/ CASE STUDY:
ABERDEEN CITY COUNCIL

Pinacl won a Managed Wireless contract with Aberdeen City Council to help bridge the digital divide and aid social inclusion

/ THE RESULT:

The provision of a scalable public WiFi solution across the City. The service provides the public with free access to the Internet with content filtering and user logging enabled to ensure compliance with relevant regulation and legislation. The project provides public WiFi within 32 Council buildings including community centres and libraries as well as external public space WiFi, supporting the Council's digital and social inclusion strategy within Aberdeen's northern regeneration areas of Northfield, Middlefield, Woodside and Tillydrone.

The service provides a simple and effective means of accessing the public WiFi service using social media credentials or a simple form based entry. Once a user has registered and used the service, subsequent attempts to access the service using the same device will be seamless.

/ THE PROJECT:

The Council appointed Pinacl Solutions to design, deploy and operate a Managed WiFi Service across its property portfolio. The aim of the service was to widen access to internet based services across the City, bridging the digital divide and aiding social inclusion, providing visitors with access to a world class WiFi facility in all public accessible spaces. The key deliverables for the project were to:

- Provide visitors access to free WiFi enabled services and local content including public information via a simple to use portal.
- Implement robust security and filtering processes to ensure the service complies with legislation.
- Provide network connectivity to the chosen sites with minimum download speeds of 100Mbps
- Migrate the existing Council public WiFi network to the new managed service
- Provide connectivity and services to identified Council buildings including Libraries and community centres.

The Council understand the part WiFi in public buildings plays as a key driver for addressing digital and social inclusion.

They had an existing WiFi network within the libraries for staff that also provided limited public access through a Council managed network. Unfortunately, there was no capacity for further expansion or resources to internally manage a public access WiFi network and therefore the Council decided to tender for a managed WiFi service under the Accelerate Aberdeen programme.

/ KEY BENEFITS:

› PROVISION OF A PUBLIC WIFI SERVICE

Providing the public with simple, consistent and seamless access to high quality secure internet connectivity using social media credentials or a simple form based entry.

› COMPREHENSIVE USAGE ANALYTICS

Rich set of statistics and reporting on the public WIFi service available to the Council via the City Connect portal.

› EXPERIENCED WIRELESS PARTNER

Pinacl work in close partnership with the Council to provide them with a Managed WiFi Service that delivers the flexibility to support the varying Council led public WiFi initiatives and has the ability to readily scale to connect additional sites.

› SUPPORTS SMART CITY INITIATIVE

Supporting the Council's Smart City strategy through the sharing of Pinacl's knowledge and experience on the design, implementation and management of public WiFi and dark fibre networks. Dark fibre and wireless networks are two of the key building blocks for any Smart City implementation.

/ THE SOLUTION:

It was important that the solution provided would be scalable, flexible and reliable to address the Councils immediate requirements but also meet their future strategic goals of bridging the digital divide and aiding social inclusion.

The wireless network infrastructure had to operate completely separate from the Council's own data network to ensure security compliance and was carefully designed to provide a high performance, secure, reliable and flexible service. Key elements of the solution include:

- Resilient Core solution based on redundant 1Gbps Internet circuits, Fortinet Firewall and Content Filtering appliances and Ruckus ZoneDirector Wireless Controllers.
- Hub Spoke wide area network connecting the identified Council sites back to the most cost effective Core site using 100Mbps fibre circuits or utilising the Council or other stakeholders dark fibre networks wherever possible.
- Cisco based local and wide area network solution delivering high speed connections to each site.
- Ruckus wireless access points delivering excellent WiFi coverage and high performance.

The main project has currently delivered Public WiFi services into thirty-two Council buildings with plans to increase the number of sites in the future. The service also supports the provision of public internet access via hardwired PCs at several of these locations, enabling visitors without their own device to still access the internet.

Aberdeen City Council work very closely with a number of local stakeholders, including Aberdeen University, and as part of the initial deployment the eduroam service was also advertised at each of the locations. eduroam is an international roaming service for users in research, higher education and further education. It provides researchers, teachers and students easy and secure network access when visiting an institution other than their own.

Whilst implementing the support for eduroam, Aberdeen University also took the opportunity to replace their existing Cloud public WiFi service with Pinacl CityConnect. This was achieved very easily with the University advertising the CityConnect

public WiFi SSiD across their existing WiFi networks and then delivering the user traffic via a layer 2 connection to a Pinacl provided gateway device.

As detailed earlier, wherever possible we worked with the Council and the other local stakeholders to expand and take advantage of their own dark fibre networks rather than deploying new and expensive service provider circuits.

This approach provided the Council with best value and reduced the ongoing costs associated with delivering the public WiFi service, making it more sustainable. This approach was taken when connecting to the Aberdeen Sports Village, where we extended the Council's dark fibre network to connect into Aberdeen University's fibre network to backhaul the data to the public WiFi core.

Pinacl bid for, and were awarded a contract to design, deploy and operate public access WiFi network services to Aberdeen's northern regeneration areas. This involved the provision of external public space WiFi within several northern regeneration areas - Northfield, Middlefield, Woodside and Tillydrone.

Seven public space WiFi zones have been created consisting of 58 T300 Ruckus access points configured as wireless mesh networks. The project had some challenges, including the ability to deploy external wireless access points onto lighting columns that did not have a permanent AC mains feed (dusk to dawn power only). The project involved working with Future Cities Catapult, Aberdeen City Council and Aberdeen University. Engagement with the local communities was an important factor, with the goal of ownership for the portal content resting with the local communities.

/ CLIENT TESTIMONIALS:

"Bringing high-speed wireless connectivity to the city centre and beyond will deliver massive benefits for schools, the public and businesses. With these plans, we are making a real statement to the global business community in terms of attracting new investment. This is a genuine partnership between private and public sector to bring about digital transformation".

Willie Young, Finance Convener Councillor, Aberdeen City Council

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