

REPORT TO EXECUTIVE
DATE 12th MARCH 2008
SUBJECT IMPLEMENTING THE MANCHESTER DIGITAL STRATEGY – PROGRESS REPORT
REPORT OF DEPUTY CHIEF EXECUTIVE

PURPOSE OF THE REPORT

To update Executive on the development of the Manchester Digital Strategy and proposed implementation plans.

RECOMMENDATIONS

Executive are recommended to

- Agree the broad strategic approach to improving access to ‘next generation’ digital broadband connectivity
- Agree the development of the proposed policy framework for further development of the Digital Strategy and associated implementation plans for the Manchester Digital City project
- Approve commencement of further informal consultation on the proposed implementation plans
- To note the setting up of a Digital Strategy technical working group on a cross-departmental basis to oversee implementation plans

FINANCIAL CONSEQUENCES FOR THE REVENUE BUDGET

None

FINANCIAL CONSEQUENCES FOR THE CAPITAL BUDGET

None

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BACKGROUND DOCUMENTS

ONE-Manchester Partnership Digital Challenge Proposal – Jan. 2007

WARDS AFFECTED

All

IMPLICATIONS FOR:

**ANTI
POVERTY**
Yes

**EQUAL
OPPORTUNITIES**
Yes

ENVIRONMENT
Yes

**EMPLOYMENT
OPPORTUNITIES**
Yes

1. Executive Summary

- 1.1 The Manchester Digital Strategy has been developed over the past year to provide a strategic framework within which practical proposals for developing “next generation” broadband across the city and the city-region as a whole. The Digital Strategy includes the idea of creating a “digital masterplan” for the city which would guide future investment and implementation, building upon the ONE-Manchester Digital Challenge proposals as outlined below.
- 1.2 Manchester is well placed to benefit from being a prime mover in attracting resources, from both public and private investment, for the Manchester Digital City project. This report outlines the justifications for and local benefits to be gained from the development of the Digital City project. The project aims to be a national exemplar demonstrating how local partnerships can establish real ‘test-beds’ for next generation connectivity, based on fibre and advanced wireless, demonstrating exactly how this can be both cost-effective and act to accelerate potential market investment.
- 1.3 The main outcomes of the project is to provide accessible and affordable broadband which is based on the proven state-of-the-art capabilities of fibre and advanced wireless, as is currently being demonstrated across continental Europe, especially in cities such as Amsterdam and Paris. where fibre connectivity is becoming available to all at 100 times to 1,000 times the speed of that available in the UK at a fraction of the cost.
- 1.4 This report proposes that Manchester takes a national lead to take advantage of its prime mover position by establishing the UK’s first ‘fibre to the premises’ (FTTP) open network, which would be complemented by advanced wireless connectivity, building on the experience of the award-winning Eastserve initiative in East Manchester. The proposed network would be developed in phases starting in the Oxford Road Corridor and its wider area of benefit, the Central Manchester Regeneration Partnership area. This will deliver next generation connectivity to residents, businesses and institutions to support job creation, skill development, business growth, transforming public services and digital inclusion. Further development to expand the network, starting with East Manchester, including the creation of a major Internet Hub supporting a digital/creative industries cluster at Central Park, will be planned concurrently with the Oxford Road Corridor deployment in order to maximise local benefit.
- 1.5 A detailed feasibility study has been undertaken which addresses not only the business case but also the intended economic, social and sustainability benefits of the proposed project, including technological options for the first phase. This is currently undergoing appraisal by the NWDA and, if successful, it is anticipated that the first phase of funding would be in place to start work on the project in April 2008.

2. Manchester 2.0 – digital sustainability in the global knowledge economy

2.1 In January 2007 Manchester City Council submitted the ONE-Manchester Partnership Digital Challenge proposal to Government with plans for developing: *“universal, affordable next generation broadband access” which “is essential to connect all residents and businesses of the Manchester City-region to the social, educational, informational and economic opportunities they deserve”*. This established the foundation for the creation of a Manchester Digital Strategy with a vision of creating the city-region as *“the most advanced ‘next generation’ connectivity in the UK, providing a sustainable base for high growth business, innovation, transformational public services and an inclusive knowledge society”*.

2.2 Manchester, as the ‘original, modern’ city, faces many challenges in sustaining its economic growth and in connecting the opportunities created by this growth with the needs of local residents, maximising local benefit. Not least of these challenges is the way that ever accelerating developments of digital technologies are creating what has been referred to as a digital “paradigm shift” in the global economy. Various terms are being used to describe this – the “Web 2.0” world, “wikinomics” and the new “long tail” economic world where millions of micro-businesses and e-traders create as much economic wealth and opportunity as the traditional large corporate companies.

2.3 In many ways Manchester is well placed to be a prime mover in this world, celebrating the 60th anniversary of the invention of the world’s first real computer, the “Baby” (on June 21st 2008) and being a real digital pioneer in the 1990s with the UK’s first public access computer communications and information system, the Manchester Host (launched with Poptel in 1991), the UK’s first Electronic Village Halls (1992) and the Manchester Community Information Network (MCIN – another UK first, 1994). The ONE-Manchester Digital Challenge proposals capitalised on this and this report now aims to set out a ‘route-map’ for a third wave of development which will use the very latest digital technologies to support further economic growth, tackle the digital divide and create inclusive sustainability.

2.4 The Digital Strategy and its proposals for a ‘Next Generation Digital City’ aim to make Manchester a world-class exemplar of how to lead this third wave around four main themes:

- sustaining economic growth, especially through the digital/creative sector, new micro-businesses, digital social enterprises and creating e-traders;
- promoting digital inclusion, ensuring that all residents can access the on-line services, technologies and applications that they need;
- continuing to transform public services through innovative uses of digital technologies;

- promoting inclusive sustainability where digital technologies are used more innovatively to support sustainable energy communities, intelligent buildings, teleworking, improved mobility, telecare and a greater quality of life generally.

2.5 This will only be possible if Manchester uses current opportunities to take the lead across these four themes. An essential part of this is ensuring that Manchester and the city-region secures the investment required for next generation connectivity based on the best of fibre to the premises (FTTP) and advanced wireless. This report aims to outline the rationale behind this and provide some key examples of best practice which are relevant and transferable to Manchester.

2.6 Already global competition is a serious threat to the sustainability of economic growth not only in Manchester but in the UK as a whole. A recent overview of these developments (provided by research commissioned by Amsterdam City Council) demonstrate that there are likely to be more fibre to the home (FTTH) connections in Japan than traditional land-line broadband (DSL) as soon as Spring 2008 when FTTH will have more than 12 million subscribers. Closer to home European city-regions, such as Amsterdam, Cologne, Milan, Paris and Vienna, are already implementing investment plans to deploy FTTP and just these five alone will account for fibre going to more than 2.5 million residential and business buildings by 2010. Other networks are developing rapidly at regional level in Sweden, France and Spain for example. In the past it has been argued that the Asia Pacific Region cannot be seen as comparable to the UK given the different societal, regulatory and business structures. The rapid, and accelerating, development of FTTP projects across Europe, however, cannot be dismissed in the same way.

2.7 It is clear, therefore, that the technologies and the business models already exist to demonstrate what is possible with next generation connectivity. This provides ample opportunities to learn not only from best practice but also from the barriers and challenges faced by those implementing fibre and other next generation access solutions. This means that we can access this experience and then utilise the knowledge gained to support the proposed test-bed trials in Manchester. These will enable us to gain valuable user feedback of extended usage, assess potential user demand and test out innovative business models, including those which would help to build and aggregate consumer demand.

2.8 The Manchester Digital City project aims to create a new and innovative environment for next generation connectivity development and to encourage new players and investors to enter the market and to demonstrate the economic viability of the proposed new business models. This approach is already well established in many other parts of Europe through the “Living Labs” concept. Manchester’s “Living Lab” was the first in the UK, set up in 2006, focusing on the Eastserve

initiative in East Manchester, and was the only UK participant in the first wave of “Living Labs” established as founder members of the European Network of Living Labs (ENOLL).

2.9 This further development of the Manchester ‘Living Lab’ would enable the Manchester Digital City project to use a tried and tested development model in its local implementation. This approach is already attracting interest from a number of potential business partners, including those which supported the ONE-Manchester Digital Challenge proposals, such as Cisco, Microsoft and The Cooperative. We intend to build on this to create an open and inclusive support network of business partners, including those which may be potential investors.

2.10 The Manchester Digital City project is about creating digitally inclusive sustainable communities. This includes enhancing the ‘sense of place’ with digital technologies, being proactive in determining what a particular place, both individual neighbourhoods and the city as a whole, needs and what kind of infrastructure and investment is required to meet those needs. We want to ensure that next generation connectivity is, on the one hand as advanced and future-proofed as possible based on the ‘open network’ principle, and on the other as accessible, affordable and inclusive as possible. We want this to start now because it can provide us with the ability to compete in the growing digital market place on more effective and equal terms. It is about ‘staking our claim’ to be up there with the emerging ‘premier league’ of cities and regions that are using this as their USP (unique selling point) for investment and innovation.

3. The digital challenges facing Manchester

3.1 In March 2007 the Government announced that all ten of the Digital Challenge finalists would be funded to continue to work as a national collaborative network. In addition to Sunderland being announced as the overall winner the ONE-Manchester bid was singled out as the “highly commended” runner-up and was specifically commended as having the “wow factor” and for its “innovative proposals” including the idea of digital social enterprises and a digital cooperative. The Digital Challenge 10, or DC-10, network is now well established with Manchester leading one of its six collaborative workstreams, on ‘next generation connectivity’.

3.2 In June 2007 a presentation was given on the development of the Digital Strategy to the Association of Greater Manchester Authorities (AGMA) Chief Executives and the overall strategic approach to improving access to ‘next generation’ digital broadband connectivity was endorsed. It was agreed that the momentum created by the Digital Challenge proposal should be maintained through the further development of the Digital Strategy and an associated Action Plan.

3.3 AGMA Chief Executives further agreed that this work would be coordinated by the Manchester Digital Development Agency (MDDA) continuing under the framework of the 'ONE-Manchester Partnership', focusing on the city-region with the Local Strategic Partnerships (LSPs) of Manchester, Salford, Tameside and Oldham at its core.

4. Making the case for investment

4.1 On November 9th 2007 the Leader of the Council and Chief Executive hosted a senior management seminar on 'Next Generation Broadband Connectivity' and the lessons to be learnt from international best practice. This focused on presentations led by colleagues from Amsterdam City Council, which is recognised as one of the most advanced and innovative city-regions in the world in this field. Manchester City Council has recently joined the new international collaboration network set up by Amsterdam City Council to exchange knowledge in this field, it is called INEC – the International Network of E-Communities.

4.2 Following the seminar, and ongoing discussions on the lessons learnt from the experiences in Amsterdam and French city-regions, work has proceeded with a feasibility study to examine the business case for, and the technical feasibility of, developing next generation broadband connectivity across the city, using the best of fibre and wireless applications. This work is also considering how new and innovative business models, including the idea of a digital cooperative, as proposed in the ONE-Manchester Digital Challenge proposals, could help to support and sustain the development of this connectivity.

4.3 The focus of the study is based on making the case for an initial roll-out of a proposed new digital infrastructure as part of a staged process. This starts with the Oxford Road Corridor and its wider community area of benefit of the Central Regeneration Partnership Area, as an experimental R&D 'proof of concept' test bed. The next stage will be progressively extending next generation connectivity through key regeneration areas, across Manchester and into adjacent AGMA districts.

4.4 The feasibility study work started at the end of October 2007 and will be completed by March 2008.

5. Manchester as a Next Generation Digital City

5.1 Manchester is particularly well placed to gain 'first mover' advantage by becoming a 'next generation digital city', building on the commitment to create "universal, affordable next generation broadband ... access is essential to connect all residents and businesses of the Manchester City-region to the social, educational, informational and economic opportunities they deserve", as made in the original Digital Challenge proposals.

- 5.2 The Digital City proposals also aim to enhance the achievements made in the transformation of the city's physical infrastructure over the past decade. This includes adding value to achievements made with inward investment, including mediacity:uk, but also allowing for very rapid expansion for other development sites within Manchester itself, especially in key regeneration areas such as East Manchester. In addition the next generation digital city proposals focus on ways that digital inclusion would support the development of sustainable communities, including new intelligent 'eco-solutions' that would have a positive impact in areas such as energy management, more sustainable mobility, teleworking and telecare applications.
- 5.3 The focus on the Oxford Road Corridor and the Central Regeneration Area as the first phase provides the basis for the 'test bed' being able to take full advantage of the collaborative arrangements already in place with the universities, through their regional network infrastructure body, Net North West, and Knowledge Capital. The existence of the 'Internet Exchange' facilities within the Science Park and TechnoPark also makes this a particularly cost-effective place to start.
- 5.4 As part of the feasibility study work the consultants and the MDDA are continuing to consult with partners and stakeholders to ensure that their levels of commitment and 'buy-in' are maintained. This includes emphasising the continuing commitment of the City Council and the ONE-Manchester partnership to develop the Digital Strategy and implementation plans regardless of the result of Digital Challenge.
- 5.5 It is intended to build a strong public profile for the Digital City initiative as the first and most significant initiative of its kind in the UK. This builds upon the very positive media coverage of the ideas set out in the Digital Challenge bid about developing a large-scale, city-region wide, accessible and affordable digital network for Manchester. We believe that there is now, in fact, much more to be gained in terms of profile from similar promotion of the current next generation digital city proposals in demonstrating how these take the original ideas much further.
- 5.6 Initial work has begun analysing how this work could be extended, focusing on creating a core 'spine' across East Manchester and up into the Central Park site where proposals are emerging for a digital/creative initiatives cluster. This will also support the Knowledge Capital's 'arc of opportunity' concept prior to a greatly extended city-wide deployment in line with the original Digital Challenge "IP-City" concept. This includes the wider deployment of wireless based access networks which would complement the rolling out of fibre networks.
- 5.7 The work undertaken to date highlights how the new digital infrastructure, based on fibre to the home/premises (referred to as FTTH/P), is very much seen as complementary to advanced wireless

systems which are essential to support the mobile and 'nomadic' aspects of a comprehensive next generation infrastructure. Industry analysts widely highlight how the best wireless systems are those with the best (shortest/easiest) access to the best fibre systems and it is clear that an extensive fibre infrastructure greatly simplifies the deployment of wireless systems.

5.8 There are now significant best practice examples which demonstrate what can be gained from Manchester having a 'first mover' advantage, including of new 'digital opportunities' for investment coming into the city. This has been given additional impetus by the recent Cushman and Wakefield study, "European Cities Monitor, 2007", which highlighted the importance of the availability of digital connectivity as a key factor in influencing corporate investment and location decisions. This is now given as the third most important factor, behind the availability of staff and markets but now ahead of office space and transport. No UK cities other than London were in the top 10 of "best cities in terms of quality of telecommunications" and all the other UK cities listed had fallen in the rankings between 2006 and 2007.

6. Promoting digital inclusion for working neighbourhoods

6.1 A next generation digital city must be both inclusive and sustainable if it is to ensure that the opportunities created by the knowledge economy can be fully accessible to local residents. Manchester's work in this area is taking place within the context of the national digital inclusion strategy, of which the Digital Challenge 10 (DC10) network is a key part.

6.2 At a national level Manchester, as the lead for the Digital Challenge (DC-10) Next Generation Connectivity workstream, is working with the DC-10 network to establish a new Connected Neighbourhood Forum. The Forum will bring together the work of local partnerships with Government departments and seek support from the wider public, private and voluntary sectors. Already this work has been highlighted and supported in a number of recent ministerial speeches and this provides a good basis for the Manchester Digital City project to be one of the first practical projects to be supported by the Forum.

6.3 The Forum proposes that a much more innovative approach is taken at national level in promoting next generation connectivity. Local Strategic Partnerships and sub-regional and regional forums and agencies, including RDAs, should be actively encouraged to develop local intervention plans, 'digital investment plans', in clearly designated areas, e.g. regeneration and housing renewal areas, linked to the achievement of Local Area Agreements (LAAs) and Multi-Area Agreements (MAAs). This is based around the idea of a Connected Neighbourhood Charter which would include the development of a digital 'blueprint' or 'masterplan' for a neighbourhood.

6.4 The idea is that the “digital investment plans” will outline how the planned intervention would fit in with the three key principles of the policy framework outlined in the UK Digital Strategy at national level. Central to this is the recent report by the national Broadband Stakeholder Group (BSG), “Pipe dreams? Prospects for next generation broadband deployment in the UK”, April 2007, which outlined the three principles which are needed to justify public intervention:

- Addressing market failure;
- Ensuring that there is an “equitable distribution of welfare gains” addressing digital inclusion;
- Ensuring regional competitiveness.

6.5 As part of a Manchester Digital City plan work will be undertaken to map where fibre, cable and wireless links are located and where any empty ducting is. Requests will be made for residents and businesses to report on what their needs are and the plan will aim to identify ways of matching supply and demand. This will form the basis for a Manchester “Broadband Atlas” initiative as part of the Digital City project.

6.6 Every time gaps or inaccessible or unaffordable provision we can develop plans further to extend affordable coverage with incentives for private, public and cooperative investment. In addition every time anyone wishes to dig up the street for anything they could be required to put in empty ducting and inform the city council where this is as well. Over time we will build up the intelligence on exactly how next generation connectivity can be extended on the most cost-effective way with the least disruption in terms of road digging etc.

6.7 The Digital City project is particularly relevant to the issue of environmental sustainability and the advantages of fibre based connectivity includes the positive environmental impacts of replacing copper with fibre, reducing the need for continuous upgrading of networks (e.g. reducing the need for street digging) and the ability to support flexible working, intelligent energy management, new mobility solutions and home based telecare and telemedicine.

6.8 Digital inclusion would also be a key element of plans to tackle worklessness and create working neighbourhoods. Greater recognition needs to be given to the potential for digital technologies to play a key role in giving people new employment opportunities. Over the past year the MDDA has been working with partners to run courses on “selling on the web” and “how to be an e-trader”. More than 1,000 local residents from regeneration areas, have applied to come on the courses, all of which are massively over-subscribed. There is increasing evidence that the “Web 2.0/long tail” digital world can be opened up to workless and socially excluded groups enabling them to establish themselves as new micro-businesses, social enterprises and e-traders. The Manchester Digital City project will have this as one of its top priorities and will

ensure that this is given the attention it deserves in Manchester's and the city-region's wider economic development and enterprise support policies.

6.9 This is why action and intervention is needed now and why the Manchester Digital City Project has so much potential. There are partners and stakeholders ready to bring their knowledge and expertise to bear on the challenge, creating practical and innovative ways of achieving the deployment of next generation connectivity through a unique Manchester "Living Lab" approach based on maximising collaboration and engagement.

7. Implementing the Digital City project – practical next steps

7.1 First Phase: Oxford Road Corridor

7.1.1 The feasibility study report will be finalised and published in March 2008 to enable final appraisal by the NWDA. This is as part of the existing, 'approved in principle', allocation of resources for the Oxford Road Corridor under the theme of "Delivering innovation, infrastructure and public realm – digitisation". This application would be made with a view to securing this funding to start implementation as soon as possible to enable significant progress on implementation to be made within 2008-09. This will deliver high speed data networks for businesses, institutions and private residences around Oxford Road as a 'test-bed' for innovation thereby providing a sustainable base for high growth businesses, innovative start-up enterprises, transformational public services and a more inclusive knowledge society. This will initially cover up to 400 residential premises and up to 50 business premises at an estimated cost of approx. £550,000.

7.2 Subsequent Phases:

7.2.1 While the first stage process is taking place further consultations will take place with partners and stakeholders on the plans for the proposed phased roll-out of the project, with additional work on business case development, including investment and business models and the wider procurement, legal and sustainability issues that will need to be considered as deployment moves beyond a 'proof of concept' stage.

7.2.2 How the network is extended will partly depend on the progress of the pilot and partly on the choices that are made about business models for network ownership and governance (as outlined above). By planning in advance for possible network expansion it may be possible to take advantage of related important developments that would impact upon the city region, such as the Government Review of Next Generation Broadband.

- 7.2.3 The Oxford Road corridor area is the obvious good starting point, both because it is a priority area for economic development and tackling social exclusion, and because of the presence of significant Internet hubs, or “peering points” within the Science Park/TechnoPark complex. It is also a good place for a pilot because of the mix of techniques required to build the network. These are also likely factors in choosing the next areas for expansion, hence the potential for developing into other key regeneration areas, including East Manchester.
- 7.2.4 The potential for developing Internet hosting facilities, which are being planned for Central Park, would provide for a fourth significant carrier-independent hosting centre in Manchester. The existing three are all on the Science Park/TechnoPark site adjacent to the main university campus so this would be a new ‘second site’ development for the city-region and so will be a likely location for further peering between networks and for new investment, both by existing companies in Manchester and by inward investors. This would underpin proposed developments to make Central Park the core of a new digital/creative industries cluster focusing on the redevelopment of the Sharp Factory site. The new Internet Hub facilities would maximise opportunities for investment and job creation potential in this area and help to ensure local benefit, while complementing and adding value to other key sites across the city and the city-region, including the Oxford Road Corridor and mediacity.
- 7.2.5 This approach would focus on employment outputs more than anything, both in terms of new jobs being created directly and in terms of a multiplier effect on other employment in relation to jobs in construction, maintenance and support services. It is estimated that an additional 500 jobs could be created over a five year period, plus the same number again as a result of this multiplier effect. Using the framework developed for the Oxford Road corridor pilot project it is estimated that the project could be extended into East Manchester, focusing on the two key sites of Central Park and the MANCAT college site in Openshaw and linking together other employment and residential sites along this “arc”. This would extend coverage to some 3,500 to 4,000 premises at an estimated cost of £7M, depending on the solutions selected and the availability of funding.

8. Conclusion

- 8.1 This report aims to provide a summary of the current direction of travel for implementation of the Manchester Digital City project based on a phased development model, firstly, developing the proposed pilot demonstration project in the Oxford Road Corridor and, secondly, extending this to cover a more significant deployment into other key regeneration areas, starting with East Manchester . There is a robust process in place to support this based on a detailed feasibility study report which addresses both the business case and the technological options.
- 8.2 If these stages are successful then there would be a compelling evidence base for extending this process even further in order to provide the catalyst for next generation connectivity across the wider 'arc of opportunity' of the city-region leveraging in the required investment from the public and private sectors.
- 8.3 It is proposed to establish a cross-departmental technical working group to oversee the development of these proposals, to be coordinated by Steve Mycio as Deputy Chief Executive.

9. Implications for Key Council Policies

- 9.1 The achievement of the aims of the Digital Strategy through the provision of accessible and affordable next generation digital connectivity aims to have a positive impact on environmental, economic and social wellbeing across the City's neighbourhoods.
- 9.2 Anti Poverty:
Inclusive and affordable access to digital technologies and services will assist a proportion of local residents on lower incomes to access new employment and skills opportunities.
- 9.3 Equal Opportunities:
Facilitation of new financial models will benefit those on low to middle incomes who may be unable to access market provision of broadband services. Disadvantaged groups are more likely to fall within this category contributing to the Equal Opportunities policy. The Strategy will contribute to the ability of all residents to access digital technologies and services of their choice.
- 9.4 Environment:
Provision of next generation connectivity aims to meet eco-friendly standards and to contribute to an improved environment for the City.

- 9.5 Employment:
Ensuring inclusive and affordable access to next generation connectivity will support the opening of new employment and skills opportunities for all local residents especially those who are workless and socially excluded. It will also support those establishing new businesses in the area will benefit the local economy and assist in providing local employment. Improved digital technologies and services will support the economic growth of the city.