**BRISTOL CITY COUNCIL
CABINET**

25 MARCH 2010

Report of: Eileen Armstrong, Service Director, Strategy & Performance

Title: **Connecting Bristol – Creating a World-Class Green Digital City**

Ward: City Wide

Officer Presenting Report: Stephen Hilton, Connecting Bristol Lead

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RECOMMENDATION

Cabinet resolves that:

• improving Digital Connectivity, achieving Digital Inclusion and supporting Digital Business are priorities for the City Council because they enable significant progress towards the ambitions set out in the 20-20 City Strategy – including the development of a low carbon economy

• the Connecting Bristol Programme and specific digital projects described in this report are noted and welcomed because they contribute to Bristol's position as one of Europe's leading Green and Digital Cities and bring tangible benefits to local citizens, businesses and communities

Summary

1.1   Digital Connectivity is one of the cornerstones of a prosperous, ambitious, green and creative city like Bristol.   Connectivity enables the city's businesses to trade more efficiently; helps the city present a 'smarter' and 'greener' face to the outside world and underpins two-way engagement between public services and local communities.

1.2   Bristol has a wealth of digital talent in business and public sectors, in academia   and   in   communities.   Micro-electronics,   Environmental Technologies and Creative Digital industries flourish here.   The Knowle West Media Centre and Watershed lead the way in digital literacy and social inclusion.   Across the city Internet-use is comparatively high (75% have used the Internet in the last week) and a recent assessment ranked Bristol as the fifth most digitally connected city in the UK - with potential to move

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into the top-three. This success creates confidence that Bristol can become a World-Class Digital City. However, there is a need to ensure that all citizens can engage with and contribute to this success.

1.3 The Council's Connecting Bristol programme grew out of the city's success in the Government's Digital Challenge competition. Recently, Connecting Bristol has aligned its programme with the delivery of the 20-20 City Strategy. The opportunity is to provide strong leadership and to build new collaborations, including in Europe, which will enable significant progress towards the environmental, social and economic goals set out in the Strategy, bringing tangible benefits for the city's businesses and communities.

The significant issues in the report are:

2.1   Increasing Digital Connectivity, achieving Digital Inclusion and supporting Digital Business are important and can help Bristol meet the ambitions set out in the 20-20 City Strategy

2.2 A £1million Council budget has been established to help Bristol become a leading Digital City with a low-carbon economy – a "Green Digital" City

2.3 The Connecting Bristol programme includes new and enhanced digital projects in support of the Council's commitment to the 20-20 Strategy.

Policy

3.1   There is a growing body of national Policy and Legislation relating to Digital Connectivity and Digital Inclusion. Recent policy documents include, Digital Britain (June 2009), Digital Inclusion Champion and Action Plan (June 2009), Building Britain's Recovery (December 2009), Smarter Government (December 2009), Social Housing Providers Digital Inclusion Action Plan (February 2010), National Plan for Digital Participation (March 2010). In general, these documents highlight the social and economic value of ensuring that all citizens and businesses are digitally connected and that connection speeds increase to support new digital services.

3.2   Locally, the Bristol Partnership's 20:20 Strategy sets out the ambitions and aspirations for Bristol. It recognises that the Partnership has a key role to play in leading and enabling a rapid improvement in the energy efficiency and carbon emissions from the city's transport, homes and economy. The Strategy commits the Partnership and its partners, including the Council, to improving the city's Digital Infrastructure in order to enable carbon reductions and support delivery in other priority areas.

Consultation

4.1   Internal - the Council has established a crosscutting 20-20 Delivery Group bring together Green, Digital and Economic strands of the Council's work with European and Communications expertise. The Group has been consulted about the development of the projects described in this report.

4.2   External - the Connecting Bristol programme has developed over a number of years and is based on an open process of community and stakeholder engagement. The ConnectingBristol blog and website (www.connectingbristol.org) and Twitter stream (@connectbristol) are used to inform and engage several thousand interested parties. There are regular events and meetings and face to face engagement is undertaken in the South Bristol community by Knowle West Media Centre. The Executive Board of the Bristol Partnership has also been engaged in the programme.

Context

The Story so Far...

5.1   Bristol has a diverse digital economy, which is represented by organisations ranging from Aardman Animations to the Universities and from British Aerospace to the BBC. The city is nicknamed 'silicon gorge' because of the concentration of high-tech Micro-Electronic and Creative Digital enterprises that choose to base themselves here.

5.3   Digital Infrastructure is an essential part of the city's success story. Research by consultants ADIT suggests that Bristol is currently around the fifth most digitally connected city in the UK and suggests that there is real potential to move Bristol into a top-three position.

5.2   Bristol City Council has a history of supporting digital innovation that increases citizens' access to technology and the Web. Interventions have ranged from the first People's Network of free-to-use computers in the city's Libraries, to i-Plus Street kiosks and Street Net - the open city-centre Wi-Fi Zone, which was the UKs largest when it was launched. Bristol was named Europe's leading city for e-Democracy and partners such as Knowle West Media Centre and Watershed are recognised centres of excellence for digital media literacy.

5.4   Connecting Bristol is the Council's Digital City Partnership Programme. Connecting Bristol grew out of the city's success in the Government's Digital Challenge competition. Over the last two years, Bristol and the other nine finalists in the competition (Manchester, Nottingham, Milton Keynes, Birmingham and Shropshire, Sunderland, Stratford on Avon, Norfolk, Ealing and Hull) have worked together with Government via an alliance called DC10plus – the network for change.

5.5   Bristol has been active in all areas of the DC10plus programme and has hosted the National Director's post. Bristol has secured approximately £1.5 million external project funding from Government and the EU, which has enabled a local programme to be delivered.

5.6   The projects that have been delivered include, the South Bristol Bristol Digital Neighbourhoods Programme, which is increasing the community's use of ICT and digital media; The Neighbourhood Carbon Makeover programme; DEHEMs and e3Houses, all of which use technology and digital media to help build more sustainable and environmentally friendly life styles. More details of the existing programme are set out below.

THEME	AIM/ROLE	PROJECTS
Digital Environment & Green ICT	ICT is currently responsible for the same volume of carbon emissions as the airline industry. We have established that Business use of ICT costs Bristol approx. £12million per year in energy costs and produces 67,000 tonnes of C02 (almost 7% of business carbon emissions). Rather than just seeing ICT as an environmental problem, the programme aims to ensure that smarter use of ICT and connectivity help Bristol meet its carbon reduction targets.	- Working with Carbon Trust and local businesses to measure and minimise Bristol's "Techno-Footprint" i.e. the city's ICT related Carbon Footprint - Developing a Green ICT Solutions Database and promoting a Bristol Green ICT Call to Action, recruiting 11 Green ICT business champions. Supporting the development of a council Green ICT Strategy - Supporting Neighbourhood Carbon Makeover in Knowle West, identifying and sharing solutions that help communities make effective use of ICT and digital media to lower their carbon emissions - DEHEMS, and 3 eHouses - EU FP7 projects that are pioneering the use of smart, real-time energy metering in South Bristol and through which we aim to capitalise on the future potential of Green Computing and Smart Energy Grids - Working with VOSCUR to enable take-up of Green ICT in Bristol's voluntary and community sector - Enabling reuse of surplus council computers into Bristol homes.
Next Generation Broadband Access	NGA represents a step-change in digital connectivity. It provides high-speed broadband of a magnitude far greater than anything that has been widely experienced in the UK. NGA is seen as an enabler of new businesses and the future delivery of public services. Connecting Bristol provides leadership and builds collaborations that will enhance the city's high-speed connectivity	- Developing an evidence base - commissioning a Strategic Scoping Study (ADIT) on the city's NGA Broadband needs and developing strategic options for investment - Working with commercial partners and the Council's Invest in Bristol programme to maximise opportunities for inward investment - Supporting Community Connectivity via projects such as Knowle West Web
Digital Inclusion	Many people and communities who already experience economic, social and health inequalities also face digital exclusion. In Bristol, older people, disabled people, less well off families and social housing tenants are amongst the most likely to be digitally excluded. Connecting Bristol aims to address this by ensuring affordable connectivity, increasing skills and capacity and engaging people in creating their own digital content	- South Bristol Digital Neighbourhoods (SBDN), working with Knowle West Media Centre, Citizens on Line and BT to develop projects that engage a disadvantaged community through the use of ICT and Digital Media - Linking with Martha Lane Fox – the Government's Digital Inclusion Champion - Working with Government and the local community to improve online access to information and services for parents and carers through the Gateway into Educational Services GES programme - Championing the Home Access initiative, which provides upto 5,000 low-income Bristol families with a new, high spec computer and free Internet access, - Promoting local e-Democracy via EU funded projects such as Citizenscape and Europetitions and by advising on the development of the Neighbourhood Partnership's Web presence

Proposal

Towards a Green and Digital City...

6. Moving forward - The Council has established a new 20-20 Delivery Group to increase the links between work on Green Capital, Invest in Bristol and Connecting Bristol. The Council has agreed a £1million budget to support this work, which is split equally between Green and Digital priorities. The Digital Workpackages of this programme aim to cement Bristol's position as an innovative Digital City with a low carbon economy – a "Green Digital" City. Details of the digital projects that will be delivered are set out below.

Digital Connectivity	
AIM: to ensure that Bristol benefits from a World-Class Digital Infrastructure	
KEY DELIVERABLES	Key BCC/External Contacts
Wi-Fi Programme Phase 1, the initial idea is to use the council's B-Net to provide internal Wi-Fi connectivity in 30 council and community buildings and libraries. This programme will enable more people to get on line. We will engage the public in suggesting locations that they would like to see Wi-Fi enabled.	Stephen Hilton (Connecting Bristol) & Paul Arrigoni (BCC ICT)
Wi-Fi Programme Phase 2, the idea is to build on the above by providing enhanced Wi-Fi connectivity in homes and public spaces to create the "Digital District." This work is more specialised and will require BCC to identify an expert partner to work with.	
Next Generation Access Strategy, the aim is to continue to focus on high-speed (Next Generation) broadband as a catalyst for economic development. We can build on existing work by consultants ADIT to create a more detailed business case. We can create a Prospectus that sets out the city's ambitions for high-speed NGA connectivity and use this to support discussions with potential investors and commercial partners. The result will be an NGA Strategy/Business Case for the City presented to Cabinet in September.	Director level sub-group: David Bishop (City Development), David Trussler (Business Transformation), Will Godfrey (Finance) supported by Stephen Hilton (Connecting Bristol), Ian MacDougal (Economic Development) and ADIT

Innovative Data Projects	
AIM: to increase environmental awareness and activity through smarter, more creative use of city data	
KEY DELIVERABLES	BCC/External Contacts
Environmental Displays, the aim is to work with UWE to commission a creative digital visualisation of the council's energy use based on the live 'half-hourly' metering data that is now captured in public buildings and/or on live data from the city's air quality sensors The Displays will provide an innovative, playful but compelling way for staff and the public to engage with live environmental data. This work builds on rwork already undertaken by Knowle West Media Centre, Science City and the Council's DEHEMs and e3 Houses EU projects.	Stephen Hilton (Connecting Bristol) Paul Isbel (Energy Management) John Dovey (UWE)
Data Portal, the aim is to increase the range of environmental data about the city that is shared publicly in real-time, for example, data on air quality, traffic-flow, public transport, recycling rates, energy-use, community safety and quality of life. By openly sharing data the aims are to, increase environmental awareness and activity; build linkages with digital companies who are skilled in designing a new wave of smart applications that can exploit data; inform the development of the new Council Web site and position Bristol as a centre for research and business innovation.	Stephen Hilton (Connecting Bristol) Kathy Eastwood (BCC Policy) Paul Arrigoni (BCC ICT) Peter Holt (BCC Comms)

Smart City Applications, the idea is to seek proposals/ideas from communities and businesses about how they would like environmental data to be used. BCC will instigate an innovation competition - commissioning 3 x Green Digital Applications that will have real-world value for Bristol citizens, as well as acting as a showcase for Bristol business innovation. A showcase event will be held to publicise this work.	Stephen Hilton (Connecting Bristol) Claire Reddington (i-Shed) Ian MacDougal (Economic Development)
DEHEMs, e3 Houses, the aim is to demonstrate and learn from innovative projects that use smart metering and other ICT based equipment to help reduce the energy consumption of buildings and tenants	Stephen Hilton (Stephen Hilton) Carolyn Hassan (Knowle West Media

Digital District	
AIM: to develop an exemplar district for the use of ICT and Digital Media to support inclusive low-carbon living	
KEY DELIVERABLES	Key BCC/External Contacts
The Digital District, the aim is to ensure that the connectivity is put to effective use in order to increase digital inclusion and participation and to enable people to use digital resources to live and work more sustainable. This programme builds on the Digital Neighbourhoods programme that is already well-established in Knowle West in partnership with Knowle West Media Centre. The new programme has yet to be fully scoped-out but the deliverables are likely to include, increased outreach with older people and disabled people, a free/subsidised computer scheme, Carbon Makeover Toolkit for Communities, digital links theme groups established across district based on communities of interest e.g. local website, community health resources, learning digital skills, asylum seekers, transport etc.	Stephen Hilton (Connecting Bristol) Alex Minschul (BCC Sustainability) Carolyn Hassan (KWMC)
Tele-Health/Care, the aim is to work with the NHS in Bristol to develop some Tele-Health/Care project priorities for the WoE PCT's and to develop a health innovation bid for the use of Interactive Digital TV	Stephen Hilton (Connecting Bristol) Maya Bimpson (NHS)
Bristol Stories, the aim is to further develop the Bristol Stories programme to act as a showcase for a Green and Digital city	Stephen Hilton (Connecting Bristol) Dick Penny (Watershed)

Other Options Considered

7.1   The project aims to be innovative. It is applying new technologies, such as smart energy meters, location aware "apps" and "pervasive media" as well as looking at how existing technologies such as Digital TV can be used differently, for example, to deliver health services. It is envisaged that further options to apply technologies in support of the 20-20 Strategy will arise as the project progresses.

Risk Assessment

8.1   Failure to improve digital connectivity and achieve digital inclusion will result in Bristol being less well placed to be prosperous and ambitious. In particular, there is a risk that new social, economic and environmental divides will open up between individuals, communities and businesses that can access and benefit from high-speed digital connectivity and those who can't. The Legislative and policy contact for this work is fast moving. Each project will have its risks assessed through robust project planning.

Equalities Impact Assessment

9.1   Digital exclusion focuses on access to and regularity of use of the Internet. Overall, levels of digital exclusion have declined in recent years

although a significant proportion of the population remains digitally excluded. In 2009, 10.2 million adults (21% of the UK population) had never accessed the internet and a further 2 million had not used it for 3 months: 7.8 million households (30% of those in the UK) had no Internet connection at home.

9.2   The extent of digital exclusion is, however, not uniform across different groups of the population:

- 62% of adults who have never accessed the internet (6.4 million) are aged over 65

- 51% of those with only basic secondary school education are digitally excluded

- people earning over £40,000 per annum, are more than twice as likely to be digitally included as those earning less than £12,500 per annum

- More digitally excluded adults need more frequent contact with public services

9.3   In 2009, Government appointed Martha Lane Fox as the Champion for Digital Inclusion.   Martha Lane Fox and the Digital Inclusion Task Force engaged Price Waterhouse Coopers to research the economic costs of Digital exclusion. Some of the findings are set out below.

- 10.2 million adults (21% of the UK population) have never accessed the internet including 4.0 million adults

- (9%) who are both digitally and socially excluded

- Households off-line are missing out on savings of £560 per year from shopping and paying bills online

- People living in 3.6 million low income households which are digitally excluded are missing out on annual savings of over £1 billion a year from shopping and paying bills online.

- Home access to a computer and the internet can improve children's educational performance: if the 1.6 million children who live in families which do not use the internet got online at home, it could boost their total lifetime earnings by over £10 billion

- Unemployed people who get online could increase their chances of getting employment with an estimated lifetime benefit of over £12,000 for every person moved into employment.

- If 3.5% of the digitally excluded found a job by getting online it would deliver a net economic benefit of £560 million

- People with good ICT skills earn between 3% and 10% more than people without such skills. If the currently digitally excluded employed people got online, each of them would increase their earnings by an average of over £8,300 in their lifetime and deliver between £560 million and £1,680 million of overall economic benefit

- If all digitally excluded adults got online and made just one digital contact each month instead of using another channel, this would save Government / Local Government an estimated £900 million per annum

- The total potential economic benefit from getting everyone in the UK online is in excess of £22 billion.

9.4 In Bristol, the Digital Neighbourhoods programme has targeted outreach at digitally excluded people in South Bristol, including older people, disabled people, low income families and carers. UK Online funding enabled the purchase of a mobile training suite which included £3,000 of specialist equipment to facilitate IT access for disabled people. The equipment was provided by Ability Net. The rollout of Knowle West Web has engaged people with both physical and learning disabilities. Additional training and some specialist equipment has been provided to support these learners. The programme is working with carers to train them to support the ICT needs of the people they care for. and Windmill Hill City Farm IT learning centre (also a UK Online centre) has developed specialist skills in working with people with mental heath problems. The accessibility and usability of web sites and digital content remains a central issue and whilst innovations, such as You-Tube's new "auto-caption" (speech to text) functionality bring tangible benefits, there is still more work to be done. The Digital Neighbourhoods programme will continue to build collaborations that promote accessibility, particularly in relation to the Web presence of the new Neighbourhood Partnerships. Connecting Bristol will also ensure that channels other than a computer are considered when addressing Digital Inclusion, for example, interactive Digital TV and mobile phones

Environmental checklist - see attached

Legal and Resource Implications

Legal

The 20-20 city strategy is the sustainable community strategy for Bristol City Council as required by the Local Government Act 2000. The Strategy is of fundamental importance to the city as it is developed and adopted by both statutory and non statutory bodies across Bristol and creates a vision for the city. The budget adopted on 25th February sets out the budget to assist in establishing Bristol as a digital city and the actions set out in the report describe what is to be done

The programme aims to support the Council's public duty on equalities - race, gender and disability

Financial

(a) Revenue

The revenue budget approved by the City Council on 23 February 2010 includes provision of £1m as follows:

£500,000 to grow the city's digital economy, including assistance to disadvantaged communities and the business sector, and

£500,000 to develop and implement an energy plan for the city that will enable Bristol to flourish whilst cutting carbon emissions and reducing energy use.

(b) Capital

None

Land

Not applicable

Personnel

Not applicable

Appendices:

Eco Impact Checklist

LOCAL GOVERNMENT (ACCESS TO INFORMATION) ACT 1985 Background Papers:

None

Eco Impact Checklist

Title of report: Connecting Bristol, Creating a World-Class Green and Digital City
Report author: Stephen Hilton
Anticipated date of key decision: 25th March 2010
Summary of proposals: The connecting digital programme is a collection of projects aimed at improving digital infrastructure, maximising digital inclusion and supporting digital business. This Eco IA provides an overall summary of the programme and projects will be subject to their own Eco-Impact Assessment (Eco IA) to identify the environmental impacts arising from each & identify mitigation measures required to reduce any impacts arising on a project by project basis.

Will the proposal impact on...	Yes / No	+ive or -ive	If yes...	
			Briefly describe impact	Briefly describe Mitigation measures
Emission of Climate Changing Gases?	Yes	+ ve	It is anticipated that the Programme will reduce emissions in the coming decade through digital smart energy management systems, efficient working practices and reduced need to travel. This is not quantifiable at this stage.	Eco IAs of programme projects will consider the impacts and opportunities and identify mitigation requirements on a project by project basis.
		- ve	In the short-term, there will be increased emissions from the use of energy during the installation of digital infrastructure across the city.	
Bristol's vulnerability to the effects of climate change?	No		No significant effect anticipated	
Consumption of non-	Yes	+ ve	It is anticipated that the	

renewable resources?		- ve	programme will reduce consumption of non-renewable energy in the coming decade through digital smart energy management systems, efficient working practices and reduced need to travel. This is not quantifiable at this stage. The programme will increase the use of electricity to power additional digital technology. This is not quantifiable at this stage.	
		- ve	Fossil fuels and other non-renewable materials & products will be used in the provision, maintenance and renewal of digital infrastructure.	
Production, recycling or disposal of waste	Yes	- ve	Electrical waste will arise from the increased use of digital technology.	
The appearance of the city?	Yes	+/-ve	Additional digital infrastructure may change the appearance of the city	
Pollution to land, water, or air?	Yes	+ ve	It is anticipated that the programme will reduce the need to travel and therefore reduce air pollution.	
Wildlife and habitats?	No		No significant effects anticipated.	
Consulted with: Tanya Saker &Alex Minshull, Sustainable City Group.				

Summary of impacts and Mitigation - <u>to go into the main Cabinet/ Council Report</u>
All Connecting Bristol Digital City Programme projects will be subject to their own Eco-Impact Assessment (Eco IA) to identify the environmental impacts arising from each & identify mitigation measures required to reduce any impacts arising on a project by project basis. The programme proposes a series of projects which may bring about increased electrical waste, energy use & a requirement for fossil fuels and other non-renewable materials & products for the provision of digital infrastructure across the city. However the programme will deliver long term environmental benefits for Bristol's carbon footprint and energy use working towards achieving a world class green digital city with a low carbon economy and these outweigh the short term impacts outlined within the Eco Impact Assessment.

Checklist completed by:	
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Date:	11th March 2010
Verified by Environment and Sustainability Unit	Sustainable City Group