

**Broadband**  
Connecting to London's future

November 2002



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## foreword by Ken Livingstone, Mayor of London



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This report is the outcome of a very successful business secondment programme to the Greater London Authority (GLA), under which company executives work within the GLA, contributing their expertise and experience.

Neil Mellor was seconded from BT to become the GLA's e-business adviser for ten months, during which time he has been able to increase significantly our knowledge of broadband communications and e-government in particular. He has also helped us to form the policy responses required in London and to ensure that communications are considered at the core of the London Plan, our strategy for sustainable growth and spatial development in the capital.

Working with colleagues right across the GLA group, Neil has been able to help translate informed analysis into workable plans. By working with private and voluntary sector partners, he has also put those plans into action, through initiatives like the highly successful Creative Industries Broadband event, co-hosted with the Confederation for British Industry and sponsored by BT, and the GLA's guide to broadband for London's smaller businesses – 'Broadband – putting London in the fast lane'.

This report highlights clearly the role that the Information and Communications Technology (ICT) and associated creative industries sectors play in London's dynamic economy and their leading role in the UK and Europe. It also illustrates clearly the importance of broadband communications in boosting economic growth, creating greater value in public services and helping sustain cohesion in London's vibrant and diverse communities.

By encouraging London's businesses to use broadband services to communicate, trade and collaborate together more effectively and by taking every opportunity, through the LondonConnects partnership, to ensure that London's public services set an example by creating effective broadband content, I aim to ensure that London continues to lead the UK in broadband use. Most importantly, we must ensure that we reap the potential financial, personal and environmental benefits that broadband enables, to reinforce the position of London as a leading world city.

I am delighted with the publication of this report, both because of the importance of its subject matter to London and to the UK economy and also as it represents a practical and successful outcome of our continuing partnership work with the private sector.

A handwritten signature in black ink that reads "Ken Livingstone". The signature is written in a cursive, slightly stylized font.

**Ken Livingstone**  
Mayor of London

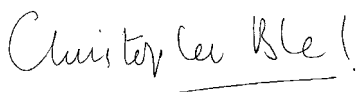
## foreword by Sir Christopher Bland, Chairman, BT Group

BT is delighted to support the work of the GLA group in leading the sustainable development of London through the secondment of one of our senior managers. London is the hub of economic and telecommunications activity in the UK and BT is working in partnership with the public and voluntary sectors to realise the benefits of new communications technology for all in the region and in the UK as a whole.

Employing around 20,000 people in Greater London, many on a flexible or teleworking basis, BT is a major contributor to the economic life of the capital, turning over £3.5 billion of our business in the city annually – a figure equivalent to the investment in our London networks over the past five years. London also remains a major focus for our operations, with 160,000km of optical fibre underpinning digital business there and almost all of the capital's residents and businesses connected to Asymmetrical Digital Subscriber Line (ADSL) broadband enabled exchanges.

Our contribution to London's communities also reflects the scale of our economic commitment. This ranges from sponsorship of Tate Modern to the Mardi Gras, supporting the first regional portal for the voluntary sector, Action Link, supporting the GLA and London Development Agency's work on digital inclusion and ensuring that the £1 billion we spend on procurement in London annually reflects and supports diversity.

This report is an important contribution to understanding the role that broadband communications can play in our economy and society. I look forward to continuing our relationship with the GLA, and to ensuring that as many individuals and businesses as possible benefit from broadband's potential.



**Sir Christopher Bland**  
Chairman, BT Group



## about the author



Neil Mellor is a Strategy Manager in BT's Wholesale division, focusing on broadband development, market analysis and public policy implications, having previously been the programme director for public policy and innovation for BT Government. He has headed BT's e-Government, Internet and eBusiness marketing teams since 1996, having joining BT in 1989.

Between November 2001 and August 2002 he was seconded as eBusiness Adviser to the GLA, working with the GLA and its partner organisations across a range of issues from e-Government to communications infrastructure development, broadband and e-democracy projects.

With 21 years' marketing and commercial experience in the hi-tech, industrial, consumer and financial sectors, he has also worked with Midland Bank (HSBC), BP Oil, Procter & Gamble, Hydro Group and US Robotics since graduating from Loughborough University of Technology with a degree in banking and finance.

A frequent speaker at conferences and events, he has become well known as an authority and influential presenter on electronic business and its impact on government, organisations, supply chains, business models, the economy and society. He has been involved with research into the wider impact of new technologies through links with the MIT (Massachusetts Institute of Technology) Media Lab and has advised several major companies and agencies at board level on the implications of doing business electronically.

A founder and steering board member of the Public Policy Forum, he also represents BT in the Broadband Content Coalition, has been involved in Technology Means Business, part of the broader Information Society Initiative, contributed to the IDeA (Improvement and Development Agency) Leadership programme and is a past member of the IMRG (Interactive Media in Retail Group) senate.

## introduction

### Overview

*'Information and communication technology (ICT) is having a profound impact on the potential for economic growth; it has become one of the main sources of competitiveness and increases in income. As a result, it has moved to the centre of the policy debate. Statistical evidence has allowed the emergence of a broad consensus that ICT is, indeed, increasing the rate of growth of productivity'.*

Commission of the European Communities.<sup>1</sup>

In London, the ICT industry is not only making a direct and growing contribution to the city's economy, but its products and services, and in particular broadband<sup>2</sup> communication and the services it makes possible, are having a marked indirect effect on business and life in the capital.

In 2000 the direct contribution of ICT related businesses to London's economy was £11.7 billion, accounting for 192,182 jobs<sup>3</sup>.

The indirect effect is more difficult to measure. All of London's business growth sectors, vital to support its rising population, are highly communications dependent. A major contributor to growth, productivity and inward investment could be the wide availability, uptake and use of applications and content enabled by broadband communications.

Most large organisations already have high speed communications networks and have, in many cases, used them to enable significant improvements in the way they do business. Low cost broadband services will be particularly important for the capital's growing number of smaller enterprises, for whom the benefits will now be greatest.

Research demonstrates that broadband services can reduce costs and improve productivity in smaller enterprises, regardless of the type of business.

New evidence is also emerging in the USA from analysis by the Gartner Group, the Brookings Institution and others which supports the idea that widespread use of broadband communications can increase the output or Gross Domestic Product (GDP) of a region by improving the ability of enterprises and individuals to network, collaborate and innovate together.<sup>4</sup>

**Key points**

- The direct contribution of the ICT industry to London's economy is large and growing.
- The indirect effect of ICT, and in particular broadband-enabled services on the capital's economy and communities is even more substantial.
- London has a major advantage over other regions in the short term in having near ubiquitous availability of affordable broadband services.
- Action needs to be taken to boost the awareness and adoption of broadband applications and content, particularly amongst smaller enterprises, to realise the benefits to businesses and to the region.

**Recommendations**

This report recommends that the potential benefits of broadband-enabled services be considered as a central part of policies to deliver economic growth, better public services and social cohesion in London. It also recommends that the GLA group play a proactive role in increasing business awareness by collaborating or partnering with the communications industry and other groups to accelerate the creation of exemplary broadband content through the GLA's e-Government programmes.

## London's growth

The GLA report *Planning for London's Growth*<sup>5</sup> sets out the challenges posed by population and employment growth in London. In summary, these are as follows.

### Population

London's population has increased by almost 600,000 since 1989, the equivalent of the capital absorbing a city the size of Sheffield. In the past two years alone, London has grown on a scale entirely outside the experience of any other UK nation or region. The capital's population, which fell to 6.8 million in the 1980s but is now above 7.4 million, is projected to exceed 8.1 million by 2016. This further 700,000 increase implies that London will now grow by the equivalent of the population of Leeds.

A strong build-up of population has taken place in southwest London which, allied to the shifting employment patterns, places additional demands on the transport network. Strategically, the largest area for future housing development is the Thames Gateway to the east.

### Employment

Over the period to 2016, London will undergo a similar rise in employment, with the total number of jobs in financial and business services alone projected to increase by more than 400,000. Employment is returning to levels seen in the early 1970s but within a totally different jobs structure. Service-based activities have replaced employment in manufacturing and other traditional areas and this pattern is set to continue.

Financial and business services are compensating for job losses in other sectors. Between 1973 and 2001, employment in financial and business services rose from 755,300 to 1,398,600. This sector alone in London now accounts for 6.6 per cent of UK GDP. Its rise more than made up for the 621,000 jobs lost in manufacturing during the same period. Jobs in other services, particularly centred on leisure and creative industries, increased by 180,000.

Financial and business service growth is concentrated in the centre, redrawing the map of employment. More than 53 per cent of London's gross jobs growth and 90 per cent of its net job growth between 1989 and 1999 took place in the six central boroughs of the City of London, Westminster, Camden, Tower Hamlets, Islington and Kensington and Chelsea. Other new jobs, particularly those oriented to personal services, are created throughout London.

### **Planning for growth**

Looking to the future, financial and business services job growth, together with other personal services and sectors such as retail, hotels and restaurants, leisure, health and sporting activities, will more than compensate for further projected job reductions in manufacturing and other traditional areas.

All the Mayor's strategies, including the London Plan - his Spatial Development Strategy<sup>6</sup> - are based on understanding the expansion of London's population and its economy as positive and planning to accommodate this development in a successful and sustainable way.

Planning for growth can continue to make London the powerhouse of the UK economy and the pre-eminent international business growth story.

The direct impact of the ICT sector on the London economy, its indirect influence in terms of improving productivity and competitiveness in other sectors and its ability to facilitate interaction and community collaboration will be critical to achieving sustainable growth. ICT is already a vital and indispensable, if often unseen, part of the fabric of daily life and business and its role will continue to increase.

## the role of ICT and broadband

*'I am committed to the development of broadband services in London which are integral to wider business competitiveness. It is particularly critical to innovations in our creative industries, which will play a critical role in London's future growth and prosperity.'*

Ken Livingstone, Mayor of London<sup>7</sup>

*'Successful modern economies are built on the abilities and knowledge of their people. Innovation is therefore about transferring and using knowledge – and that relies on communication.'*

London Development Agency<sup>8</sup>

### Enabling role

This report covers both the ICT industry itself and the secondary effect its products and services, in particular those enabled by broadband communication, have on the way we do business, socialise and organise ourselves.

The broadband networks now being created by communications companies are even more vital to today's growth businesses than the railways and canals were to earlier industries. They allow the fast delivery of information, let people work together regardless of location, provide interactive and on-demand services, education or entertainment and let people communicate or collaborate together sharing pictures, video, sound or text. London in 2016 without them would be as inconceivable as London in 2000 without the tube, train or bus.

In a fast growing and evolving city, information services, applications and content are critical to productivity, employment, inward investment, sustainability and quality of life. They are as important to London as its transport infrastructure.

Those sectors which are driving the economic success of London are heavily dependent upon the innovative use of modern ICT. Not only London's growth in finance, business services and creative industries, but also its sustainability, its quality of life, its education, its health and its political future – all depend on rapid and inclusive access of both businesses and the community to the new generation of information and communication services.

### Potential benefits

ICT could help to increase output, improve productivity, cut costs and enhance the quality of life for London's businesses and residents. This potential is growing due to the development of broadband networks and services, the creation of new and simpler means of accessing interactive

communications such as digital TV, set-top boxes, home 'hubs' and new mobile or wireless devices. These developments are opening up significant economic and social opportunities.

New services, applications and content will create new business opportunities and provide the means to increase productivity and hence growth and employment throughout London's economy and that of the UK. They will also provide Londoners with more convenient access to government and new tools to facilitate communication, education, information sharing and community integration.

The e-Europe 2005<sup>9</sup> initiative illustrates the wider possibilities and aims to provide a favourable environment for private investment and for the creation of new jobs, to boost productivity, to modernise public services, and to give everyone the opportunity to participate in the global information society. It aims to stimulate secure services, applications and content based on a widely available broadband infrastructure.

London enters the 21st century with substantial advantages, among them a near ubiquitous broadband infrastructure, capable of providing high speed ADSL (a high-speed service delivered over existing phone lines) or cable services from a variety of providers to most residents and businesses<sup>10</sup>. It also has the highest level of internet use and e-commerce adoption in the UK and is regarded by businesses as the most favourable location in Europe for conducting e-business<sup>11</sup>. e-business adoption in London is amongst the highest in the world, with 96 per cent of London companies having internet access, 88 per cent having a company website and 33 per cent actively trading online. Internet usage amongst people living in London is the highest in the UK at 58 per cent<sup>12</sup>. London also has the highest proportion in the UK (28 per cent) of its workforce with degree or equivalent level qualifications<sup>13</sup>.

The Institute for Employment Studies<sup>14</sup> estimates for 'potential mobile telework occupations' placed London at the top of the European league in 1999, with potential mobile teleworkforce of 15.9 per cent of employment. Research by Local Futures<sup>15</sup> also supports the conclusion that London is the most telework-intensive region of Europe on the basis of its occupational profile, access to enabling technologies and self-employment base. The size of the teleworkforce is growing nationally, and there is every reason to expect London to lead this trend towards more e-enabled home-based and mobile working. These trends are being reinforced by other factors specific to London, including the costs of commuting and transport problems. There are also increasing stress pressures on London's professionals which, coupled with the need for

employers to retain skilled people, are prompting fresh consideration of the work/life balance, of which more flexible working routines are an important aspect.

London has also joined the top ten cities in Europe for output growth, according to a survey of 250 regions and 45 big cities by Cambridge Econometrics<sup>16</sup>. The capital is expected to perform well on the back of its specialisation in high-growth sectors, such as transport, communications and business services. In terms of overall output growth and output per employee, London outstrips other UK cities. Cambridge Econometrics predict that annual productivity growth in London will accelerate from about 0.5 per cent from 1995-2000 to 2 per cent from 2000-2006.

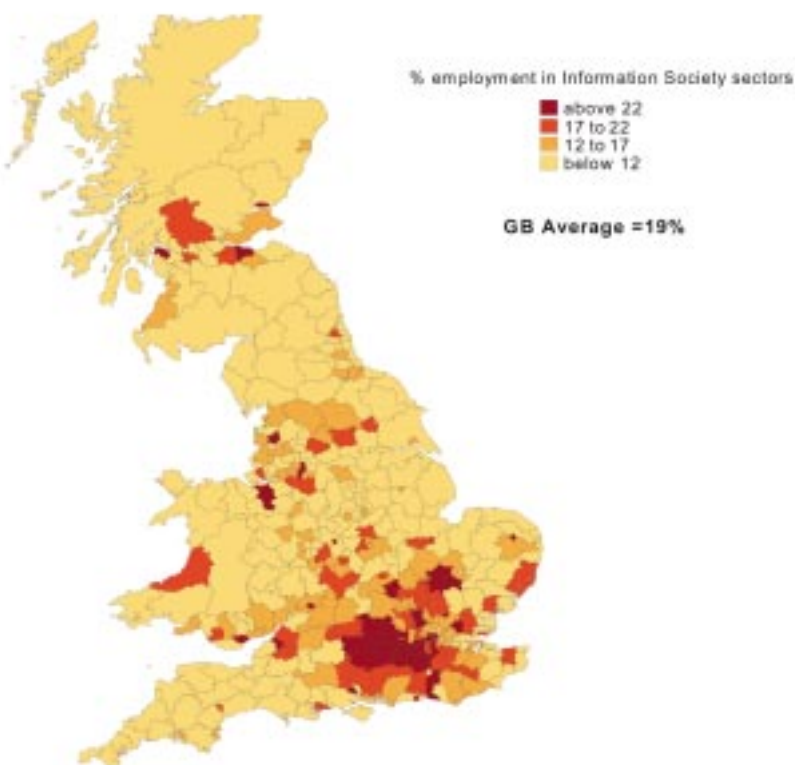
### Direct economic contribution

#### *Value*

The ICT sector alone already contributes £11.7 billion per annum to the London economy<sup>3</sup>, some 7.4 per cent of the total value of the capital's GDP.

#### *Employment*

The ICT industry is also a major contributor to London's employment. In London, 192,182 people are employed in ICT, some 22 per cent of total UK employment in the sector<sup>3</sup>. The map, from a Local Futures report<sup>17</sup>, indicates that London is the hub of the UK's and Europe's ICT and related industries and, together with other closely-linked areas in the south-east, accounts for the majority of knowledge-based employment in the UK.



### *Regeneration*

ICT is a key element in assisting in the growth and competitiveness of smaller enterprises and therefore in regeneration and economic development in London. A recent study by Fletcher Research<sup>18</sup> showed that using broadband services alone could add £4.7 billion to the profits of UK SMEs.

A fundamental challenge for London is to close the gap between the most advanced users of ICT and those sectors and areas of the London economy that are lagging behind. Above all, London needs a comprehensive and integrated strategy for ICT that makes the right connections between infrastructure and service providers, business and community users, the public and private sectors and trainers and learners.

To this end, the London Development Agency (LDA) has already committed to work with the GLA and other partners to co-ordinate the various initiatives that are currently underway to improve London's competitiveness in the application of ICT<sup>19</sup>.

### *Skills*

London's workforce is young, educated, flexible and multicultural. This valuable resource places the capital in an ideal position to grow its information based industries and use ICT innovatively across all sectors to benefit the regional and UK economy.

### **Indirect economic contribution – impact on other sectors**

A report from consultants McKinsey, *Broadband Changes Everything* concludes that: 'To those who still think we are making excessive claims for what is basically a faster way to do things we can already do, we would say that a car is just a faster version of a horse and carriage, and a computer merely a faster mechanical calculator. If broadband applications have a fraction of the impact of either of these, they will indeed change everything.'<sup>20</sup>

Broadband communication and its ability to present new and more effective ways of working and collaborating could improve the efficiency with which we work and thereby drive out costs and improve productivity. More importantly, by facilitating more flexible working and reducing reliance on the physical constraints of the immediate geographic skills pool, office space or transport capacity, it could help London's economy to perform better than current limitations in the supply of these factors would otherwise allow.

### GDP

*'Information and communication technology (ICT) is having a profound impact on the potential for economic growth; it has become one of the main sources of competitiveness and increases in incomes. As a result, it has moved to the centre of the policy debate. Statistical evidence has allowed the emergence of a broad consensus that ICT is, indeed, increasing the rate of growth of productivity.'*

Commission of the European Communities.<sup>21</sup>

In an attempt to quantify this assertion, Gartner Inc<sup>22</sup> have carried out studies into the impact that broadband, by facilitating greater communication, collaboration and innovation, can have on GDP within a region. Their initial work focused on Michigan but this has also been extended to the US economy as a whole, proposing a potential increase in GDP of \$500 billion annually on the basis of a 50 per cent broadband adoption rate. Similar figures have been suggested by the Brookings Institute and by TechNet in the USA.

### Costs

A survey into the impact of broadband communications on small or medium sized enterprises (SMEs) in Britain by Fletcher Advisory, an internet consultancy firm, suggests that most SMEs using it already see business productivity gains.

Companies report benefits across a large variety of functions and processes, including sales, costs, productivity and profits. Nearly half claim to have already experienced productivity gains in their businesses, and three-quarters expect to see further gains in the next one to two years.

'The impact on overall costs and on productivity will be marked,' notes Fletcher Advisory. 'We think that by 2005, broadband will be making £3.5 billion productivity savings and £1.2 billion cost savings a year for the UK SME sector.'

By 2005 Fletcher Research estimate that broadband will have increased SMEs' internet usage by 2.4 million hours a day, with about 40 per cent of all SMEs in Britain, or 1.4 million businesses, connected via broadband services.

### *Productivity*

*'The new challenge is broadband. We are in the early days of broadband but it has the potential to revolutionise many aspects of our lives. It has the potential to increase productivity, enhance competitiveness and enable new markets to be reached. It could radically improve public services.'*

Prime Minister, Tony Blair <sup>23</sup>

The study by Fletcher Research estimates that £3.5 billion productivity improvements per annum could accrue to UK SMEs. In their survey, 48 per cent of SMEs had already experienced productivity improvements from using broadband services, with 60 per cent also expecting to do so in the future.

### *Satisfaction*

Employee and customer satisfaction was also found by Fletcher Research to have increased in companies using broadband services. The main reason was that broadband helped give people the tools they need to do their jobs adequately. For example, in one firm the 'rationing' of slower internet access had previously caused frustration between people who needed to be online simultaneously but couldn't. In another firm, the need to upload and download large files clogged up the system and denied people bandwidth when needed. In a third, delays in delivering important documents had been drastically reduced by using broadband, resulting in fewer customer complaints.

### *Business enablement*

ICT and broadband enables business to be done in ways which were not previously feasible or economic. These might involve offering highly interactive or transactive services via the internet, or could entail working collaboratively using instant, real-time, online applications in flexible trading groupings of 'business webs'.

Such collaborative online working, flexible 'virtual enterprises' and business webs are seen as an important part of the future business environment<sup>24</sup>. London's economy relies heavily on vibrant innovation and growth in the SME sector and it is critical that companies take advantage of broadband to work profitably and productively by taking advantage of the new business opportunities it enables.

For example, broadband has revolutionised the way some smaller companies operate. Fast access to the internet has enabled them to sell online for the first time. Many sites have been successful enough to warrant expansion and products can now be bought instantly online, with

orders transmitted immediately to the sales department, thanks to always-on, high-speed broadband links. The next step for many is to bring customers and suppliers into the system. This is usually big-league stuff but the low cost of broadband brings the technology within the reach of SMEs, allowing business partners access to systems so they will be able to order or co-operate automatically without phoning or faxing.

### *Innovation*

One of the most important long-term but often overlooked effects of broadband use in smaller enterprises can be the stimulation of innovation. Low cost, low risk experimentation with new products or services benefits from a fast, always-on internet connection.

Several of the companies studied by Fletcher Research highlighted innovative applications. These included a security company with a remote monitoring system, a community learning centre expanding the level and quality of services it offered, a media design company expanding into web-hosting and a computer training business delivering service and support across a much wider geographic area. To do this, all had been obliged to re-think the services they offered to make best use of the new technological possibilities, creating new business and service offerings.

Another recent example comes from the Medivet Veterinary Group, which has 27 surgeries across London. Having recently got ADSL broadband internet access, it found it proved invaluable when a dog needed an operation on a fractured elbow. 'The vet was in the middle of a complex operation and needed specialist help from a vet in another practice,' explained Medivet's Director Arnold Levy. 'It was more useful to take digital pictures of each stage of the operation and send them down the network to the specialist. This gave the specialist detailed information that would have been impossible to describe on the phone.' As a result, the operation was a complete success. The surgery now plans to install webcams in all its operating theatres so that difficult operations can be monitored in real-time throughout the group using broadband<sup>25</sup>.

### **Community and citizenship**

ICT can be used not only to improve business, but also to support and enable communities, overcoming 'digital divides' and ensuring connectivity and access as a right of citizenship for all. 'Community networking'<sup>26</sup> is becoming a means for presenting local communities with the enormous opportunities of broadband internet connectivity for achieving their economic, social and cultural objectives. Effective community networking involves not only access to the technical infrastructure but more importantly, developing the social infrastructure,

including literacy, information and technical skills, diversity of content, involvement and community cohesion.

MIT Dean of Architecture William J. Mitchell observes in his book *City of Bits*<sup>27</sup> that 'the most crucial task before us is not one of putting in place the digital plumbing of broadband communications links and associated electronic appliances (which we will certainly get anyway), nor even of producing electronically deliverable 'content', but rather one of imagining and creating digitally mediated environments for the kinds of lives that we will want to lead and the sorts of communications that we will want to have.' The process that he describes requires that we develop an agenda now for building an online environment that serves the public interest as effectively as it meets the expectations of business plans and shareholders.

Also from MIT, Prof Keith Hampton, in *Community in Digital Neighborhoods*<sup>28</sup>, notes that using the internet is associated with high levels of social contact and supportive exchange with distant social ties. Local electronic communication encourages public participation, community involvement and the growth of local social networks. Given near ubiquitous access to electronic communication, internet use encouraged visiting, surveillance, neighbour recognition, collective action and the maintenance of local social ties.

## **Public services**

### *Public service delivery*

As well as benefiting from all the same advantages of broadband as private sector businesses, public sector organisations could use broadband as an enabler for a whole new generation of online public services. There is notable lack of public service broadband applications currently, however, despite their potential for greater interaction or for reaching people who have difficulty with traditional computer communications, such as the elderly, disabled or illiterate. The following examples are summarised from 'Broadband Britain – Realising the Vision' by Dan Jellinek<sup>29</sup>.

### *Education*

One example of good practice in this area is the Hackney Broadband project<sup>30</sup>. Their range of broadband sites featuring video, animation and other graphics covered areas from virtual art galleries to citizenship. Participants in the project, which ran from September 2000 to Easter 2001, included the local education authority and the Corporation of London alongside local multimedia companies. Hackney is also part of a collaborative educational broadband network in London, the London Grid

for Learning (LGfL). The LGfL<sup>31</sup> is a consortium of 33 local education authorities which grew out of the National Grid for Learning and is being developed over the next three years as part of a £40 million public-private partnership. It will help its members use broadband by spreading the costs of content development and providing broadband connection to all London schools, primary and secondary, by the end of this year.

#### *Health and social services*

The caring services also have much to gain from broadband, which could become a key enabler of care in the community and home rather than in institutions. Broadband could help carers monitor patients' heart rates or other physiological signs in their homes. Some researchers estimate that early warning signs gained in this way could prevent as much as a third of all emergency readmissions to hospital. In addition, the availability of videoconferencing in the home of the patient allows for visual images to help with investigation and diagnosis.

According to a recent policy debate by the Future Health Forum<sup>32</sup> there are other ways that physiological 'tele-measurement' of the patient at home using wireless broadband connections can assist diagnosis and care management – and hence generate cost savings in ways not previously possible. Experience has shown that empowerment of the patient and their immediate carer with ownership of their clinical measurements is a major additional benefit.

#### *Interaction, access and inclusivity*

The greatest benefit of broadband for public services may lie in its ability to provide a high level of interactivity between citizens and government, enabling a new generation of online services offering much better public value. Services could become increasingly 'smart' and digital, helping people complete forms such as tax returns, for example, by intelligently filling in already known information and offering other help services. Broadband videoconferencing could even avoid travel to an office by being able to 'click' through to a live helper instantly. This could be multilingual, vital to offering access electronic services for people whose literacy or linguistic skills are poor.

#### *Democratic participation*

The Hansard Society's e-democracy programme<sup>33</sup> suggests that, 'from radio phone-ins to reality TV, people these days prefer media featuring 'real people' to the staged media events of traditional politics. The interactivity of the internet, which breaks down barriers between producers and receivers, is a perfect medium for the more inclusive, participatory aspirations of contemporary democracy.'

Broadband offers the potential for huge advances in this area, for example with live debates between citizens and politicians. The Hansard Society sees a potential turning point as the election after next. 'Arguably, the incorporation of e-interactivity into the traditional domestic sphere will be the real coming of age of the net. In this sense, 2001 and the next election could be seen as dress rehearsals for the coming arrival of universally accessible e-politics.'

Several pioneering e-democracy trials are already active in London. For example, the London Borough of Brent is engaged in a two-year EU fifth Framework funded project called EURO-CITI and is undertaking trials at the moment involving discussion forums, consultation and voting.<sup>34</sup> This provides an observation of local thoughts about specific issues, the means to contribute to debates, additional electronic consultation mechanisms and secure e-voting using digital certificates stored on smartcards.

## e-Government, a GLA priority

The role of electronic communications and in particular broadband in improving public value by helping transform the delivery and operation of public services has been highlighted in this report. The need to achieve this through a clear focus on service users and a 'one-stop shop' philosophy has already been adopted by the GLA and is the guiding principle behind LondonConnects<sup>35</sup>, which was set up in 2001 by the GLA and London boroughs to help develop 'joined-up' electronic government across the London's services and communities.

A successful consultation paper 'An e-Government Strategy for London'<sup>36</sup> was issued in December 2001 to communicate the outline architecture for progress and gain wider input to the plans. The GLA vision and plans for joined up, integrated electronic public service delivery in London by 2005 are set out in their Implementing Electronic Government (IEG) Statement for 2001<sup>37</sup>.

### **Innovation, not replication**

It is already well recognised that, in order to make the most of what ICT has to offer public services, the opportunity must be taken to reconstruct service delivery around the needs of the user, rather than around historical processes or departmental boundaries. Innovation and transformation are the keys to extracting better public value rather than the more straightforward automation of existing processes<sup>38</sup>. However, most current e-Government initiatives are at best focused on automation and at worst on cosmetic change.

By using the potential of interactive broadband services to redefine delivery along more efficient and customer focused lines and by delivering public services and content to people in a way that makes best use of broadband communications, the GLA can deliver greater public value, act as an exemplar to accelerate the development and use of broadband enabled services in London and stimulate the growth of the capital's vital creative industries.

### **Progress to date**

London has some of the UK's leading local authorities in the field of e-Government. The London Borough of Camden, Newham, Lewisham, Brent and many others have won awards or have exemplar projects which are recognised by national government. However, progress remains patchy Londonwide. A key objective for LondonConnects is to spread good practice, share knowledge and help the lagging boroughs catch up with the best.

### Political issues

Whilst there is a good deal of discussion and action on the technology and implementation of e-government, electronic service delivery, e-democracy, the digital divide and e-commerce there is still something of a vacuum in government when it comes to the broader political implications of decisions in these areas. These points are discussed in detail in a recent Institute of Public Policy Research (IPPR) paper *Code Red*<sup>39</sup>.

Government views technology, including the internet and broadband, as value neutral. It also lacks detailed understanding of these areas and has not therefore attempted to imbue these spaces with political values. Seeing the internet as a medium of communication rather than as a place in which people spend time, politicians have developed few ideas about regulating and shaping behaviour in internet space for positive social ends.

If we accept that the internet is a space in which people socialise, collaborate and do business, then high speed computer networks must embody and impose values by virtue of their architecture or content. These embedded aspects of governance can affect the way in which people are able to interact and behave and may have profound implications for privacy or inclusivity, for example. In short, code is inherently political in nature and the nature of this code can be used to embed government policy into electronic infrastructure or services.

The opportunity exists for the GLA to take a moral and practical lead in this area by ensuring that Mayoral policy is delivered not only through traditional channels, but is also taken account of in influencing the nature of electronic networks in the capital and in the implementation of e-government programmes. Priorities, for example, may be inclusivity of access, protection of rights online, social equality or equal and active citizenship.

## e-London update

The forerunner to this document, *E-London – An outline of London's opportunities and challenges*<sup>40</sup>, was published by the GLA in September 2001.

### Key elements

The report highlighted three key areas that will underpin London's e-success and ensure its competitiveness in the future. These were the development of mass broadband access to the internet across London, the development of e-skills and appreciation of new technology and the delivery of e-government services within specific timescales. Going forward, the report concluded that if London is to become the true e-business capital of Europe, the GLA and its functional bodies must dedicate more internal resources to e-business and e-government and to overcoming the digital divide.

Of the issues raised, broadband is the key because it offers the potential for widespread affordable access to qualitatively new activities, such as those described in this report. Developing broadband involves both 'push' and 'pull' factors. The 'push' element demands that affordable access is available to a mass market and that suitable content and applications which make the most of broadband communication are developed. On the 'pull' side, consumers and smaller businesses must be aware of the benefits of broadband-enabled services and have the skills and means to purchase and use the services. In 2001 both 'push' and 'pull' sides of the broadband equation needed attention for services to become popular.

### What's changed?

Since 2001 there have been major developments in the broadband marketplace, primarily on the 'push' side. Uniquely amongst UK regions, most Londoners now have a choice of broadband services available from competing suppliers. More importantly, the price of services has reduced very considerably, chiefly as a result of cuts of around 50 per cent in the wholesale prices of ADSL broadband connections by BT in April 2002, which were subsequently passed on to end users by the majority of internet service providers.

### Keys to progress

The major challenges now lie in the 'pull' element. These include:

#### *Content and applications*

Fast internet access is the primary attraction for today's broadband customers but, however important, the appeal of this application is limited to high frequency internet users. No single application or use is likely to be the 'magic bullet' that encourages very large numbers of

businesses or consumers to reap the benefits broadband has to offer. A wide 'bouquet' of compelling content and applications are needed to meet individual needs. Included in this may be services as diverse as music or film subscriptions, video on demand, home security and monitoring, healthcare in the community, shopping, video messaging and conferencing, online gaming, car diagnostics, 'on tap' business services or simple low cost phone calls. The main challenges facing the content industry are those of adapting their skills and businesses to broadband, focusing more on the emergent needs of users and engaging them in ways that make the most of what broadband offers.

#### *Educating the consumer*

Awareness of broadband services is growing as a result of more aggressive marketing campaigns by service providers, yet these are still oriented towards fast internet access only. This is inevitable as most internet service providers are themselves small companies and lack the budget or marketing resources to mount large scale or speculative campaigns. General awareness of the benefits of broadband-enabled services, rather than the technology itself, is required before many of the potential social, economic and public value benefits of broadband can be realised. This is particularly important for the large number of smaller enterprises in London, whose effective and innovative exploitation of broadband could accelerate growth in the capital's competitiveness, employment and output.

#### *Developing an e-culture*

Closely related to the above points is the rate at which the use of 'always-on' electronic communication becomes embedded in the way we all live and work and is accepted in the way that electricity and clean water have become. This involves not only the universal availability of affordable basic services, but also the routine use of broadband communication as part of entertainment, education, training, business and public services. e-business becomes 'everyday' business for Londoners; e-communication as much a part of popular culture as EastEnders.

**Who should lead?**

A high level of public, business and personal usage of broadband-enabled services could develop through the operation of market forces, given a competitive communications marketplace and a favourable economic outlook. The issue for London (and for the UK at a national level) is whether this rate of deployment, adoption and exploitation is rapid enough to secure relative competitive advantage, social cohesion, sustainability and public value compared with other world cities or regions.

Given the primary importance of sustainable economic development, ICT-related growth sectors in the capital, a vibrant and diverse society and improved public services, it is essential that government play a more active part in accelerating the acceptance and uptake of broadband related services.

This is not, however, to substitute or understate the importance of the business community, the academic sector or voluntary groups, all of whom have a vital role to play. The public sector must also act as a catalyst to their efforts and wherever possible seek to 'join up' initiatives from other sources to maximise their overall impact.

## GLA group achievements

Over the past year, since the publication of *E-London*, the GLA group has made progress on a range of fronts to implement the reports' recommendations and to initiate work in new areas in response to the rapidly changing communications marketplace and the needs of Londoners. The following highlights some of these achievements.

### **Creative Industries Broadband Event**

Run jointly with the Confederation of British Industry (CBI) and held at the BT Tower in June 2002, this highly successful event was the first time that content providers from the creative industries were brought together with broadband service providers and the public sector to examine jointly the opportunities to improve business, create new content and boost London's economy.

### **Broadband – Putting London in the Fast Lane<sup>41</sup>**

A brief, practical guide to broadband for smaller businesses, produced by the GLA in conjunction with the June 2002 Creative Industries Broadband Event.

### **The Digital Divide in a World City<sup>42</sup>**

This report was prepared by the International Electronic Commerce Research Centre (IECRC) and Citizens Online for the GLA, LondonConnects and the London Development Agency in June 2002. The report provides a literature review on ICT use and the digital divide – the research team reviewed over 200 papers and research reports – and makes recommendations for research and strategy development to address the digital divide in London. Current strategies promoting ICT use concentrate on providing access to people seeking it. Few policies target those, often from socially excluded groups, who need more encouragement to use ICT and are as yet unconvinced of its benefits. The report considers how this encouragement can be given and how policy-makers can support socially excluded groups.

### **3D Democracy**

The planned 3D Democracy project aims to increase levels of participation by citizens in the democratic process at a local and regional level and to test the role of innovative, advanced technology in doing this. It intends to examine what role new visualisation technology may play in connecting policy-makers with ordinary people and whether this can help engage parts of the community who for social, economic or cultural reasons do not take part in traditional forms of public consultation. Through collaboration with London boroughs, private companies and the academic sector, the project aims to develop, experiment with and evaluate a suite of state-of-the-art e-democracy applications.

### **LondonConnects<sup>29</sup>**

LondonConnects is London's e-government agency, bringing together public sector organisations to co-operate on e-government developments for London. The founding partners are the Greater London Authority and the Association of London Government on behalf of London boroughs; and there has been active support from the Department for Transport, Local Government and the Regions, the Office of the e-Envoy, the NHS, and the GLA functional bodies.

### **The London e-Government Conference<sup>43</sup>**

This GLA/LondonConnects event, held on 10 July 2002, was focused primarily on London, but attendees from other regions were welcomed. Over 550 delegates from a wide range of public sector organisations attended and were able to participate in a broad agenda covering the key policy, service and delivery issues which are essential for the success of e-government. The conference comprised keynote addresses from national and London speakers; together with workshop sessions, providing an opportunity for delegates to participate in discussions, and to question leading exponents of e-government delivery. An exhibition of e-government solution providers, together with current innovative e-projects, ran concurrently with the conference.

### **An e-Government Strategy for London<sup>30</sup>**

A consultation draft was published by the GLA on behalf of LondonConnects in December 2001. This draft strategy focuses on public service provision, and in particular the harnessing of technology to improve quality and accessibility. A technology-enabled transformation of public services is seen as an essential factor in ensuring that London sustains its current pre-eminent position as the major driving force in the national economy, and as Europe's prime e-business location.

### **Implementing Electronic Government Statement 2001<sup>31</sup>**

This document sets out the GLA's vision for joined up, integrated electronic public service delivery in London by 2005.

### **E-London – an outline of London's opportunities and challenges<sup>34</sup>**

This report was an earlier outcome of a business secondment programme to the GLA, under which company executives worked within the GLA, contributing their expertise and experience. The report emphasises the challenge of e-technology in maintaining and developing London's position as the e-capital of Europe. It suggests key areas for development if London is to remain competitive in the e-world.

## recommendations

Current government policy regarding broadband communication and its related industries is essentially that their presence is beneficial and their absence undesirable. The implications of broadband for national or regional GDP for public value or for social cohesion are not widely understood and therefore frequently overlooked.

There is, therefore, an outward display of support without the tools required to enable replication of successes which have been proven elsewhere or to support the innovative development of new forms of local access, content or applications.

Broadband is frequently relegated to the technology agenda as it is perceived as tangential, rather than central to the main goals of government policy.

This report contends that far from being peripheral, the provision and wide use of services enabled by broadband networks are critical to London's future and are central to the successful delivery of the Mayor's key strategies.

The difficult policy issues of economic growth, employment, education, transport, health, diversity, social cohesion, culture, crime and security, the environment and democratic engagement are related directly to the wide availability and use of innovative services that are founded on affordable broadband communications.

The report therefore makes the following recommendations for London:

1. That the GLA both champion and take account of the potential of broadband enabled services to contribute to all other areas of policy delivery.
2. That the GLA consider the political and social implication of technology-related decisions and seek to embed agreed policy into the fabric of e-business and e-government in London.
3. That the GLA group take active steps to increase the level of awareness and uptake of broadband enabled services amongst smaller enterprises in London and work with other business organisations to provide support.
4. That the GLA, LondonConnects and the London boroughs seek actively to produce exemplary broadband content as part of their commitment to eGovernment.

5. That the GLA continue to work closely with the communications industry and develop plans to ensure that appropriate modern communications infrastructure is provided as part of the development plans outlined in the London Plan.

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