The Next Generation of Broadband
Atkins provides professional, independent Next Generation Broadband consultancy. Our expertise supports clients in rural and city environments throughout the world.
Bridging the digital divide

Next Generation Access Networks will be a cornerstone of economic prosperity for businesses and citizens. As the digital economy grows, the widespread availability of Next Generation Access services and applications will support social inclusion, education, innovation, opportunity and productivity.

Failure to provide universal Next Generation Access will, over time, severely impair communities, businesses, regions, countries and individuals. This creates a digital divide between ‘the haves and have nots’ which exists in many places today.

High speed broadband network availability is one of the key issues affecting public and private sector bodies today. Defining policy and creating incentives for investment will breed innovation and competition and bridge the digital divide; leading to a modern, prosperous future for nations and regions.
Strategy to operation

As the benefits and opportunities of higher-speed digital communication become clearer, the issues associated with the capability to deliver next generation applications, such as telemedicine, require detailed analysis. Local and National networks that deliver these services need to be upgraded or even replaced in a ubiquitous manner to the benefit of all.

The technology required to enable the service vision is available today, but the ability to deploy it economically and in a sustainable manner requires creativity and innovation in the way such ventures are financed and executed. Public and private sector organisations need to work together. It is unlikely that a common business model can be applied in all cases - each deployment is unique.

To succeed, a properly informed strategy and business-case is required, based upon realistic costs, revenues and implementation timelines. Atkins works with organisations to ensure practical, innovative and cost-effective techniques are utilised. Return on investment is driven through efficient operational management and the future ability to deploy new services, combined with an open approach to infrastructure sharing.
Our holistic approach

The implementation of a Next Generation Access broadband infrastructure is a complex, multi-faceted process. Atkins’ holistic approach ensures that the vision and strategy can be properly defined and a robust business case developed and agreed by all stakeholders. We bring together economic experts, mapping capability, financial modelling skills and project management before we embark on detailed telecommunications engineering network design and procurement strategies.

We can assist with the development of the business case as well as the subsequent more detailed implementation. A number of critical, inter-related factors need consideration including:

- Articulation of the vision for the scheme
- Development of policy and strategy
- Socio-economic aspects
- Cost and revenue modelling
- EU State-aid implications
- Carbon neutral/green issues
- Systems architecture and design
- Network management specification
- Procurement, planning and execution
- System implementation
- Ongoing network operation and maintenance

Our assessment will help establish whether modernisation of existing infrastructure or an entirely new network is required. Identifying any existing and planned infrastructures from both the private and public sectors and how these could be integrated into the new system architecture is also extremely important. Our extensive contacts with telecommunications service providers, property developers and the public sector help identify suitable assets.

Atkins’ multidisciplinary approach coupled with innovative thinking ensures that maximum benefit and value to users is realised from the investment… and that the performance and financial metrics can be met over the project lifetime.
Atkins has worked with a variety of public and private sector organisations to plan, design and enable cost effective broadband networks for deployment in remote and challenging terrains, large cities and urban areas.

Our multidisciplinary capability includes business case analysis, demand forecasting and engineering design coupled with expert programme and project management.

Country to countryside

Wales
Atkins completed a cost/benefit study of the FibreSpeed initiative for the Welsh Assembly Government (WAG). FibreSpeed is a special purpose vehicle set-up by the WAG to deliver Fibre-To-The-Premise (FTTP) connectivity to businesses in key parks across North Wales where broadband connectivity was otherwise scarce or expensive. Our study examined the potential for FibreSpeed to be used as a backhaul route for extending FTTP access across the rest of Wales and included evaluating the economic conditions and telecommunications infrastructure to support such an opportunity. Atkins undertook extensive research of other successful deployments around the world supporting our conclusions.

Ashford
Atkins helped bring Next Generation broadband services to Ashford by developing a cost and revenue model for an Open-Access fibre to the home (FTTH) network. Our duct infrastructure design and cost breakdown of the core, distribution and access network was complemented by a detailed analysis of the potential revenue opportunity for an Open-Access operator. Atkins provided a market evaluation and contacted local Telecoms Service Providers to gauge their interest in delivering services to residential and business clients. The full investment case was then prepared (using existing European financial investment models as reference), speeding up the availability of Next Generation services.
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Western Isles of Scotland
From feasibility to concept, from plan to procurement, from build to network operation, Atkins has helped transform the lives of thousands of citizens in the Western Isles of Scotland. In one of Europe’s most remote locations Atkins has provided schools, hospitals, medical practices, homes and businesses with broadband access via a network infrastructure that spans nine islands. Our continued support to Highlands and Islands Enterprise now includes the deployment of applications such as Telemedicine, VoIP and IP-TV across the network. This EU award winning network is helping to shape other broadband projects across remote and rural areas throughout Europe.

“The Atkins team developed the technical design and implemented a very successful procurement framework, which has led to an outstanding implementation”

Donnie Morrison,
Highlands and Islands Enterprise

Singapore
Atkins partnered with KPMG and Baker McKenzie to provide advice to the infocom-Development-Agency (IDA) of the Singapore Government. We defined the architecture and supported the contract award for the Singapore National Next Generation Broadband Network (NGNBN). Atkins was responsible for the technical strategy and related tender specifications, leadership and of the Competitive Dialogue sessions held with major international telecommunications organisations. The ultimate goal of the NGNBN is to provide a future-proof infrastructure capable of delivering Next Generation applications and services across Singapore by 2015. The solution finally recommended by Atkins was a 100% Fibre-To-The-Premise (FTTP) network.

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