eurofiber

Vital infrastructure increasingly essential

Five reasons why VitalFiber1-40 makes your organization future-proof

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Our economy and society are currently transforming at a rapid pace. The barriers between the physical, digital, and biological worlds are increasingly blurred. With the integration of the Internet of Things (IoT), cloud computing, data integration and other technological advancements, the way we work, live, and communicate is changing in a revolutionary way. Is your organization ready for the future?

Organizations striving to innovate and grow can no longer get by without a vital infrastructure. Connectivity is the foundation around which everything revolves, making it a critical element. Networks, devices, platforms, systems, and people are all connected. While this makes us increasingly dependent on ICT and communication, which can be rather intimidating, it also offers a wealth of opportunities.

Digital transition
Digitalization is currently our main source of growth, innovation, and new business. We've come so far that our smartphone will be as intelligent as the human brain in fifteen years! The impact of this on government organizations, educational and healthcare institutions, and businesses is immense.
Fiber to the Home and Dedicated Fiber
Reliable connectivity is the foundation of the digital transition, which is why the fiber optic market is currently bustling. Fiber to the Home (FttH), where the fiber

optic cable comes right into your home/business, is booming. The same is true for Business or Dedicated Fiber. The techniques vary greatly. In particular, the number of applications and unlimited bandwidth are the main advantages of Dedicated Fiber over Fiber to the Home. A must when your infrastructure needs to be available 24/7, the business needs to keep running, and you want to continue innovating and growing!

Launch of VitalFiber1-40
Reliable connectivity is now essential to every organization: from government to construction and from e-commerce to logistics. Infrastructure with such an important role can be issued 'vital' status from the Ministry of Economic Affairs and Climate. Eurofiber was awarded vital infrastructure status in 2018. We offer services, the continuity of which is of vital importance to Belgian society. When vital infrastructure fails, society is impacted. This is why we are committed to the ongoing improvement of our products,

Source: www.smartcitiesworld.net/news/news/
smartphones-smarter-than-humans-1468

services, and processes. Our new proposition, VitalFiber1-40, arose from this commitment. With VitalFiber1-40, we are responding even more to the needs of the market and, above all, we can guarantee our customers' business continuity.

Make your organization future-proof
In this e-book, you can learn about the latest trends, the tremendous network growth in our digital society, and what it takes to grow and innovate with it. Consider the cloud and the vital fiber optic infrastructure needed. Read more about the differences between Fiber to the Home and Dedicated Fiber, the need for high bandwidths, and the five reasons why VitalFiber1-40 will make your organization totally future-proof.
Happy reading!

Table of contents

1. Trends you don't want to miss

The impact that technological developments are currently having on people (customers, employees) and the spaces in which they reside (home, school, institution, office, car) is enormous.
We're increasingly seeing that smart combinations of all these technological trends result in even more smart innovations. These trends are responsible for the growth of cloud computing, high-speed networking, and a vital fiber optic infrastructure.

Companies looking to automate their business processes do so primarily by combining Artificial Intelligence (AI) and Machine Learning (ML). This is also known as Hyperautomation. A combination that means decisions are increasingly made by devices rather than people. The number of autonomous devices replacing human functions is growing all the time. This, of course, has implications for the workplace.

Networking in society
If you look around, you will see how governments and organizations are already taking full advantage of digital technology. Digital transformation is today's reality. Smart city projects for livable, urban environments are sprouting up in major cities worldwide. Another example is home automation, where information systems in homes make it possible to provide remote care to the elderly, for example. In this way, they can continue to live independently in a safe manner for longer.

50 billion connected devices
Organizations may still be able to get by with the available capacity for now. But one thing is certain: the demand for capacity in all sectors will increase at a phenomenal rate in the coming years. A key reason for this is autonomous devices: the Internet of Things (IoT). In fact, as many as 50 billion devices are expected to be connected to the Internet by 2025. Each of these devices collects data that goes to the cloud via Internet.

Fast and reliable network

With all these developments, the need for a solid network is tremendous. It's a need in which fiber optic technology plays a crucial role. After all, a fast network must be able to transport a lot of data in a short period of time. Latency (delay) over that connection must be low so that data arrives at its destination with minimal delay.

Although the maximum Internet speed via fiber optics is already very high, it will become many times higher in the future. This is a necessity if we are to use all the future possibilities of digitalization. A reliable network is also essential. In critical environments, such as a hospital or an educational institution, the primary process immediately comes to a halt if the network degrades, or even worse, fails. Reliable availability is also crucial in SMEs, industry, government services, or financial services. This is why network providers are increasingly implementing redundancy: organizations then purchase two separate connections to seamlessly switch to the other connection in the event of a malfunction.

Longer-term trends

Self-driving cars are an example of a longer-term development that has already begun. A single self-driving car generates about 4 terabytes of data daily alone. This demands optimal connectivity requirements of the underlying infrastructure. This data travels to data centers via mobile networks and the fixed fiber network infrastructure.

To transmit this enormous amount from A to B as quickly as possible, a stable, secure, and future-proof network infrastructure is an absolute must. Fiber optics are the ideal, flexible transport medium for this purpose. Our customers are already taking this into account in strategic future plans.

Cloud: now and in the future

The cloud is the foundation for exploiting all those large quantities, and not just for this data, but for all big data. Combined with high-performance connections, the cloud provides access to data and computing power anywhere, anytime. For many organizations, a secure cloud connection is essential and forms the basis of their cloud strategy.

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2. Fiber optics: Fiber to the Home or Dedicated Fiber?

Connectivity is now a basic need and the foundation for digital Belgium. Governments, healthcare institutions, education, and businesses: never before has a reliable connection been as important as it is today. As a result, the fiber optic network in our country is growing explosively. Both Fiber to the Home and Dedicated Fiber are experiencing this growth. But which should you choose as an organization and what do you base that choice on? While it is certainly not a matter of right or wrong, one does fit better than the other. The difference is mainly in the applications you use now and in the future.

A fiber optic connection can transport huge amounts of data to the other side of the world in a fraction of a second. No form of transport can compete with that. More and more organizations are working in the cloud for their online applications, data traffic, and data storage. Data that is critical to business operations and for which a vital infrastructure with fiber optics is essential.

Main differences
Those making the move to fiber optic have a choice between Fiber to the Home (FttH) and Dedicated (Business) Fiber. Both differ greatly in price and also in applications. But how, exactly? The first difference can be noted right from the installation of the fiber optic cables.

FttH installation
With FttH, the installation of fiber optics is per street or neighborhood. All addresses

are then connected to a single street block. The fiber optic cable runs directly to your home or business, but you share the capacity with others. Depending on the intensity of the collective use, delays may occur. Although the cables are neatly tucked away underground, they are often only about 20 cm deep—directly under the paving stones. This makes the cables extremely fragile and quickly damaged, especially when (road) works are being conducted in the street.

Dedicated Fiber installation
Business Fiber is always exclusive to a particular address or location. As a result, fiber optic is available (almost) everywhere and you always hold exclusive rights. In addition, Dedicated Fiber is better protected. An open tube is buried at a depth of 60 cm and the fiber optic cable is then blown through it. Branch lines in the fiber optic network are welded in

handholes. These handholes are deep, completely watertight, and accessible only to authorized people. As a result, not only is the network safely underground, but in the event of any damage, you can easily replace a broken cable and quickly blow in a new one if necessary. With FttH, this is not possible, and that often creates significant challenges with repairs.

Difference in applications
The most important difference between the two techniques is that Dedicated Fiber is suitable for all kinds of applications simultaneously. FttH, on the other hand, only provides access to the Internet. With Dedicated Fiber, you have access not only to the Internet, but also, for example, to large public clouds and data centers. In addition, you can interconnect companies. Whether that's two or two hundred, it doesn't matter. So the number of applications is many times greater!

Bandwidth
Another significant difference has to do with maximum bandwidth, or the amount of data you can send and receive at the same time. With Dedicated Fiber, the bandwidth is both unlimited and scalable. Depending on the service chosen, bandwidth is scalable up to 400 Gb/s. With FttH, the maximum bandwidth is usually limited. The fact that Dedicated Fiber is scalable has the great advantage that you can grow with it as an organization. Those who are expanding their workforce, producing more, and wanting to innovate will also eventually need more bandwidth for all the data. You

can adjust that very easily and quickly using Business Fiber.

Own or shared cable
As all Dedicated Fiber cables are deep underground and exclusive, it is more secure and private. For example, office locations or data centers always have their own cable. No one else can access that. The main advantage of this is the continuity and fast data traffic with hardly any disruptions. In FttH, the cables come together at a given point and are partially shared. As a result, the cable is never really your own and thus less safe and reliable.

Support and guarantees on SLA
Another clear difference between the two

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techniques is the support provided. With FttH, this is often limited to office hours and Business Fiber benefits from 24/7 support. Problems on the network, such as a cable break? You'll be back up and running faster with Dedicated Fiber. For example, consider an SLA of up to 8 hours when repairing a fiber optic break, while the repair time with FttH is many times higher. This non-guaranteed response time is quite a risk. In the event of downtime, for example, no telephone and mail traffic, no Internet access (online shop), and therefore hardly any business operations are possible. When a network is down for more than 8 or perhaps even 16 hours, operating costs add up significantly.

Dedicated fiber versus FttH:
- Unlimited bandwidth
- Scalable
- Fiber in-house (open network model)
- Privacy & security
- Unlimited cloud and backup capabilities
- Ability to connect multiple locations
- Very low latency
- High level of service (<8 hours)
- Future-proof

3. High bandwidth: essential for growth!

Digital transformation–the shift to location-independent work and being able to access your data anywhere–has dramatically increased cloud adoption. The Covid-19 pandemic further accelerated the process. A need to work from home created an urgency to move data and applications to the cloud. This will only increase given all the online applications, data traffic, and data storage. It therefore requires ever higher bandwidths that are only available through fiber optics.

Beyond all the hybrid working, business locations still remain places where people come together, get creative, and develop new products and services. Therefore, the bandwidths on which to run all the applications and uses are only increasing. Also, applications are becoming more data-driven and their intensity is growing due to a wide range of analysis on that data.

Reaching new heights with high bandwidth

Cloud adoption has also received a huge boost. This is due to the intensive way we communicate with each other and the fact that data and applications are increasingly cloud-driven. Not surprisingly, cloud users make their businesses and IT environments flexible and agile, and ensure continuity. The fear of not knowing where data and apps are is gone. It is precisely the feeling of being relieved of worries, 24/7 accessibility, and good security that predominates.

Cloud adoption is the essence of high bandwidth. Hybrid and data-driven working, connectivity between business locations, and working in ecosystems are simply no longer possible without it. With that, the need for high bandwidths increases tremendously and with it the demand for, say, 5 or 10 Gb/s. It's great to see how fiber optics and high bandwidth are preparing companies for all the technological advances to come.

Many advantages

With this upgrade of the high-bandwidth network, Eurofiber largely continues to do what it has always done, only now at a higher standardized level. We therefore offer the highest form of connectivity, with reliable, redundant connections that automatically convert to another route if something does go wrong. This ensures that customers are always back on track within eight hours. For Eurofiber, this is the way to provide customers with the highest level of support and offer super-safe, scalable connections. As a future-proof company, you simply cannot do without a broadband connection. By laying a good foundation for this, Eurofiber allows customers to grow, which is how we take the next step together!

Upgrade broadband network

A growing number of organizations are understanding that fiber optics is the foundation and we understand that this is why we now need to take a big step towards the 4th revolution high bandwidth. With a key upgrade (10 Gb/s) of our broadband network in the Netherlands and Belgium–followed by an upgrade in Germany and France–we ensure that we can offer even more customers high bandwidths with a very short delivery time. This is truly the next step! A solid foundation for customers to achieve continued growth. Cloud adoption is then continuous and new applications can run with it at all times.

4. Future-proof with VitalFiber1-40

A vital infrastructure and 24/7 service is essential for a growing number of organizations. It helps to achieve continued development, innovation, and growth. You remain relevant precisely by anticipating developments such as the Internet of Things, cloud computing, and data integration in a timely manner. With VitalFiber1-40, Eurofiber ensures that all these boxes are checked, so that everything comes together. Innovation and growth are therefore attainable for all!

Digital transformation is in high gear. As a supplier of the Belgian vital infrastructure, Eurofiber knows how important connectivity is for companies and organizations. Currently in Belgium, 72% of all data centers, 33% of all energy networks, 18% of all hospitals, and 13% of all universities are connected to our fiber optic network. Our digital infrastructure is vital to these organizations to ensure the continuity of their business operations.

Their connectivity must not only be qualitative, but also reliable, flexible, and very secure. An (open) fiber optic network, dedicated fiber, and high bandwidths make that possible.

VitalFiber1-40 custom package
Still, not every organization needs the same thing to stay connected and grow. With the launch of VitalFiber1-40, you can choose a package that aligns perfectly with the organization. It's all about what

your organization needs. VitalFiber1-40 offers packages of 1, 2, 5, 20, and even 40 Gb/s. Perfect for companies with the most stringent requirements for speed and availability. This way, the digital infrastructure flexibly follows the dynamics of an organization. With reliable redundant connections that automatically convert to another route should something go wrong. VitalFiber1-40 represents true business continuity.

The five biggest VitalFiber1-40 benefits for entrepreneurs:
1. The highest quality
2. The highest service
3. Guaranteed availability (> 1 Gb/s = 99.99%)
4. High Service: 24/7 support and an 8-hour SLA
5. Premium Anti-DDos: the higher the bandwidth, the more premium the Anti-DDos

VitalFiber1-40 Portfolio

Offer	VitalFiber 1 Gb/s	VitalFiber 5 Gb/s	VitalFiber 10 Gb/s	VitalFiber 40 Gb/s
Speed	1 Gb/s	5 Gb/s	10 Gb/s	40 Gb/s
Availability	99,95%	99,99%	99,99%	99,99%
Access	Flat redundant	Fully redundant	Fully redundant	Fully redundant
CPE	10 Gb/s	10 Gb/s	10 Gb/s	40 Gb/s
SLA	8 hours	8 hours	8 hours	8 hours
Support	24x7	24x7	24x7	24x7

Questions or personal advice?
Do you have any questions or would you prefer personal advice? Please feel free to contact us at **02 307 12 00**

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