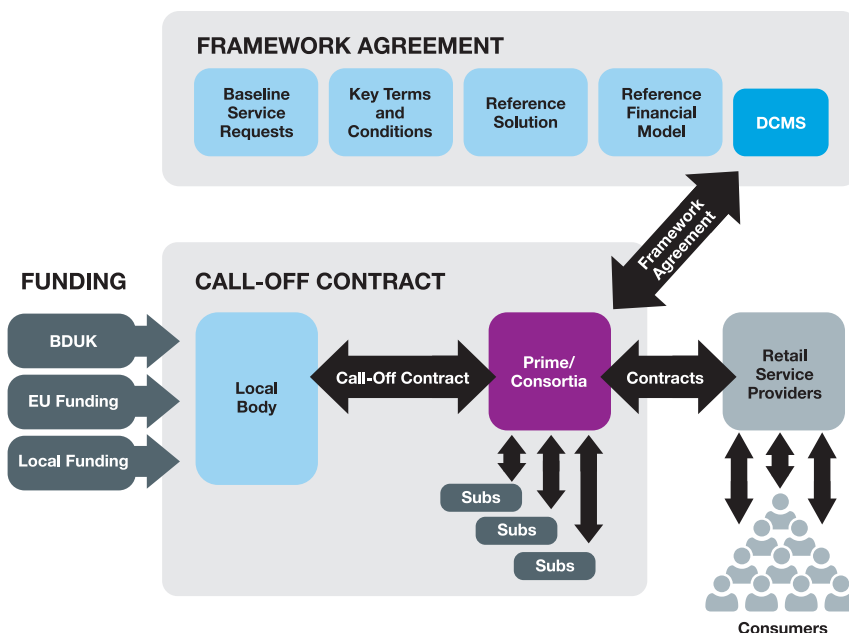
Figure 3: Source of Diagram:
Summary Broadband Delivery
Framework, DCMS, 21 October
2011 (available at www.gov.uk/InsideGovernment)

Investment Partnership with BT

Beyond the commercial deployment referred to above, a co-investment partnership between the County Council and British Telecommunications Plc (BT), along with Government support, will extend NGA deployment to around 90% of premises by 2015. The County Council entered into a Contract with BT on 14 March 2013 to achieve this. This was procured under the Government's Broadband Delivery Framework and represents a key milestone towards full NGA coverage for Northamptonshire.

Broadband Delivery UK (BDUK) was established by the Department of Culture Media and Sport (DCMS) to manage the implementation of Government's **broadband policy**. The Framework and BDUK Rural Programme secured approval from the European Commission in 2012 to enable the investment of State aid. The County Council and BDUK (DCMS) are each investing £4.08m of capital grant which is matched by a similar investment from BT.

The high level operating model and key relationships under the BDUK Framework are depicted below. In Northamptonshire, the funding currently committed under the Call-off Contract with BT does not include European sources:



The BDUK Framework supports the use of a 'gap-fund' subsidy commercial model, where the private sector invests alongside a public subsidy to provide broadband to areas where there is not otherwise a viable commercial market. The supplier, in our case BT, takes the risk of implementing and operating the network and the risk of ensuring its commercial success. The Contract with BT will deliver on the following targets:

- extending NGA coverage to around 90% of premises by September 2015 (when combined with commercial deployment) and providing minimum access line speeds of 24Mbps (defined as superfast broadband); and
- providing 3,000 businesses access to superfast broadband by September 2015
- all remaining premises to have access to a minimum of 2Mbps by December 2015

Joint arrangements with BT were mobilised in April 2013 and planning and survey work for the first phases of the deployment plans will be taken forward over the coming months. The first customer connections are expected to be offered in the fourth quarter of 2013/14.

The latest news on BT's deployment plans with the County Council can be found on the Project's website at www.superfastnorthamptonshire.net

Securing Deployment Solutions for the Final Premises

The Next Generation Strategy and this consultation marks a significant step towards addressing the remaining challenge for superfast broadband coverage in the county. It demonstrates the County Council's commitment to achieving its full NGA target by 2017, an ambition shared by local partners. Northamptonshire is the first authority to articulate this in a cohesive and deliverable strategy, demonstrating our continued focus on securing the county's place at the forefront of UK connectivity and the digital economy.

This third element of our programme towards countywide NGA coverage has the potential to be the most challenging. We are looking forward to exploring solutions with the telecoms market, being innovative and progressive in addressing barriers to investment, and in doing so breaking new ground to secure better outcomes for Northamptonshire and UK plc.

Defining the Intervention Area

Requirements established under European State aid law mean that the public sector can only invest in broadband deployment in areas of the county where the market is failing (referred to as the 'white' areas) i.e. locations where there is no existing commercial footprint and where the market has no plans to provide coverage.

Northamptonshire Loves
**Superfast
Broadband**



Superfast Broadband across
all of Northamptonshire by 2017

Figure 4: Superfast Northamptonshire Expected Commercial Deployment & Intervention Area Map (2012-2015)

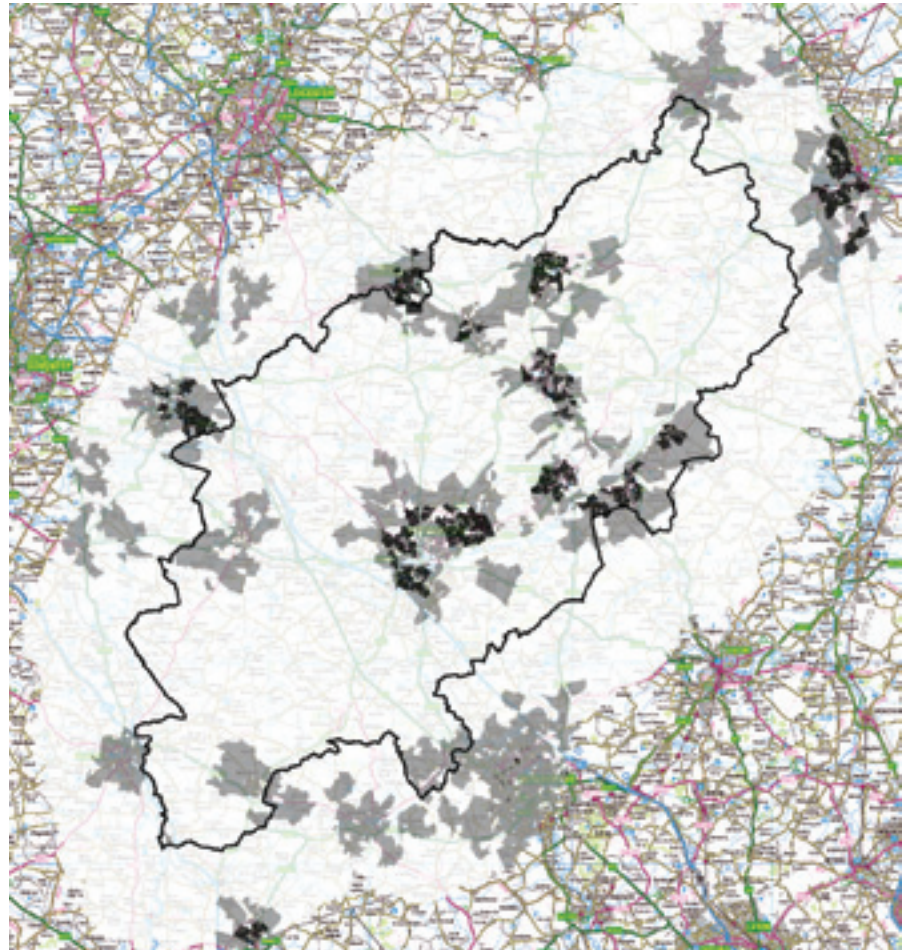
To understand where these eligible 'white' areas for intervention are, the County Council undertook two public consultations with the market during 2012. Market responses enabled the County Council to determine areas where one supplier was already operating or had plans to do so by 2015 (referred to as 'grey' areas) and those areas where two or more suppliers were doing likewise (referred to as 'black' areas). These areas are outside of the scope of public intervention because the market has an offer or plans here.

The intervention area for Superfast Northamptonshire as a whole has been defined as including around 87,200 residential and business premises across the county, with the remaining 228,650 premises already being served or due to gain access under commercial plans by 2015. The County Council's Contract with BT will provide NGA to around 53,000 of these premises by 2015, including an expected 3,000 businesses. When combined with the expected commercial coverage in the same period, this should take Northamptonshire to around 90% coverage.

Premises located in the residual areas are where an NGA solution has yet to be found. These are the target areas to benefit from this next phase of the Next Generation Strategy towards full NGA coverage by 2017. This final deployment area currently includes around 34,100 premises. These premises can be characterised into locations which include parts of:

- the town centres of Northampton, Corby, Kettering and Wellingborough
- the Northampton Waterside Enterprise Zone
- a number of Business Parks/Industrial Estates
- the remaining rural areas

Northamptonshire County Council Boundary



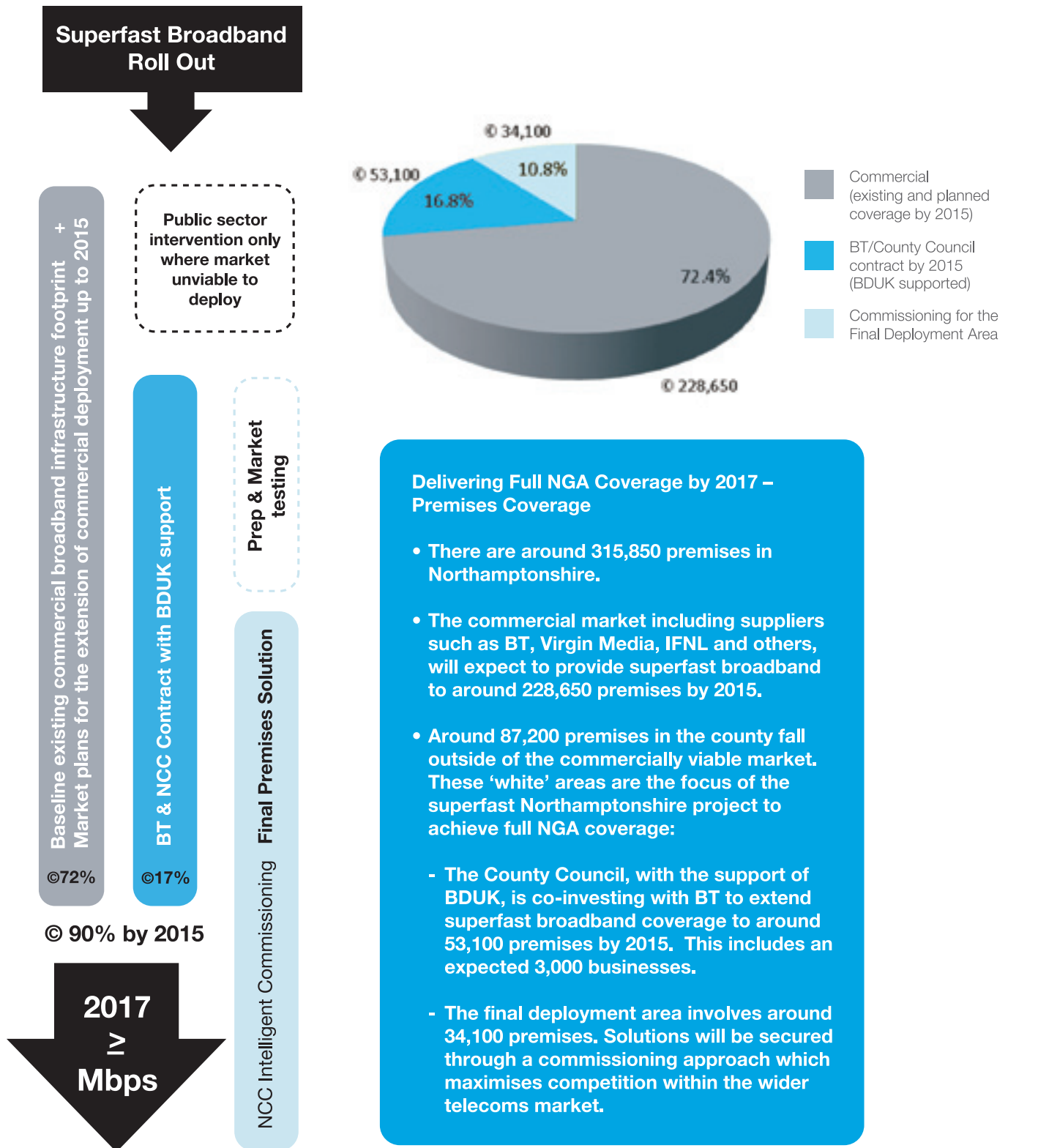
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The scope of the final deployment area includes just over 6,000 premises in the intervention area located in parts of the town centres of Corby, Kettering, Wellingborough and Northampton and parts of the Northampton Waterside Enterprise Zone. A solution requirement for these 'white' areas was not part of the mini-competition which resulted in the appointment of BT; this was partly because the mini-competition was run under the BDUK 'Rural' Programme and these areas are very urban, and partly because in the first instance, the County Council and the Partnership Board wanted to explore alternative solutions outside of the BDUK gap funding model which may better lend themselves to serving these urban areas. This meant that public funding, being invested with BT, could be directed to other areas which are 'harder-to-reach'. These urban areas are within scope of the final premises coverage.

Solutions for this final phase will be developed in parallel to the mobilisation of the BT Contract to ensure coverage is deployed at the earliest opportunity. A number of community based projects are already emerging which we hope will be successful in providing a solution for some parts of the final deployment area.

Figure 5: Deploying Superfast Broadband in Northamptonshire (June 2013)

Deploying Superfast Broadband in Northamptonshire



Chapter 5: Commissioning Approach for the Final Deployment Area

Securing Solutions for the Final Deployment Area

Northamptonshire was only the 5th county nationally to be approved by Government to invite tenders for an industry partner under the BDUK Framework. With BT now on board and the deployment experience it brings through BT Openreach, Northamptonshire is well placed to deliver early on the Government's 90% superfast coverage target by 2015.

However, the Northamptonshire ambition stretches beyond this and aims towards full NGA coverage by 2017. If realised, this will ensure Northamptonshire's place as a leader in the digital economy and will deliver on the EU's 2020 Digital Europe Agenda three years early.

Whilst the BDUK Framework and Rural Programme 'gap-funding' model has offered a robust approach to help us towards 90% coverage (when combined with commercial provision), achieving deployment to the final premises will be more challenging. We need to look to the wider market, as well as our existing partnership with BT, to maximise opportunities and innovative solutions. In parallel, we need to manage complex EU State aid and public procurement regulations to ensure compliance in our approach. We also need to develop a strong business case to ensure that the best use is being made of any public funding which is invested. The County Council aims to take forward a multi-faceted commissioning approach which provides the right level of flexibility and looks beyond pure 'gap-funding' interventions. This includes the development of a portfolio of potential investment models aimed at stimulating market investment decisions and bridging the gap to commercial viability in a smart way.



Overview of Northamptonshire Approach

The final premises are those for which a solution is not expected to be delivered by the market commercially or through the County Council's investment partnership with BT up to 2015. The Northamptonshire approach to extend deployment towards full NGA coverage involves a number of activities, many of which can be taken forward in parallel to expedite progress.



The approach can be summarised as:

- Understanding the final deployment area - key analysis
- Promoting local community and business surveys to understand levels of demand and 'hot spots'
- Market testing and the launch of a NGA Prospectus
- Outlining technical and other requirements
- Creating a Data Bank providing intelligence to the market
- Developing a portfolio of potential investment models to address barriers to the market
- Pursuing and aligning funding from EU, national & local sources to create a Next Generation Investment Fund to support the Investment Portfolio approach
- Working with local stakeholders to identify other assets/ resources e.g. buildings able to 'host' technology or potential anchor tenancies
- Understanding the appetite and capability of community projects including self build and other self fund initiatives
- Managing State aid compliance and securing necessary approvals
- A multi-faceted but targeted approach to commissioning to enhance market competition

Key Principles

County Council's approach is guided by a number of key principles. These are:

- Maximising market competition
- Providing Value for Money
- Sustainable solutions
- Technology-neutral approach
- Future-proofed and scalable solutions
- Affordability and choice for end users
- Maximising benefits for business
- Quality and reliability, including access line speeds of at least 30Mbps

Technologies

The Next Generation Strategy is based on a **technology-neutral approach**. However, the ambition is for a future-proofed and scalable infrastructure network providing NGA (principally fibre-based) capable of supporting quality broadband services with minimum access line speeds of 24Mbps by 2015, and with a stretching target for minimum access line speeds of 30Mbps by 2017.

NGA means access networks (broadband infrastructure) which consist wholly or in part of fibre optic elements, and which are capable of delivering broadband access services with enhanced characteristics (such as higher upload/download capabilities), as compared to those provided over existing copper networks.

NGA solutions include:

- Fibre to the Premises (FTTP) (wholly fibre optic network – this has the greatest speed capabilities (determined by the electronic equipment at the end of the link));
- Fibre to the Cabinet (FTTC) (fibre network to the 'green' street cabinet, with existing copper wires connecting the cabinet to the premise – this shortens the distance from the active electronic equipment to the customer and hence boosts broadband speeds. However, speed performance diminishes with increased distance between the cabinet and the premise); and
- upgraded cable TV networks.

Fixed wireless and mobile broadband technologies, such as Wi-Fi, Wi-Max and LTE (Long Term Evolution), can also support Superfast Broadband services (defined as 24Mbps and above). However, Wi-Fi in particular is only really effective over shorter distances.

LTE is 4G mobile broadband and is capable of doubling 3G download speeds. The telecoms regulator Ofcom announced the outcome of the 4G spectrum auction in February 2013; there were five winning bidders. Ofcom attached a coverage obligation to one of the 800 MHz lots of spectrum which was won by Telefónica UK Ltd. This requires Telefónica to provide a mobile broadband service for indoor reception to at least 98% of the UK population (expected to cover at least 99% when outdoors) and at least 95% of the population of each of the UK nations – England, Northern Ireland, Scotland and Wales – by the end of 2017. It is understood that Ofcom is planning now to support the release of further spectrum for possible future '5G' mobile services.



Understanding the Final Deployment Area

Northamptonshire is currently one of the few areas of the UK which has more clarity around the geography of its final deployment area beyond the Government's 90% coverage target (see Figure 6 overleaf). This is because the County Council has already secured a contract with BT. However, whilst a proposed implementation plan has been set out by BT, this could be subject to refinement and change following the survey and planning phases of the project. This is because the implementation plan is based on a number of assumptions made prior to more resource intensive 'on site' surveys. The survey and planning phase may discover factors which have an impact on the proposed implementation plan, such as blocked or collapsed ducts for example, which may change the timescales for the proposed deployment of some phases (or parts thereof) and/or have an impact on costs. This may affect viability and value for money considerations. However, major change is not anticipated.

Notwithstanding this, now that the expected geography of the final premises requiring an NGA solution is broadly known, it is important that the spatial and socio-economic characteristics of this area are properly defined and understood. This will help the County Council, working with the Partnership Board and the market, to identify opportunities and any priorities; business clusters will be a key consideration in respect of the latter.

Core information relating to the characteristics of the expected final deployment area, as broadly defined, will be made available to the market via an open Data Bank to help inform supplier considerations, positioning and business cases. This includes undertaking further targeted research and demand registration work as necessary and sharing the outcomes, as well as refining relevant socio-economic, spatial, asset and other data of interest to the market. It is expected that the open Data Bank will be launched in the autumn of 2013. This will be informed by market views on what data is pertinent to inform investment decisions. It will be maintained over the lifetime of the Project to ensure that content remains relevant and up to date as an intelligence resource to encourage further commercial investment in Northamptonshire.

This work will also help to inform the development of a more flexible approach to commissioning, including potential options for different 'lots' or phases as an alternative to an holistic approach. This may involve more granular definition within the four broad categories currently identified, namely the town centres, the Enterprise Zone, business parks/industrial estates and the remaining rural areas, and/or within particular geographies. Details of this will be outlined in the NGA Prospectus which is expected to be published in the autumn.

It will be necessary to re-consult the market on their commercial plans prior to the launch of further commissioning, particularly if the approach is deemed to involve State aid (and subject to State aid Regulation compliance overall). This is to identify if commercial plans have changed since the last public consultation in 2012 and to ensure that public sector intervention remains targeted only at those areas which are unviable for the market.



Superfast Northamptonshire: Expected deployment of superfast broadband by 2017

Purpose

- This map shows an overview of the expected roll out of superfast broadband in Northamptonshire including proposed commercial plans by 2015 and expected deployment in the Project intervention area up to 2017. It is based on information known at June 2013.
- This map is high level only. It is not accurate at premise or postcode level and should not be interpreted as such.
- The Superfast Northamptonshire Project is at an early stage. Expected deployment plans as currently shown will be subject to change as further work is progressed including surveys and planning.
- Phased 'go live' announcements will be made on the Project website when confirmed. Visit www.superfastnorthamptonshire.net
- Your frequently asked questions are answered on the Project website
- The next edition of this map providing an update on deployment plans will be available by December 2013.

Expected Deployment Programme and Map:

The map represents anticipated roll out of fibre-based infrastructure (NGA) to support superfast broadband over the period up to 2017. The 'black' and 'grey' areas are informed by the market's response to the County Council's public consultation seeking information on where suppliers already provide, or are planning to deploy, superfast broadband by 2015 (defined as capable of supporting access line speeds of at least 24Mbps).

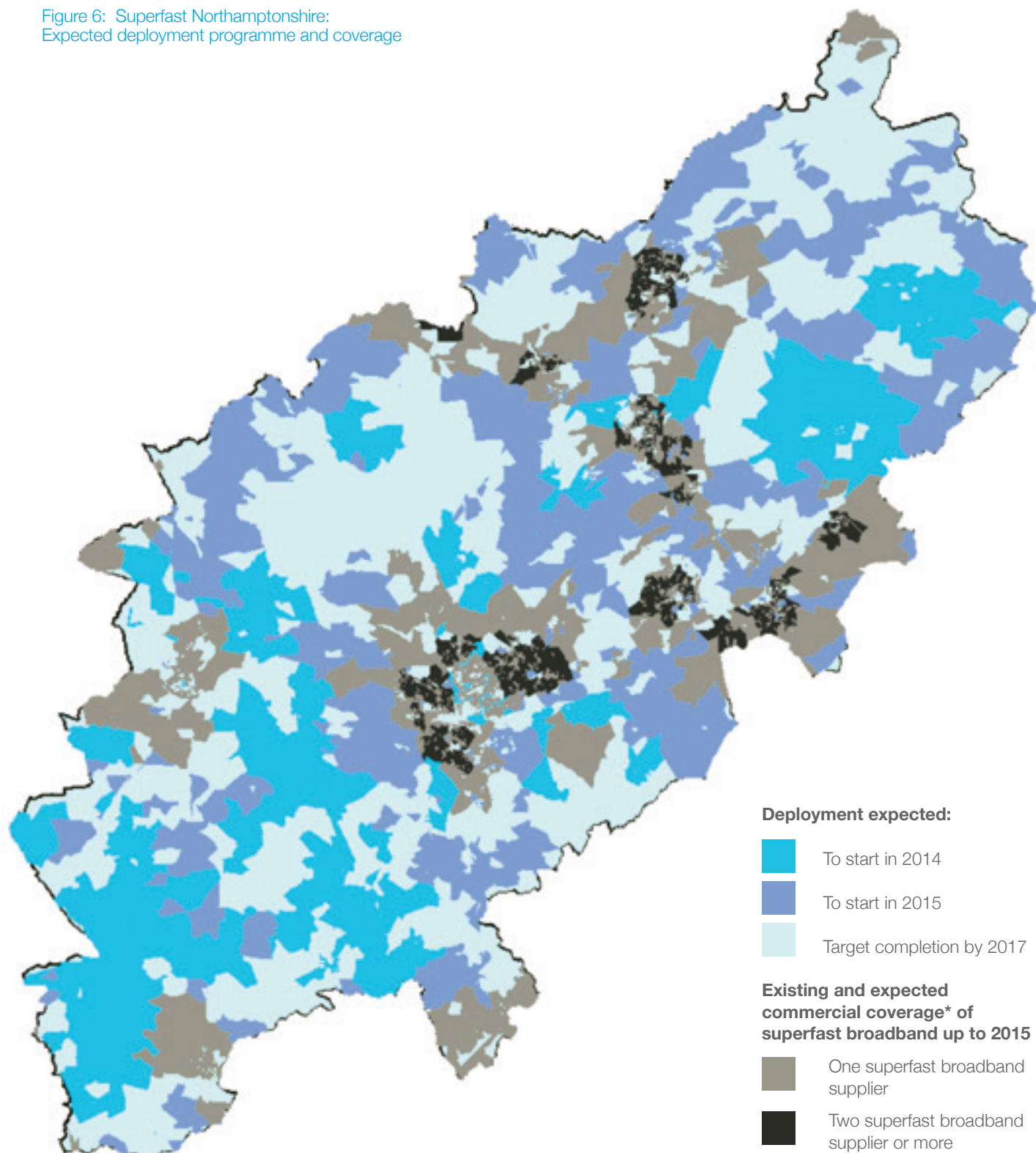
The remaining phasing shows the anticipated programme for deployment being delivered by the superfast Northamptonshire Project through the County Council's Contract with BT (extending fibre coverage to around 90% of the county by 2015, when combined with commercial coverage); as well as the remaining deployment area for which a solution is being progressed through the next phase of the Next Generation Strategy.

This programme and the current expected coverage will be subject to change over the lifetime of the Project following more detailed and phased on-site survey and planning work by BT in support of their implementation plan and to take account of any necessary changes to the final deployment area following any further consultation with the market by 2015 to re-test expected commercial deployment plans.

Updates on the deployment programme will be announced through the regular Superfast Northamptonshire Newsletter and information will be made available on the Project's website at www.superfastnorthamptonshire.net This includes more detailed information as and when specific phases are confirmed and 'go live' dates can be announced.

Please note that no more detailed information is available about the expected deployment plans at this time.

Figure 6: Superfast Northamptonshire:
Expected deployment programme and coverage



**Information on commercial coverage collated through an Open Market Review and Public Consultation undertaken in 2012 (to be re-tested in 2014/early 2015)*



Opportunities

Increasing Commercial Potential

The broadband and telecoms market is a fast moving and globally competitive technology sector. Over recent years we have seen new technology and service products continue to change demand and impact on the way we live, work, play and do business; as a result the world is a very different place to that of a decade ago. The advent of 'smart' and mobile technologies being a case in point to complement fixed-fibre solutions, whilst suppliers continue to develop and offer new products, including for example, the recently launched BT 'on demand' fibre service and advancements in fixed-mobile 4G LTE. Children growing up today have never known a world before mobile phones. Technology expectations, consumption and increasing demand for instant access to information and connectivity will transform business opportunities and practices in the coming decade.

Technology development continues to drive down costs and extend capabilities, including the ability to provide greater download and upload speeds. The number of players in the market and their capabilities and experience continues to grow – the sector appears increasingly lucrative for investors.

Over the lifetime of the Superfast Northamptonshire Project, the extent of current commercial plans could grow. If this happens, it will either increase the level of competition between suppliers in an area or will extend coverage of superfast broadband helping us towards our full coverage target.

The County Council will be re-consulting with the market by 2015, or sooner, to re-test market plans and ensure that the commissioning approach for the final deployment area remains focused on real areas of market failure.

Public Sector Interventions

The commercial potential may change over the lifetime of the Project, hopefully to the county's benefit. However, further interventions, promoted by the public sector, will be required to stimulate the take up of market opportunities. These could involve investment enablers, funding or the provision of resources and assets. The County Council's proposals include all these provisions and it is expected that further details will be set out in an NGA Prospectus in the autumn 2013.

Investment Enablers and Resources

Portfolio of Investment Models

Securing network deployment for the final premises presents new challenges and opportunities and the County Council is keen to engage with the wider telecoms market to maximise competition and potential.

The County Council's contract with BT, which takes us to around 90% NGA coverage (when combined with commercial provision), is based on the BDUK Framework 'gap-funding' commercial subsidy model. To extend deployment towards the full NGA coverage target by 2017 under the same model could require a public sector commitment of well in excess of £20m. The actual scale of the 'gap' is untested. It is also uncertain how far BT's solutions could extend within a viable commercial model and meet value for money requirements of both the County Council and BT.



Notwithstanding this, the BDUK Framework based 'gap-funding' approach will be one consideration for the County Council and the Partnership Board in determining the best solutions for the final premises. However, the County Council is also keen to explore and exploit the growing capability and technologies in the wider market and different appetites for intervention solutions to maximise competition and the efficient use of public funds. The Next Generation Strategy is supplier and technology neutral in this respect.

The County Council is developing a portfolio of potential investment models which could be offered to stimulate market investment and address barriers to extended deployment in Northamptonshire. Potential options will be identified and tested. These will be informed by market feedback to this consultation. The outcome will be set out in the proposed NGA Prospectus. Initial engagement with the wider market to date indicates an interest in such an approach.

However, in finalising the portfolio offer, the County Council needs to better understand the key considerations and likely risks of different models, and to set out the key tests to be considered as part of any investment proposal. The portfolio of investment models should provide flexibility for the market to respond. It should also be used in conjunction with the Next Generation Investment Fund (see 'Funding' page 38) to build a sustainable business case.

This aligns with the County Council's role as an enabler. It also provides flexibility to explore investment models which fall outside of State aid and which satisfy the Market Economy Investor Principle (MEIP). The EU State aid Regulations relating to the broadband market are complex. Gaining the necessary approvals can be time consuming, whether from the European Commission directly, or through the UK National Competency Centre managed by BDUK. The County Council will consider, with relevant bodies, how best to approach such approvals in order to reduce the length of time this could take. Commercially-based investment options could provide for a more timely agreement and expedite deployment solutions. However, this approach is also not without its own complexities and risks in terms of transparency and rigorous tests that any offer does not constitute aid.

The portfolio of investment models could be made available to single suppliers or a consortium thereof. The type of models which are up for consideration and exploration include:

- **Netco's or Asset/Op Co's (arms length asset and operations cooperative companies)**
 - **Joint Ventures (shared risk, shared gain, competitive investment)**
 - **Loans (on commercial terms or soft loans (aid))**
 - **Guarantees to Bank Loans**
 - **Subsidy (time limited and with or without repayment requirements)**
 - **Shared equity**
 - **Gap funding or grants**
 - **Other models (subject to further investigations to identify opportunities)**
-

Feedback from the market on the types of investment models, which could help address barriers, would be particularly welcome. This includes indications of the likely scale of investment requirements – clearly the latter would be dependant on the scale of any solution so could be highlighted as a potential range. Comments can be treated in commercial confidence as requested.

Stakeholder Inspired Investment Models

In parallel to the development of a County Council investment model portfolio, a programme of stakeholder engagement will be progressed to test the appetite, capability and capacity for alternative incentives and solutions which could be progressed with the market. These could include:

Community investment models:

- **Demand Registration** – lowering risk for industry investment by securing formal contractual commitment by local 'end users' to take up services
- **Build and Benefit** – community contribute through self-dig, waiver of wayleaves or paying higher installation costs
- **Community Enterprise: Partnership** – community raise part-finance; industry partner co-invests and designs, builds and operates network
- **Community Enterprise: Concession** – community raise all-finance but offer concession to supplier to design, build and operate network on behalf of the community
- **Community Enterprise: DIY** – community raise finance and design, build and operate network

Asset based and / or anchor tenancy models

These involve buildings or other physical assets, such as CCTV, or other networks, which could be utilised to reduce deployment costs or provide concessions, and/or where a body commits to a broadband service from a particular supplier for a period of time, which provides more certainty about forecast revenues and therefore confidence to make a capital investment e.g. for a public service network or service to a significant business cluster. Potential assets and anchor tenancy opportunities would need to be mapped.

This consultation asks for public sector agencies to consider the availability of potential re-usable assets and/or the timescales for re-procurement of public sector networks which could support anchor tenancy models. Landlords/owners of business parks of sufficient scale could potentially also provide an anchor tenancy attraction to support a wider network solution.

The potential resource offer will inform the NGA Prospectus. Information will be made available in the proposed open Data Bank.

Self-Fund initiatives

These are where local business clusters and/or local people in a particular community pool their own private funding and secure a supplier to provide the required NGA connectivity (this would exclude public sector funding e.g. from parish councils which would constitute State aid). The costs of procuring an NGA solution may be dependant, for example, on the quality and capacity of network in the locality and access to back-haul provision.

Funding

Securing Funding and Potential Sources

The County Council has already been successful in securing funds to support the extension of deployment by 2015 beyond the market's commercial deployment plans. This includes a commitment of £4.08m from the County Council to match an allocation of £4.08m from BDUK via its Rural Broadband Programme, which was secured following Government approval of Northamptonshire's Local Broadband Plan bid in 2011. This combined funding has levered in a similar value in private sector investment from BT to extend coverage to around 90% by 2015.

The County Council will create a **Next Generation Investment Fund** to be used in conjunction with the proposed portfolio of investment models to stimulate private sector investment in the county and maximise leverage for public sector funds.





Managing the Pursuit for Funding

There are a number of potential funding sources which will be pursued to create the Next Generation Investment Fund, including opportunities at European, national and local levels.

The Partnership Board will have a role in advising on which routes should be pursued, providing support and facilitation where required, and helping to identify new potential opportunities for funding.

The County Council will draw on its skills and experience in securing and managing external funding. In addition, it will:

- draw on intelligence received through its partnerships and networks to identify potential funding streams, the respective deadlines and requirements, and to effectively manage any partner support required;
- work with Northamptonshire Enterprise Partnership to identify and pursue funding opportunities including maximising the expertise provided by its European Investment team located in Brussels and its strong relationship with the local business community;
- continue to nurture and support active local communities; and
- utilise the commercial and technical advice and knowledge provided by the County Council's technical consultants to ensure that bids and proposals are well evidenced, demonstrate a strong business case, and are robust.

Potential Funding Sources

Potential funding opportunities currently identified to support infrastructure roll-out include (amongst others):

- Attracting private sector investment from telecoms suppliers
- EU funding (various potential strands, including European Structural and Investment Funds) to be pursued with the support of the Northamptonshire Enterprise Partnership European Investment team
- Rural Community Broadband Funding (Defra/BDUK) – the County Council is pursuing bids in support of the final deployment area under RCBF and continues to support community bid aspirations
- Potential further Government funding through the BDUK Rural Programme (the County Council will continue to push for an early allocation of future funds to support more efficient deployment options) - £300m has been earmarked by Government post 2015;
- Potential Government Urban Broadband Funds – whilst Northamptonshire is currently not eligible, the County Council will continue to press Government to release funds – our call will be substantiated through the offer of a robust commissioning approach and viable solutions through engagement with the wider market which could deliver real economic benefits in respect of the Northampton Waterside Enterprise Zone and our key town centres;
- Other Government and agency funding streams;
- Claw-back under the co-investment contract with BT (dependant on heightened customer take up of superfast services)
- Additional local authority funding (county council and the seven district and borough councils) – potential resources through New Homes Bonus, business rate retention and capital programmes
- Northamptonshire Enterprise Partnership, including potential Growing Places Fund
- Northamptonshire Single Capital Pot funding from 2015
- Town and Parish Council resources including potential allocations arising from Section 106 / Community Infrastructure Levy funds awarded at the community level and local budgets
- Local community generated funding i.e. collective community contributions from citizens
- Collective contributions from business groups or clusters

The success of securing additional local funding support will be dependent on maintaining the engagement of key stakeholders throughout the Project, communicating progress, understanding aspirations and priorities, and evidencing the funding requirement and solution capability.



Intelligent Commissioning

Stage 1: NGA Prospectus

Soft Market Testing

This consultation marks the start of a programme of market warming to raise awareness about the potential of Northamptonshire's offer and the great opportunities here. It also commences more focused soft market testing to better understand the barriers to commercial investment and the type of intervention models which could be effective catalysts, as well as to gauge the level of interest from the wider market.

This consultation is leading towards the launch of a NGA Prospectus to the market, which is expected to be in the autumn of 2013. A Market Day event may also be held in the autumn to showcase the opportunities in Northamptonshire.

The NGA Prospectus will reflect on the outcome of this consultation and provide more detailed information on the commissioning approach. In particular, it will set out more detail on:

- the expected final deployment area and the characteristics thereof;
- the portfolio of proposed investment models which the County Council could offer;
- potential re-usable assets or anchor tenancy opportunities across the county;
- expected strength and availability of the Next Generation Investment Fund and the future outlook;
- the expected technical standards, solutions and requirements which will form the basis of the future commissioning programme; and
- a link to the open Data Bank to provide ongoing intelligence to the market.

The Prospectus will call for expressions of interest (EOI's) from suppliers (or consortia) in the market. EOI's will enable suppliers to express initial interest in the portfolio of investment models and the Next Generation Investment Fund in support of network deployment solutions for premises expected to be in the final deployment area. EOI's could relate to part or all of the final deployment area. Responses will provide the County Council with a clearer picture of the scale of 'ask' from the market, the level of State aid dependant type interventions, and interest in commercially based investment enablers i.e. non-aid.

Such EOIs would be treated as strictly confidential given the commercial interest. They will be vital in terms of evidencing the potential of a competitive market response and any gaps or weaknesses.

The Prospectus may launch early investment opportunities ahead of a full commissioning programme which is expected to start in 2014. This will be informed by responses to this consultation and appetite from the market for such an approach.

The potential for early pilot initiatives may also arise for consideration. The County Council is also open to trial opportunities for emerging technologies to raise awareness in the UK about potential capabilities and to identify localities which could serve as 'test-beds'.

Assessment of EOIs

The outcome of a review of EOI's received will inform the next steps and will provide an indication of the strength and level of interest from market proposals, any themes and 'hot-spots' emerging, and any gaps in the market response in terms of the final coverage geography. Further measures would be undertaken to understand the barriers affecting such gaps and remedial measures considered in support of the full NGA coverage ambition.

The outcome of the EOI phase would inform the characteristics of the full commissioning approach, but would not prohibit any supplier or consortium in participating further. The outcome should ensure maximum competition is maintained whilst ensuring our coverage ambitions are fulfilled.

Stage 2: Commissioning

Market Competition

Formal commissioning and procurement invitations will be launched in 2014. The work undertaken to understand the expected final deployment area, plus the initial market response through Soft Market Testing, will help to inform the approach and the design of any particular 'lots' if deemed appropriate. These 'lots' could be based on different 'core' geographies. Suppliers (or consortia) could bid for one or more lots if this approach is adopted. Alternatively, a holistic commissioning approach may be more favourable for the entire final deployment area to find a single industry partner or partner consortia to co-invest towards full NGA coverage. Commissioning could be flexible to accommodate either approach. Again, views on the strategy and other soft market testing will help to inform the approach.

The need for 'phased' commissioning will be considered and is likely to be dependent upon funding and resources available, any priorities informed by the Partnership Board and the need to address any challenging 'gap' areas as necessary. This may include alternative solutions for any 'final percent' of premises, which are simply too challenging or costly, to provide NGA connectivity. It is expected that technology evolution, driven by market competition over the lifetime of the project, will provide for alternative solutions to NGA capable of supporting broadband services of sufficient quality to meet end user requirements.

Local requirements and evaluation criteria will be clearly set out at this stage and innovative solutions will be encouraged.

The commissioning approach will be managed in compliance with EU and public procurement procedure and State aid regulations.

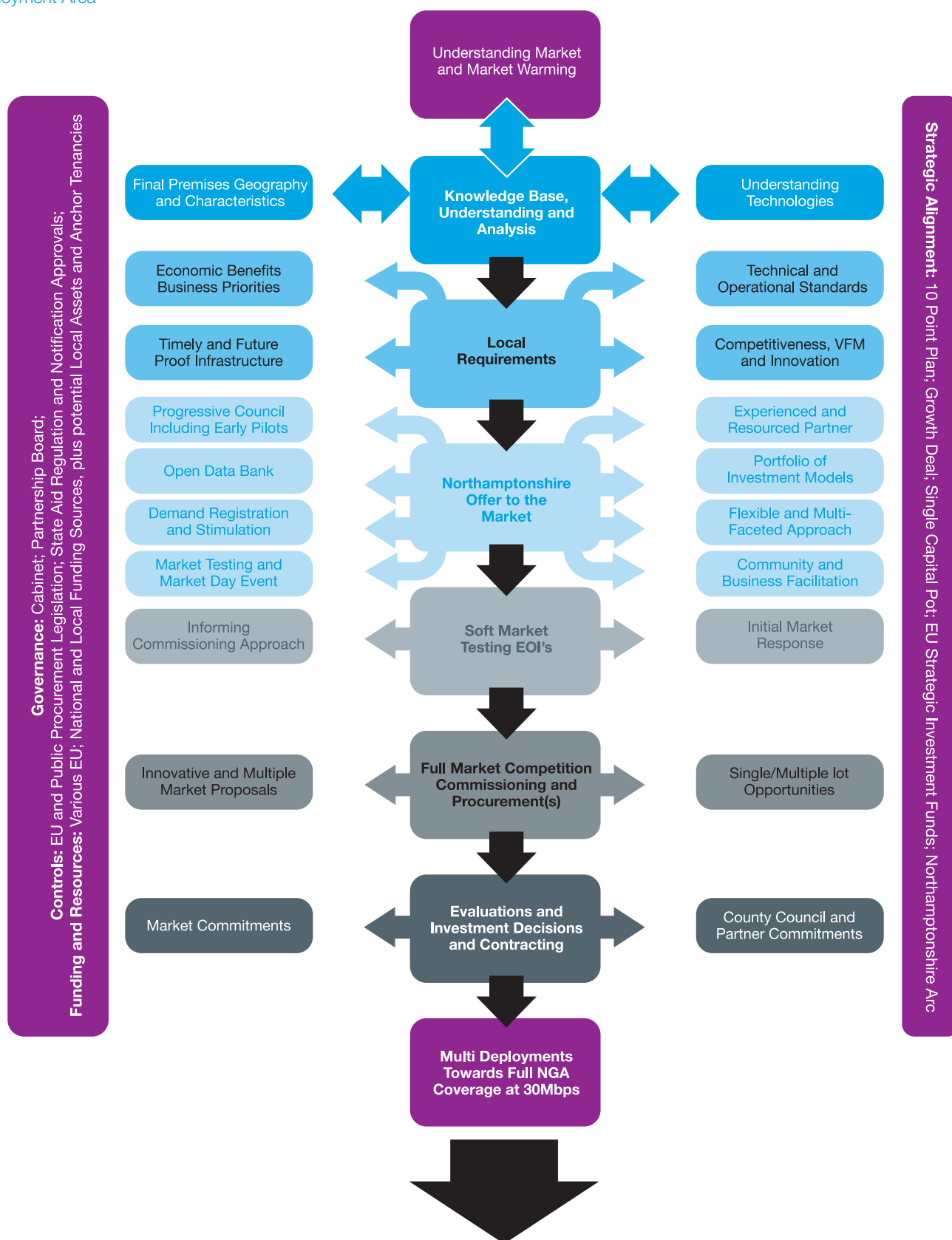
Due Diligence

Market proposals will be subject to a structured and in depth evaluation process to assess the quality, value for money and benefits of the proposals including (but not limited to) scalability of proposals and technology 'future proofing', speed and reliability, access to a Retail Service Provider(s) and services available, as well as the strength of the business case, sustainability and level of investment risk. Decisions by Cabinet to enter into an investment contract or award Next Generation Investment Fund support to any supplier or consortia will be competitively based and compliant with EU and national regulations.

The County Council's approach is shown in Figure 7. A 'SWOT' analysis of the approach is also provided overleaf. Figure 9 illustrates the key components of the NGA strategy.



Figure 7: Northamptonshire Commissioning Approach for the Final Deployment Area



SWOT Analysis of the Approach

Strengths

- Leadership and commitment to achieve headline target for full NGA coverage by 2017
- Extending deployment towards full NGA coverage at the earliest opportunity i.e. in parallel to deployment through the BT contract
- Raising Northamptonshire's visibility and opportunity to the market
- Enabling greater competition and introducing new players
- Promoting greater innovation
- Securing value for money
- Providing for flexibility
- Engagement (market, business, local communities)
- Strengthening Northamptonshire's positioning nationally to secure additional funding, particularly from Government and EU sources

Weaknesses

- Uncertainty about how the market will respond
- Challenge to compare value for money between different competing solutions
- Managing refinements made to the final deployment area as a result of changes to the proposed BT implementation plan following survey and planning
- Infrastructure platforms may not attract Retail Service Provider(s) (RSPs) to provide superfast broadband services for end users
- Separate deployments and solutions may be difficult to manage and for RSPs to work with

Opportunities

- Increased economic growth
- Greater job creation and learning opportunities
- Alignment with 'channel shift' for public sector service delivery and resulting efficiencies for local authorities, education and health sector
- Raising Northamptonshire's profile nationally and internationally
- Breaking new ground in terms of approach and outcomes
- A strengthening wider telecoms and broadband market
- Mobile & fixed mobile 4G LTE enrichment
- Partnership contributions
- Demand registration and stimulation initiatives which add value to Project impacts and outcomes

Threats

- Not being able to secure buy-in from Government, local partners and stakeholders
- Getting the right 'ask' (technical and quality standards of solutions)
- Securing timely approvals for the application of State aid as required.
- Misinterpretation of complex EU State aid and Public Procurement Regulations leading to legal challenge
- Insufficient transparency and evidence to substantiate a 'non-aid' intervention leading to challenge
- Financial risks to the County Council and others associated with the proposed portfolio of investment models
- Uncertainty about the outcome of any future public consultation with the market and required changes to the intervention area

Chapter 6: Governance and Controls

Governance

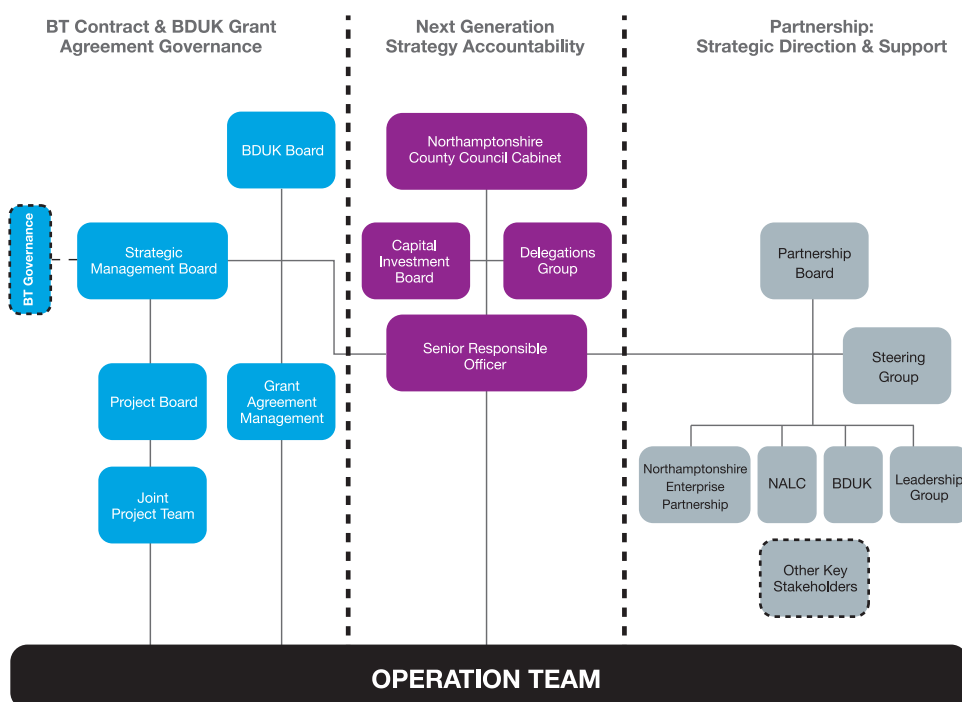
Accountability for the Next Generation Strategy and the Superfast Northamptonshire Project lies with the County Council (see Figure 8). The Cabinet is responsible for key decisions, with certain delegations granted to the Project's Senior Responsible Officer, namely the Director for Environment, Development and Transport, in consultation with the Cabinet Member.

Joint governance arrangements are in place to manage the Contract between the County Council and BT supported through the BDUK Rural Broadband Programme. These include a joint Strategic Management Board, Project Board and co-located joint Project Management Team. The County Council reports to BDUK in accordance with the terms of the Capital Grant Agreement in place with DCMS. This includes reporting on deployment progress against key milestones and also on expenditure and claims.

Strategic direction and oversight for the Next Generation Strategy and the Superfast Northamptonshire Project is provided by the Partnership Board. This involves high level representation from the district and borough councils, business, education, health and local communities. Partnership Board members are also key advocates for the Project and play an important role lending support for implementation initiatives. They may also be holders of potential re-usable assets.

The County Council reports on progress to both the Board of Northamptonshire Enterprise Partnership (NEP) and the Northamptonshire Leadership Group which involves all public sector bodies in the county. NEP is also a key partner for the Project in support of business targeted initiatives, including demand stimulation and the forthcoming Superfast Business initiative.

Figure 8: Superfast Northamptonshire Project Governance:



Controls

Key controls for the Project include:

- **European Commission State aid Regulations** governing intervention in the broadband market. These are complex and exacting and are established through approved Council Regulations and EU Guidelines for the application of State aid rules, including 2013/C 25/01 amongst others. Breach of State aid Regulations could incur serious fines and penalties for the County Council. Expert advice will be sought independently and from the BDUK National Competency Centre, as required, to ensure that the Northamptonshire commissioning approach is compliant with the application of State aid, or robust in meeting tests to demonstrate non-aid application. The County Council's contract with BT is compliant with the European Commission approved National Scheme for the UK (BDUK) SA.33671 (2012/N) and the Project has secured approval from the BDUK National Competency Centre in this respect.
- **Compliance with current Public Procurement Regulations** which enact EU Directives that govern the purchase of supplies, services and works by public sponsored organisations. It is anticipated that revised EU procurement Directives will be adopted into UK law by June 2014 i.e. within the lifetime of the Superfast Northamptonshire Project; these will apply to contracts and concessions and are currently being negotiated by Government with the European Commission.
- **Contract Terms and Conditions:** The management of deployment towards the 90% coverage target by 2015 is governed by the County Council's Call-Off Contract with BT under the BDUK Broadband Delivery Framework. In addition, the County Council has entered into a Capital Grant Agreement with BDUK for the management of BDUK's contribution in support of the 90% target under the BDUK Rural Programme. Should other funding be secured towards the Next Generation Infrastructure Fund, such as Rural Community Broadband Fund, then further terms and conditions required by any 'funder' may apply.



Chapter 7:

Programme and Timescales

Steps	2013
Partnership Board and Cabinet decision on proposals	May – June
Next Generation Strategy consultation published	June – Aug
Understanding the final premise coverage - research data & analysis	June – Sept
Work to better understand the Market and technology capability; including Market Warming	June – Autumn
Funding pursued; Next Generation Investment Fund created and managed	June – 2017
Assets and resources investigated including with key stakeholders	June – 2017
Investigation and development of potential portfolio of Investment Models	June – Autumn
Appetite for Community-led and self-fund models investigated and facilitated	June 2017
Promotion of Demand Registration particularly focus on final deployment area (analysis to inform open Data Bank)	June – Autumn+
Consideration of EU Regulations relating to the application of State aid and managing approval processes as required	June – 2017
Consideration of 'non-aid' market stimulation investment options and risk analysis	June – 2017
Soft Market Testing: Launch of the Northamptonshire NGA Prospectus, Portfolio of potential Investment Models; and the 'open' Data Bank providing intelligence to the market	Autumn
Expressions of Interest invited	Autumn
Review of Expressions of Interest; refinement of commissioning and procurement approach	Winter
Cabinet decision on approach	2014 – 2017
Launch of Commissioning:	
Public consultation with the market on commercial plans to confirm the eligible final deployment area	
Full commissioning approach, including launch of Invitation(s) to Tender	
Holistic approach or 'lots' designed and offered (may be more than one phase depending on market response and available resources/funding)	
Evaluation and Contracting	
Mobilisation – NGA deployment towards full coverage	

In parallel activity



**Progressing deployment plans to the first
© 90% of premises** by the commercial
market and through the County Council's
partnership with BT;

**Progressing Strand 2 of the Next Generation
Strategy: Maximising the Benefits -**
demand stimulation and optimising the
usage and application of NGA enabled
technology; and

Delivery, monitoring and evaluation –
performance management and reporting
on progress



Northamptonshire
County Council

Chapter 8: We Want to Hear From You

How to Respond to Our Consultation

We would like to hear your views on our proposals to secure NGA deployment for the final premises in the county by 2017. In particular, we would like feedback from suppliers in the telecoms market, as well as from key partners, Government and other stakeholders. Feedback will help us to refine our approach in advance of the launch of a NGA Prospectus to the market in the autumn and commissioning which is expected to commence in 2014.

Please send us your responses by 30th August 2013 to:

**Superfast Northamptonshire
Northamptonshire County Council
Room 274 County Hall
Northampton
NN1 1DN**

Or by email to: bigidea@northamptonshire.gov.uk

**Please use the subject description of 'Next Generation Strategy consultation'
For further information about the Project please go to
www.superfastnorthamptonshire.net**



Questions to the Market

The County Council would like to hear from suppliers in the telecoms market. Your early views on the approach set out in the Next Generation Strategy will be important in helping us to develop a stronger programme for success, identify opportunities for immediate action, and to inform the proposed NGA Prospectus, including the development of a portfolio of potential investment models.

We would like to encourage candid responses from the market. However, the County Council understands that there may be commercial sensitivities. If you would like your response, or any part of it, to be treated as confidential then please ensure this is clearly marked in your submission. It would be helpful for the County Council to understand the reason(s) for this.

The geography of the final deployment area in Northamptonshire is expected to cover over 34,000 premises (residential and business) and will comprise a range of localities including a number of the key town centres, the Enterprise Zone, Business Parks/Industrial Estates and the remaining rural areas. We may need to manage a level of fluidity in terms of what the final deployment area comprises, as this will be affected by any changes to BT's deployment plans in the period up to 2015 through its contract with the County Council, particularly following phased survey and planning work. However, the town centres and Enterprise Zone area should be less impacted in this respect.

The County Council would like to hear from suppliers in the telecoms market in respect of:

1. Barriers to investment:

What do you believe to be the key barriers to deploying NGA solutions to the areas expected to fall within the final deployment area?

2. Interventions:

What measures could be taken to remove these barriers and what support or interventions could the County Council offer in this respect, financial or otherwise? How best can the County Council and others encourage market solutions and investment?

3. Solutions for Business Localities:

The Northampton Waterside Enterprise Zone, a number of business parks/industrial estates and the hearts of Corby, Kettering, Wellingborough, and Northampton town centres currently fall within the final deployment area. What particular challenges, or opportunities, do these areas provide for the deployment of NGA or performance equivalent solutions in comparison to the rural areas and the residential market? Do you have a potential solution to serving these areas, and if so please can you provide details?

4. End User Experience:

Deploying the network is only part of the story – the scale of the impact of the Project will be dependant on local take-up of superfast broadband services. In addition, the ability to understand how best to utilise the technology, and connectivity this provides, will also be important (the Superfast Business initiative is an example of a measure to address the latter). Access, affordability and reliability will be important. Does the proposed Strategy for the final deployment area raise any issues in this respect? What quality of customer offer could your solutions provide?

5. Data and information requirements:

The County Council will be launching an open 'Data Bank' alongside the NGA Prospectus designed to support the commissioning approach. It will provide the market with the essential information it requires to help inform the development of a business case for investment, and a 'costed' solution, for the final deployment area. To help us populate the Data Bank with the most relevant information, the County Council would like to hear from you on what key data sets and information are most critical to the market and how this should be provided?

6. Comments and advice on any other aspects of the Northamptonshire Next Generation Strategy are also welcome.



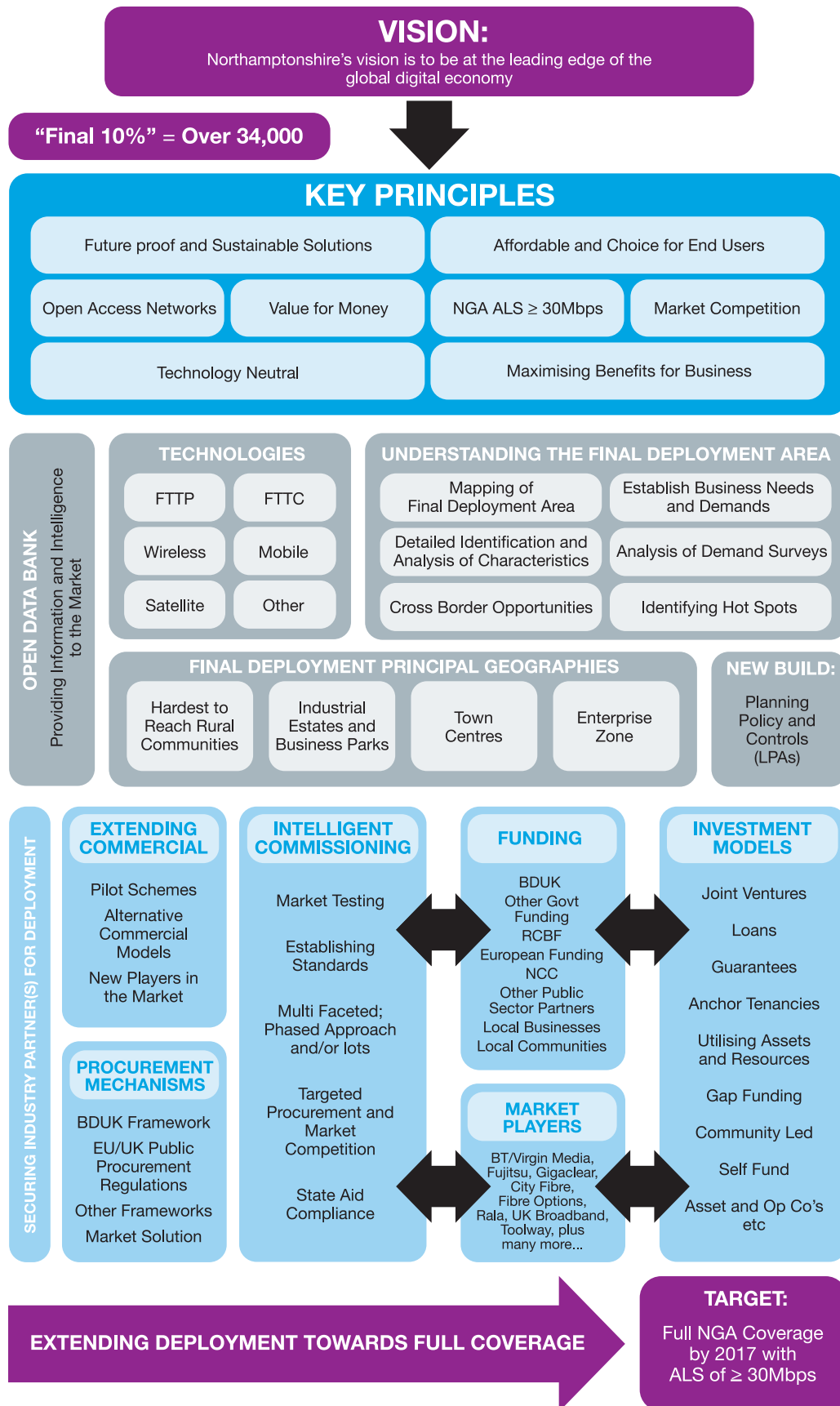
Questions to Local Partners and Stakeholders

The County Council would also like to hear from Government, local partners and other key stakeholders. In particular, we would welcome responses on the following questions:

- 1. What measures could be taken to strengthen the proposed approach to securing full NGA coverage by 2017?**
- 2. Are you supportive of the creation of a Next Generation Investment Fund to work in alignment with the portfolio of potential investment models? Would your organisation support the principle of making a financial contribution towards extended superfast broadband in your area, and if so on what basis (please specify any requirements/conditions)?**
- 3. Do you have any network based or other assets, including buildings on which technology could be hosted, which you may consider offering for utilisation in support of the Superfast Northamptonshire commissioning approach and Project deployment, and if so on what basis?**
- 4. Are you supportive, in principle, of the anchor tenancy model to securing market investment and if so, is your public service network likely to come forward for re-procurement anytime within the next 2 to 3 years?**
- 5. If you are a member of the public or a business owner, would you be willing to act as an advocate for the Superfast Northamptonshire Project. This could involve:**
 - a. coordinating the registration of demand for superfast broadband in your local community or business location (using questionnaires provided by the County Council); and/or
 - b. receiving the latest information direct from the County Council on the Project and sharing this with your local community;
 - c. you can also share your IT skills and knowledge of computers, including how to use the internet, software applications, and different technologies, to open up the digital world and its capabilities to others in your community.

If you would like to volunteer to be a library IT Buddy or learn more about IT training opportunities provided by the Library Service then please contact the County Council at www.northamptonshire.gov.uk and 'Get involved in Libraries' or simply ask a member of staff at your local library. Alternatively, the Government's **GoOn** initiative can also provide further advice on how to get started to provide voluntary support within your community (go to www.go-on.gov.uk).





Contact Information:

E-mail: bigidea@northamptonshire.gov.uk
Web: www.superfastnorthamptonshire.net

