

# ANY PLACE, ANY TIME, ANY DEVICE

100G NETWORK DELIVERS MAJOR  
BANDWIDTH INCREASE FOR LEADING  
DUTCH TRIPLE PLAY PROVIDER

REACHING  
FARTHER,  
FASTER



For residents of The Netherlands, communicating with friends and family at unprecedented speeds is a reality. Innovative Dutch media and communications services provider Ziggo is implementing a major technology upgrade that will keep it well ahead of increasing bandwidth demand and at the same time deliver new levels of Quality of Service to its customers.

MARKET: SERVICE PROVIDER  
LOCATION: UTRECHT, THE NETHERLANDS  
COMPANY SIZE: 2,800 PEOPLE



## CASE STUDY

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AT THE SPEED OF IDEAS™

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In the Dutch telecom market, bandwidth differentiation has long been a key focus for telecoms and their clients. Ziggo, formed in 2007 and now grown into one of the country's leading media and communications services providers, is expanding on this focus with an aggressive technology strategy built around the 100G network from Alcatel-Lucent.

**CHALLENGES:**

- Customer expectations for high-quality experience, delivered in any place, at any time, on any device
- Rapidly growing traffic demands from multi-media applications and Internet access

**SOLUTION:**

- Alcatel-Lucent's 1830 Photonic Service Switch (PSS) with 100G coherent transport and Wavelength Tracker

**BENEFITS:**

- Enables service providers to upgrade directly from 10G to 100G
- Allows re-use of existing infrastructure, for efficient and cost-effective implementations
- Offers optical tracing and monitoring capabilities via the Wavelength Tracker



**“ZIGGO'S AIM IS TO BECOME THE LARGEST PLAYER IN THE DUTCH MARKET OFFERING MEDIA AND ENTERTAINMENT SERVICES, INCLUDING TV, INTERNET AND TELEPHONY. OUR GOAL IS TO OFFER THESE SERVICES TO OUR CUSTOMERS IN ANY PLACE, AT ANY TIME, AND ON ANY DEVICE.”**

JOHN SIMONS, VICE-PRESIDENT OF DEVELOPMENT ZIGGO

Formed as the result of the merger of three cable operators, @Home, Casema and Multikabel, Ziggo provides telephony, TV and Internet to residential customers, with a range of customizable TV packages that offer different levels of interactivity and functions. For its business clients, Ziggo offers products and services that help to reduce the burden of technology ownership and ensure Quality of Service, for instance across transactional and healthcare-related applications.

At the time of the merger, Ziggo faced a number of challenges including a steep integration curve and the need to address certain service and technology challenges. Today, just four years later, Ziggo has become the benchmark provider in The Netherlands, serving approximately 3 million households, 1.8 million broadband Internet customers, 2 million digital television

customers and 1.3 million telephone subscribers across the country. The 3 million customers who receive television (digital and analog) from the company represent a market penetration of 72% of homes in Ziggo's service area.

As the cable and content industries continue to evolve in The Netherlands, Europe and beyond, Ziggo is experiencing a transformation of its own. The company is laying the groundwork for a major evolution that will see it emerge as a full-fledged media company, positioned to offer its customers a wide range of high-quality media experiences, tailored to individual needs. Initiatives such as the Amsterdam Ziggo Dome are illustrative of the group's expanding media ambitions. Scheduled for completion in 2012, the Ziggo Dome, a multi-use indoor arena with capacity for 15,500 people, will showcase a range of events

including music concerts and sport matches. Says John Simons, Ziggo's Vice-President of Development: "Ziggo's aim is to become the largest player in the Dutch market offering media and entertainment services, including TV, Internet and telephony."

**DELIVERING A HIGH-QUALITY MEDIA EXPERIENCE**

To achieve this goal, Ziggo is taking direct aim at the quality of the customer experience. "Next to increased bandwidth, Quality of Service becomes ever more important. Delivering a high-quality experience is key to Ziggo," says Simons. "We want customers to see Ziggo as the brand that delivers the consistently high-quality media experience that they have come to expect."

This evolution will mark a significant step in the young company's history. It also marks a major turning point in the

technology path that's taking Ziggo into the future. While the challenges that Ziggo faces are shared across the industry – increasing need for bandwidth, and changes in customer expectations – the company's response to these challenges is unique. Alcatel-Lucent's 100G solution will ensure Ziggo can provide its customers with an unprecedented level of service.

**STRAIGHT TO 100G**

For Ziggo, a 40G network – a choice for many companies – was not an option. "The 40G solution didn't really provide added value for us. And since Alcatel-Lucent now offers a mature, stable 100G platform, we decided to step up to this level now, so that we're prepared for the future," says Heleen Elfrink, Ziggo's Director of Network Development.

Going straight to a 100G network made sense for Ziggo on many levels. To start, the company's existing DWDM network would have reached its limits in the future. With it, Ziggo could then not fulfill its promise of consistent Quality of Service 'in any place, at any time, on any

device'. And it was clear that the company's planned growth in Internet access speeds, additional television channels and advanced services would require an ever-increasing network capacity. "We're moving to 100G now because we see that our customers need it today," says Simons. "Internet traffic is going to grow dramatically in the next several years, and we want to be prepared."

Customer expectations have also evolved: Ziggo's residential customers now expect a different quality experience. Before, it was enough to deliver a cable connection to a home address. Now, a home might contain five 'clients', each using a different device to access content, and each expecting to experience the same Quality of Service.

**MATURE SOLUTION OFFERS SMOOTH BANDWIDTH EXPANSION**

Once the decision was made to upgrade to 100G, Ziggo selected the Alcatel-Lucent 1830 Photonic Service Switch (PSS). Ziggo and Alcatel-Lucent worked together to outline the

most effective implementation strategy. The plan had to take into account Ziggo's existing technology investments, and also avoid intermediate steps that would add unnecessary complexity to the network.

"The Alcatel-Lucent 1830 PSS gives us a mature solution that does two things: it lets us begin our migration roadmap today, and it allows us to upgrade our backbone network to be ready for the bandwidth increase that's coming," says Elfrink. "Another key advantage is that we need only take one big migration step, and that helps us keep our network framework as simple as possible. We can also reuse the existing 10G infrastructure, which allows us to implement the migration both gradually and efficiently."

Today, Ziggo is able to offer broadband Internet access speeds up to 120 Mbps. This is just one way for Ziggo to provide an unparalleled, high-quality experience for its users. This is also important in the Dutch market, where bandwidth has traditionally been a key differentiator.



**"ALCATEL-LUCENT WORKED VERY CLOSELY WITH OUR ARCHITECTS. TOGETHER, WE HAVE FOUND THE PERFECT SOLUTION FOR ZIGGO."**  
 HELEEN ELFRINK, DIRECTOR OF NETWORK DEVELOPMENT ZIGGO

**FACTS AND FIGURES**



- Ziggo's network is 98% fiber optic up to – on average – 300 meters from its customers' front doors, making it The Netherlands' largest fiber optic network.
- Ziggo has partnered with Paul Verhoeven, renowned Dutch director, screenwriter and producer, and LG Electronics on the Entertainment Experience, a cross-platform, user-generated entertainment platform.
- Ziggo has released a new version of its popular Ziggo TV app for the iPad, which allows live viewing of the ten most-watched Dutch channels 'in almost HD quality'



**NETWORK MONITORING TOOL LETS MANAGEMENT 'SEE' WITH PINPOINT ACCURACY**

Alcatel-Lucent's Wavelength Tracker, which provides optical tracing and monitoring capabilities, will allow Ziggo to see exactly what is happening in the network. "This allows us to easily monitor network use. It delivers key data about the usage, which helps us to make the correct upgrade at the right moment, at the right place," says Simons. Heleen Elfrink agrees. "The Wavelength Tracker is an excellent management solution that enables us to coordinate our capacity in an efficient way and see possible network disturbances," she says.

The 1830 PSS also helps with planning for bandwidth needs. "Planning for bandwidth used to be done based on ballpark estimates, assuming that bandwidth would increase by X% and setting up the network according to that assumption," says Simons. "With Alcatel-Lucent's 1830 switch, we can easily monitor network use. It delivers key data about the usage, which helps us to make the correct upgrade at the right moment, at the right place."

**STEP-BY-STEP IMPLEMENTATION TO GUARANTEE SUCCESS**

"Our migration path to 100G will be a phased approach," says Elfrink. "We want to take it step-by-step; see where traffic growth is strongest and upgrade the network where it's needed most." The implementation will take place over three years, and will be split into three steps. First, Ziggo's eight core sites will be upgraded, then the IP network, and then the 100G photonic switching will be activated.

While the industry is changing and traditional roles are shifting, it's important to keep looking for ways to reduce network total cost of ownership and increase network resilience and flexibility. There's more content, running over more channels, than ever before, but in the end all content passes over the service provider's network. This makes it vitally important for the service provider to develop a compelling vision for the future.

**SHARED APPROACH**

It also makes it increasingly important to choose the right long-term partners. "We appreciate Alcatel-Lucent's ability

to think along with us about the future, about the challenges we face in our capacity growth, and our ambitions in terms of video," says Simons. "At the same time, they know our history, and they are aware of all the investments we've already made. This helps to guarantee that we make the most of our previous investments when we use them as the foundation of new projects and technologies."

As part of its transition, Ziggo has moved the customer from the very end of the process to the beginning. "Ziggo started out as a cable company, with connections to home addresses. Back then, we didn't need to know what was behind those home addresses," says Simon. "That works for TV in the living room, but when you want to expand your services to 'any place, any time, any device' - and that's what Ziggo is aiming to do - it means we have to find out more about our customers." The solution from Alcatel-Lucent, along with Wavelength Tracker, will ensure this, and more, for this ambitious organization. •