SUPER CONNECTED CITIES

> "The need for broadband connectivity for businesses has always existed. The Urban Broadband Fund created an incentive to act now. We saw this opportunity to rapidly deploy reliable service with Cambium wireless broadband, and customers are immediately experiencing the benefits."

GILES PHELPS, MANAGING DIRECTOR, SPECTRUM INTERNET

Overview

Communities grow when they are connected to the Internet. Governments understand the need for connectivity and encourage network extensions to provide connectivity to small and medium businesses in rural locations. When entrepreneurial service providers engage with government initiatives, communities get the connectivity they need to flourish.

Spectrum Internet is the leading independent Welsh Internet Service Provider and one of only a handful of Internet Service Providers (ISPs) in Wales that are able to provide Wireless and Microwave solutions as well as Fiber-to-the-cabinet and Fiber-to-the-Premise solutions. Deeply experienced in both wireless and fiber installations, Spectrum Internet has created broadband connections to connect remote locations, specializing in offering connectivity to businesses in remote areas where connectivity is difficult or expensive.

Business service offerings include:
- High speed primary connectivity
- Backup connectivity
- VoIP services
- Streaming video for video conferencing

PROFILE

Spectrum Internet provides broadband connectivity to business and residential customers in Cardiff and Newport in Wales. www.spectruminternet.com

CHALLENGE

Build awareness of the Super Connected Cities scheme among small business customers and provide a proven connectivity solution before funding expires.

SOLUTION

- **PTP 600** wireless backhaul to reach from their core network to the city.
- **PMP 450** wireless access points deployed in the center of the city to connect local small business users.

Challenge

When the UK government created a multi-million pound investment to provide broadband connectivity to rural areas, Spectrum Internet saw the opportunity to connect small business users in their coverage area. The "Super Connected Cities" voucher program allocated a total of £150 million for an Urban Broadband Fund (UBF) to connect up to 22 cities. The program provides funding up to £3,000 to subsidize an individual business connection.

Spectrum Internet was surprised to find they had to build awareness and develop demand for the vouchers. The local business population had not got the message regarding the incentives.

The highest priority business users were customers who did not have any broadband above 2 Mbps. For these prospects, an awareness campaign was created to share the news about the vouchers and propose that Spectrum Internet provide connectivity in a matter of weeks.

Other prospects were business users who currently had broadband, but were not satisfied with the service. The voucher incentive gave them an opportunity to switch providers to a wireless solution that is stable, predictable and less expensive than leased line services.

With the customers and propositions identified, the technical solution had to be designed and put in place. Spectrum Internet leveraged their good relations within Cardiff and secured a prominent high site in a central location to deploy the Access Points. This provided the ability to easily connect many small businesses in the local area.

Why Spectrum Internet chose Cambium Networks:

- **High Throughput** – with up to 125 Mbps per Access Point for high speed data transfer.

- **Low Latency** – for clear transmission on sensitive VoIP and streaming video applications.

- **GPS Synchronization** – to reduce self-interference and allow for frequency re-use for maximum total throughput in a minimum amount of spectrum.

- **Proven Performance** – to provide data transfer, VoIP services and streaming video services.

- **Easy Installation** – for rapid and cost effective deployment.

Solution

Spectrum Internet created an all wireless network to rapidly deploy connectivity to the city and approach the market of 100 small businesses that would be in the 12 square mile (21 square km) coverage area.

Application	Solution
Backhaul	PTP 600 to provide up to 300 Mbps connection from the core network to the city center.
Access	PMP 450 with up to 125 Mbps of total throughput per AP to provide 30 Mbps service to a range of 1.6 miles (2.5 km).

Installation at the central location was completed in one day and connecting each business location took approximately 2 hours.

Results

Business customers were very pleased with the results. "Compared to the alternative options for a broadband connection, Spectrum Internet's solution was by far the best value for the money," says Rob Samuel, IT manager, IntaPeople. "From start to finish, we were kept informed during the different stages and the solution was delivered within the original timescales set."

Among the results achieved are:

• Reduced cost from leased lines

• Access to video conferencing, reducing travel time to meetings

• Higher speed connectivity has reduced data backup times from 9 hours to 1 hour

• Small businesses no longer need to allocate or ration use of broadband between staff members, which had inhibited activity

With a proven technical solution and continuation of the government incentive, the Super Connected Cities program is a win for all parties.