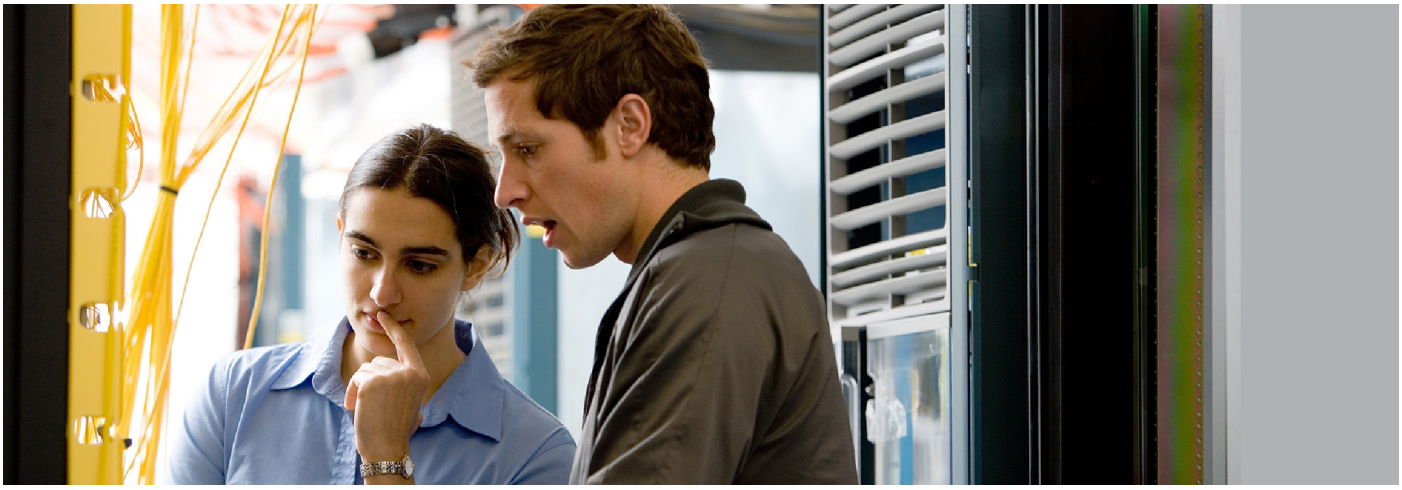
# Belgian Service Provider Builds Optical Transport Network

Customer Case Study



edpnet chooses Cisco optical packet technology to enable new service options and support business growth

## EXECUTIVE SUMMARY

**Customer Name:** edpnet

**Industry:** Service Provider

**Location:** Belgium

### Challenge

- Build a new high-speed backbone with greater reach
- Overcome problems linked to poor quality fiber and long distances
- Retain leadership in cost and service management

### Solution

- A DWDM backbone built on a Cisco ONS 15454 MSTP platform
- Cisco Capital for leasing options to protect cash flow
- Cisco Services for design and consultancy

### Results

- Future-proof platform to cope with business expansion
- Homogenous, intelligent architecture for fast, innovative service provision
- More effective resource utilization through advanced service automation

## Business Challenge

An independent service provider headquartered in Belgium, edpnet opened for business in 1999. Originally specializing in Internet access only, it now markets a broad portfolio including business and residential broadband services, voice solutions, hosting, and customized enterprise solutions. In addition, wholesale international wavelength-based and MPLS-based transport and transit services are offered.

"The telecoms market is extremely competitive and, in order to stay ahead of the game, we have to constantly innovate and improve our services," explains Philip Deutz, CEO of edpnet. "Our goal is to become a global telecom provider." The advantages that edpnet has built into its business model include a lean organization along with streamlined ordering and delivery processes. These enable the company to individually tailor its transport offer and activate services very quickly.

But, for edpnet, maintaining competitive edge is crucial to continued business success. "We needed a platform for future expansion, which would allow us to take advantage of new international opportunities within and between Europe, Russia, and North America," Deutz adds. "In particular, by creating our own European fiber backbone we would be able to keep in front in terms of service management and cost leadership." The choice of the right partner for routing and optical networking hardware and software was a crucial step.

## Network Solution

The company chose the Cisco ONS 15454 MSTP as the fundamental building block for its DWDM (dense wavelength division multiplexing) transport architecture. Like all the solutions that make up the Cisco IP Next Generation Network (NGN) architecture, the Cisco Packet Optical Transport solution was designed to help service providers such as edpnet reduce their expenditure and accelerate new service delivery. For example, an important factor in that decision was the reconfigurable optical add-drop multiplexing (ROADM) technology of the ONS 15454, because ROADM has proven to be less expensive in the longer term than the fixed version of this technology.

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Philip Deutz
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The aim for the edpnet pan-European next-generation network so created was to provide highest customer service quality with sophisticated end-to-end service monitoring and enhanced protection capabilities. With Cisco technology already incorporated in the company's multi-protocol label switching (MPLS) IP-based network, the addition of the ONS 15454 MSTP in the backbone would offer end-to-end homogenous technology. This, in turn, enables comprehensive and integrated services.

The ONS 15454 MSTP serves as a universal transport layer for edpnet, offering a high degree of automation, as well as a leading set of ROADM and wavelength cross-connect capabilities for 80 channels supporting bandwidths of up to 100Gbps. To provide services that either span very large distances or traverse poor quality fiber (or both) edpnet utilizes the latest coherent 40Gbps high performance optics of the Cisco ONS 15454 MSTP.

The ONS 15454 ROADM functionality also allows connections to be added or removed without the need to convert between electrical and optical signals at transit sites. As a result, and supported by Cisco advanced management tools, operating expenditures and service activation times are further reduced, while service reliability is increased. Other benefits are the very compact form factor of the ONS 15454, as well as the solution's ability to support a comprehensive range of services.

To efficiently bridge the ultra-long-haul distances required in its network footprint, edpnet uses the advanced optics and Raman amplifiers inherent in the ONS 15454 to boost signals and reduce data errors. Furthermore, the ONS 15454 supports an industry-leading portfolio of transponders, muxponders, and packet optical for Ethernet services, as well as an extensive range of storage area networks and legacy service-specific functionalities. Alien wavelengths are also fully supported, enabling service providers like edpnet to use third-party light sources, thereby gaining long-term technology innovation and equipment pricing advantages.

## Business Results

edpnet foresees capacity demands for its European fiber backbone continuing to increase exponentially. The company will leverage the Cisco optical transport technology to efficiently carry these vast volumes of traffic and meet future customer requirements such as the rapidly increasing popularity of video-based services.

"The Cisco optical transport solution is the perfect foundation to our carrier-class IP infrastructure. As a whole, this NGN delivers innovative services with the highest quality, constantly monitored across all network layers," says Deutz.

The optical networking technology was, however, only part of the Cisco solution. Cisco Capital was chosen to assist in protecting cash flow and speeding time to revenue. The company also used Cisco Services for disciplines such as planning and design. "With a thriving business to run, we cannot afford to take chances with customer service," says Deutz. "The use of Cisco Services meant that our own engineers could focus more closely on our core business."

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## Next Steps

The initial rollout of the edpnet DWDM backbone will connect 25 points of presence in 15 major cities throughout Europe, the USA, and Russia, a total of 4,500 kilometers of optical fiber. "Cisco packet optical transport technology provides us with a flexible infrastructure that's cost effective to operate and gives us the best of all worlds," concludes Deutz. "While meeting basic needs like wavelength provision and voice transit traffic, we can also provide innovative IP-based NGN service options to meet customers existing and future requirements."

## For More Information

To find out more about the Cisco IP Next-Generation Network, please visit: www.cisco.com/go/ipngn

For more information about Cisco optical networking solutions, please go to: www.cisco.com/go/optical

## Product List

### Routing and Switching

- Cisco ONS 15454 MSTP
- Cisco PRIME management

**Americas Headquarters**
Cisco Systems, Inc.
San Jose, CA

**Asia Pacific Headquarters**
Cisco Systems (USA) Pte. Ltd.
Singapore

**Europe Headquarters**
Cisco Systems International BV Amsterdam,
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