

CityFibre Sees 60% reduction in TCO with Edgility Virtualized uCPE

How Telco Systems Transformed CityFibre's Network Operations with Virtualized Services at Scale

CityFibre is at the forefront of the UK's digital transformation, operating the nation's largest independent full-fiber platform, and serves millions of homes and thousands of businesses, with scalable and future-ready connectivity to ISPs. CityFibre realized that their traditional hardware CPEs were just not the right choice any more for the next-gen network they were envisioning, and approached Telco Systems to help them modernize and scale their operations efficiently.

The CityFibre Challenge



CityFibre aimed to replace outdated and End-of-Life Customer Premise Equipment (CPE) with scalable, cost-effective, and flexible solutions. Facing limitations with their costly Cisco legacy devices, CityFibre needed to deploy, manage, and operate an extensive range of virtualized services at scale. The goal was to establish a next-generation, low-cost access network across the UK, reduce environmental impact, and enable business ISPs to deliver advanced services without traditional vendor constraints.

The Telco Systems' Impact



Telco Systems' Edgility platform provided a Virtualized Customer Edge (uCPE) solution that transformed CityFibre's access network. By leveraging white-box hardware and separating software systems from physical components, Edgility enabled seamless out-of-the-box access, Zero-Touch Provisioning (ZTP), and centralized management of hundreds of thousands of devices at the edge. The virtualized solution empowered CityFibre's business customers to deploy, manage, and upgrade critical services—such as VoIP, SD-WAN, and firewalls—across a single uCPE device without costly on-site visits, dramatically lowering **Total Cost of Ownership (TCO) and CO2 emissions by 60% and 45%, respectively.**

Virtualized Customer Edge CPE

To continue their ambitious growth plan, CityFibre faced challenges in maintaining and upgrading their network while keeping operational costs low. Traditional uCPEs used to deliver services came with vendor lock-in, higher costs, and lacked flexibility for future expansion. Additionally, their large form factor and high energy requirements were at odds with CityFibre's commitment to reducing environmental impact.

The Situation

Expensive, Inefficient Hardware and Software that didn't align with CityFibre's forward looking game plan

CityFibre's existing network infrastructure relied on CPEs, creating bottlenecks in scaling services. They were dealing with:

Vendor Lock-In: Dependent on a single hardware vendor for updates and expansions.

Scaling Limitations: Inability to deploy new products quickly, limited by the CPE's hardware and software constraints.

High Operational Costs: Traditional routers and multiple appliances across sites resulted in rising costs and inefficient resource use.

Environmental Impact: A need to reduce their carbon footprint, as older, larger hardware contributed to higher energy use.

The Vision

An innovative, modernized, energy-efficient network powered by Edgility's virtualized customer edge uCPE

Telco Systems' innovative virtualized edge solution opened the path for CityFibre's infrastructure evolution, transforming their legacy hardware into efficient white-box appliances. Through Telco Systems' Edgility platform, CityFibre achieved significant cost and CO₂ reductions while gaining centralized control over thousands of network devices. The advanced capabilities of Telco Systems streamlined CityFibre's operations, establishing simplified network orchestration across their infrastructure.

Key Benefits



Cost Savings: 60% reduction in Total Cost of Ownership (TCO) by transitioning from costly, legacy hardware to virtualized solutions.



Scalability & Flexibility: Virtualization enables the centralized management of hundreds of thousands of edge devices, expediting the deployment of new services across multiple sites. This also lowers the costs of service and support by reducing the need for on-site technicians, minimizing truck rolls, and streamlining operations.



Vendor Independence: With Telco Systems' The white-box approach, means freedom from vendor lock-in, enabling the use of any approved hardware, reducing supply chain dependency, and adding the flexibility to scale from 1G to 10G as needed.



Reduced Carbon Footprint: By replacing old, inefficient hardware with compact and energy-efficient appliances, CityFibre reduced their CO₂ emissions by 45%, supporting their sustainability goals.

Operational Excellence: Setting the Stage for Future Innovation

CityFibre chose Telco Systems' Edgility to address their present-day challenges and future proof their network

- ✓ **Zero-Touch Provisioning:** Automating the deployment of devices across their network, saving significant operational time and reducing human error.
- ✓ **Plug-and-Play Functionality:** CityFibre's customers can now run their own containerized network functions (CNFs), improving service delivery.
- ✓ **Centralized Management:** Edgility Central allows real-time monitoring and remote management, giving CityFibre enhanced control over network operations and performance.
- ✓ **Deliver a flexible, virtualized solution** tailored to their needs.
- ✓ **Provide a comprehensive management platform** that integrates with future network expansions.
- ✓ **Support CityFibre's goals** of reducing costs while increasing service flexibility and environmental sustainability.



This is another important step towards our ambitious vision for a fully virtualized network.

Telco Systems' carrier-grade networking expertise and management of virtualized edge devices at scale makes them an ideal innovation partner.

David Tomalin, Group CTO at CityFibre

Highlights

Open, Vendor-Agnostic

Solution: Freed CityFibre from traditional vendor lock-in, allowing flexible service offerings from any chosen VNF provider.

10 Gbps Interface:

Supports high-speed connectivity, ensuring top-tier service for demanding network applications.

360-Degree Automation:

Simplifies the deployment and management of VNFs across CityFibre's network.

Plug N'Play Access: Rapid, easy deployment of network services without the need for specialized installations.

Integration with MDSO: Enables streamlined management and orchestration of diverse network functions.

Environmental Efficiency:

Reduced CO² emissions by 45% and TCO by 60% through virtualized solutions and white-box hardware.

Zero-Touch Provisioning (ZTP):

Automates device setup and configuration, minimizing manual processes and reducing errors.

Remote Troubleshooting:

Allows for efficient maintenance and diagnostics without the need for on-site engineers.

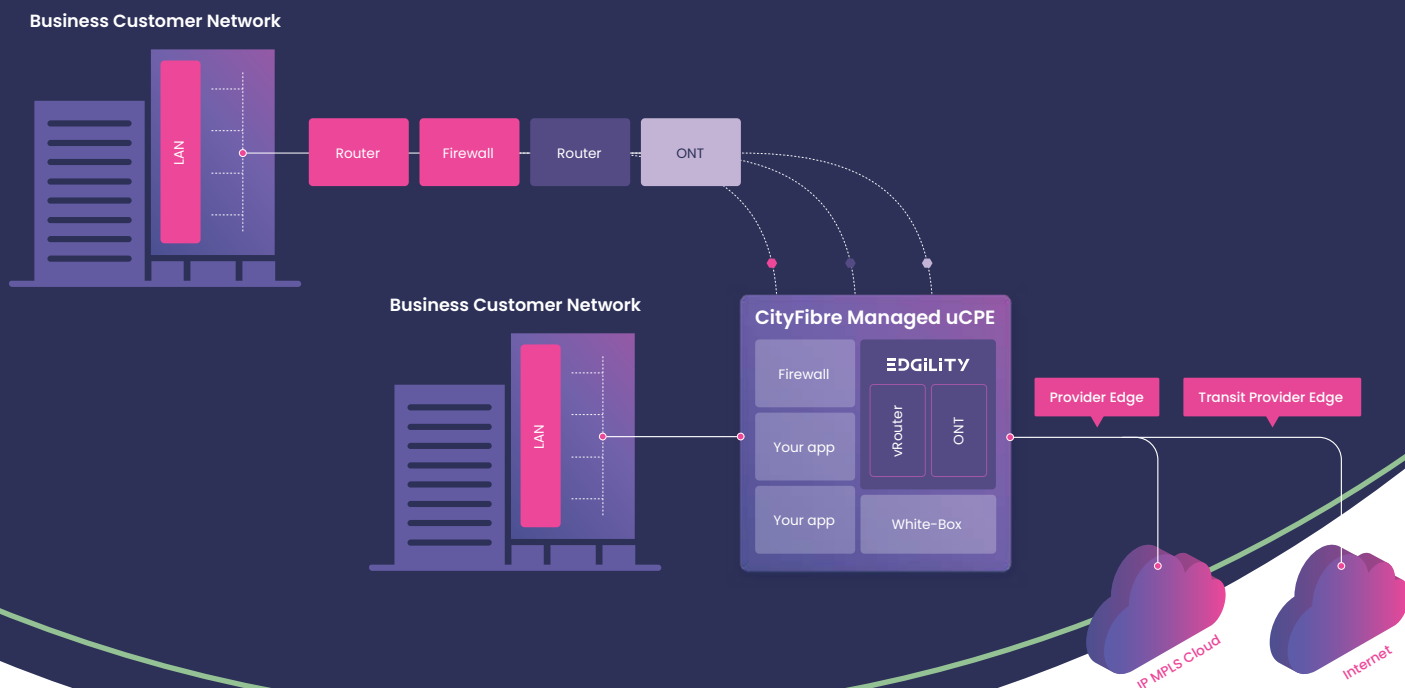
Future-Proof Flexibility:

Built for scalability, allowing CityFibre to introduce future value-added services as market needs evolve.



We wanted to deploy the UK's leanest and most efficient network, and adopting Telco Systems' Edgility platform greatly helped us cut wastage and maximize efficiencies.

David Tomalin, Group CTO at CityFibre



60%

Reduction in TCO

45%

Reduction in CO² Emissions

Telco Systems' Edgility virtualized connectivity platform empowered CityFibre to modernize their network infrastructure and scale their services for future growth enhancing operational efficiency while significantly reducing both costs and environmental impact.



TELCO SYSTEMS

Telco Systems is a global leader in providing cutting-edge networking solutions. Edgility platform enables communication service providers to transform their networks into virtualized, efficient, and scalable infrastructures.