

ABERDEEN CITY COUNCIL

COMMITTEE Enterprise, Planning & Infrastructure DATE 13 September 2011

DIRECTOR Gerry Brough

TITLE OF REPORT Digital Network Development

REPORT NUMBER: EPI/11/204

1. PURPOSE OF REPORT

The purpose of this report is to:

- Advise Committee on progress, since the report to Committee of 9 November 2010, towards the development of a programme to enable the delivery of improved broadband connectivity to domestic and commercial users in Aberdeen.
- Seek Committee support for the establishment of a dedicated team to develop and implement a detailed business plan for broadband delivery across Aberdeen City and Shire, based on the "Maximising Digital Connectivity, Outline Business Case" produced by Mott MacDonald in July.
- Provide an indication as to the likely areas where (Central Government and/or European) funding may be sought and on mechanisms to encourage development where such funding is unlikely to be made available.

2. RECOMMENDATION(S)

It is recommended that Committee:

1. Notes the contents of the Maximising Digital Connectivity study and supports the creation of an improved digital network development through implementation of the reports recommendations
2. Supports efforts by ACSEF (Aberdeen City and Shire Economic Futures) to lobby Scottish Government in an effort to obtain their agreement to the early submission of an ACSEF led bid for funding
3. Supports ACSEF's attempts to identify funding or in kind support to enable the appointment of a technical adviser to work with the current team to agree the action plan going forward and form a dedicated team to implement the Maximising Digital Connectivity study recommendations

4. Supports the submission of an initial bid for up to £2 million of capital funding, from Aberdeen City Council's 2012/13 capital programme, as a possible contribution towards the implementation of those elements of the project that are directly related to Digital Network Development within the City (i.e. along the route of the AWPR/Energetica Corridor(s) and within the Aberdeen City core area)

3. FINANCIAL IMPLICATIONS

There are no current quantified financial implications for Aberdeen City Council (ACC) from these proposals during the course of this financial year. As delivery models are developed areas may be identified where financial support could be seen as providing economic/community benefit. Where these are identified they will be reported to committee, and appropriate spending approvals sought, as part of the ongoing update process.

The business case for a wi-fi digital network in the City Core Area may require the council to enter into an agreement with third parties to deliver services across the city and/or utilise ACC's current property portfolio to assist with implementation. This model could provide an opportunity to generate sufficient ongoing revenue income to avoid the need for any public subsidy.

The business case for creating an open access fibre network along the route of the AWPR/Energetica Corridor(s) and other key corridors in the region may require upfront capital funding and would necessitate the establishment of a management company to deliver. It is anticipated that the long term period for ROI required to deliver may make such an approach less attractive to a 100% private sector investment model. It is therefore likely that some public funding from local, national and European public sources will be needed to deliver this programme. However, since no detailed business plan has yet been produced for this project, the total cost of provision has not yet been determined.

Nevertheless, officers have been reliably informed that, after taking account of long term revenue income opportunities within this model (for the management vehicle delivering the proposed solution), that this project is likely to require investment in excess of £10 million. On this basis, we are recommending that an initial bid be submitted to the Council's 2012/13 capital programme, to enable Aberdeen City Council to invest up to £2 million in this project (or 20% of the capital contribution, whichever is the greater), subject to the exercise of effective due diligence.

4. SERVICE & COMMUNITY IMPACT

Community: The contents of the report relate directly to delivering on key National Outcomes of the Single Outcome Agreement:

National Outcome 1 – We live in a Scotland that is the most attractive place for doing business in Europe

National Outcome 2 – We realise our full economic potential with more and better employment opportunities for our people.

National Outcome 3 - We are better educated, more skilled and more successful, renowned for our research and innovation.

In addition the delivery of Next Generation Access (NGA) with associated affordability levels for disadvantaged communities (geographical and societal) will support and enable community engagement to improve life chances and opportunities.

The contents of the report also relate directly to delivering the economic development aspects of the Administration's Policy Statement Vibrant, Dynamic and Forward-looking:

“The future prosperity of our city depends on ensuring that Aberdeen becomes an even more attractive place in which to do business and so ensure that high quality employment opportunities exist for citizens.”

ACSEF has identified a number of areas within the Economic Action Plan where NGA can play a critical role in transport, global connectivity, attracting and developing skilled people and company headquarters.

Specifically, within the Economic Content of the Energetica Strategic Framework, the partners note:

“At strategic level there are 5 key elements;

ii) Connectivity, both within the Corridor and externally, needs to be radically improved in order to enhance its competitiveness.

For this part of Britain, seeking to compete in the global energy industry, this is a 'no-brainer'. It is an absolutely core consideration. Proposals include;

- Seeking to secure 'digital advantage' through installing world class digital connectivity 5 to 10 years ahead of competition”

Service: The ability of the economic and business development service to deliver this plan is dependent on the budget and resources allocated to this area of work.

5. OTHER IMPLICATIONS

The business case option provides for the potential of ACC partnering with third parties to deliver services across the city and the potential that ACC utilise current property portfolio to assist this delivery. This model may also provide an opportunity to identify ongoing revenue income.

There are no current other implications. If the programme is approved for further development any implications arising will be reported to committee as part of ongoing process.

6. REPORT

BACKGROUND

In the report to committee of 9th November 2010 the case for developing a programme for delivering a next generation digital network in Aberdeen City was presented to Committee. At the time, due to budgetary constraints, ACC entered into a working relationship with Alcatel-Lucent to review the current provision and develop proposals for further development. This review identified the existence of fibre optic networks in the City servicing large corporate customers or providing backbone capacity for Telecommunications companies upon which future delivery models might potentially be based.

Following the announcements on potential funding by central government, and the submissions to ACSEF from Alcatel-Lucent, the ACSEF board agreed to make available funding to appoint consultants to appraise the opportunities for developing a collaborative approach to deliver digital broadband connectivity across Aberdeen City and Shire as a whole.

Following a tendering process, Mott MacDonald was appointed to undertake this work in April 2011.

Mott Macdonald have now completed a first stage research programme to provide ACSEF, Aberdeen City Council and Aberdeenshire Council with an outline business case (“Maximising Digital Connectivity, Outline Business Case”) showing current provision, areas of potential demand, delivery models and funding options to deliver enhance broadband provision throughout the City and Shire. This outline business case was completed at the end of July 2011.

For the region as a whole the outline business case identifies three key projects to significantly enhance broadband connectivity across the City and Shire. These are:

- (1) AWPR
- (2) Energetica and other Development Corridor(s),
- (3) Rural Aberdeenshire,
- (4) Core City development,

Whilst Aberdeen’s primary interest will be in programme areas (1) and (3) there are clear benefits to be gained, in terms of the Region’s economic potential, by supporting enhanced broadband services in rural locations – primarily by attracting highly skilled employees and entrepreneurial activities seeking to make a rural lifestyle choice. In addition there may be wider opportunities that benefit City businesses through the development of additional industries based on world class communications infrastructures (creative industries, industrial digital media, data centres etc.).

The outline business case shows a clear current and future demand from business for enhanced broadband and notes an existing mismatch between

expressed requirements of a large subsection of business users and current availability of service.

Similarly, the majority of the City does not currently receive the most advanced of “current technology” which provides services at up to 20 Mbps (millions of bits per second or megabits per second) and no fibre provision to the home. Most exchanges are only capable of offering maximum download speeds of up to 7.15 Mbps (although BT have recently announced just two exchanges in the region will receive Fibre options by December 2012).

Mott MacDonald’ Outline Business identifies three key projects, namely;

- (1) **An open access fibre access network built along the line of the future peripheral road around the City.** This will connect key business areas such as Westhill and Dyce and the residential suburbs like Kingswells and Dyce. There is also potential to expand the coverage to the strategic growth areas defined by the Aberdeen City and Shire Structure plan namely the Energetica corridor north to Peterhead and the north coast, along the A96 to Inverurie and south to Stonehaven. This will be a wholesale network that will sell capacity and services to national and local service providers who will, in turn, sell services to end customer. There is potential for both Aberdeen City Council and Aberdeenshire Council to invest in this network in collaboration with private industry through the establishment of a special purpose vehicle.
- (2) **A rural access strategy to ensure that there is 100% availability of broadband services in the rural areas and significantly increased access speeds.** This will be achieved through a blend of technologies such as exchange upgrades, deployment of next generation wireless and satellite technologies and the utilisation of the Aberdeenshire network currently serving the Shire sites and schools. Here it is envisaged that the most appropriate business model may be to gap fund a systems integrator or telecommunication operator to undertake this programme of work.
- (3) **Deployment of next generation wireless technology in the Aberdeen’s core city area.** This will enhance competition and deliver improved service provision within Aberdeen City. The City will use its existing property portfolio as an incentive for wireless operators to deploy base stations across the City and possibly be an anchor tenant to deliver a number of key public service and provide enhanced broadband connectivity for businesses, consumers and visitors to the City.

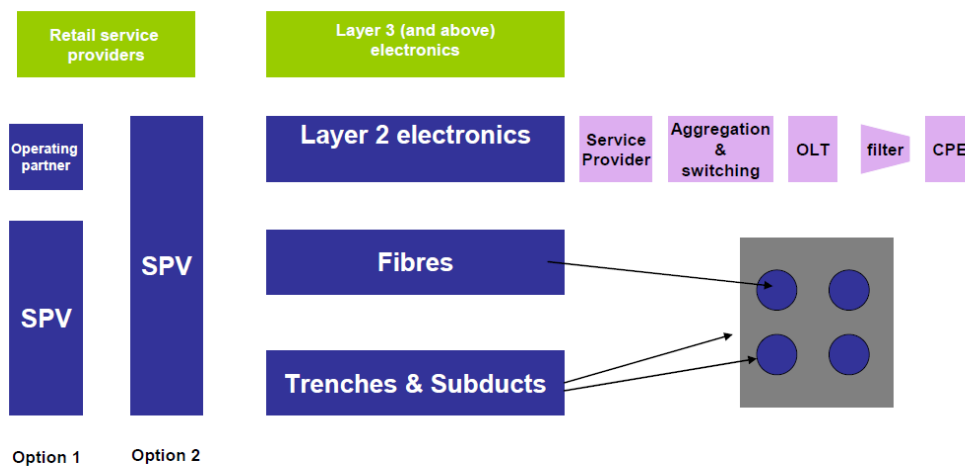
Projects (1) and (2) have the potential to tap into Central Government funding through BDUK programmes (these being managed in Scotland by the Scottish Government) and would also potentially be suitable for European funding programmes.

Project (3) may be deliverable without public subsidy.

Models for delivery of the two projects directly related to Aberdeen City (i.e. Open Access Fibre Network following the peripheral route¹ and City Next Generation Wireless Network) are provided in more detail within the Mott MacDonald report. A brief overview of proposed structures relating to these two projects is shown below.

Open Access Fibre Network (Peripheral Route)

Figure 4.1: Ownership structure



Source: Mott MacDonald

pg 34, Maximising Digital Connectivity

In this model the Public sector would establish a Special purpose vehicle (SPV) with Private sector partners. Capital investment (some of which may need to be provided by Aberdeen City and Aberdeenshire councils) would be used to roll out trenches and sub-ducts and fibre which would continue to remain in the ownership of the SPV with income generated from lease of capacity within the network to ISPs and Telecomm providers. Layer 2 electronics may be either provided by SPV or remain in ownership of private sector partners. Network management and billing would be the responsibility of the SPV.

City Next Generation Wireless Network

This could be achieved through a straightforward contractual arrangement between ACC and a network operator to deliver a service on a commercial basis within the city. ACC may wish to consider within this the value of access to public service buildings and other infrastructure with this either becoming a chargeable fee or a commitment to delivery in return for ongoing revenue.

¹ In the current understanding that the Western Peripheral Route when constructed is intended to have neither services nor be a development corridor.

This would not require the creation of a commercial vehicle and it is not envisaged that public subsidy would be needed to deliver. This would overcome potential issues on state aid.

However ACC may also want to consider other relationships with potential suppliers such as an anchor tenant position whereby key applications and services may be delivered over the network or that the network could be used for the delivery of free public WiFi access. These scenarios would create an “Anchor Tenant” agreement which may prove more attractive to possible operator companies.

NEXT STEPS

The next stage of programme development will be to progress from the proposal stage to clarifying the potential for on the ground delivery. This work will be led by ACSEF, in accordance with the attached ACSEF Management Team Paper (see Appendix 1).

It is proposed that a development team should be established to further define potential solutions and deliver on such proposals. This team will combine staff and resources from partner organisations (Aberdeen City Council, Aberdeenshire Council, ACSEF and Scottish Enterprise) with support from external consultants.

A report for the ACSEF and Scottish Enterprise boards (based on the ACSEF Management Team Report in Appendix 1) is currently being produced by ACSEF’s Development Manager. This report will call for the creation of the proposed development team (in accordance with SE regulations) and outline key roles and responsibilities. It is anticipated that Mott MacDonald may be appointed as external advisors to this group, subject to confirmation that the extension of their current appointment is compliant with the appropriate procurement procedures.

7. REPORT AUTHOR DETAILS

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8. BACKGROUND PAPERS

Appendix 1: ACSEF Management Team Paper “Maximising Digital Connectivity – Next steps and Action Plan”