



## Modernizing City Connectivity: A Smarter Infrastructure for Waregem, Belgium

### Overview

Waregem, affectionately known as “the galloping city” of West Flanders, Belgium, embodies a unique blend of heritage and innovation. This community of nearly 39,000 residents, famous for hosting the historic Waregem Koerse horse race, has evolved into a thriving center of modern municipal services, commerce, and civic engagement. The city’s administrative heart beats within The Pand, a dynamic complex that brings together City Hall, a public library, social welfare offices, and local businesses under one roof.

Delivering efficient services to residents demanded a robust, dependable, and manageable infrastructure. Through their collaboration with Black Box and leveraging Extreme Networks technology, Waregem established a unified network platform that keeps everything running seamlessly, from permit processing to social program administration, all within a single, integrated ecosystem.

### AT A GLANCE

#### CHALLENGE

- Aging core and edge infrastructure struggling to keep pace with growing municipal demands
- Rising connectivity requirements spanning numerous public facilities and city operations
- Intricate network environment connecting government offices, libraries, welfare centers, and commercial zones
- Critical requirements for security, scalability, and streamlined management

#### SOLUTIONS

- Comprehensive network overhaul featuring Extreme Networks 10G Ethernet switches (X670-G2)
- Migration from outdated EAPS topology to MLAG for enhanced resilience and performance
- Fiber-optic backbone connecting distributed server rooms to ensure redundancy
- Deployment of Extreme Extended Edge Switching and V400 devices for uninterrupted service delivery
- Continued evolution toward ExtremeCloud IQ – Site Engine and ExtremeControl for automation and access management

#### RESULTS

- Significantly improved network performance and reliability throughout municipal operations
- Streamlined management through centralized control, minimizing configuration mistakes
- Adaptable, scalable infrastructure prepared for future automation and cloud capabilities
- Smart investment approach with lower operational costs and better service dependability

#### BENEFITS

- Dependable connectivity underpinning all city services and public interactions
- Strengthened security and redundancy through automated failover mechanisms
- Reduced maintenance burden via centralized management
- Sustainable cost efficiency through hardware flexibility and compatibility
- Solid partnership providing continuous technical expertise and strategic guidance

## Challenges

As digital operations expanded and citizen expectations grew, Waregem's existing infrastructure hit a wall. The network had to bridge multiple entities such as City Hall, the Public Center for Social Welfare (OCMW), and various satellite locations, while simultaneously supporting parking systems, CCTV networks, public Wi-Fi, and building automation.

The city required a secure, adaptable solution capable of growing alongside new digital initiatives. Keeping everything operational with a lean IT team presented its own set of hurdles. Manual configuration workflows heightened the risk of outages and mistakes, while outdated core and edge equipment blocked any meaningful expansion plans.

Facing these mounting pressures, the municipality looked to its trusted technology partner, Black Box, to architect a more intelligent, resilient network powered by Extreme Networks technology.



## Solutions

Black Box completely reimagined the city's infrastructure with a clear focus on simplicity, dependability, and growth potential. The initiative kicked off by replacing the aging EAPS ring topology with a Multi-Chassis Link Aggregation (MLAG) configuration, dramatically boosting both performance and redundancy.

The foundation of this new architecture consisted of Extreme Networks X670-G2 high-density 10G Ethernet switches, functioning as aggregation hubs within Extreme's Extended Edge Switching framework. This strategy simplified deployment, cut down on management overhead, and guaranteed uniform performance across every connected service.

Connecting City Hall and the OCMW's server rooms, which are roughly 500 meters apart, required a thoughtful approach. Black Box installed a fiber-optic loop, establishing a high-speed connection for redundancy and seamless data synchronization. Existing Extreme switches (X460-G2 and X440-24P) were repurposed alongside V400 edge devices, pushing core capabilities out to the network edge and delivering complete feature parity without additional configuration headaches.

This smart combination of legacy and current hardware helped squeeze maximum value from the investment while upholding the highest standards of stability and efficiency.

## Results

The transformation delivered immediate, tangible improvements. The network now powers the entire municipal complex, from administrative platforms to public Wi-Fi, with markedly better reliability and visibility. Downtime has plummeted, and configuration blunders have been virtually eliminated, thanks to centralized management.

Through Extreme's Extended Edge Switching model, administrators can oversee all devices as a single, cohesive system, lightening the workload and sharpening responsiveness. The city also secured the scalability needed for emerging applications, smart city projects, and expanding connectivity demands.

Looking ahead, Waregem will introduce ExtremeCloud IQ – Site Engine and ExtremeControl for sophisticated automation, network access control, and detailed visibility. These enhancements will enable automatic device provisioning and more robust policy-driven security, setting the stage for comprehensive network automation.

### Why Black Box?

Waregem's achievement rests on two pillars: cutting-edge technology and committed partnership. Black Box's extensive experience with municipal infrastructure and thorough understanding of Extreme Networks solutions enabled them to deliver a custom-fit solution perfectly aligned with the city's operational objectives.

The relationship extends well beyond initial deployment. Black Box's engineers maintain an ongoing collaboration through routine system assessments, proactive refinements, and reliable advisory support. Their commitment to customer success, coupled with technical excellence and quick responsiveness, has established Black Box as a go-to partner for local governments across the Benelux region.

Black Box helps public institutions like Waregem modernize effectively, ensuring every connected system, from municipal offices to community services, operates securely, sustainably, and without interruption.