



# How optical connectivity is helping businesses do more

**Sectors: Telecoms, mobile, finance, government, health, broadcasting**

When customers need the highest possible bandwidth, Wholesale Optical is the answer. Using fibre optic cable to transfer data digitally, our optical solutions deliver dedicated and uncontended high-performance point-to-point and multi-access connectivity – over greater distances than other cabling options.

But what sort of customers need this kind of connectivity? Read on and discover just a few of the possible use cases. Whether your customers are in finance, government, telecoms health, broadcasting or something else, Wholesale Optical can support their needs.





Segment: Telecoms service provider

## Large UK service provider utilises BT Wholesale Optical service to maximise reach and coverage

A major UK telecoms company wanted to create an optical network core for its business. However, it was also keen to avoid investing in and building its own network, thereby reducing its capital expenditure. It turned to us to find the right solution for these budgetary and network requirements.

### The business challenge

As well as trying to reduce the overall cost of its network, this telecoms company had other critical requirements to address. The nature of its work meant UK-wide coverage was essential, including access to harder-to-reach locations.

Scalability and flexibility were crucial to the customer too. It would need room to grow, so it would be able to respond to increasing demands in future – without having to ramp up expenditure.

### The network solution

BT's Wholesale Optical solution was ideal, as it offered national coverage and the largest reach across the country. We also offered the benefit of being a single provider of nationwide high bandwidth core connectivity.

Another important benefit was the ability to start relatively small with lower-speed services and grow later on. Over the years, as its platform and traffic have expanded, this customer has gone from 10Gbps to 100Gbps services.

We've also been able to offer diverse network routing and resilience, providing ultra-reliable service for the customer's critical applications and traffic – all backed by our world-class SLA and network performance.



**Segment: Mobile provider**

## **UK mobile service provider uses BT Wholesale Optical for backhaul aggregation across the country**

We were approached by a major UK mobile provider, which needed 100Gbps backhaul for network aggregation throughout the UK. Thanks to our excellent reach and coverage, we were chosen to carry out this project. Our presence in on-net datacentres where they were also located was equally important, making connectivity simple and efficient.

### **The business challenge**

Some of the locations the customer needed to cover were harder to reach – areas such as the South West, West Wales and Northern Ireland.

### **The network solution**

Using Wholesale Optical with diverse network routing, we created resilience and separacy in the service, offering optimal reliability for the customer's network and services. This also included Diverse Plus services, where Openreach access circuits were required to connect to some sites.



## Segment: Financial services

# UK bank opts for high-speed, secure optical solution for long distance, multi-site consolidation

A major UK bank acquired a company that provides products and services that complement its own. It then faced the huge challenge of integrating the two organisations' operations. The firm needed to reduce total IT costs and also comply with data security and disaster recovery regulations. It did this by consolidating its datacentres using a seamless and optimised network based on optical connectivity. This service carries both new and legacy protocols and saves money if bandwidth or wavelengths need to be expanded in the future.

## The business challenge

Basel 2 and FSA data security and disaster recovery regulations are becoming more stringent in the face of potential threats. From natural disasters and accidents to terrorism and cyber criminals, these can come at any time, from anywhere. These threats also mean you can't store and back up data in sites that are close to each other anymore – or in similar situations, such as on the same flood plain or under the same flight path.

Meeting these regulations and managing the costs would have been enough of a challenge, but the acquisition intensified things. They also needed to consolidate the datacentres to save money and increase operational effectiveness. And with space and rent at a premium in urban areas, it made sense to relocate some of them to greenfield sites. The bank needed a solution that integrated legacy networks running different network protocols. They needed to move large volumes of data quickly, and beyond the normal distances for fibre-based networks. And they had to do all this with low latency and total security.

## The network solution

Optical solutions were delivered that gave the bank a cost-effective, resilient way to integrate their office locations and consolidate their datacentres. Just as important, the bank was able to move its mission-critical data to lower-cost centres with better physical security.

The company previously used 1Gbps Ethernet, but the optical solution allowed it to move to 10Gbps, with a view to moving to higher 100Gbps speeds in the future. It's already saved money on total cost of ownership and operation, due to needing less space, equipment and power. Not only is the bank using fewer servers, storage and network devices, but each one is being used more intensively.

The key to this success was a network with virtually unlimited scale and extremely high availability. The bank is also benefiting from its efficient, high-speed network in new ways. For example, it has to archive data for compliance reasons, but now it can mine that data to help cross-sell and up-sell complementary products and services.





## Segment: Government

# UK local authorities use long distance, secure optical network to share services

To save money, two neighbouring UK local authorities got together to combine the administration functions they had in common. They needed to slash costs and cut their carbon footprints to meet tough government targets. It meant moving from separate, dedicated applications running in isolated datacentres to a shared model. To do this, they needed an integrated, seamless and optimised network. Optical connectivity offered everything they needed.

### The business challenge

It's a tough time in the public sector. Government departments at all levels are cutting budgets and trying to make their operations more efficient. That often means doing things in new and different ways. We're seeing less staff working in fewer buildings, and more assets and resources being shared.

Datacentres are being consolidated and applications are being moved into the cloud. The top priority is to cut the total cost of owning and operating networks, but a close second is to reduce CO2 emissions.

These two local authorities needed a network solution that would integrate multiple legacy networks that ran different protocols. And which could move large volumes of data quickly and securely over distances beyond 70km.

### The network solution

The Wholesale Optical solution gave the authorities more than just a cost-effective, resilient and scalable solution to integrate their office locations. They're now using fewer servers, storage and network devices, but each one is being used more intensively.

Less equipment needs less power to run it, so these organisations significantly reduced CO2 emissions and the total cost of ownership and operation. The key to this success was a high availability, scalable network that can carry many different datacentre protocols. They're already seeing the benefits of their new efficient network architecture and high-speed access. And the consolidated IT platform is allowing leaner, more consistent governance around IT strategy.



## Segment: Health

# NHS ICT provider adopts optical solution to cope with exponential data growth

Because of an explosion in data, the provider of ICT services to NHS trusts in a largely rural region found the wide area and local area networks and datacentres were struggling to cope. And neither could it guarantee sufficiently high availability.

The provider needed a better way to move, store and retrieve the data securely and reliably. It had to connect locations that were far apart in difficult terrain many miles away from the nearest metropolitan area network. But it also had to cut costs. An optical solution overcame all these hurdles – and will be able to handle data and bandwidth increases in the future.

## The business challenge

Both local and wide area networks are struggling to deal with increasingly large data files at a time when costs are being cut. With this in mind, the provider needed a network

solution that could integrate legacy networks that were running different protocols. It had to offer low latency while moving large volumes of data quickly. And since it handles patients' confidential records, it had to do it with complete security.

## The network solution

A high-speed optical solution was provided, which is cost effective, resilient, scalable and connects all the remote locations. It has allowed the provider to rationalise and consolidate its datacentres– and it does all this with armour-plated security. The company saved a lot of money on the total cost of ownership and operation, since it now uses fewer servers, storage and network devices. The key to achieving this was a network with virtually unlimited scale and extremely high availability.





## Segment: Broadcasting and Media

# Future-proofing a TV broadcast network

Using optical services, we helped a major TV company to future-proof its network. Faced with a growing audience and increasing use of digital formats for broadcasts and streaming, it was looking for a digital IP solution that could keep up with the demand. This includes high bandwidth modern media formats including UHD, and the need to transmit with low latency and minimal delay.

Over 18 months, we worked together to design and build an optical network offering:

A massive  
**4.7Tbps** of  
capacity.

A core network  
of nearly **3,000**  
video and audio  
circuits.

More than **700**  
data circuits.

The project included installing new resilient optical circuits to several of the customer's sites across the UK, and fitting new equipment to connect its services to the new network.



# Why choose us for optical?

## High-quality, secure services

We offer uncontended bandwidth over dedicated network routes and a choice of resilience options if you need. So you can benefit from highly secure, better quality services without having to worry about the risks of a shared infrastructure.

We offer speeds up to 400Gbps, beyond the capabilities of Ethernet services.

We offer the lowest latency and best performance compared with other network services like Ethernet or IP VPN, and it's all backed by our 21C optical network, which offers 99.999% platform availability and a five-hour fix SLA, in the rare event of any service problems. We can also offer a range of resilience services including full diversity and network separation where needed.

## Exclusively yours

Our products use dedicated capacity and routes, so your network performance will never be affected by another customer's use. That means you get exactly what you pay for. And you decide whether you need more bandwidth or wavelengths. The capacity you don't use on day one will still be there if you need it later. All in all, you get highly secure, better-quality services – with no hidden risks.

## Better reach

Our fibre network covers the whole of the UK. It reaches many places that others can't. Quite simply, if we can't reach it, nobody can.

We have on-net connectivity in a wide number of third-party datacentres and BT exchanges, and we continue to expand our network coverage to bring end user sites closer to a node, reducing pricing and complexity of delivery.

For the latest information on our optical coverage and roll-out plans, please see our [interactive coverage maps](#) >

If you have customers with large bandwidth demands, Wholesale Optical could be the solution you're looking for.

For more information, visit [btwholesale.com/optical](https://btwholesale.com/optical).

To arrange a discussion with one of our network specialists, email [clientreception@bt.com](mailto:clientreception@bt.com) or speak to your account manager.

### Offices Worldwide

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