Digital Glasgow Roadmap 2014

Glasgow
CITY COUNCIL

Contents

Digital Glasgow Board

Glasgow City Council would like to thank all organisations who participated in working groups to help shape the roadmap in 2013, specific thanks to Glasgow Chamber of Commerce, Glasgow Life, Jobs and Business Glasgow, Scottish Enterprise, Glasgow Kelvin College, Glasgow Clyde College, University of Strathclyde, Glasgow University, ScotlandIS, Interactive Scotland, Skils Development Scotland, Entrepreneurial Spark, SCDI, Wheatley Group, Energise 2-0, ACCESS, BBC Scotland, Future City Glasgow, Microsoft, HP, Biocity Scotland, Scottish Government, Ofcom, INDEZ, Princes Trust, SCVO, Carnegie UK Trust, Citizens Advice Direct, GCMB and Targeting Innovation.

intelligent
transport

innovation

web 3.0

digital
skills

economic

smart living

inward investment

You
Tube

next

generation

open

data

connectivity

convergence

growth

agile working

smart health

infrastructure

world
class city

cloud

Foreword

Glasgow is on a journey – it is an ambitious city with a proud history of embracing challenge, delivering change and capitalising on opportunities. Glasgow continues to demonstrate strong leadership in charting a way towards new growth, economic recovery, and providing opportunities for all its citizens.

The Digital Glasgow roadmap is about helping the city to achieve its key outcomes, economic growth, becoming a world class city, a sustainable city, a learning city, and a city which looks after its vulnerable people. It is about ensuring we have a world class digital infrastructure in place but also supporting the development of services in the city which maximise the benefits of these investments. Effective use of digital services by citizens, businesses and the 3rd sector has the potential to transform the way the city works: boost productivity, drive economic growth, provide jobs, connect individuals and revitalise the way services are delivered.

"Our citizens, businesses and entrepreneurs must have the skills to participate in a digital society, and should be supported in developing these. With the right skills the opportunities are endless, not only for these groups but also for public sector organisations to reform and do things differently, to involve communities in the decision making process and meet the needs of a more digitally skilled population. The award of £24m of funding from the Technology Strategy Board (TSB) to the city to develop its FutureCity demonstrator will assist us on this journey, however we must build on the momentum to deliver a shift in mind set, putting citizens at the heart of how we design and deliver public services.

This is a city strategy, developed in dialogue with and focused on promoting collaboration between the public, third and private sectors. Digital Glasgow is a partnership that pulls together expertise from business, the public sector, universities and colleges, the third sector and grass roots community organisation.

The roadmap set out in this document is the starting point of a journey. For the first time we have documented existing investments, identified opportunities for alignment and established priorities for future collaboration.

I look forward to working with the Digital Glasgow Board and stakeholders from across the city as we take forward an ambitious programme of projects which will make a real difference to the city.

Cllr Gordon Matheson
Leader of Glasgow City Council

"Glasgow will be a world leading digital city by 2017 securing and growing the competitive advantage of the city and providing opportunities for residents and businesses to embrace the benefits of the digital age"
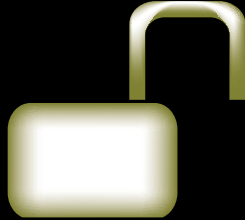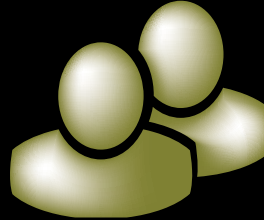
Why Digital?

1. At least 64,000 Glasgow households do not have broadband at home

2. If we can unlock world class levels of participation we can secure £0.65bn of GVA for city
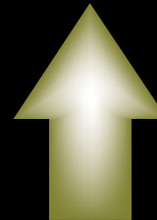
3. ....and create 2,800 new jobs

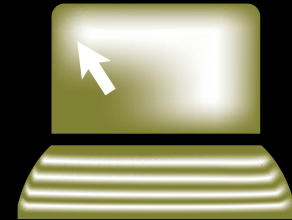4. Only 35% Of SMEs in Scotland trade online

5. The poorest 10% of families could save £270 per annum by being online

6. Only 62% of households can access superfast broadband

7. ....this is set to rise to 95.7% by 2017

8. People with good ICT skills earn 3-10% more than those without

9. For each transaction we move online we can save at least £3.30 to invest in frontline services

10. 70% of those who have the internet can't live without it

1.	MORI Glasgow Household Survey (Autumn 2012)
2.	SCA report to leaders of 7 Cities (August 2012)
3.	SCA report to leaders of 7 Cities (August 2012)
4.	BIS Small Business Survey 2010/FSB Members Survey (2011)
5.	The Economic Case for Digital Inclusion-Race Online (PWC)
6.	"This is for Everyone" The Case for Universal Digitisation, Booze & Co (2012)
7.	The Economic Case for Digital Inclusion-Race Online (2012)
8.	Scottish Government, Digital Scotland Scotland.gov.uk
9.	Scottish Government, Digital Scotland Scotland.gov.uk
10.	The Connected Kingdom, How the Internet is Transforming in the U.K. Economy, Boston Consulting Group (2010)

Current Investment Highlights

Inovation and Incubation
Creative Clyde

A natural home for media, technology and creatively-minded businesses, Creative Clyde is a flourishing and vibrant riverside community where great ideas and creative energy flows. In a nutshell, Creative Clyde is a business hub based on the waterfront in Glasgow - with office space, land for commercial development, and an entire community of creative minds to collaborate with. It has been created in partnership involving Scottish Enterprise, Glasgow City Council, Creative Scotland, BBC Scotland, University of Glasgow, Scottish Exhibition and Conference Centre (SECC), STV, Raise the Roof Productions, Glasgow School of Art, Glasgow Chamber of Commerce, Film City Glasgow and Glasgow Science Centre. The Creative Clyde vision is to expand on the successfully regenerated riverfront by continuing to develop a vibrant, colourful and inspiring riverside community for media, technology and creatively-minded businesses to work, socialise or live. Where originality of thought flourishes and great ideas are shared and enjoyed. And where its unique character and buzz is renowned, capturing the imagination of organisations throughout the UK and internationally.

The Digital and Creative Clyde Launchpad

Eleven creative and digital businesses in Glasgow have won £620,000 amongst them to help develop innovative new products and services.They are winners in a funding competition, The Digital and Creative Clyde Launchpad, announced in January by the UK's innovation agency the Technology Strategy Board in partnership with Creative Clyde. Among their innovative ideas for new products are a digital tag for wireless monitoring and security applications, a 3D virtual reality technology that creates branding and training experiences, and computer games rendering technology that will help make feature films easier and cheaper to produce.

SMEs and ecommerce
eTrade Tester

The eTrade Tester is a new initiative pioneered here in Glasgow by INDEZ and the Glasgow Chamber of Commerce. The process is being used to help Glasgow companies reduce their business risk in trading online and focus their businesses with products and marketing that help maximise successful trade.

Digital Graduate Intern Programme (DGIP)

A new, innovative programme launched in October, 2013, supported and funded by Glasgow City Council. The overall aim of DGIP is to create quality job opportunities for Glasgow graduates while delivering real tangible business benefits to participating Glasgow SMEs. The programme seeks to improve the export competitiveness and performance of Glasgow businesses by leveraging the digital skills of recent graduates. Eligible companies receive a 50% grant towards the salary costs of employing a Digital Graduate Intern for a period of six months. The role of the graduate is to develop and implement a Digital/Social Media Strategy fully aligned with and supportive of the company's agreed business goals and objectives. Graduates are supported in doing this by a comprehensive Digital/Social Media Strategy training and mentoring programme delivered by acknowledged experts in the field. This ensures the dissemination and transfer of 'best practice' digital and social media advice to participating companies. The Programme is also supported by an Online Learning Community open to all current and past Interns. Eligible companies may apply for a grant covering a further 12 months if they wish to retain the services of the graduate after the initial six months Internship.

Digital Participation

Learning Centres

The Wheatley Group are working with Glasgow Kelvin College to provide learning centres in local communities offering tenants the opportunity to further advance their internet skills, prepare for jobs and potentially undertake certified courses. GHA tenant Davie Douglas used the new computers every day at Townhead Village Hall to find a job. He quickly found one he loves – at the centre itself. Davie said: "I didn't have the internet at home so I was up at the centre every day using the computers looking for a job. I used to have my own building business, but the recession hit and I ended up losing my business and my home. I'm starting all over again. I don't have internet at home so I used to travel into the Mitchell Library each day to get online. Now this is on my doorstep. I was here so often that I applied for a concierge job in the hall itself. Now I have a flat I love and a job I'm really enjoying. It's great." The partnership currently supports 23 learning centres with the Village Hall being the first to offer free wifi to users.

Glasgow Life (GL) too provide access to digital learning and information. Over the last year Glasgow Life customers accessed more than one million hours of free internet access via 630 Learning Centre PCs through the city's 33 libraries, with free Wifi also available in 7 library locations. The GL Digital Learning Team offer a 4 week 'Getting Started with computers and the internet' course in all 33 libraries as well as accredited individual computing modules (Internet & Email, spreadsheets etc), ECDL and bespoke digital employability courses and supported 'Silver Surfer' groups at library learning centres. In 2012-13 the GL Digital learning team offered 2194 classes across the city, recording 10,468 attendances and 2368 registered learners for accredited courses.

Broadband Infrastructure
Wheatley Group Connectivity Pilots

The Wheatley Group is undertaking two pilot projects to develop a model for achieving a low cost broadband solution for its tenants which can be replicated across the social housing sector. The first study, which has been extended to a year-long project, provides the internet to 12 homes in low-rise properties. Different technology solutions are being tested and each household has been given a device (laptop/tablet) to access the internet as well as help and support to get online. The second pilot is a Digital Demonstrator project and is a joint initiative with the Scottish Government and BT. The aim of the study is to test the feasibility of developing a low-cost broadband solution in a multi-storey block. The chosen block includes 138 units and a range of customers including single person households and temporary flats for homeless people. Together these two pilot studies will help the Wheatley Group plan for an effective delivery of internet connectivity to every home for social rent and to test the costing assumptions to deliver an affordable model for social housing.
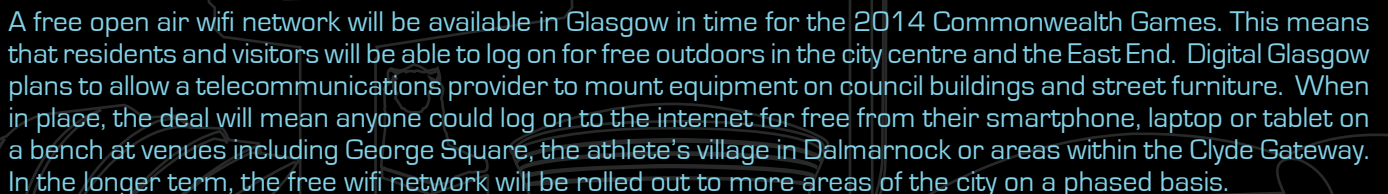
Employment, Skills and Training
Digital Apprentices

July 2013 marked the beginning of Glasgow City Council's Digital Apprenticeship Programme. Run by Education Services, the programme has recruited 29 digital apprenticeships, based in secondary schools across the city. Each Modern Apprentice (MA) will support the school to identify the most vulnerable pupils who require support from partners, increase participation in learning and training, deliver improved post-16 transitions for all young people and identify how the use of technology can be integrated into current service delivery. They will undertake an SVQ Level III in Advice and Guidance and will have the opportunity to increase their digital skills by undertaking nationally recognised specialised IT certification which will give them an excellent skill set at the end of their 2 year apprenticeship.

Wireless Infrastructure
City Wifi

A free open air wifi network will be available in Glasgow in time for the 2014 Commonwealth Games. This means that residents and visitors will be able to log on for free outdoors in the city centre and the East End. Digital Glasgow plans to allow a telecommunications provider to mount equipment on council buildings and street furniture. When in place, the deal will mean anyone could log on to the internet for free from their smartphone, laptop or tablet on a bench at venues including George Square, the athlete's village in Dalmarnock or areas within the Clyde Gateway. In the longer term, the free wifi network will be rolled out to more areas of the city on a phased basis.

Digital Public Services
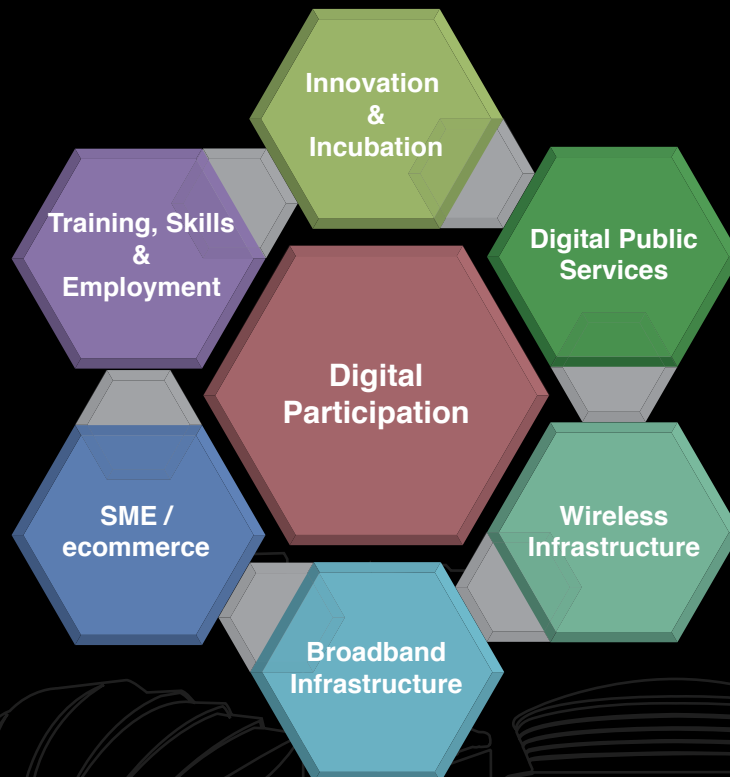### Future Cities Demonstrator

Glasgow is well underway with an ambitious £24million programme aimed at using technology to make life in the city smarter, safer and more sustainable. More than 200 data streams have been identified across the city. They include information on everything from bin collections to footfall in retail areas. Some of this data is already available to the public but often it is held in isolation, difficult to access and even harder to understand. It is not personal information but relevant data about the city. The new City Technology Platform will integrate the data streams, analyse the information, present it in a meaningful format and make it open for use by the public, businesses and academics alike. It will be accessed through websites and smartphone apps including a data portal, a mapping portal and the MyGlasgow dashboard. It will mean people could potentially use their smartphones to access real time information for practical purposes like finding an empty off street parking space in the city centre or monitoring the energy use in schools. The programme is making active use of social media and more is available by following the journey on twitter @openglasgow.

The Digital Glasgow Vision

The success and achievement of Glasgow's ambition to become a world leading digital city by 2017 rests on 2 core requirements, Firstly, a world class digital infrastructure is essential to supporting the wider transformation of the city, attracting new businesses and jobs and supporting major regeneration projects. The second of equal if not greater importance is ensuring Glasgow businesses and residents have the skills required to create and access the opportunities that digital has to offer.

In order to deliver on both, the Digital Glasgow Board have identified eight workstreams which together will deliver on the vision for Glasgow to be a world leading digital city.

Benchmarking and Impacts

Innovation & Incubation

Training, Skills & Employment

Digital Public Services

Digital Participation

SME / ecommerce

Wireless Infrastructure

Broadband Infrastructure

The Digital Glasgow Board has mapped out current activity, identified gaps and established collective priorities across each of the workstreams. The following sections present the key highlights of this work. In each workstream we will continue to collaborate and work in partnership as we take forward the initiatives identified.

"Glasgow will be a world leading digital city by 2017 securing and growing the competitive advantage of the city and providing opportunities for residents and businesses to embrace the benefits of the digital age"

Workstreams, Objectives and Roadmap

Broadband Infrastructure

Where are we now?

The city is well served with broadband services through both the BT Wholesale and Virgin Cable TV networks. A competitive market exists with a wide range of providers offering services to residents and SMEs including Sky, Talk Talk etc.

Currently the average speed of a broadband connection in the city is 13.1 Mbit/s although 7.6% of premises receive a service below 2 Mbit/s.

BT and Virgin are taking forward a major investment programme and rolling out superfast (24 Mbit/s+) services which are currently available to 66.5% of premises in the city (Dec 2013). Glasgow currently lags significantly behind other UK cities in this commercial superfast broadband rollout.

For larger businesses, connectivity through leased fibre and ethernet technologies is widely available across the city with a competitive market from over 30 providers

"Glasgow's broadband infrastructure is an enabler for growth across all economic sectors and increasingly relevant to inward investment decisions. The aim is to ensure the city has a globally competitive and modern communications infrastructue by 2017"

Ofcom Fixed Broadband Map 2013, http://maps.ofcom.org.uk/broadband/

Actions from the Roadmap

● BT and Scottish Government through the Rest of Scotland Broadband Step Change programme will invest in broadband networks which will ensure that at least 85% of Glasgow premises have access to fibre broadband by 2015 and at least 95.7% by 2017.

● In partnership with the Scottish Government and the Scottish Cities Alliance, we have commissioned a consultant to undertake stakeholder consultation across the city and develop a series of strategic options to build further on this investment and secure world-class infrastucture in Glasgow. This work will inform future local and national strategies and act as a catalyst for securing investment to the city.

● We will continue to liaise with BT, Virgin and other communications providers to ensure commercial rollout of services is taken forward as a priority within Glasgow and to stimulate demand through the digital participation workstream.

Measures of Success

To monitor progress we will compare the following measures on an annual basis as part of programme monitoring of this roadmap:

● % of premises with access to superfast broadband.
● % of premises receiving a service< 2Mbit/s.
● average downlink speed of a broadband connection.
● comparison to UK Capital and Core Cities.

Rest of Scotland: Planned Rollout
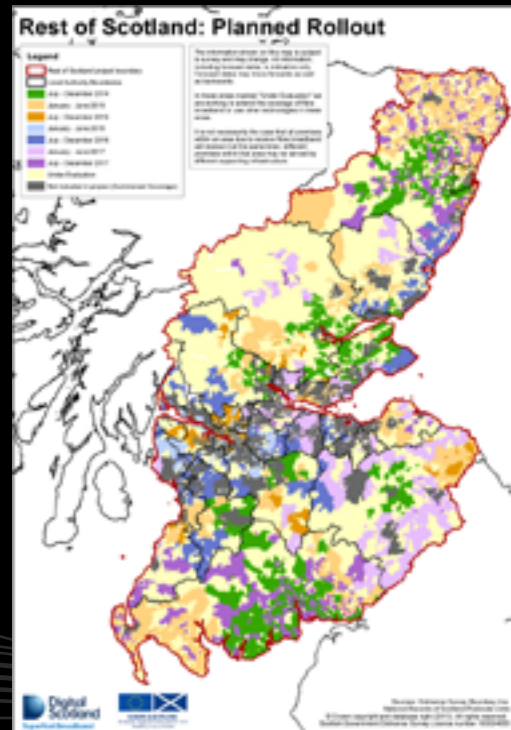
Wireless Infrastructure

Where are we now?

The city was one of the first locations in the UK to benefit from 4G with the rollout of the EE and Vodafone networks in 2013.   Other network providers are now finalising their plans and services are expected to be introduced across the city over the next 12 months.

Free wifi is already available at Glasgow airport and at SPT underground stations. It will be rolled out at Anniesland, Central, Queen Street, Dalmarnock, Mount Florida and Partick rail stations by 2014.

As outlined within the Current Investment Highlights section on page 8, the Wheatley Group are currently piloting the provision of free wifi within one of their high rise properties in Knightswood. The project commenced in September 2013 and will run for one year.

Wifi is scheduled to be installed by First Direct on 300 buses by the end of 2013 and is available on some McGills buses. Major intercity trains have wifi services including free wifi between Scotland's cities.

Free wifi is available in 7 libraries and community facilities across the city.   Venues such as Hampden, Celtic Park and the SECC also have commercial wifi services.

"Glasgow's will have world class wireless capabilities and a free wifi service across the city supporting digital participation, providing a platform for new approaches to delivering services, helping promote the city and attract investment."

Glasgow

Wireless Network

Actions from the Roadmap

● We will establish a strategic 'concession' partnership with a telecommunications provider to rollout a Glasgow branded free 'wifi' service in city centre public spaces and streets with high footfall by Summer 2014. Coverage will be extended across the city based upon success of this initial rollout.

● We will work with the Commonwealth Games Organising Committee to enhance 3G mobile coverage in and around games venue by Summer 2014 and ensure a legacy to the city.

● We will continue to rollout free wifi in Glasgow Life facilities and work with Glasgow Housing Association as they trial wifi services to tenants.

● We will work with existing operators to market services, and develop a 'Glasgow' standard welcome page with simplified authentication for users.

● We will work with the Digital Glasgow Digital Participation workstream to assist in developing a single digital access map (fixed and wifi) for the city. Opportunities to link this work to the mapping portal and commitment to the visualisation of data by Glasgow Future Cities project are being explored.

● We will work with partners to encourage the expansion of free wifi provision by businesses such as hotels and cafes across the city.

Measures of Success

To monitor progress we will compare the following measures on an annual basis as part of programme monitoring of this roadmap:

● % of city with coverage from a free 'wifi' service.
● % of properties within 500m of a free 'wifi' service.
● service usage measures - unique visitors/ sessions.
● % availability of service.

Digital Participation

Where are we now?

More and more Glasgow citizens are seeing the benefits of digital. The most recent Glasgow household survey reports [1]77% of residents use the internet at home, an increase of 4% in just 6 months. Although increasing, uptake in Glasgow remains below that of other UK cities, with at least 64, 000 households not online, particularly those most disadvantaged.
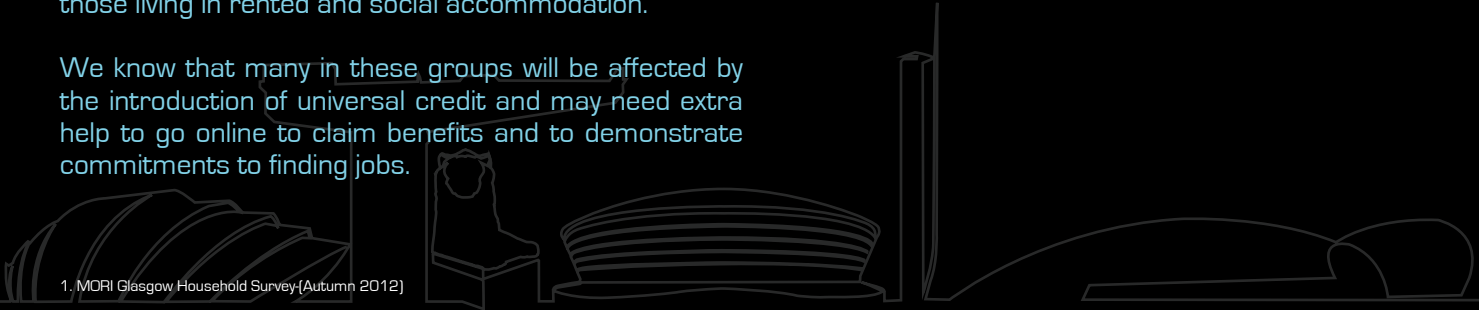
Digital increasingly influences all aspects of how we work, learn and enjoy life in our city. This is particularly true in Glasgow which is now home to the £24M Future City/ Glasgow Demonstrator, which through the integration of data and city systems will revolutionise the citizen's experience of the city.

Digital can improve employment opportunities, allow households to save money on goods and services, improve access to public services and enable contact with distant friends and family.

To increase participation we have identified those who are less digitally connected, the elderly, unemployed and those living in rented and social accommodation.

We know that many in these groups will be affected by the introduction of universal credit and may need extra help to go online to claim benefits and to demonstrate commitments to finding jobs.

"All citizens of Glasgow will be confident to choose how, when and where they can go online and be supported as they need it. They will be able to safely communicate, browse and transact online. They will be able to participate as citizens online and influence decisions in their communities as part of a world class digital city."

1. MORI Glasgow Household Survey (Autumn 2012)

Actions from the Roadmap

●	With support from both the Digital Glasgow Wireless Infrastructure workstream and Future Cities team, we will lead on the development of a "digital access map" for the city and develop a plan to provide a comprehensive network of digital access points, training and support across the city.

●	We will develop a plan to engage with and support the most digitally unconnected groups of citizens, the elderly, unemployed, and those living in social and rented accommodation, to go online.

●	We will create a basic digital skills standard to be offered in every digital access point and develop a 'digital skills journey' to channel citizens to build on their skills level and point them to locations where support can be found. This will link to the Future Cities literacy programme as appropriate.

●	We will work together to address challenges such as welfare reform where the government is moving to digital by default and seek to secure external funding to support digital inclusion initiatives across the city including co-ordinating a bid to the Big Lottery Digital Inclusion fund.

●	We will work to ensure Digital Glasgow partners sign up to the Digital Participation Charter.

Measures of Success

To monitor progress we will compare the following measures on an annual basis as part of programme monitoring of this roadmap:

●	% of residents accessing the internet, both at home and on the move.
●	% of residents transacting online.
●	% of residents accessing public services.
●	Increase in no's registered for formal learning courses (GL, JB and Glasgow Kelvin College).
●	Track the no of Glasgow partners who sign up to the Digital Participation Charter.
●	Track the no of digital access points.

Digital Public Services

Where are we now?

As a city we are committed to making it easier for customers to access public services. Providing services online meets a growing demand, to provide ways that deliver a positive customer experience and which over time, will also help the council reduce its administration costs.

Currently Glasgow residents can complete a basic range of transactions 24/7 online, including making payments, calculating entitlement, applying for grants, requesting services, providing feedback, submitting a complaint and apply for licenses.

The launch of the My Glasgow app in July 2012, enhanced our offering by providing a 'report it' facility via a mobile channel. Citizens can report issues that affect their local area such as pot holes and fly tipping. This has proved a positive experience with 75% of customers saying they would be happy to use this type of technology for other contact needs.

The most recent Glasgow Household survey reports that 77% of residents use the internet at home. However our online services were used by just 4% of those surveyed. This therefore represents an opportunity to offer customers more and better access to online services. Glasgow is not only putting the citizen at the heart of the delivery of online transactional services, but more widely, the design of all services, thanks to the award of £24M to the city from the Technology Strategy Board.

GCC My Glasgow Smart App review July 2013

This is helping Glasgow in its mission to provide modern data driven responsive public services and information.

The Future City programme seeks to deliver practical benefits for residents and visitors. The programme is far-reaching and encompasses several different projects. They include:-

● The creation of an Integrated Operations Centre managing a new futuristic public space CCTV network and TRAFFCOM roads management systems.

● Sustainable Glasgow - addressing issues such as energy conservation and generation, greater use of green technology such as white street lighting, air pollution and the integration of active transport (walking and cycling) routes with public transport networks.

"Glasgow citizens will be able to access more services through digital channels. We aim to provide a wider range of improved online services, giving our customers more choice in how they engage, interact, source information and transact with us."

● The creation of a Big Data Store collecting and analysing information from previously unconnected databases to influence future city services and developments and make it more accessible to more organisations.

● Setting up a centralised City Dashboard giving agencies and the public real time information on subjects like traffic flow, weather alerts, accident and emergency waiting times, rail and bus services and roads gritting. Access will be via smartphone apps.

MORI Glasgow Household Survey (Autumn 2012)
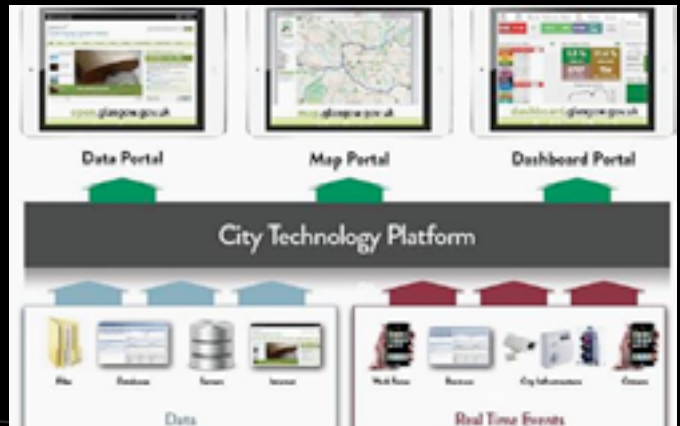
Actions from the Roadmap

● We will work with our customers to develop our customer insight knowledge and channel strategy. Profiling our customers will help us to understand their needs and expectations of a digital service. A range of demonstrator projects will be implemented in line with this to develop our digital channel strategy.

● We will reorganise ourselves to focus on 1. the customers experience, placing that at the centre of our business processes, 2. delivering more efficient, effective, and integrated services that meets our customers channel access needs and 3. building our technology platforms upon which end to end public services can be provided.

● We will develop and improve the range of services offered through digital channels providing customers with a wider range of online transactions and easier access to information about our services.

● We will adopt a more interactive approach with our customers, creating channel shift opportunities and supporting them to engage with us digitally, through promotion of our digital channels that offer a better customer experience and actively working with other programme streams to signpost and direct customers to online services to improve their choice of why how and when they interact with us.

● We will provide improved and more responsive city services through the introduction of Glasgow City Management System, a technology infrastructure to enable the integration of city systems and data across multiple agencies. This will provide the platform on which a data repository, an intelligent operations platform, city dashboards and a variety of citizen, business and academic engagement opportunities will sit and further development of the My Glasgow app.

● We will deliver service improvements through the Future City/Glasgow Integration Demonstrators identified, health, energy, transport and public safety. The Integrated operations centre for example will enable the collocation of public space CCTV and Traffcom allowing sharing of assets, the development of more intelligent working practices, cost savings and community reassurance from improved response to crime prevention, enhanced incident management and emergency response.

Measures of Success

To monitor progress we will compare the following measures on an annual basis as part of programme monitoring of this roadmap:

● Number of available and improved online services.
● Customer use of online.
● % of citizens who engage with council through web/mobile channel.

Training Skills and Employment

Where are we now?

Glasgow is a "learning city". The city is home to 5 world class higher educational institutions; contributing approximately £1Bn to the city economy, and has the highest student population in Scotland at almost 133,000 students.

The city also has three large further education colleges who work together to deliver a Regional Outcome Agreement that responds to the priorities of both the Scottish Funding Council and the city's Single Outcome Agreement. They deliver education and training for businesses and apprentices, school leavers and adults. They contribute to the Senior Phase of the Curriculum for Excellence and provide a range of additional efficient learner journeys from school to university as well as to employment.

Glasgow has a strong skills offering, with large employers, including JP Morgan's European Technology Centre locating in the city for this reason.

The city is also a recognised centre of innovation, with the University of Strathclyde choosing to locate the International Technology and Renewable Energy Zone (ITREZ) and Technology Innovation Centre (TIC) here.

Scotland wide however there is a skills gap. As a nation we are both not producing enough IT specialists, or those with an understanding of the link between IT, digital and business transformation, resulting in only 35% of our SMEs having an online presence.

Our citizens, entrepreneurs and SMEs need digital skills in order to both understand and take advantage of the opportunities presented by the Future City/ Glasgow project.

"Glasgow citizens will have the digital skills to not only consume services but to be the producers of new goods and services, harnessing the potential of digital technologies to drive growth, stimulate innovation and improve productivity."

www.glasgoweconomicfacts.com

Actions from the Roadmap

● Partners will work together to give Glasgow citizens the skills not only to use digital technologies but also to create digital businesses and technologies.

● We will analyse the skills journey and focus on pathways, e.g. "exemplars" of the different ways that citizens may access learning/employment in the digital sector, to identify any gaps and routes through collaboration and partnership working to fill those gaps.

● We will explore the long term needs and requirement for digital skills across all sectors including IT and how these can be met, whilst implementing short term measures to improve the situation now and make us more competitive as a city.

● We will work together to excite school age young people and those currently under represented in the sector, particularly women, of the potential opportunities and careers in the digital sector.

● We will work as partners to develop an integrated marketing and communications campaign promoting digital skills in education and learning across the city to all stakeholders including employers. This will tie closely to the Future Cities literacy and engagement programme.

● We will continue to invest in improving access and modernising IT in schools (GLOW, refresh, social media, teachers CPD).

● We will work together to ensure an effective channel between schools and higher education and employment.

Measures of Success

To monitor progress we will compare the following measures on an annual basis as part of programme monitoring of this roadmap:

● % increase in number of IT graduates.
● Greater online presence of SMEs.
● % increase in the number of digital commonwealth apprenticeship places.
● % increase in under represented groups in IT particularly women.

SMEs / E commerce

Where are we now?

The Glasgow city-region generates about £2.4bn GVA directly and £1.8bn indirectly from ecommerce which supports 50,000 jobs and a further 36,000 indirectly. However only 35% of SMEs are trading online and Glasgow is perceived as lagging behind other cities in the UK.

Glasgow is a city built on trade. Almost all forms of modern trade are increasingly being carried out online. This trade is becoming ever more global and involves web design, digital marketing, advanced logistics and transport. Glasgow's digital media quarter is a key centre for web technology for design and marketing whilst the city has a rapidly increasing business sector making use of IT-led distribution and fulfillment.

Glasgow has a strong concentration of digital businesses and ground breaking support initiatives such as Creative Clyde, the Digital Media Quarter and Digital Design Studio on Pacific Quay.

Extensive support is available to help businesses become more digital through Glasgow City Council, Princes Trust, Glasgow Chamber of Commerce and national agencies - Scottish Enterprise and ScotlandIS. There is also a wide network of support available from local and national IT companies and advisors.

There is scope however for us to achieve more by working together and building from what is in place.

Scottish E-Commerce Study, Scottish Enterprise (2012)
BIS Small Business Survey 2010/FSB Members Survey (2011)

"Glasgow businesses will be able to compete with the best nationally and internationally through the use of digital tools, technologies and ecommerce. They will have access to integrated business support and advice which helps them each step of the way in developing their effective use of digital technologies to increase their competitiveness. Glasgow will also have a thriving digital sector."
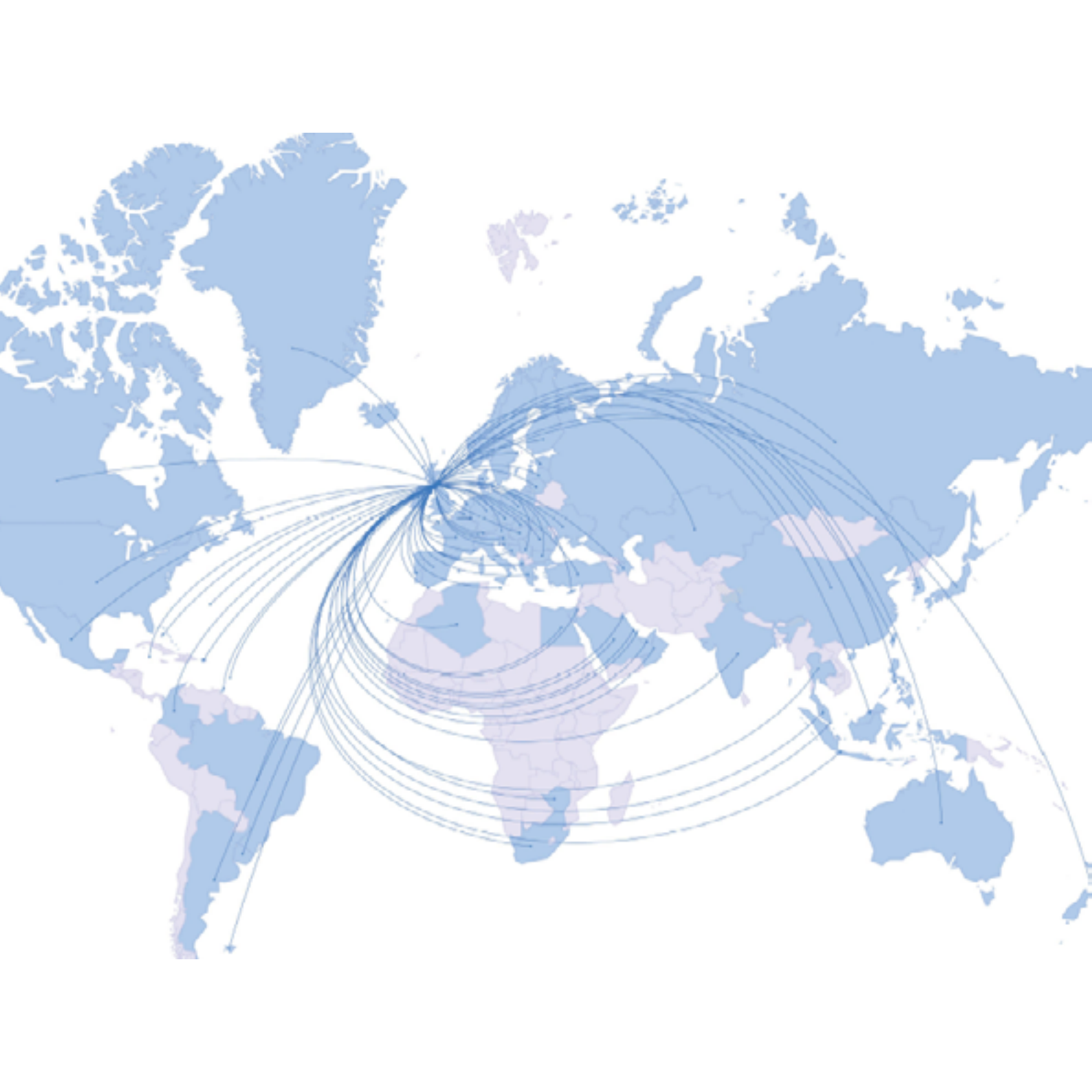
Actions from the Roadmap

● We will work as partners to develop an integrated marketing and communications campaign promoting digital business support in the city, both public and private sector.

● We will put in place a segmentation approach to target business support to particular sectors and levels of digital maturity, building from awareness sessions through to tailored support for implementation.

● We will reconfigure services to deliver an enhanced package of business support, learning from best practice elsewhere with a greater focus on international trade/ecommerce, new business models, productivity and on implementation of digital strategies (with a particular focus on exporting internationally).

● Ecommerce and building new business models will be given more emphasis with projects such as the development of an etrade tester tool in partnership with Glasgow Chamber of Commerce.

● We will continue to build on the efforts of the Future Cities Demonstrator team to link Scottish digital SMEs with the procurement opportunities available through the demonstrator project and more widely the Council family.

● We will continue to build Glasgow's burgeoning digital sector, in partnership with Scottish Enterprise and Scotland IS, through projects such as Creative Clyde, Digital Enterprise Centres etc.

Measures of Success

To monitor progress we will compare the following measures on an annual basis as part of programme monitoring of this roadmap:

● Increase the number of SMEs trading online to 60%.
● Increase the GVA in Glasgow from ecommerce by 15%.
● Increase new jobs by participation in ecommerce by 2,800.
● Increase the number of digitally sophisticated Glasgow companies by 20%.
● Grow Glasgow's Digital sector.
● Increase in the number of digital SMEs procuring with Glasgow City Council.

Innovation & Incubation

Where are we now?

Glasgow has a rich heritage of innovation and continues to be the location of choice for many UK, Global and Scottish technology businesses including JP Morgan's European Technology Centre, the BBC and SMG located at Creative Clyde.

The award of £24M to the city to host the Technology Strategy Boards Future City Demonstrator, as well as the location of the International Technology and Renewable Energy Zone (ITREZ) and Technology Innovation Centre (TIC) in the city by Strathclyde University, demonstrates Glasgow is already recognised and building on its reputation as an innovative city in terms of adopting technology.

The open data platform http://open.glasgow.gov.uk/, developed as part of the Future City/Glasgow project provides Glasgow SMEs with new opportunities to develop smart city products and services that can create revenues for the city and beyond. This can also provide public sector organisations with the opportunity to provide data driven public services, innovate and do things differently.

As well as encouraging and assisting existing SMEs to innovate, the city also recognises the importance of providing support to talented entrepreneurs and young businesses as they make their first steps in the commercial world. A network of Digital Enterprise Centres working alongside incubators based in higher education institutions across the city as well as initiatives such as entrepreneurial-spark aims to ensure their success.

"Glasgow will be recognised as a centre of innovation and a place where businesses are keen to locate and invest. A 'triple helix' partnership of companies, public agencies and academia will work collectively to help realise our growth ambitions."

Actions from the Roadmap

● We will continue through initiatives such as the Future City/Glasgow and Digital and Creative Clyde Launchpad programmes to support and where appropriate provide match funding to businesses and opportunities to develop and demonstrate innovative products and services.

● We will ensure support and buy in across the city for Glasgow's Open Data manifesto which signals a clear commitment from the city to make data open by default in order to promote SME innovation through the development of new products and services. The manifesto also seeks to empower communities by putting our citizens at the heart of both service design and delivery. http://open.glasgow.gov.uk/wp-content/uploads/2013/11/FC_OPEN-Manifesto.pdf

● We will work closely with Future City Glasgow to explore how we can add value to the work of all workstreams through the mapping portal and commitment to the visualisation of data. This will begin with the Participation workstream but could be expanded further as data sets become available.

● Building on the success and lessons learned so far, we will develop a Future City Glasgow Hackathon strategy, with roll out programme expected February 2014. Hackathons will be based around finding a city response to a specific city problem. This work will link closely to the roll out of the literacy programme and engagement hub activity aimed at getting citizens and SMEs innovating and developing new products and services.

● We will review the support provided to young companies to ensure where possible they have every opportunity to secure sustainable growth including considering factors such as availability of appropriate facilities, access to specialist technology and/or professional services.

● We will continue to build partnership working together to integrate service offerings and actively market and promote Glasgow as a destination of choice for innovative young business people and startups.

● We will review the toolkit of funding and finance ensuring a common standard of information is available across our support network.

Measures of Success

To monitor progress we will compare the following measures on an annual basis as part of programme monitoring of this roadmap:

● The survival rate of business startups in the city.
● Measures of growth in revenues, profits and jobs from those businesses provided with support through our networks.
● Digital and technology businesses making location choices in the city.
● The number of attendees at hackathons and products produced.

Benchmarking World class

Where are we now?

Glasgow is an active member of both the Intelligent Community Forum (ICF) as well as Eurocities network and Eurocities Information Society Forum, which provide a strong grounding for the Digital Glasgow roadmap. We will seek to identify opportunities for collaboration with other cities and identify areas to seek collaborative funding for projects.

Glasgow was a founding member of the Digital City Symposium. This new forum established by New York includes major global cities with a digital focus such as San Francisco, Singapore and Helsinki.

Through being home to the UK Future City/Glasgow demonstrator we have established networks with the 29 other UK cities taking forward data-driven innovation projects. Within Scotland, Glasgow leads the Digital and Smart Cities workstream of the Scottish Cities Alliance.

As a city we also use the Scottish Household Survey, Glasgow Household Survey and OFCOM Communications Surveys and Market reports to benchmark our digital offering with other Scottish and UK cities.

We have established a Reference Group for the Digital Glasgow Board which includes key partners including HP, Microsoft, BBC Scotland, Interactive Scotland, ScotlandIS, Scottish Government, University of Glasgow and Glasgow Kelvin College.

Through this Reference Group we will be seeking to draw on the experience and global networks of our partners to ensure we challenge our thinking and learn from the best.

"Our aim is that Glasgow is a world leading digital city by 2017. We will compare our programmes to the best and network and learn through engagement with the cities globally and with our private and academic sector partners."

Glasgow
CITY COUNCIL

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