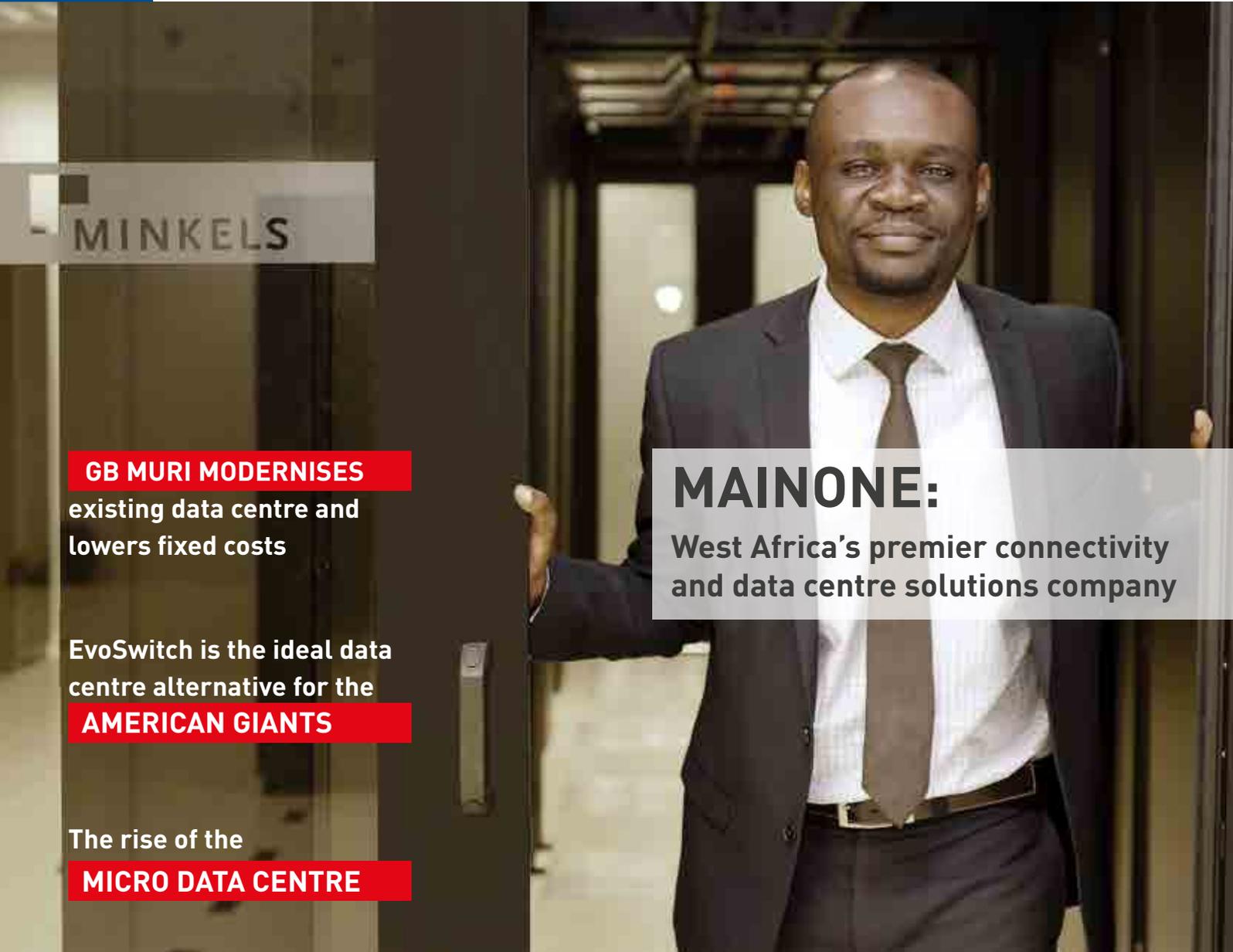


MINKELS

MAGAZINE

2016
#2



MINKELS

GB MURI MODERNISES
existing data centre and
lowers fixed costs

EvoSwitch is the ideal data
centre alternative for the
AMERICAN GIANTS

The rise of the
MICRO DATA CENTRE

MAINONE:

West Africa's premier connectivity
and data centre solutions company



PIONEER VANCIS: a modern data centre
for the past thirty years



MINKELS and ICTROOM sign
EMEA channel partner agreement



Sustainable data centre for the
KRIMPENERWAARD MUNICIPALITY

Do you want to **optimise** or reduce the size of your server room? The MiniCube is the answer!

Available in the first quarter of 2017!

With the adoption of cloud computing, many companies now have a need to reduce the size of their server rooms and to save energy costs. Do you have fewer applications running from your in-house server room than before? Do you only want to house your business critical information on site? Then the time has come to deploy an energy-efficient, turn-key micro data centre.

Even if you want to access data more quickly – low latency – or if you want to optimise your server room, the MiniCube is the ideal solution. The MiniCube has everything you need for a full data centre: housing, power supply, monitoring and cooling, all in a compact system. The MiniCube is fully pre-configured and truly plug-and-play. Therefore, the MiniCube also makes your IT manager's life easier!



ADVANTAGES

- Reliable and cost-efficient solution for server rooms
- No dependency on the building, easy to deploy
- Energy-efficient cabinets or racks for your IT infrastructure
- Use of proven technologies
- Turn-key solution, including installation and start-up

Would you like more information? Read all about it on page 12 or send an e-mail to info@minkels.com!

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COLOFON

MINKELS MAGAZINE

Minkels is a subsidiary of the Legrand Group. This global, publicly traded organisation has companies and offices in more than 180 countries with revenues of 4.5 billion Euros worldwide. Legrand markets a range of low voltage equipment and data networks from different manufacturers for the housing, utility construction and industrial sectors.

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A Group brand | **legrand**

Legrand and Minkels Corporate Social Responsibility (CSR) explained

Dynamics that promotes innovation and performance

The Legrand Group strives to operate in an ethical, innovative, customer-oriented and sustainable manner in its day-to-day activities. Thus, Legrand attaches great importance to Corporate Social Responsibility (CSR). A short overview...

The Legrand CSR strategy focuses on four domains: employees, the environment, society and users. The Legrand Group currently has 10 areas of focus* within these domains. By working on these areas, Legrand is able to create a dynamic that benefits the group's development and performance in particular, and the electrical sector as a whole.

The CSR Roadmap that is used internationally within the Legrand Group applies to all national locations. Sustainability and safety are two areas

on this Roadmap that are very important to the day-to-day business operations. Legrand Netherlands and Minkels have recently taken significant steps in both areas.

AREA OF FOCUS: SUSTAINABILITY

The FIRA platform is a digital register where companies (suppliers) show their CSR performance to customers (buyers). FIRA (intervention agency) verifies a company's CSR information and grants a status based on the outcome.

"The fact that customers actually highly value this status became clear recently when, in connection with a tender, a large customer asked Legrand Netherlands whether the company did anything with FIRA", says Erik van Avendonk, Quality & HSE Manager with Legrand Netherlands & Minkels.

"That question was the reason why Legrand Netherlands decided to take action. A brainstorming session held with FIRA showed that we were already doing a lot in terms of policy, actions and best practices. We just had to gather all our 'evidence', organise the information and place it on the FIRA platform. At the end of April 2016, FIRA screened and validated the information provided. Both Legrand Netherlands and Minkels were granted the Bronze status at that time."

AREA OF FOCUS: SAFETY

As part of the company's safety philosophy whereby all employees must be able to work under safe conditions without accidents, Legrand Netherlands also decided to obtain VCA certification (Safety, Health & Environment Checklist for Contractors). Legrand Netherlands does not install any equipment, instead the company collaborates closely with system installation partners. Erik van Avendonk: "The technicians with our systems installation partners are already VCA certified. Legrand Netherlands also wanted to become certified at the company operations level and has been awarded level VCA **." ■

CORPORATE SOCIAL RESPONSIBILITY

*Our ten priority objectives:

1. Provide sustainable solutions
2. Play a driving role in the electrical sector
3. Act ethically
4. Ensure responsible purchasing
5. Enable access to electricity for all
6. Respect human rights
7. Guarantee health and safety at work
8. Develop skills and promote diversity
9. Reduce the Group's environmental footprint
10. Innovate for a more circular economy



Future-proof your data centre!

The role of data centres is quickly changing, driven by the cloud, data growth and IT cost reduction. This leads to new challenges when it comes to future-proofing data centre infrastructures. Minkels believes that modularity and full integration are the key to meeting these challenges. Only then can the right amount of flexibility and efficiency be offered.

WHITE PAPERS REPLETE WITH DATA CENTRE KNOWLEDGE

Minkels' experts have published a number of white papers which can be used as a guide to creating a future-proof and energy-efficient data centre. For example, you can find more information regarding fire safety in your data centre on page 8. Free copies of this and many other white papers can be found at:

www.minkels.com/whitepaper

The dynamism of the data centre market offers plenty of opportunities

Christiaan van Terheijden,
CEO Minkels

The data centre market is in a state of flux. “Data centres have taken over from cheese as the Netherlands’ new export product,” claimed the headline of the Dutch Data Centre Report 2016 (on page 18) recently. Christiaan van Terheijden, the CEO of Minkels, underlines just how dynamic the data centre world is. The Internet of Things (IoT) is one aspect that is creating new challenges when making data centres future-proof.

THE INTERNET OF THINGS (IOT)

An average rate of growth of 15% over the past five years means that the Dutch data centre sector has doubled in size in just a short time (source: Dutch Data Centre Report 2016). Christiaan van Terheijden, CEO of Minkels, says, “The role of data centres is becoming more and more important, driven by factors including the Internet of Things (IoT). There were about 14 billion devices connected worldwide in 2014, but by 2020 there will be 50 billion.” (source: Cisco) “The Internet of Things is also affecting the design and implementation of data centres. At the moment, we are seeing two levels of ‘compute’ arising: an edge layer such as micro data centres” - see also page 12 - “and a core layer, such as hyper-scale data centres. At the Power Building & Data Center Convention (28-29 September in Vienna) and at IP Expo (5-6 October in London), Minkels will be explaining this in greater depth, as well as presenting Eliot. This Legrand program, which gets its name from a portmanteau of electricity and IoT, demonstrates Legrand’s vision of the Internet of Things.”

ENERGY-EFFICIENCY

And there’s more going on in the data centre market. “The sector has taken

energy-efficiency to new heights, and is working continuously on becoming greener and more sustainable. We’ve come across a number of interesting projects over the past six months in which energy-efficiency played a part. Among others, Air France and the Ministère de l’Écologie are now using energy-efficient Minkels solutions. But demand for Minkels products is not only coming from countries close to the Netherlands.”

WORLDWIDE PRESENCE

The market is increasingly keen on the worldwide presence of Minkels - and therefore on the same level of quality and availability of its products as well. “This fits perfectly with our strategy of ‘global presence, local excellence’. After joining the Node Pole Alliance, we’re now very much active in the Scandinavian market; the global hub for innovations in data traffic and data management. We also started assembly and production activities on the Mid-Atlantic seaboard. We are serving the American market from the New York area. Production in China is growing steadily as well. We are producing in Wuxi for Hitachi Data Systems and others, as well as for other customers from the local Legrand organisations.”

MORE SYNERGY, MORE VALUE FOR THE CLIENT

The Legrand sales network contributed to excellent local and export results over the last six months. “Legrand is focusing more and more on data centres, in particular on providing total solutions. For instance, the energy management products of Raritan - which has officially been part of Legrand since last September - are a high-quality addition to our portfolio. The closer cooperation with Raritan and Legrand means we can achieve more synergy and therefore create more value for clients.”

THE NEXT SIX MONTHS

“In addition to cooperating with other companies from the Legrand stable, the coming six months will see us taking a good look at partnerships. We have already recently signed a Minkels Solution Partnership with ICTRoom (page 20). Partnerships like these will let us serve the market better. They mean not only that our products will be available throughout the world, but that they are often used with our partners’ products as part of a total solution. In addition, we will be focusing on the introduction of the MiniCube micro data centre (page 2 and 12). Like the recently launched MatrixCube, it is an ideal solution for the SME sector.” ■

Implementing sprinkler and water mist systems in data centres?

Some guidelines!

Installing sprinkler and water mist systems is a requirement in many data centres nowadays. But issues can arise in combination with aisle containment, both in the design and in the installation. Minkels has addressed these issues in an update of its white paper 05 – 'Integration of Aisle Containment with Fire Suppression Systems'. In particular, it covers the latest guidelines and solutions.

INSURANCE CONTRACTS

Using sprinkler and water mist systems in data centres has been commonplace in the United States for a number of years now. "Insurance contracts for data centre buildings demand that sprinkler and water mist systems are used," says Niek van der Pas, Lead Data Centre Expert at Minkels and co-author of white paper 05 – 'Integration of Aisle

Containment with Fire Suppression Systems'. "Even relatively small data centres in English-speaking countries are obliged to use these methods instead of gas-based fire extinguishing. The regulations are not yet so strict in continental Europe. It is however expected that the regulations will soon be tightened up in countries such as Germany, France, Switzerland and the Netherlands."



Niek van der Pas,
Lead Data Centre Expert Minkels

SPRINKLER AND WATER MIST SYSTEMS ARE COMING

The use of sprinkler and water mist systems in data centre environments is very much on the rise. "The owner of a data centre building is often not the same as the data centre service provider operating out of that

facility. From the costs point of view, the building owner is more likely to go for sprinkler and water mist systems and



not to opt for gas-based extinguishing. Sprinkler and water mist systems mean they are choosing to protect their building. If such fire safety systems are not yet present, white paper 05 provides guidelines for implementing them in combination with aisle containment solutions."

AISLE CONTAINMENT SOLUTIONS

White paper 05 had already paid attention to the Next Generation Corridor, which allows air flows in data centres to be kept separate from each other, which is energy-efficient. "The white paper is now also paying attention to the Free Standing Corridor. The Free Standing Corridor gives clients the flexibility to add in various types and sizes of racks at a later time. Complete corridors can already be kitted out with fire extinguishing, even if only part of the corridor is in use. This means that certification of the fire extinguishing systems in the whole corridor is possible from an early stage."

MAKING ROOM FOR WATER SPRINKLERS

Sprinklers may be obstructed by the aisle containment roof construction. "That's why Minkels has developed an extensive portfolio of roofing that provides room for sprinklers. Solutions including pivot roofs were discussed earlier in white paper 05, now the updated document is also paying attention to Drop Away Panels, an extension to the roofing portfolio."

DROP AWAY PANELS

Drop Away Panels provide a seamless integration of aisle containment solutions with sprinkler or water mist systems. "In case of fire in the data centre, the plastic panels of the Drop Away Roof System automatically soften and drop down so that they won't be an obstacle before the sprinklers are

activated. The system is specifically designed for sprinkler systems to extinguish at 74 degrees Celsius or higher. The Drop Away Panels therefore improve safety and reduce risks in the data centre. But at the same time, the aisle containment systems remain intact." ■

WHITE PAPER ABOUT FIRE EXTINGUISHING IN DATA CENTRES

Minkels has expanded its existing white paper 05 – 'Integration of Aisle Containment with Fire Suppression Systems' – with more valuable information:

- Attention is paid to the latest legislations and regulations about fire extinguishing.
- The impact of fire safety on aisle containment layouts. Guidelines for designing fire-safe data centres with aisle containment (based on a study of fire safety and data centre standards).
- There is attention not only for the Next Generation Corridor, but also for the Free Standing Corridor. On top of that, Drop Away Panels are discussed, in addition to pivot roofs.
- An explanation of the interests and perspectives of the various stakeholders relating to fire safety design in data centres, so that their roles and responsibilities in the design process can be properly understood.
- A number of examples of successfully completed projects in which aisle containment and fire extinguishing have been both appropriately matched and seamlessly integrated.

The expansion of white paper 05 is in line with demand from organisations that want to combine high energy-efficiency with fire safety seamlessly in their data centres.

GB Muri modernises existing data centre and lowers fixed costs

GemeindeBetriebe Muri (GB Muri) is a Swiss regional multi-utility company supplying gas, water, sewerage and telecommunication services. In the field of telecommunications, GB Muri supplies both corporate and private customers with internet, television, land lines and mobile services. GB Muri's existing data centre is housed in a dated building. This made upgrading the existing data centre quite a challenge. GB Muri now profits from an efficient data centre with a high availability and lower fixed costs. Minkels Magazine spoke to Fabian Künzi, Head Telecom GB Muri, about the developments in the telecommunications market and the necessity of modernising the existing data centre.

MARKET POSITION

GB Muri is able, through its professional services and customer focus, to position itself as an attractive supplier of internet, television, land lines and mobile services in a regional telecommunications market. Fabian Künzi, Head Telecom: "As a supplier of infrastructure and telecommunications services, we understand the needs of our customers and ensure a high quality of service. We primarily offer products from Quick Line AG – a leading full-service provider of entertainment and communications. Thanks to a complete portfolio, we have been able for years to expand our market share with both private and corporate customers."

SYNERGY

The competition within the telecommunications market is tangible. "Companies must strengthen their USP's in order to survive in these competitive times. This also influences the costs and thus GB Muri is always looking for potential synergies. We have reached synergy through the product portfolio of Quickline AG, amongst other things. On the other hand the declining margins in the market are forcing companies to consider better or newer services."

OWN DATA CENTRE

As a distribution network operator, GB Muri has owned a data centre for years now. "Because of the changing customer demands in the field of availability of

telecommunication services and an updated risk analysis, our board of directors came to the conclusion that the infrastructure in the data centre should be modernised. We want to make the infrastructure that is not in use available to customers. By also offering our customers co-location services, the fixed costs in the data centre can be reduced."

MODULARITY, QUALITY AND PRICE DECISIVE FACTORS

After talking to partners, the name Minkels continued to come up. "We then contacted Minkels, but also talked to a number of other suppliers. We wanted a data centre with a focus on availability. In addition, we also wanted a data centre

About Gemeindebetriebe Muri (GB Muri)

Since 1998, Gemeindebetriebe Muri has been an independent public institution of the Muri municipality, located near Bern. GB Muri aims to supply services in the fields of gas, water, sewerage and telecom at the lowest possible rates, so that all residents and companies in the municipality profit.

in which investments would be scalable and the fixed costs could be lowered. In the end, the combination of modularity, quality and price were decisive. This way we have the best of both worlds; we have our own data centre and we can lower the fixed costs by offering co-location services."

OLD COMPANY BUILDING

The existing data centre is located in an old building. "This makes the installation of, among others, enclosed cold aisles more complex. The enclosed cold aisles separate cold and hot airflows in an energy-efficient manner. In addition we have H2O-coolers, racks, cable trays and PDU's in the facility, among others. But by far the biggest

challenge of the project was remodelling while the existing data centre was still in operation. Continuity was constantly a top priority during the remodelling."

RESULTS

In the meantime the project has almost been finished, with an efficient data centre with a high availability and lower fixed costs as a result through, for example, the offering of co-location services. "We expect savings of around 20% to 25% on our fixed costs. Now that we are fully operating, the focus lies on the training of employees. We expect nothing but good things of the future." ■

Fabian Künzi, Head Telecom GB Muri

The rise of the micro data centre

Micro data centres are here to stay. But why? Minkels Magazine has been talking to Bas Jacobs, Product Manager at Minkels. He discussed the developments in the micro data centre market and explained some of the drivers that are affecting market demand.

Micro data centre solutions MatrixCube and MiniCube

The expansion of its portfolio to include the MiniCube and the MatrixCube (see also Minkels Magazine 2016-1) lets Minkels offer a solution for any data centre request. Starting with the compact MiniCube (single rack, up to 4kW) and the MatrixCube (multiple racks, 22kW) and ending with complete, modular aisle containment solutions.

The MiniCube and the MatrixCube have all the features of a fully-fledged data centre: housing, power, monitoring and cooling, all in a variant that has been kept as compact as possible.

DRIVER 1: THE INTERNET OF THINGS (IOT)

The Internet of Things (IoT) is changing the data landscape completely. Bas Jacobs: "In 2014, there were about 14 billion devices connected worldwide. By 2020 there will be 50 billion (source: Cisco). This will also mean a boost for the micro data centre

market, globally: from 1.7 billion dollars in 2015 to 6.3 billion dollars by 2020. This is because centralised data processing is not sufficient for the IoT, for instance because of low latency requirements (edge analytics). The IoT therefore requires this data to be handled locally, for example using micro data centres."

DRIVER 2: ADOPTION OF THE CLOUD

Another trend that is affecting the micro data centre market is adoption of the cloud. "More and more applications are ending up in the cloud. Take office automation, for example, or CRM and ERP systems. That means that you are able in many cases to shrink your data centres, simply because your physical hardware requirements are less. In addition, IT miniaturisation and virtualisation are advancing, which means that less space is needed. As a result, lots of companies only need a small and clear data centre – though it still has to meet the requirements of a large one. These companies are choosing to accommodate operationally critical applications and information – with a high level of reliability at low costs – in these micro data centres. You also see these small data centres being used as a (ROBO) backup or fallback."

DRIVER 3: EFFICIENCY

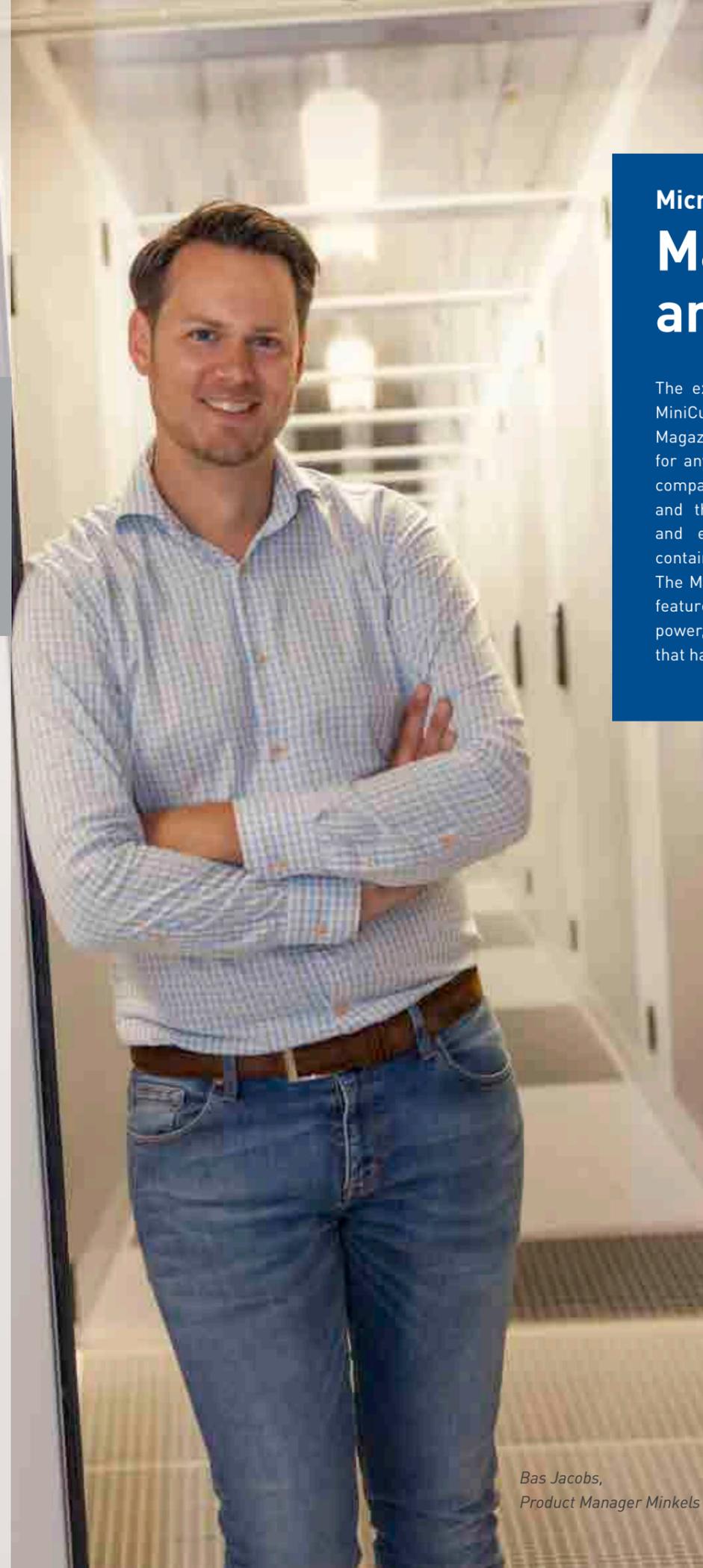
In addition, operational and other costs are a driving force in the growth of the micro data centre market. "Companies who outsource their IT to commercial data centres or cloud data centres often do so because these large data centres can operate extremely efficiently in terms of energy because of their size. That's also positive for a company's green image, of

course. In the meantime, they can also reduce the size of their in-house data centres, which means lower energy use. Standardisation of micro data centre solutions means that the operational and other costs are much more predictable."

DRIVER 4: OPERATING COSTS VERSUS EASE OF USE

Finally, a reliable and cost-efficient micro data centre genuinely removes one source of worry for an IT manager. "Take the MatrixCube and the MiniCube. IT managers don't have to be specialists in order to put this kind of micro data centre together. Both the MatrixCube and the MiniCube are completely pre-configured and can be up and running quickly - a genuine plug-and-play solution. It means that IT managers don't have to worry about cooling or monitoring, for instance, which lets them concentrate on what they're good at: information management." ■

	MINICUBE	MATRIXCUBE
Standardisation	high	high
Modular features	no	yes
Cooling	in-rack	1x row-based DX (basic configuration)
Racks	1x	2x (basic configuration)
Power distribution	1x	1x (basic configuration)
UPS	1x	2x (basic configuration)
Scalability	no	yes
Redundancy	N	N, N+1, of 2N
Energy-efficiency	standard	airflow optimised
Plug & Play	yes	yes, in conjunction with installation services package through Minkels partners
Completeness	total solution	total solution
Monitoring	onsite/remote	onsite/remote
Cost-efficiency	high	high
Target use cases	hybrid IT, SME	hybrid IT, mid-sized businesses
Market delivery	distribution and solution partners	distribution and solution partners



Bas Jacobs,
Product Manager Minkels

Pioneer Vancis:

a modern data centre for the past thirty years

Vancis is a high quality IT service provider for research, education, and healthcare organisations. From its data centres in Amsterdam and Almere Vancis offers data centre, cloud and managed services. Over a span of thirty years Vancis has seen Minkels change from a supplier of products to a supplier of total solutions. We interviewed Jim Jansen, Data Centre Operations Engineer at Vancis.



Jim Jansen, Data Centre Operations Engineer at Vancis

**“We have been a Minkels customer for 30 years.
That has to say something.”**

THIRTY YEARS OF INTERNET

Vancis was founded in 2008 as a subsidiary of SURFsara. Jim Jansen: “With that background Vancis has about 45 years of experience in IT. Our data centre in Amsterdam was one of the first data centres in the Netherlands. It actually led to the emergence of the Dutch internet 30 years ago. We have been doing business with Minkels since the very beginning. At that time we were working with steel racks, not aluminium. Nowadays, the market demands completely different products. Minkels has clearly adapted to these

developments and – as a supplier of total solutions – is still a company we can rely on.”

MODERN DATA CENTRE

New data centres are suddenly sprouting up all over. That presents Vancis with an additional challenge to compete with its existing data centre against the newest data centre buildings. “Therefore, we are focusing on energy-efficiency. Each room must meet today’s standards. Where necessary, we move customers to new racks and we install cold aisle containment. We are also concentrating more and more on cloud and hybrid

services, security, flexibility and pay-per-use. These services enable us to provide our customers with everything you could expect from a modern data centre.”

DATA CENTRE IN AMSTERDAM AND ALMERE

In Amsterdam Vancis has nine computer rooms on two floors in the building. “We have a total of 570 server racks and patch cabinets spread over an area of approximately 1,700 m². In Almere we have two different computer floors with 150 racks and 400 m². Both data centres are carrier-neutral and provide excellent connectivity to the leading internet exchanges like AMS-IX, NL-IX and Netherlight. What’s more, the Amsterdam location has a PUE of 1.5 and a capacity of 2.5 Megawatts in redundant power supply.”

FLEXIBLE AND CUSTOMER-SPECIFIC DATA CENTRE SOLUTION

Minkels helps Vancis offer its customers a flexible and customer-specific data centre solution. “We work with the Minkels server racks, patch cabinets and cold aisle containment. Our customers clearly prefer Minkels due to the company’s flexible, customer-specific solutions as well as the ease of installation. We are also very happy with the excellent quality, speedy delivery and the fact that they offer input into the development and design of the racks. We have been a customer for 30 years. That has to say something.” ■

Data centre Vancis

Minkels provides support for its consultancy partners in the **Data centre specification process**



An energy-efficient, integrated data centre design is a challenge. Minkels' business partners – including data centre consultants, engineering agencies and data centre integrators – often ask Minkels for advice. The combined knowledge of Minkels, Legrand and Raritan is invaluable for these consultants... Time to share this knowledge!

SPECIFICATION REQUIREMENTS

Every single day, Minkels' consultancy partners face the challenge of designing future-proof data centres. What specifications does such a data centre need to meet? Consider requirements relating to integration and energy-efficiency: Minkels, Legrand and Raritan have a great deal of experience in

this field, given their common background in data centres. Legrand focuses on building-related infrastructure, Minkels on data centre solutions (from housing to cooling) and Raritan concentrates on data centre energy management. Taken together, these complementary products mean that a complete and fully integrated data centre is achievable.

SMART SPECIFICATION FOR DATA CENTRES

Minkels can support its consultancy partners during the various phases of a data centre project, both in the tendering phase (from front-end engineering to the bill of quantities) and in the construction phase.

Consultants are highly appreciative of this support. The specification process in particular is simplified significantly through the use of the 'Minkels selection tool', which has been developed by Minkels to assist with the design of the data centre, making the process more efficient. These data centre designs use products from Minkels, Legrand and Raritan. Consultants are able to use the software tool to work out the precise specifications of the desired data centre design. For example cold aisle containment with overhead cabling, or hot aisle containment with row-based cooling and cabling under the floor. Depending on the choices they make, the consultancy partners get all the necessary documentation and specifications for all the products in this design. This includes manuals, photos, CAD drawings, videos and MasterFormat™ specifications. The end result will be solid functional and technical designs and tender drawings for data centres. ■

Analysis specification processes

To create effective data centre designs, Minkels interviewed a number of clients and analysed the specification processes for several major data centres. This analysis has let Minkels simplify the specification process for its consultancy partners.

Design – Tender Stage



Construction Stage



* Bill Of Quantity

Turbulent growth in the data centre sector

Data centres are the new cornerstone of the Dutch economy and are critical to the country's competitive position on the international stage. With an average growth of 15% over the past five years, the sector has doubled in size within a short period of time. All trends point to the continued growth in this area for the next several years. A key reason for this growth is because the Dutch data centre sector forms a part of the Digital Gateway to Europe, the third main port. This and more are the results from the Dutch Data Center Report 2016 published by the Dutch Datacenter Association (DDA).

DUTCH DATA CENTER REPORT

The Dutch Data Center Report is a leading annual report about the state and importance of the Dutch data centre market. The report underlines the importance of the data centre sector for the economic future of the Netherlands. Stijn Grove, director of the Dutch Datacenter Association (DDA): "With the shift in services from a physical to an online economy, the continuing critical role of IT for companies and consumers, the emergence of the Internet of Things, Big Data and robotics in the future, data centres are the new export product after cheese."

GROWTH OF THE DATA CENTRE SECTOR

There is no end in sight to the growth of the data centre sector. The results of the study show that this growth is also expected to continue over the next several years. Grove: "This is necessary, because if the Netherlands wants to maintain its prominent position and continue to serve as the Digital Gateway to Europe, the sector must continue to show double-digit growth. However, action is required. Investments must be made into educating and training people to maintain the momentum in the sector's growth. What's more, the sector will have to work together

on energy-efficiency and, at the same time, the government will have to anticipate a further increase in energy usage. The government has a role to play in a number of different areas: for instance, the Netherlands should take a leading role in internet governance and great care must be taken when dealing with laws for the digital sector. The government must also support the project to promote the Netherlands as a safe, secure and efficient Digital Gateway. Now that the Netherlands is sitting on a goldmine of data centres, the time has come to take them to market."

The Dutch Datacenter Association (DDA) is the trade organisation that represents data centres in the Netherlands. The DDA unites the largest data centres in the Netherlands with a mission: to strengthen economic growth and to promote the data centre sector to the government, media and society.

The DDA presents the views of the industry related to legislation and policies. It demonstrates leadership by encouraging its members to implement improvements in the form of 'best practices'. The DDA promotes education and contributes to technical standards that the data centre industry in the Netherlands and beyond can use to stand out.

Stijn Grove, director of the Dutch Data Centre Association (DDA)



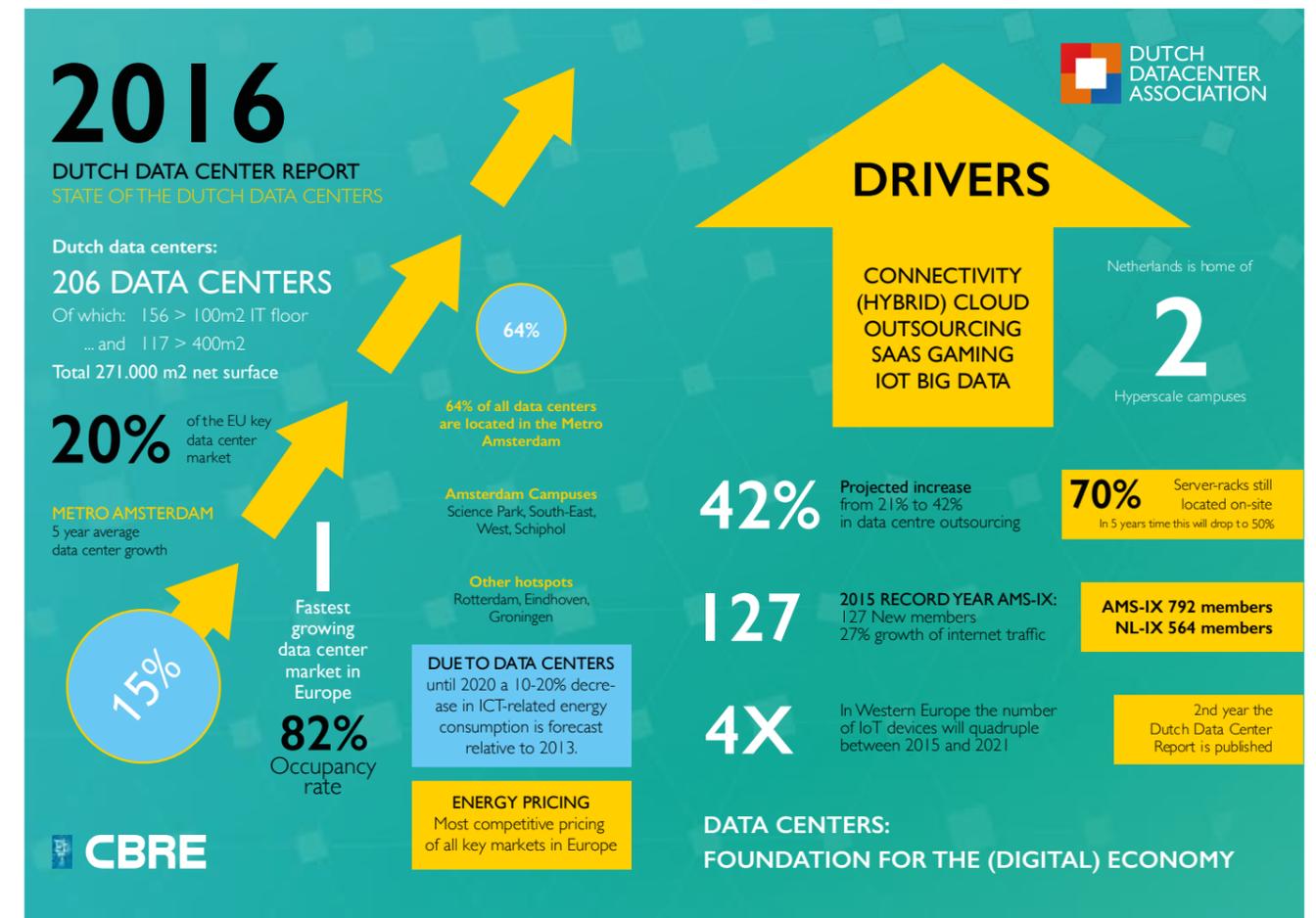
WORLDWIDE DEVELOPMENTS IN THE DATA CENTRE SECTOR

The data centre sector is also experiencing significant, worldwide growth. The cloud is the main driving force behind this growth. Here are a few facts:

- The cloud is growing steadily at a rate of approximately 20% per year
- Software as a Service (SaaS) is expected to grow by 20.3% (forecast: 37.7 billion dollars in 2016)
- Infrastructure as a Service still shows the fastest growth (forecast: 22.4 billion dollars in 2016)
- Platform as a Service (PaaS) is growing as expected at a rate of 21.1% (forecast: 4.6 billion dollars in 2016)
- Business Process as a Service (BPaaS) is expected to grow by 8.7% (forecast: 42.6 billion dollars in 2016)
- Private cloud adoption increased from 63% to 77%
- Hybrid cloud adoption increased from 58% to 71%
- 82% of companies have a hybrid cloud strategy
- 95% of companies are experimenting with IaaS
- Data centre outsourcing is expected to increase from 21.1% in 2013 to 42.3% in 2018
- Data centre take-up* will peak

*Data centre take-up: data centre space that was sold during the specified quarter.

Source: Dutch Data Center Report 2016, <http://www.dutchdatacenters.nl/dutch-data-center-report.html>



Data centre supplier Minkels and ICTroom sign EMEA channel partner agreement

Minkels has signed a Solution Partner Agreement for EMEA with channel partner ICTroom – a data centre integrator with offices located throughout Europe. The Solution Partnership is aimed at further enhancing the cooperation between Minkels and ICTroom, to offer customers ultimate deployment flexibility required for setting up future-proof data centres.

About ICTroom

ICTroom designs, builds, maintains, exploits and manages highly reliable computer rooms and data centres, creating a technical infrastructure in which IT hardware can perform optimally. Since its founding in 2001, ICTroom has completed more than 250 data centres and computer rooms in EMEA. Customers are national and international companies, (cloud) service providers, governments and IT service providers. ICTroom combines deep data centre expertise with high-quality components from leading suppliers. The company is headquartered in the Netherlands. ICTroom also has offices in Belgium, the UK and Germany. More information about ICTroom: www.ictroom.com



Ramón de Groot, Business Unit Manager Netherlands | Director Export, Minkels

BEST 'FIT'

ICTroom works with all kinds of data centre solution brands and is always looking for the best 'fit' for their customers. To find the best customer fit, ICTroom normally sets up taskforces – with the customer – for market comparison and evaluation of all solutions available. According to ICTroom, Minkels stands out in a positive way because of the comprehensive portfolio in the field of data centre infrastructure. This channel partnership agreement provides Minkels and ICTroom with the opportunity to bolster mutual ties while enhancing flexibility in customer deployment.

KNOWLEDGE ORGANISATION WITH A VISION

"We see ICTroom as a knowledge driven organisation. This vision fits well with the philosophy and methodology of Minkels," says Ramón de Groot, Business Unit Manager Netherlands | Export Director, Minkels. "Our engineers are finding more often we are working together on integrated designs, a good example being data centre security. We have high

expectations of the partnership in the EMEA region for the future."

SUCCESSFUL PROJECTS

"We have jointly worked on many projects that we completed successfully," says Jeroen van der Reijken, Sales Director ICTroom. "Recently we have completed one of the most energy-efficient data centres in the Netherlands for Cegeka, a European ICT Group with 3,500 employees and offices across Europe." Ramón de Groot adds: "The brand new data centre includes several Minkels solutions (such as Next Generation Corridors) and is very flexible, secure and energy-efficient (PUE of 1.14)."

GOOD CHEMISTRY

It is precisely this shared focus on flexibility but also modularity that



Jeroen van der Reijken, Sales Director, ICTroom

ensures a good chemistry between the two companies, according to ICTroom. Van der Reijken: "Minkels, being part of Legrand, has a very broad data centre solutions portfolio of excellent quality. This gives us the opportunity for one-stop shopping while also offering flexibility. Thus, we can offer customers a pay-as-you-grow environment, with the ability to gradually implement new technologies." ■

An interview with MainOne

West Africa's premier connectivity and data centre solutions company

MainOne, the premier connectivity and data centre solutions company in West Africa, blazed a trail in Africa with the construction of West Africa's largest Tier III+ Data centre, MDXi. MainOne's data centre is the premier carrier-neutral co-location facility in West Africa because it is the only data centre to have attained PCI DSS, ISO 27001 and ISO 9001, and recently the SAP certification for Infrastructure Services for SAP® solutions. MainOne has blue-chip financial institutions, oil and gas, and fast moving consumer goods companies operating out of their data centre. In addition, they are the data centre of choice for international operators and content providers who have chosen to establish a presence in Nigeria. Minkels Magazine spoke to Ms. Funke Opeke (CEO) and Mr. Egomaron Jegede (Technology Projects Manager) about the companies' impressive achievements.



Ms. Funke Opeke,
CEO MainOne

HOW IS THE AFRICAN DATA CENTRE MARKET DEVELOPING?

■ The African data centre market is growing rapidly, largely driven by increased adoption of ICT, availability of fibre infrastructure to provide high speed connectivity, and an upsurge in mobile broadband. The African data centre market currently boasts over 42 data centres; South Africa is leading the continent with 19 data centres, and an estimated 100,000 sq.m. of floor space as of 2014, followed by Mauritius, Nigeria, Morocco and Kenya. With increased infrastructure development in the region, data centre growth on the continent over the next five to ten years will be a cumulative 100 per cent, with South Africa in the vanguard, and Nigeria coming closely behind. Our current focus is the largest and most mature market in the region, which is Nigeria, accounting for 47% of the regional population and with over 80 million internet users."

CAN YOU TELL US MORE ABOUT MAINONE?

"MainOne currently operates the largest purpose built brick and mortar data centre facility in West Africa and the



Facts

- MainOne is the premier connectivity and data centre solutions company in West Africa.
- MainOne launched operations in 2010.
- MainOne invested Two Hundred and Forty Million Dollars (\$240,000,000:00) in a private fibre-optic submarine cable system running between Europe and West Africa.
- MainOne has operations across eight countries in West Africa.
- MainOne has built several hundreds of kilometers of fibre infrastructure spanning the major business districts in Lagos.
- MainOne has established Points of Presence / Meet Me points across all states in Nigeria and beyond Nigeria and Ghana where they have telecom licenses.
- MainOne built West Africa's largest Tier III+ Data centre, MDXi.
- MainOne's data centre is the premier carrier-neutral co-location facility in West Africa.
- MainOne's data centre has attained PCI DSS, ISO 27001 and ISO 9001, and recently the SAP certification for Infrastructure Services for SAP® solutions.
- MainOne invests heavily in growing the broadband ecosystem in West Africa.

only data centre in Nigeria certified to PCI-DSS and ISO 27001 standards. Our facility is also certified as a SAP Infrastructure provider data centre. We partnered with other global companies too such as Microsoft, EMC and Cisco, to provide innovative value-added services. In addition, we are a carrier-neutral facility and the best connected data centre in the region with access to all major operators in 8 countries in West Africa, access to leading internet peering exchanges including London

and Amsterdam and direct access to 4 submarine cable networks and numerous satellite gateways hosted at our facility. Our leading infrastructure investments enabled us to drive Internet use and the emergence of Internet enabled business models across the region."

WHAT DOES YOUR DATA CENTRE LOOK LIKE?

"The data centre is a 3500 sq.m. building spread over two floors with the ground floor hosting work areas – a Global





Photographer: Ms. Oluwafemi Akintilo



Mr. Egomaron Jegede,
Technology Projects Manager MainOne

Network Operating Centre (NOC), Office spaces and dual power rooms. The first floor hosts dual network rooms, a staging room and two data halls with 1500 sq.m. whitespace to host 600 customer racks. Rack power density is designed to include a mix of 20% high density (Above 5kW) and 80% low density (3kW) per rack. It is designed to meet ANSI TIA 942 and Uptime Institute's Tier III certification standards ensuring redundancy for all critical Data Centre equipment with no single point of failure."

WHY DID MAINONE CHOOSE TO UPGRADE THE EXISTING DATA CENTRE?

"MainOne observed a strong market demand for a world class, carrier-neutral co-location data centre when many of our connectivity clients insisted on hosting their equipment in our Lagos Cable Landing Station in 2012. The market demand rapidly outstripped our

existing co-location space within our Cable Landing Station and necessitated the construction of a purpose built Tier III facility with 600 Rack Capacity. We developed the Lekki DC (MDXi) over 24 months and launched in January 2015 with rapid expansion of the existing infrastructure to keep up with customer demand."

WHY DID YOU CHOOSE FOR AN AISLE CONTAINMENT SYSTEM?

"MainOne, in search of best of breed solutions, conducted a global search for a more flexible Cold Aisle Containment System (CAC) to accommodate the various needs of our global customers with racks of varying widths and heights. We considered manufacturing in China to meet our specifications and also direct purchase from various OEMs. A global evaluation followed: all top industry players, custom CAC vendors and local

manufacturers were evaluated to provide racks, Cold Aisle Containment, PDUs and accessories for customers at our data centre."

WHY WAS MINKELS CHOSEN?

"Minkels met our requirement to provide a cold aisle containment solution: flexible concerning rack width and height, able to accommodate a free standing 47U solution, and lend itself to caging. In addition, Minkels has the technical ability to understand our requirements and quickly make custom engineering modifications based on experience with many of our global customers. Minkels was very responsive and precise in communicating what they could provide and competitive in the pricing of their solution. The commitment to a quality product and providing advice clearly based on a wealth of experience in the data centre space further contributed to Minkels being chosen."

WHAT HAS BEEN ACHIEVED?

"We have successfully deployed the cold aisle containment solution and custom support frames to meet the requirements of our international co-location customers who will be deploying their server racks shortly. This is a first in West Africa and a notable achievement continuing the trend of MainOne innovating and delivering world-class solutions. Minkels was quite helpful with the provision of videos towards installation, an easy to understand manual for our first time installers and regular follow up by their team to ensure the deployment was successful. We look forward to further business with Minkels. Several of our international clients that are already using Minkels Racks, are very pleased because of the seamless integration between their standard and custom racks deployed within our Minkels CAC. Feedback from our customers is that

they are impressed with the Minkels CAC and it makes the decision and process of co-locating with us easier."

WHAT DOES THE FUTURE HOLD FOR MINKELS AND MAINONE?

"I believe there is great opportunity for future business between Minkels and MainOne as we drive the growth of the data centre market in West Africa. We are currently ordering racks from Minkels with cable management accessories for 2 global multinational customers and are in discussions to further explore Minkels products for other current and future needs. Given the success of this first-of-its-kind custom CAC deployment, we are in early discussions exploring the possibility to partner in the further deployment of Minkels solutions across MainOne's MDXi datacentres to ensure we remain very competitive in a dynamic and growing market." ■

Sustainable data centre for the Krimpenerwaard municipality

Since December 2015, The Krimpenerwaard municipality has a new data centre in Lekkerkerk (the Netherlands), from which virtual work places are offered and in which the data of the municipality is kept. The data centre was built by Minkels Solution Partner All IT Rooms, who placed an aisle containment. This results in a sustainable data centre, with which Krimpenerwaard is ready for the future.

PRIMARY DATA CENTRE

The municipality Krimpenerwaard's primary data centre is located in Bergambacht (the Netherlands). "At this moment we offer 500 work places from this data centre. In practice, we use about 350 to 400 of those work places on an average day", says Marco Lingen, senior system and application manager for the Krimpenerwaard municipality. "We also host all of the municipality's data in this data centre. We have deliberately chosen to host all of the data in-house this is due to privacy considerations. After the opening of the new data centre in Lekkerkerk, the data centre in Bergambacht will serve as a fall-back location." The new Lekkerkerk data centre is provided with modern equipment and the newest techniques. "Because of this the location will take over the function of primary data centre.

As the data centre is based in the same building as our ICT department we are able to reach the centre faster, which simplifies management."

ALL IT ROOMS

In the preliminary stages of planning it already became clear that there is an enormous amount of choice in the area of appliances, suppliers, cooling techniques and combinations thereof. Henk Verveer, advisor automation for the Krimpenerwaard municipality: "For us, it was not doable to make a well-substantiated choice between these products, as we simply do not know the market well enough. It is not our daily work, after all. In the end we granted the project to All IT Rooms after a 'Best Performance Purchase tender'. With a 'Best Performance Purchase' you ask suppliers to propose the best solution within the set functional demands and the available budget. For this,

we set demands in the field of availability, safety and redundancy. We mainly looked at the approach taken, the results, the functionality and the completeness of the solution."

THE BEST SOLUTION WITHIN THE AVAILABLE BUDGET

Thus, when using a Best Performance Purchase the selection does not depend

solely on price, but on what is the best solution within the available budget. "We give suppliers room to think with us. For example, does a supplier feel that we may profit from a solution which we did not ask for? Then they can include this solution as part of their tender, as long as they do not exceed the budget because of this", Verveer says. "This has led to us actually receiving more than we

had initially asked for and had expected during this project. For example we now possess a closed hot aisle, which we did not see as an option beforehand, considering our budget."

ROW-BASED COOLING

The data centre in Lekkerkerk is provided with two rows of Minkels server cabinets, in which row-based cooling is applied.



From left to right: Marco Lingen, Henk Verveer and Ronald Kok



Marco Lingen, senior system and application manager for the Krimpenerwaard municipality

this we could trace how much cooling capacity comparable data centres of other municipalities need and how the capacity demand has developed over the years. This data shows that in many cases the necessary cooling ability decreases through the years, instead of increasing like one might expect. After all, IT Equipment is becoming more and more energy-efficient. Therefore we have chosen for an initial cooling capacity of 10kW which can be expanded modularly. We can monitor the data centre continuously and in real time. When, for example, unexpected temperature increases or problems with the power supply occur, we are immediately warned.

We can also proactively advise customers with regard to preventive maintenance and measures to prevent failures.”

NOW OPERATIONAL

The Krimpenerwaard municipality data centre has been operational since April 2016. “The coming period we will focus on transferring the functions of our current primary data centre in Bergambacht to the new data centre in Lekkerkerk. We are doing this under our own management”, says Marco Lingen. “We deliberately chose to leave space in the data centre. If we want to expand its capacity, we can easily add extra cooling technology, servers and other equipment.” ■

Together these rows form a hot aisle, which is closed off by a glass roof and a sliding door. “This ensures a good air circulation in the data centre. Hot air is suctioned from the hot corridor, after which the cool air is blown back into the data centre”, says Lingen. “The choice of a hot corridor arises from the municipality’s demand for a sustainable solution. With a solution like the hot corridor, sustainable and energy-efficient cooling is possible”, Ronald Kok, director of All IT Rooms, explains. “Many other parties choose to supply cooling with overcapacity. However, this stands in the

way of energy-efficiency. If the cooling is working at, for example, 10 percent of its maximum capacity, it can never perform in an energy-efficient manner, and the same goes for the UPS. In addition, overcapacity asks for a large initial investment, which can be avoided by accurately assessing the needed capacity.”

ACCURATELY CALCULATING THE NECESSARY CAPACITY

All IT Rooms has collected much data from other data centres which they monitor real-time. Kok: “Because of

EvoSwitch is the ideal data centre alternative for the

AMERICAN GIANTS

EvoSwitch offers co-location services and IT infrastructure solutions for organisations in a secure, scalable IT environment. Since its data centres are located near the largest internet nodes in the world, they are a cost-effective solution for Europe and North America. EvoSwitch places particular emphasis on energy-efficiency. Thus, the financial investment required for hosting business critical IT equipment can be kept to a minimum. With 12,000 m² or 120,000 ft² of existing co-location space and options for expansion up to 40,000 m² or 400,000 ft², EvoSwitch has been able to rely on Minkels to fit out its data centres for many years.

IMPRESSIVE GROWTH

EvoSwitch was established in 2007 and has experienced impressive growth ever since. Eric Lisica, Operations Director EvoSwitch: "We operate a large data centre campus in Haarlem (the Netherlands) with six data halls. We have 25 megawatts worth of equipment here. We also have a presence in the US, in Manassas (VA). Meanwhile, we are studying where the next expansion will take place."

THE ALTERNATIVE TO THE AMERICAN GIANTS

EvoSwitch has a varied customer portfolio with a strong focus on the corporate and cloud market. "We work for a large number of hosts, system integrators and cloud providers from all

THE APPEAL OF THE DUTCH DATA CENTRE MARKET

The Dutch data centre market has a high level of appeal to the rest of the world. Eric Lisica also notices this in day-to-day operations. "Traditionally we have the four main internet nodes: Amsterdam, London, Frankfurt and Paris. None of those nodes has experienced the same growth as Amsterdam. The growth in Paris has stagnated somewhat over the past one and a half to two years. Frankfurt is dealing with high energy costs. Real-estate is particularly expensive in London, and how will the Brexit affect London? That's a whole different story. Therefore, Amsterdam is a great alternative for companies that are looking for a location to establish operations in Europe."

concept is how quickly we can add capacity. We can deploy a new module whenever the need arises; a layer for IT and an integrated layer for the complete data infrastructure including UPS, fire extinguishing equipment and cooling units. The Minkels racks fit perfectly within this modular concept. Racks are

normally installed based on certain width and depth measurements. We can easily deviate from those standard dimensions to meet a customer's specific needs. Therefore, the flexibility and customisation options Minkels offers greatly appeal to us."

FLEXIBILITY AND SPEED THANKS TO BUSBARS

EvoSwitch also works with Legrand busbars, tap-off boxes and cable ducts. "The busbars give us flexibility in terms of power supply and they provide an excellent price-quality ratio. We do not need to install a whole new set of cables

for every new customer. Everything can be set up within the same structure. This is the flexibility that works for us and we can help our customers right away. We recently migrated a customer from one data hall to another, while also increasing the capacity. The customer was online in no time."

DEVELOPMENT IN FULL SWING

EvoSwitch continues to focus on development. Eric Lisica: "We recently launched the EvoSwitch OpenCloud. With this service we can offer customers an open cloud infrastructure. Customers can build their private cloud with EvoSwitch and simply connect to the large public cloud providers. We have high expectations of this service. We will also keep focusing on our USPs, which is important in this day and age. For instance, we have trained technical personnel on site 24/7. A customer who calls after hours from any location is not connected to a regular helpdesk employee. The customer is connected to a qualified engineer who is available to discuss solutions with the customer and to walk directly to the rack if necessary. Customers like being able to rely on local people with knowledge and expertise who can physically walk over to the systems and help them. Talking about customers, we are a happy Minkels customer. And that will not change as long as Minkels continues to deliver the flexibility we experience today." ■

over the world. The market is currently undergoing significant consolidation. One acquisition after another is taking place and that trend will continue for a while. We do not have the ambition to become the biggest, but we do want to be and remain the alternative to the American giants for companies that are looking for capacity in the Netherlands. Our personal approach and focus on service are incredibly important."

MODULAR GROWTH

EvoSwitch is well prepared for future growth. "We now have a building in Amsterdam. We also have enough property in Haarlem and access to funds to continue development. The sixth hall that we built in Haarlem was built based on our own modular concept and it is highly energy-efficient. A key benefit of this modular



Eric Lisica, Operations Director EvoSwitch



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