



Second Annual Report and Strategic Recommendations

Broadband Initiatives in Devolved Administrations

November 2002

Northern Ireland

STRATEGY FOR A WORLD CLASS TELECOMMUNICATIONS INFRASTRUCTURE IN NORTHERN IRELAND

Telecommunications is central to Northern Ireland's knowledge based economy. It is also recognised as key to the region's competitiveness, business excellence, and its science driven innovation. The effective rollout of affordable broadband services across Northern Ireland also has a strong social dimension and is crucial to addressing e-inclusion. The Department of Enterprise, Trade and Investment (DETI) is the Northern Ireland government department with responsibility for delivering on the government's vision of a world-class telecommunications infrastructure for the region.

While recognising the need to develop policy within a national context in collaboration with DTI and the E-Envoy's office, and the independent regulator, Northern Ireland has sought as much flexibility as possible to develop its telecommunications strategy in the interests of the region. In doing so Northern Ireland has participated in a number of the Broadband Stakeholders Groups and has established working relationships with the different and competing interests within its local public and private sectors;

Northern Ireland's telecommunication strategy has a twin focus: to stimulate demand and to encourage supply. It also has a collaborative basis with the public and private sectors working together. And it has an economic and social rationale, improving business competitiveness on the one hand and services to the customer, consumer and citizen on the other.

On the demand side a number of initiatives have been developed:

- An e-Solution Centre has been established to horizon-scan and identify newly emerging technologies, to demonstrate leading edge technologies to our regional businesses, and to tailor advice on broadband to the specific needs of particular businesses;
- In conjunction with UK Online for Business a dedicated team of regional ICT Advisers, linked into the e-Solutions Centre, provides businesses with specific advice and guidance on a one-to-one basis, focused on helping companies exploit the correct technologies to increase their business competitiveness.
- Workshops and seminars are held around the province to raise awareness with industry, especially SMEs, to the business benefits of broadband telecommunications.
- On-line support for companies has been developed, including a "Broadband for Business" website.
- Pilot subsidies are available to companies in non-adsl enabled areas to stimulate their use of broadband through satellite technologies. The successful uptake of this programme has been such that it has stimulated a number of satellite companies, new to Northern Ireland, to actively market their products in the region.

These demand side activities are complemented by a range of supply site initiatives:

- Northern Ireland's £1.46m share of the UK Broadband Fund is pioneering a number of initiatives including a range of pilot actions, feasibility studies and technology trials, by both the public and private sectors. Projects include fixed wireless and wireless hotspot trials, development of a virtual trade-fair and business broadcasting channel, cluster initiatives in the engineering and

construction sectors, and development of a number of local case studies.

- An open invitation was issued by DETI in June 2002 for flagship applications, content or services that would showcase broadband service design and innovation in Northern Ireland. Nineteen proposals are currently being assessed under this £2m call.
- The preparation of an open call for local access projects which will address the familiar "last mile" problem and link into Northern Ireland's excellent backbone infrastructure.
- A cohesive and corporate action across Northern Ireland's wider public services to address the issue of broadband aggregation in Northern Ireland. A feasibility study, chaired by DETI, is currently examining the potential benefits of aggregation, including economies of scale, improved delivery of e-government services, wider benefits for the economy, and support to social inclusion activities.

Northern Ireland shares many problems in common with Scotland and Wales, including large areas of low population density and limited market competition, and Northern Ireland's initiatives encompass many of the activities of the other Devolved Administrations. On-going contact between the regions has been important in developing Northern Ireland's strategic approach

Northern Ireland however has telecommunications issues unique within the UK due to its land border with the Republic of Ireland. Working with InterTradeIreland, a cross-border economic group with the aims of promoting all-island trading, DETI is participating in a Digital Island project to try to overcome major barriers to cross-border e-business. An example of the issues being addressed includes the major e-business barrier of full international rates applying to cross-border data traffic.

The Digital Island project will also benefit from collaborations between DETI and the Irish Department of Communications, Marine and Natural Resources to develop telecommunication infrastructure in the border regions under the EU's Interreg III programme.

These range of evolving strategic initiatives are seeking to put in place the fast, secure, reliable, affordable and widely available broadband networks for the economy, and to deliver on the aim of making Northern Ireland's telecommunications infrastructure a world leader.

FURTHER EXAMPLES OF GOVERNMENT PROJECTS IN NORTHERN IRELAND

Department of Culture, Arts and Leisure

The **Electronic Libraries for Northern Ireland (ELFNI) Project**, through the provision of 2Mbps links to each library, is introducing significant business change into the public library services in Northern Ireland, enabling libraries to function as community information hubs

Department of Education

The Classroom 2000 project is placing broadband into every classroom in NI. The additional objectives of the project include enhancing the curriculum and increasing the IT literacy skills of both teachers and pupils.

Office of the First and Deputy First Minister

The Government Gateway hides the complexity of dealing with Government and will revolutionise the transactional relationship between citizens and Government. The gateway payments engine will allow all bills generated by Government Departments to be settled online.

Department of Agriculture and Rural Development

A farmer's portal is addressing the needs of the farming community in NI. As well as providing up-to-date information on local farming issues the portal will also provide electronic access to the Animal and Public Health Information System.

Department for Education and Learning

Job vacancies are now being made available electronically both on the Internet and on kiosks in Job Centres. The new facility means that job seekers have ready access to vacancies anywhere in NI. Consideration is being given to piloting the delivery of this service using digital television.

Department of Health, Social Services and Public Safety

GPs are to be provided with high speed, secure e-mail and Internet services which will ensure that they are able to receive laboratory and radiology reports electronically.

Scotland

THE SCOTTISH EXECUTIVE'S BROADBAND STRATEGY

The Scottish Executive launched its broadband strategy "Connecting Scotland: Our Broadband Future" last year. It aimed to promote affordable access across Scotland for the purpose of economic development and to prevent a digital divide opening up between urban and rural areas. The strategy consists of three strands – aggregation of public sector demand, consideration of direct intervention measures and UK regulatory liaison - and significant practical progress has been made in implementing all key elements of the approach and realising the wider aims.

The strategy made a commitment to exploit the potential of the public sector's aggregated demand for higher bandwidth connectivity in order to lever in major investment in infrastructure from the private sector and thus encourage wider provision of broadband. Aggregated procurement is therefore being tested in two Pathfinder areas – Highlands and Islands and the South of Scotland – and work is well in hand to move the procurement process forward on these major initiatives.

The strategy's second strand involved direct intervention where this was considered appropriate. Scotland was allocated £4.4m under the DTI's £30m UK Broadband Fund and a number of projects are being developed and implemented, managed by the enterprise agencies, Scottish Enterprise and Highlands and Islands Enterprise. There are measures to raise awareness and demand for services, trial alternative technological means of supplying broadband and develop the link between demand and supply i.e. content and applications.

Finally, the broadband strategy highlighted the importance of liaison on policy developments at UK level. This has been pursued both on the telecoms regulatory front (particularly on the Communications Bill/OFCOM and on fixed Wireless spectrum allocation) and through contact with the Broadband Stakeholder Group.

Liaison with the other Devolved Administrations has been important in progressing and developing the Scottish Executive's work. This summer's announcement by the National Assembly of Wales of a 5-year plan to increase access to broadband in Wales reflects much of the activity already in hand in Scotland such as aggregated procurement, subsidised satellite broadband and awareness raising/demonstration. More recently, the Scottish Executive has agreed to work in partnership with the DTI's UK Broadband Taskforce.

Scottish Enterprise has also concurrently been developing its Project ATLAS, which aims to address an identified lack of competition in Scotland's wholesale telecoms sector. Phase I of the project is setting up a virtual Telecoms Trading Exchange (TTE) in order to substantially reduce high-bandwidth costs for Scottish businesses and encourage use of broadband services. It will target high-end users of bandwidth in Edinburgh, Glasgow and Aberdeen. Phase II will aim to spread the TTE's benefits more widely through building satellite hubs in some of Scottish Enterprise's business parks with backhaul to the main ATLAS hub.

The Scottish Executive will be publishing an update to its broadband strategy very shortly describing the progress that has been made since its publication last year. The overall goal will remain a Scotland with affordable and pervasive broadband.

SCOTTISH PROGRAMME UNDER UK BROADBAND FUND

Demand/Awareness related projects

Neutral Broadband Website

The overall aim of this project is to provide on-line independent, simplified advice and information on broadband services to the SMEs in order to overcome consumer barriers to adopting broadband.

Network of Local Demonstration Centres

The central aim is to educate SMEs through easily accessible demonstration facilities offering independent expert advice and a wide range of services (through a network of regional Local Demonstration Centres) enabling them to make educated decisions on using broadband applications.

Corporate Demonstration Centres

These are designed to bridge the awareness, education and skills gap related to the use of broadband for key business applications by SMEs e.g. e-procurement, distributed design, video conferencing. Large corporate businesses will be encouraged to assist in this process by hosting and demonstrating relevant broadband business applications.

Supply-related projects

Wireless pilot, Western Isles

The aim is to provide a pilot demonstrator broadband network capable of supporting a whole island community spread across a number of populated islands and using a range of technologies, primarily wireless but including satellite and powerline systems.

Powerline Carrier Pilot Projects – Crieff and Campbeltown

The aim is to illustrate the potential of DSL & Powerline Transmission (PLT) technology in delivering broadband IP (broadband via the electricity socket) to rural communities.

Network Trial Using VPN

The aim is to develop/demonstrate the application of a broadband model for electronic community networking using a Virtual Private Network in a part of Ayrshire unlikely to benefit in the short to medium term from the commercial deployment of broadband.

Sectoral Application - in Agriculture

A pilot project to use wireless technology to deliver rural content and applications over broadband to rural/farm businesses in Ayrshire and to test the case for broadband, in terms of applications benefits.

Rural Neutral Access Point

The aim is to provide a pilot Neutral Access Point in a rural area not included in the ATLAS network. Taking place in the Borders, it will try to address rural disadvantages of lack of competition, high distance-related tariffs for certain services and lack of access to broadband services. It would ultimately be integrated with the ATLAS network to exploit broader benefits.

Content-related

Centre of Excellence for Wireless Applications

The aim is to bring together Scotland's expertise in wireless technologies from industry, academic research, technical infrastructure and applications development in order to enhance and demonstrate our innovation in the wireless arena. It will involve facilitating trials of new wireless content and applications.

Other initiatives

Satellite-based broadband

Highlands and Islands Enterprise is piloting a scheme which offers assistance with the installation costs of satellite-broadband technology. Business benefits will be monitored as will several issues associated with satellite broadband, such as signal loss in bad weather and its position relative to tariffs for other fast Internet technologies. Three Scottish Enterprise Local Enterprise companies have also offered similar subsidies.

ADSL broadband

HIE is currently collaborating with BT on the inclusion of 2 exchanges near Inverness in BT's "ADSL Exchange Activate" commercial trial of "mini D-SLAM". This may help to provide a more cost effective method of ADSL-enabling exchanges for a very limited number of ADSL customers in rural areas.

Wales

THE WELSH ASSEMBLY GOVERNMENT'S STRATEGY FOR BROADBAND WALES

Introduction

The Welsh Assembly Government's plans for the positive economic and social transformation of Wales is published in its ten-year Economic Development Strategy 'A Winning Wales' www.wales.gov.uk. A recurrent theme throughout A Winning Wales is the importance placed upon the exploitation of information and communications technology (ICT) to build a strong, sustainable, competitive and prosperous economy. The ways in which the Assembly Government plans to facilitate the successful take up and use of ICT are set out in Cymru Arlein – Online for a Better Wales.

Cymru Arlein – Online for a Better Wales

Cymru Arlein (www.cymruarlein.wales.gov.uk) is the Assembly Government's Information Age Strategy. Informed by the Assembly Government's largest and most successful online consultation process, this strategy sets out in detail how the Assembly Government aims to maximize the exploitation of ICT to:-

- enhance our communities,
- build successful businesses,
- improve public services, and
- develop and improve ICT skills and learning

Underpinning the central themes of Cymru Arlein is the need to secure widespread affordable broadband access. It is only through facilitating access to a modern telecommunications infrastructure that the effective use of ICT can be made possible. It is against this background that the Broadband Wales Programme was launched.

Broadband Wales Programme

(<http://www.cymruarlein.wales.gov.uk/broadband.htm>)

The Broadband Wales Programme was launched by the Economic Development Minister, Andrew Davies on 11th July 2002 as the Assembly Government's flagship programme for facilitating broadband Wales. The five-year, £115 million programme provides a holistic, flexible approach to driving forward Broadband Wales and is the most significant investment of its type into broadband in any part of the UK.

The Programme recognises the two-fold nature of the deficiencies in the broadband market in Wales. Affordable access to broadband is impossible without the appropriate means of supply and yet without demand commercial operators will not find it economically viable to invest in Wales and rollout their broadband infrastructure at a competitive price. Over the lifetime of the Programme the aim is to create a 'virtuous circle' where increased demand feeds further supply leading to further increases in demand and supply.

It will deliver a range of all-Wales supply and demand stimulation activities across the following areas.

- **Facilitation and awareness raising** - actions to raise awareness of broadband and to support those who wish to exploit the new technologies.

- **Supply-side encouragement** - actions to overcome obstacles to the availability of affordable broadband.
- **Encouragement of local initiatives** - actions to facilitate initiatives by business and community groups to develop local broadband solutions and content.
- **Specific procurements** - interventions to increase the availability of broadband in specific circumstances, addressing identified gaps in provision.
- **Aggregations of public sector demand** - actions to rationalise public sector broadband procurement in Wales that can also positively influence the economics of broadband deployment.

Its supply and demand activities have been informed not only through the close consultation of a range of stakeholders in the private, public and voluntary sectors but also on the extensive and authoritative research undertaken in the 'Ubiquitous Broadband Infrastructure Study' (www.wis.org.uk) published last year. Despite being launched less than 4 months ago, a tremendous amount has already been achieved. Amongst the first tangible initiatives to be rolled out by the Broadband Wales Programme is;

- The **SME Satellite Broadband Subsidy Scheme** that was launched in September 2002 (<http://www.wda.co.uk/broadband>) and which is already helping small businesses right across Wales who are unable to access affordable terrestrial broadband to obtain affordable broadband connectivity for their business via satellite. The subsidy offered equates to 50% of the cost (to a max. £1500 per company) of first year satellite services. It effectively reduces the cost of obtaining broadband via satellite to that of terrestrial ADSL solutions. By making available affordable broadband services, this ensures a more level playing field on which Welsh business can compete, By increasing demand for satellite broadband the subsidy will also, in the medium term help to drive prices down and increase the choice of suppliers in Wales.

- **'Try Before You Buy'** broadband showcasing and demonstration facilities available at ICT Support Centres across Wales and which are showcasing the potential and benefits of broadband to Welsh businesses. A map of these ICT centres is available at ; <http://www.businessconnect.org.uk/index.cfm/Region>.

- Work is also continuing to establish a high profile **Broadband Wales Unit** within the Assembly Government, to be responsible for driving forward the 5-year Broadband Wales Programme.

Further initiatives will also be taken forward over the coming months. A summary of the Programme Action Plan providing a flavour of the type of activities that will be taken forward is available at <http://www.cymruarlein.wales.gov.uk/pdf/BBW%20actions.pdf>.

Whilst a major transformation in Wales' broadband infrastructure cannot be expected to take place overnight – the wide ranging scope of the Programme and the progress made since its launch not only puts Wales ahead of the game in terms of activities that are taking place in other parts of the UK but also serves as a strong indication of the Assembly Government's commitment to Broadband Wales.

Within the five-year lifetime of the Programme the following targets will be delivered:-

- The availability of affordable terrestrial broadband services in Wales to be increased by approximately 30%, with 310,000 extra homes and 67,000 extra business lines potentially being able to access wireline broadband.
- 50-100 local or regional initiatives to be developed to deliver broadband solutions
- Fibre and/or other broadband connectivity to be available in most business parks.

- Approximately 1200 additional public sector sites to be broadband-enabled.
- Broadband services to be made widely available throughout Wales at near-DSL prices.
- Increased awareness of broadband communications and its benefits.

To complement the activities of the Broadband Wales Programme, the Welsh Assembly Government is also driving forward a number of initiatives on the aggregation of public sector demand. In particular: -

The Welsh Assembly Government's Lifelong Learning Network

This multi million project spearheaded by the Welsh Assembly Government and launched in October 2001 with the aim of providing broadband connectivity to all schools, learning centres and libraries in Wales, £10million has been spent on supplying multi-media equipment at these locations. Since its launch extensive background work has been undertaken in the last 12 months to ensure that a resilient and effective network is put in place. In March 2002 the Assembly Government signed a contract with Logical UK Ltd to create a country-wide broadband network linking all 22 Local Education Authorities in Wales and eight University sites.

The Core Network of the Lifelong Learning Network was completed on target by Logical in August 2002 and connected to the Internet via the Joint Academic Network (JANET). The network will provide 100 Mbps connections and Internet connectivity into every unitary authority. Welsh Networking Ltd, the Assembly's managing agents, are working hard to connect each of the 22 local authorities to the network and to its Internet Service Provider (ISP). Gwynedd will be the first authority to transfer to the network and a timetable is being prepared for the other authorities to transfer from current ISPs to the Lifelong Learning Network. All of Wales' local authorities are expected to be connected to the Lifelong Learning Network by the end of March 2003. The local authorities will link this hub to schools, libraries and community learning centres in Wales.

DAWN 2

The Welsh Assembly Government has launched DAWN 2 – an extended version of the existing Digital All Wales Network (DAWN) linking the country's hospitals. The £20million investment will provide broadband connectivity to all hospitals in Wales - providing up to 1000 broadband connections linking 550 hospitals, GPs and homeworkers with high speed broadband connectivity making it much easier for clinicians to share information and undertake remote diagnostics.

JIGSAW

The Joint Initiative for Services Across Wales (JIGSAW) provides 'joined up' services to farmers in Wales through automated processes and data capture, use of Internet for claim submissions from farmers, delivery of integrated records, use of bilingual tools and provision of free access to the Internet for farmers via National Assembly Divisional Offices.

Other Infrastructure Projects

In addition to the significant levels of activity being taken forward as part of the Broadband Wales Programme the Assembly Government has also committed itself to working with partners in the public and private sectors in the development of a number of initiatives designed to improve Wales broadband infrastructure.

eFro Broadband Wireless Project (<http://www.e-fro.cd/>)

The Assembly Government has used a proportion of its £2.67 million allocation from the DTI's Broadband Fund to support the development of the e-fro project which uses the 802.11b broadband wireless spectrum to provide broadband access to a community in rural North West Wales. The Assembly Government has worked in close contact with Wales Digital College in the development of this project which aims to: -

- stimulate the demand for broadband,
- create on-line communities,
- trial technologies in Wales and
- help the Assembly to meet its social inclusion and equal opportunities goals.

The project was launched earlier this year and has proved to be extremely successful. It provides a concrete example of how wireless technology can be used to provide connectivity to rural areas and helps to build a business case for the utilisation of wireless technologies as a broadband solution in some parts of Wales.

Arwain Project (www.arwain.net)

Officially launched by the Economic Development in October, this project uses wireless technology, transmitting the internet via an antenna or special access point, with no need for cables or wiring. This allows even the remotest communities to link up to the internet easily and cheaply. The project reflects trials of similar technology such as the e-fro project taking place in North West Wales. At present Arwain is available in the Cardiff area, however there are plans to extend the network to Caerphilly, Blaenau Gwent and further afield in the future.

Further Demand Side / Awareness Raising Initiatives

The Assembly Government recognises that as companies move up the eCommerce ladder that this will also have a beneficial impact upon the demand for affordable broadband connectivity. Therefore as well as the supply side initiatives described above the Assembly Government has also worked with a number of partner organisations to establish appropriate sources of focused advice, specific to the needs of business to assist them with the successful exploitation of ICT. Amongst the most prominent are: -

Opportunity Wales

Which offers a wide variety of medium to high end services to all SMEs in the Objective 1 areas. Personal advisers are able to visit each business to provide a free eCommerce review, followed up by additional low-cost, high-value consultancy services. They can also provide financial assistance should a business wish to purchase products and services identified through the eCommerce review. Finally, a business wishing to demonstrate best practice and able to share its success, can also be supported. As of September 2002, over 1,200 business reviews have been delivered. Opportunity Wales will be extended to all Wales through Objective 2 bid in future. More information can be found at www.opportunitywales.co.uk.

ICT Support Centres

Which are offering impartial 'low-end' ICT help and guidance to about 5,000 businesses each year. 38 ICT Business Support Advisers are now delivering ICT support across Wales. For more information, see www.businessconnect.org.uk.

Other Projects

e-communities programme

A project currently in the late developmental stage which will seek to fulfill the following objectives:-

- Work with over 100 communities across Wales, creating a network of 60 community portals and Information Age Community Support Centres.
- Engage with communities and groups by raising awareness and increasing the use of ICT and the internet by communities.
- Assist communities to develop the ICT skills of individuals through the development and use of new and relevant community portals and content.
- Create and maintain the technical portal infrastructure required for communities to sustain and further develop their eCommunity activities
- Create sustainable communities through the safeguarding of new employment opportunities and encourage new business start-ups in eBusiness applications arising from the eCommunities projects.
- Seek to achieve the transformation of communities into eCommunities and monitor the progress by communities in achieving this transformation.

National Grid for Learning (NGfL) Cymru

Complimentary to the Welsh Assembly Government's activities on the Lifelong Learning Network is the National Grid for Learning (NGfL) Cymru. The contract was awarded in June 2002 for this scheme which comprises several strands activity using digital technology to provide curriculum materials for use in schools across Wales. The service includes:

- a new bi-lingual education portal for Wales, intended to become the main online learning centre for pupils and teachers;
- new curriculum materials and education resources to be commissioned and developed by learn.co.uk for Wales, plus free access to premium online content developed by learn.co.uk
- support for teachers and other education practitioners to share expertise and contribute their own material for NGfL Cymru; and,
- re-launch of the Virtual Teacher Centre as the premiere online curriculum and In-Service Training resource for teachers in Wales.