

**THE HIGHLAND COUNCIL**  
**PLANNING, DEVELOPMENT AND INFRASTRUCTURE**  
**COMMITTEE**

Agenda Item	9
Report No	PDI 30/15

**3 JUNE 2015**

**SCOTLAND'S 8<sup>TH</sup> CITY – THE SMART CITY**  
**IMPLICATIONS FOR INVERNESS AND THE HIGHLANDS**

**Report by Director of Infrastructure and Development**

**Summary**

This report highlights the opportunities arising from a European Regional Development Fund (ERDF) Strategic Intervention to invest in 'smart cities' projects. The report asks Members to note that an application for ERDF resources to support 'Scotland's 8<sup>th</sup> City – the Smart City' Strategic Intervention has been submitted on behalf of Scotland's cities by Glasgow City Council, and to approve, in principle, continued engagement with Scottish Cities Alliance (SCA) partners to progress the projects outlined in this report.

These proposed smart cities projects also further the Council's programme of support for the Highland economy. More specifically the projects assist in securing maximum benefit for the Highlands from EU funding programmes, support the development of our urban centres, and help realise the benefits of the Scottish Government's 'Seven Cities Strategy'.

**1. Background**

- 1.1 Inverness is a member of the Scottish Cities Alliance (SCA), along with Aberdeen, Dundee, Edinburgh, Glasgow, Perth and Stirling and the Scottish Government. Each city is represented by their respective local authority. The Scottish Government is also a member of the SCA. The SCA is focused on three workstreams including low carbon, infrastructure, and smart cities. A smart city uses data and technology to enhance the delivery of city services, promote economic growth, increase sustainability and engage more actively with its citizens.
- 1.2 To further the smart cities workstream Scotland's cities, led by Glasgow City Council, are undertaking a collaborative ERDF funded Strategic Intervention entitled 'Scotland's 8<sup>th</sup> City – the Smart City'.
- 1.3 Projects undertaken as part of this strategic intervention must be centred upon data and technology, and be undertaken in collaboration with at least one other Scottish City. The Strategic Intervention's outcomes include developing innovative city services, opening up data sets, and increasing citizen engagement. The Strategic Intervention will receive £10m of ERDF funds over

the period 2015-20, of which £1.8m is ring-fenced to be used in Inverness and the Highlands. This ring-fenced money must be matched by an additional £1.8m of funding.

- 1.4 As programme lead, Glasgow City Council submitted the application for the Strategic Intervention in March 2015 to the Scottish Government. At the time of writing, the application for these funds is still awaiting formal approval. However, presuming the Scottish Government approves the Strategic Intervention, the second phase of the '8<sup>th</sup> City' programme will involve writing and submitting applications for the ERDF funding required to support individual projects.

## 2. Proposed Projects

- 2.1 To inform the Strategic Intervention submitted, the projects below have been developed in outline form. If Members are supportive in principle of these projects further work will be undertaken to finalise the detail and costings before a second stage application is submitted for ERDF resources.

### 2.1.1 Energy Monitoring Project

The Development and Infrastructure Service of the Highland Council will lead on an energy monitoring project as outlined in **Appendix A**. The scheme will be introduced to several communities, and is aimed at encouraging energy efficiency, reducing fuel poverty, and producing data that can be used to better map how energy is used across the Highlands. An estimated budget of £200k will be required for the three year period of the project. With regards to the project's financing, £100k will come from the '8<sup>th</sup> City' ERDF monies which needs to be matched by an additional £100k.

### 2.1.2 Digital Health – Smarter Communities Project

Led by Highlands and Islands Enterprise (HIE), and NHS Highland Research, Development and Innovation. The aim of this initiative is to develop innovative technology and services that support a more coordinated management of healthcare and social challenges, while promoting economic development in the region. A Health Solutions Hub will be established and will, within twelve months, assess and implement an easily deployed digital health exemplar project. More information about this project is available in **Appendix B**. The indicative budget for the Hub during the initial twelve month phase will be £225k. Of this sum £112.5k will be sourced from ERDF monies while the rest will come from match funding.

### 2.1.3 Transport Smart Cities Projects

The Highlands and Islands Transport Partnership (HITRANS) and the Traffic Section of the Highland Council will lead on coordinating three transport projects. The first initiative will see the upgrade of traffic signal sites to carry technology that improves public transport flow, as well as making junctions more energy efficient. The second project entails investing in the use of traffic data to more effectively manage the transport network, and open up real time traffic and public transport information to passengers. The third transport project focuses on expanding the use of 'smart ticketing' to enable people to

use multiple forms of public transport using the same payment system or ticket. Further information about these transport initiatives is available in **Appendix C**. The Indicative budget for these transport initiatives is £1m over five years. The ERDF contribution to these projects will be £500k while the same amount is required in match funding.

#### 2.1.4 Digital Inclusion Projects

The Digital Inclusion projects will focus on providing technology, skills, support and encouragement to Highland residents who are experiencing digital exclusion. These measures will foster social inclusion and contribute to the continuing development of the Council's online services. At the time of writing, progress is ongoing with regards to finalising the lead partners on the project. The indicative budget for this project is £350k over three years. Of this sum, £175k will be sourced from ERDF funds while an additional £175k is required in match funding. Further information regarding these projects is available at **Appendix D**.

### **3. Next Steps**

- 3.1 Presuming the Strategic Intervention is approved by the Scottish Government, the applications for ERDF funding of the projects outlined in this report will be developed in partnership with SCA and Highland based partners. This 'second phase of the '8<sup>th</sup> City' programme will entail finalising the projects' costings and activities, as well as the match funding arrangements including the Highland Council's contribution. A further report on this matter will be brought back to a future Committee.

### **4. Implications**

#### 4.1 Resource

The Inverness city region's projects that form part of the '8<sup>th</sup> City' Strategic Intervention will be allocated £3.6m, of which £1.8m will come from ERDF funds. The total indicative costs of the projects outlined in this report will be £1,775k over five years. Of this sum £887.5k will be derived from ERDF funding while the rest will come from match funding. In total, £912.5k of ERDF funding from this Strategic Intervention remains unallocated and can be used to support other partnership projects and provide additionality to the projects already outlined in this report. Future reports will be brought to this committee setting out other proposals in due course.

#### 4.2 Legal Implications

The Council will apply robust contract management and procurement arrangements with delivery agents and partners involved with this programme.

#### 4.3 Equality Implications

Equality and diversity considerations are integral to the ERDF operation application process. The Council will, therefore, put measures in place to ensure that its equality and diversity obligations are met in the completion of these projects by internal staff and partners alike. The focus of several of the projects, such as the digital health and digital inclusion initiatives, is on

fostering social inclusion and promoting, through technological means, wider access to the city region's services.

4.4 Risk Implications

There is risk that the Strategic Intervention application for ERDF funds will be unsuccessful. The Intervention's lead partner, however, has been in constant dialogue with Scottish Government in order to ensure a successful application.

4.5 Rural

The '8<sup>th</sup> City' Strategic Intervention's main focus is on the major urban centres in Scotland. In the case of Inverness the whole Highland Council area is eligible.

4.6 Gaelic

There are no Gaelic implications arising from this report.

4.7 Climate Change

Environmental implications are an integral part of the ERDF operation application process. In particular, the energy monitoring project and the transport projects have a particular focus on energy efficiency while the digital health/smarter communities' initiatives and digital inclusion projects will promote access to city services in a way that can reduce carbon emissions.

**Recommendation**

This report asks Members to:

- note that an application for European Regional Development Fund (ERDF) resources to support 'Scotland's 8<sup>th</sup> City – the Smart City' Strategic Intervention has been submitted on behalf of Scotland's cities by Glasgow City Council; and
- approve, in principle, continued engagement with Scottish Cities Alliance and Highland partners to progress the projects outlined in this report and that a further report is prepared for a future meeting of this Committee.

Designation: The Director of Development and Infrastructure

Date: 20 May 2015

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## Appendix A

### Energy Monitoring Project

1. The increasing cost of energy, and changes in the way in which it is generated, distributed and supplied, mean that it is increasingly important to understand how householders use energy so that the region can make smarter use it in the future.
2. Historically, energy planning and purchase is based on average national consumption and use. The Highlands are an area of low and diverse population and therefore the area's impact on national averages is small. Consumption patterns are also likely to vary across the region depending on location, however the absence of research, specific to the Highlands, makes the verification of such a claim difficult.
3. Actual Highland specific statistics will assist with presenting how energy is used differently across the Highlands. This will help lobbying on issues such as fuel poverty, help set specific objectives in funding applications and help justify need. Having profiles of energy use seasonally and daily will help with planning and enable communities to make better use of energy, especially as local energy schemes and renewable generation develop.
4. Detailed monitoring would allow Inverness and its city region to be 'smarter' with its energy use. The planned use of local community based organisations to deliver the project on the ground will allow information to be shared within the community. This delivery structure will, in turn, permit comparison to be made and communities to learn more about energy and its use, along with supplying information that is specific to them. This emphasis on community empowerment would consequently have a local impact on saving energy and contribute to the Strategic Intervention's requirement to engage citizens. The data will be used to develop a tool so that typical energy patterns and uses can be reported and predicted depending on the home location, type and occupancy. At least one data set will be opened for innovation in accordance with the requirements of the Strategic Intervention.
5. A budget of £200k will allow monitoring of approximately 50 households / businesses in seven communities over a three year period, with a degree of flexibility to ensure good representative coverage. With regards to the project's financing, £100k will come from the '8<sup>th</sup> City' ERDF monies while £100k of match funding will be required from the Development and Infrastructure (D&I) budget over a three year period.
6. The Development and Infrastructure Service will lead on this project while a tender will be prepared looking for an organisation experienced in dealing with communities and carrying out energy monitoring. Funding is sufficient for a part time Programme Coordinator, along with a part time local Contacts Officer to set up the system.

## Appendix B

### Digital Health – Smarter Communities Project

1. Led by Highlands and Islands Enterprise (HIE) and NHS Highland Research, Development and Innovation. The aim of this project is to establish a globally recognised centre in the Highlands and Islands for innovative technology and services that support a more holistic management of health, care and social challenges.
2. In order to support the above aim the following objectives will be pursued:
  - establish a significant competitive advantage for healthcare related businesses in the Highlands and Islands thereby attracting new healthcare businesses to the region;
  - deliver higher quality health and social care to individuals in the community;
  - accelerate utilisation of anticipated digital health improvements; and
  - develop, through effective citizen engagement, innovative services and support the opening of data sets for innovation.
3. The key focus areas for the first twelve months will be the creation of a Health Solutions Innovation Hub, and an exemplar project, scoped, with funding secured, and made ready for deployment.
4. The Health Solutions Hub will provide place for individuals and companies to bring project ideas to the attention of the NHS. The unit will screen and assess the project, then act as a partner to the project originator to write the business plan, lead NHS Highland's procurement process and agree monitoring and assessment criteria. A team of three people would be required for this phase while the estimated costs for people resource will be £155k in the first year. Of this budget, £77.5k will be derived from ERDF monies while the match funding will be sought from HIE and its partners.
5. The purpose of the exemplar project is to develop the Smarter Communities initiative with a credible healthcare project requiring little or no further development before implementation. Proposed projects will be assessed and a candidate would be recommended for implementation as an exemplar project. External consultant/ expertise support will be required to assist the 'Hub' team to deliver the above. The estimated costs for this support will be £70k over 12 months. As with the Hub, ERDF funds will contribute half of the costs while the £35k of match funding will be derived from HIE and its partners.

## Appendix C

### Transport Smart Cities Projects

1. Background

Over recent years the Highland Council in partnership with the Highlands and Islands Transport Partnership (HITRANS) have significantly invested in the development of Intelligent Transport Systems to link and coordinate Urban Traffic Management & Control (UTMC) technologies within Inverness and the wider Highland area. The coordination of these technologies ensures that the data these systems previously generated in isolation is collected and wherever possible used to inform better traffic management and public transport solutions, coordinate responses and inform the public.

2. Project Proposal and Outputs

The '8th City' Smart Cities ERDF programme provides the opportunity to build on this recent work and develop a number of innovative projects that will help enable a more integrated transport network across the Inverness city region and also between Inverness and the other Scottish cities. In line with the outputs of the '8th City' Strategic Intervention, the transport initiatives will lead to a minimum of four data sets being opened for innovation and the development of one innovative service.

3. Below is a series of proposed projects that could be implemented over the three year timescale, the benefits they would provide, and the estimated funding required. HITRANS and the Highland Council will lead on developing the Inverness City region's '8th City' Strategic Intervention transport projects.

4. Traffic Management & Adaptive Bus Priority

Numerous traffic signal sites have reached or are close to the end of service life. It is proposed that as these sites are replaced additional functionality will be included in the upgrade so that the signals could be linked into the control network. This improvement would also provide the opportunity for expanding the coordination and data handling. The application of smarter technologies to Traffic Signal installations will allow many more sites to carry adaptive bus priority thus increasing the scope to improve public transport journey times.

5. In addition, the funding would also enable a reduction in the carbon footprint and energy cost of each site by converting these to Extra Low Voltage (ELV) and using LED optics. The total indicative budget of the project will be £500k over five years. Of this sum, 50% will be derived from ERDF monies while the Highland Council and HITRANS will each contribute 25% of the project costs.

6. Live Traffic and Public Transport Information

The availability of real-time transport information is vital to improving the journey experience of both the regular commuter and the first time visitor. Highland Council's Urban Traffic Management Control (UTMC) database currently receives live information on a number of transport modes and

operations. This project would help enable the use of this information to both better manage the transport network and make this data available to the public. It is proposed that the data be made available through a variety of mediums including online and via live information displays.

7. The project will also allow the piloting of innovative technology such as solar powered information displays, air quality monitoring information through existing signage and Bluetooth or similar technology to monitor journey time information, as has recently been trialled on the A9 and other trunk roads.
8. This project, moreover, will seek further enhancements through data sharing with other cities with common transport links and potential harmonisation of data protocols through the UTMC compliance platform that already exists across the Intelligent Transport Systems users in Scotland. The total indicative budget of the project will be £450k over five years. With regards funding, 50% will be derived from ERDF monies while the Highland Council and HITRANS will each contribute 25% of the project costs.
9. Smart and Integrated Ticketing  
There is an opportunity for the Inverness city region to work with Transport Scotland to become a leader in the roll out of Smart and Integrated Ticketing. Many of the journeys made within Inverness to other Scottish Cities and key destinations in the Highlands involve more than one transport operator and mode. Transport Scotland's vision is that all journeys on Scotland's bus, rail, subway, tram and ferry networks can be accessed using some form of smart ticketing and payment.
10. This project could help support an innovative solution for students attending the various campuses of the University of the Highlands and Islands, including the new campus in Inverness. This project would enable students to pay for their transport to their college in advance, encourage greater use of public transport, and also open up the opportunity for numerous other products and services, such as 'smart parking', to be delivered through the Smart Ticket technology. The total indicative budget of the project will be £50k over five years. Of this sum, 50% will be derived from ERDF monies while the Highland Council and HITRANS will each contribute 25% of the project costs.



## Appendix D

### Digital Inclusion Project

1. The smart cities initiative is looking to improve the accessibility of the Highlands and the lives and wellbeing of its residents and visitors through the use of data and technology. There are opportunities to improve the digital access and skills for Highland residents and increase digital uptake. The barriers still remain for the 11% of Highland residents who have never accessed the internet, and those who lack the access, confidence or inclination to reap the benefits of being online.
2. Digital access and the skills and confidence to use it will help enable customers to seek and apply for work, manage their money, make savings, access and engage with healthcare, reduce social isolation and access learning opportunities and Council services. The Digital Inclusion workstream will focus on providing devices, skills, support and encouragement to Highland residents who are experiencing digital exclusion.
3. Digital inclusion is an important aspect of the continuing development of online services. This work fits with the priorities of the Digital First programme, but also contributes to the Welfare Reform agenda. In line with the requirements of the '8<sup>th</sup> City' Strategic Intervention, citizen engagement is one of the key outcomes of this project along with developing innovative ways of delivering city services and opening data for innovation. At the time of writing, progress is ongoing with regards finalising the lead partners on the project.
4. Access  
Under the access theme, this initiative will pilot the provision of connected devices to selected groups of individuals, such as low income tenants, to support them to utilise the benefits of being online. Devices may also be provided to third sector organisations and public locations such as libraries, to support those who support others. Further rollout of provision of devices may follow this pilot. Consequently this activity will promote the delivery of the city region's services via technological and digital means. This strand aims to increase digital inclusion, reduce the region's carbon footprint and potentially reduce costs compared to 'traditional' face-to-face service delivery methods. The indicative budget of this initiative will be £200k over three years. Of this sum, £100k will come from ERDF money while the match will be sourced from the council and potential partners.
5. Confidence  
Complementing the access strand, an initiative will be pursued that is aimed at increasing the confidence of people in using technology. This initiative will entail the delivery of digital skills training for individuals and community groups and promote support networks to support them to engage with technology to support their lives and access Council services. The initiative will also build capacity amongst Council staff to support their clients' engagement with this

technology. Technological solutions will also be developed to create packages that will provide advice and training to particular audiences. This initiative's indicative budget is £100k over three years of which 50% will be provided from ERDF funds while the match will be sort from the Highland Council.

6. Inclination

The final part of this initiative will focus upon engendering a desire amongst target groups and individuals to utilise these technological solutions. In particular the aim is to support community groups, charities and other organisations to support their clients to go online. The indicative budget of this strand will be £50k over three years. Of this sum half will come from ERDF funding while £25k will be derived from match funding sourced from the Highland Council.