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23

# LANCOM Reference projects



Best practice examples from satisfied customers and partners. Detailed information on all LANCOM solution areas can be found at: [www.lancom-systems.com/solutions](http://www.lancom-systems.com/solutions)



**LANCOM**  
SYSTEMS

LANCOM  
**Reference projects**  
2023

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Make ideas real



LANCOM Systems GmbH is part of Rohde & Schwarz GmbH & Co. KG.

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## Preface

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Dear readers,

With great pleasure, we present to you the LANCOM reference projects 2023. Learn all about our proven solutions and industry-specific applications that will help you provide digitally sovereign, high-performance and secure networks. From small locations to complex branch and corporate networks, we offer tailor-made solutions for every challenge.

As a leading company in the field of network infrastructure and network security, we support businesses of all sizes with innovative and secure solutions. Discover successful use cases from various industries such as healthcare, education and retail, where LANCOM solutions enhance efficiency, security and customer service.

If you have any questions or need further information, our competent team is at your service. Our dedicated contacts will be happy to assist you in selecting the best solutions for your individual requirements.

Thank you for your interest in our reference projects. We hope this brochure provides valuable insights and inspiration to take your network infrastructure to the next level.

Best regards,



Ralf Koenzen,  
Founder and CEO  
LANCOM Systems GmbH

## Our mission



### For more digital sovereignty in Europe

We are the leading European manufacturer of IT network technology. We enable a trusted and secure IT infrastructure “Made in Germany”.

### Our expertise

- Secure and high-performance IT network solutions
- Site connectivity, IT networks for branches & buildings, indoor/outdoor
- Network security, no compromise on the foundation of digitalization
- Network management, automated and intelligent control of IT networks
- Wholly owned subsidiary of Rohde & Schwarz

### Our appreciation

- Focus on value-added customer benefits
- Use case oriented thinking and business excellence “Jobs to be done”
- Customer-centric service & support
- Sustainability firmly anchored in the corporate strategy

## Our references. Your benefit.



### More than products, more than networking. LANCOM solutions for more digital sovereignty.

Every corporate network has its own everyday challenges when it comes to secure and reliable networking. Individual high-quality network components are a good basis, but only in combination with a systemic, well-thought-out networking strategy and the appropriate know-how about the latest technologies do they become an efficient solution for your IT network.

For us, it's all about taking a realistic view: how is your network currently designed? What technical requirements should your IT network meet? What do you need and – more importantly – what do you want? We will find suitable, feasible solutions for your concerns and problems in the areas of site networking, network security and network management using the latest technologies. Because the time is now to solve what's on your mind. Ideally with a highly secure complete package that strengthens your digital sovereignty. That said, which of your network requirements are we implementing together today?

# LANCOM

## solution areas & industries



### Site connectivity

Scalable. Trustworthy. These are the core characteristics of all site connectivity solutions. And for every individual requirement in your IT network, we offer flexible and professional solutions. Benefit from our many years of experience and expertise in one of the most critical areas of digitalization and explore our comprehensive range of tailor-made network solutions to meet your needs.



### Network security

Is your internal IT infrastructure adequately protected? We provide extensive security expertise – from basics to unified threat management and risk management. Leverage our competence in network security and IT security to safeguard your company's network quickly, effectively and securely against external access and manipulations.



### Network management

The reform of network management is called LANCOM Management Cloud. This centralized management and monitoring tool simplifies processes that often consume a lot of time and resources: setting up a secure and reliable network, connecting multiple company locations and branches or troubleshooting network problems – all of this becomes quick and efficient with just a few mouse clicks.



### SME (small and mid-size enterprises)

SMEs have their own specific requirements for their IT infrastructure, but it must be powerful, scalable and secure in any case. With LANCOM, you make your IT network a valuable collaborating entity, understanding it as a digital foundation that enhances your value creation, productivity, customer retention and competitiveness for the future. We accompany you on your personal digitalization journey, from SME to SME.



### Retail

Excellent shop Wi-Fi, reliable digital payment systems, fast and secure data transmission between headquarters and branches – retail needs network solutions that make work easier, enrich shopping experiences and are always reliable. As specialists in retail infrastructures such as stores, franchises and shop-in-shop systems, we place particular emphasis on durable, secure networking technology and software, reliable roll-outs, data protection and transparent costs.



### Public sector

Whether educational institutions, authorities or medical facilities – digitalization in the public sector often follows longer, heavily regulated processes and demands high security and privacy standards. Yet, it is particularly important that digital transformation progresses here. LANCOM Systems ensures the necessary digital sovereignty and security, accompanying you as a trusted partner throughout the entire digitalization process.



### Healthcare

In the era of digital value chains in the healthcare sector, a secure IT network holds utmost significance for the daily work of healthcare providers – especially to confidently utilize telemedicine applications such as electronic patient records, electronic medical certificates and more. The challenge lies in meeting the legal security requirements, patients' medical demands and associated data protection. LANCOM solutions secure the connection to the telemedicine infrastructure, enabling a compliant and efficient design of the digital healthcare system.

# Site connectivity



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You can also find more information on our website!



# SD-WAN solution incl. 4G/LTE backup in over 400 branches

- Establishment of a secure and unified IT infrastructure with a user-friendly focus, also catering to internal customers
- Implementation of a standardized and centrally managed IT network infrastructure with VPN site networking, Wi-Fi, LAN and cloud management
- Compliance with GDPR requirements and individual customization for different locations

## Customer benefits

- The new IT infrastructure provides a homogeneous system, moving away from isolated solutions, and meets customer expectations.
- Fully cloud-managed and state-of-the-art solution including access rights and constant integration in development processes
- Improved user-friendliness for internal employees and relief for the IT department



### Dussmann Group

Sector: services

Locations: 400



# Agile networking of 8,800 sites

- The network is deployed, managed and monitored with high automation using Software-defined-networking (SDN) technology based on the LANCOM Management Cloud (LMC)
- Each location is equipped with an IPSec-VPN router, responsible for handling all digital communication
- LANCOM vRouters are used as endpoints in ecotel's data centers

## Customer benefits

- German technology ensures the protection of sensitive customer data with robust security and data privacy standards
- New locations are quickly and securely integrated into the company's network via the LMC with just a few clicks
- LMC reduces operational costs, management efforts and monitoring workload

### **ecotel communication AG**

Sector: services  
Locations: 8,800







*“Safe and reliable operation is essential for the success of the cable car network. Communication via Wi-Fi plays an important role here. At the same time, the wireless technology paves the way for a wide range of future innovations.”*

Guido Torsten Bäuerlen, project coordinator at Doppelmayr/Garaventa

## Mobility of the future: wirelessly connected above the city's rooftops

- Since 2014, the Bolivian cities of La Paz and El Alto have been connected by a cable car system built by the Austrian cable car manufacturer Doppelmayr
- With a total of 10 cable car lines and 1,396 cabins transporting over 300,000 people daily, there is a need for a modern Wi-Fi solution to support security-related applications and additional services
- Applications such as intercom systems, security cameras and light control require a robust, reliable and powerful Wi-Fi

### Customer benefits

- Outdoor access points, thanks to their IP66 protective housing, operate reliably even in temperatures ranging from -33°Celsius to +70°Celsius.
- Directional antennas precisely direct the Wi-Fi signal to the specific section of the cabin route
- New sections of the route can be quickly and easily equipped with Wi-Fi and seamlessly integrated into the entire network

### Doppelmayr Seilbahnen GmbH

Sector: services

Network supplied with Wi-Fi: 1,396 cable car cabins



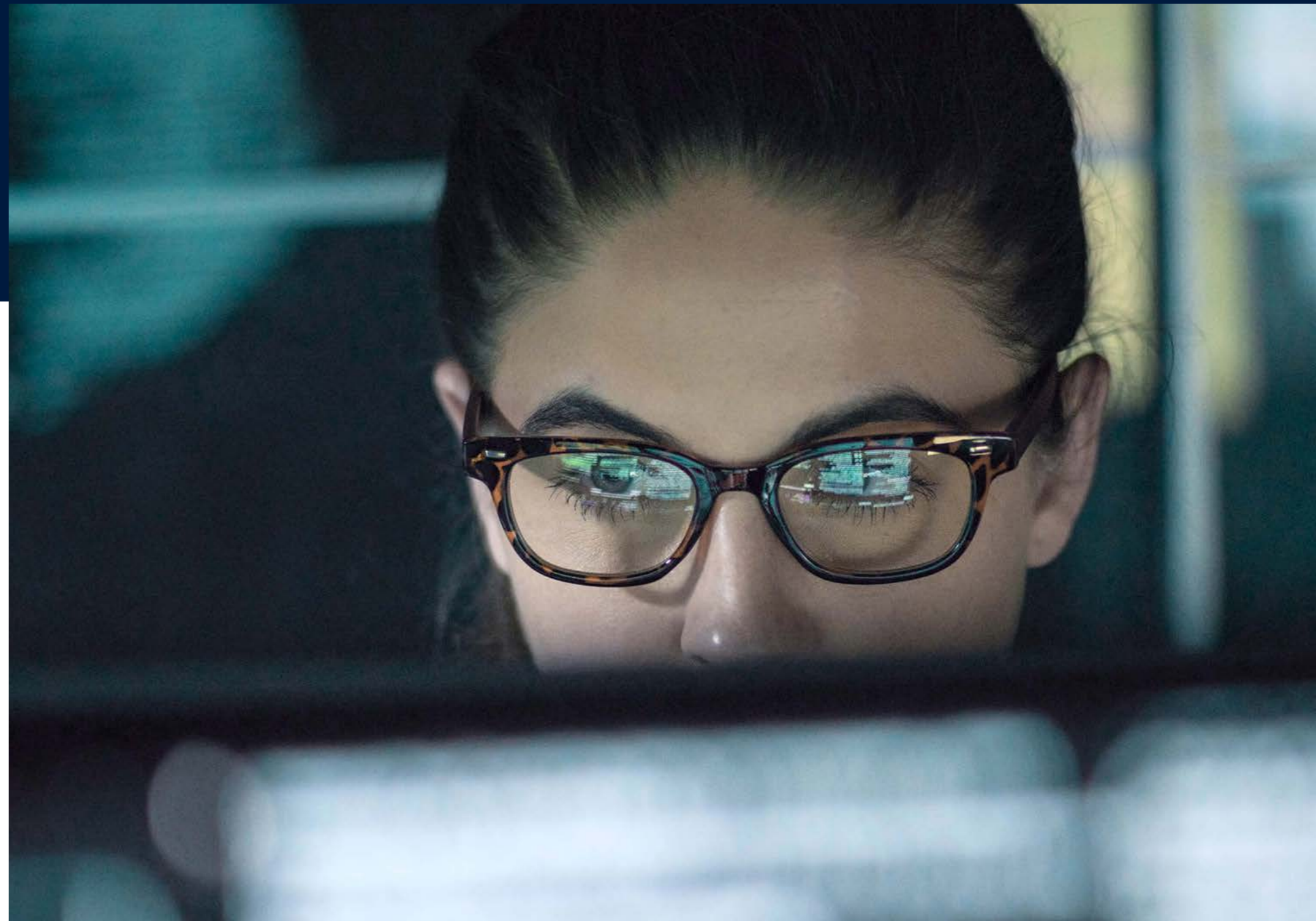
# Network security



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You can also find more information on our website!





## HASOMED GmbH

Sector: healthcare  
GDPR-compliant security solution



# The smart solution for doctor's offices

- Since the revised statutory requirements of the German Association of Statutory Health Insurance Physicians (KBV), medical practice owners across Germany are faced with the task of comprehensively securing their networks and protecting patient data
- The healthcare industry's exceptionally high security standards demand not only GDPR-compliant solutions but also a backdoor-free protection through a UTM firewall
- The networking foundation is built upon a LANCOM R&S® Unified Firewall UF-60 with an optional connection to the Telematics Infrastructure (TI)

## Customer benefits

- The introduction of PraxisProtect® has brought a new solution by HASOMED, providing medical practices with the advantage of comprehensive data protection that fully meets the legal requirements
- The LANCOM Management Cloud (LMC) offers a variety of benefits: centralized management, configuration through one-click-security and significantly simplified management and monitoring
- The ongoing operations, including intensive patient care, remain undisturbed, while cost savings are achieved



# The gatekeeper for the machine network

- Following a cyber attack on the machine systems, the customer aimed to enhance the security level of remote maintenance and bolster protection for the machine networks
- The use of SSL inspection and deep packet inspection enables scanning, filtering and application recognition, even for encrypted data packets, effectively implementing security measures
- On-site, the firewall functions as the “gatekeeper” for the machine network, regulating communication with the equipment

## Customer benefits

- LANCOM Systems’ security solution has elevated the security level of VPN remote maintenance, providing improved protection for the customer’s networks
- The firewalls can be swiftly and securely activated through the LANCOM Management Cloud
- As a result, the solution can be seamlessly integrated for the customer, even in sensitive areas, with minimal effort

*“What LANCOM has developed with us is a solution that is unique in its entirety on the market. You can currently only get such a high level of security for machines and plants with Optima and LANCOM.”*

Dr.-Ing. Benjamin Häfner,  
Group Leader of Industrial IT at Optima

## **OPTIMA packaging group GmbH**

Sector: industry  
Increased security level

**OPTIMA**

# Network management



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You can also find more information on our website!



# Modern network infrastructure for gas stations

- Complete solution renewal, transitioning towards a secure and managed network
- Establishment of a separate Wi-Fi network to connect the cash systems of the car wash stations
- Deployment of components (routers, switches and access points) on a cloud platform
- “Made in Germany” and the expressed satisfaction in the ongoing contract were crucial for collaborating with LANCOM

## Customer benefits

- The cloud platform is hosted and operated by the partner, setting new standards for security, efficiency, scalability and agility in the renewed networking solution
- A dual-modem strategy ensures high failover reliability: in the event of DSL line failure, the LTE modem takes over

### Well-known gas station chain

Sector: retail

Connected sites: over 900



*“Thanks to the professional solution from Seabix and LANCOM, we can now concentrate fully on our main task – flying!”*

Gerold Biner, CEO of Air Zermatt



## Faster across the skies with **cloud-based networks**

- Reliability and speed are the crucial cornerstones of the preparedness for the mountain rescuers of Air Zermatt
- Long waiting times for resolving outages in essential resources such as Internet and telephony were not acceptable for a flight rescue operation where time is critical
- The customer wanted to implement a network that is entirely provided by a single source – from internet connectivity to Wi-Fi and telephony

### Customer benefits

- The mountain rescue team now benefits from improved Wi-Fi coverage, wireless telephony through voice over Wi-Fi and higher network service quality
- In particular, time-saving proactive monitoring and efficiency improvement due to simplified operation allow the customer to have more time for mountain rescue operations
- After extensive research, the customer chose LANCOM because of its comprehensive hardware portfolio and the combined Management Cloud

### **Air Zermatt AG**

Sector: services

Location: Zermatt, Switzerland



# Small and mid-size enterprises (SMEs)







*“Interdisciplinary agile working is an extremely relevant factor in our targeted scaling of the business model. Accordingly, high-performance Wi-Fi is an important driver for our business model and only rounds off the entire project as a best-practice example of successful digital transformation.”*

Marco Dembowski,  
Head of Brand Strategy & Experience, PackEx GmbH



## PackEx GmbH

Sector: medium-sized companies  
Area covered by Wi-Fi: 4,000 square meters



# Digital revolution between folding cartons and Wi-Fi

- As part of a planned revolution in the production of packaging materials, a comprehensive digitalization strategy and a modern Wi-Fi were required
- LANCOM access points now provide powerful Wi-Fi coverage over an area of 4,000 square meters
- The LANCOM Management Cloud offers advantages such as centralized administration, automated maintenance and configuration, a rapid response to issues and quick network expansion

## Customer benefits

- PackEx employees are connected to the Internet and company network with their devices anywhere and at any time
- Visitors also receive an additional Wi-Fi-service
- Thanks to the cloud, the network excels in terms of stability and flexibility

# Retail



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*"The bottom line is that the solution is a huge win for us. We are technically up to date and can react with maximum flexibility to all circumstances from a central location via the cloud."*

Volker Hermann, Team Leader in the "Communication & Collaboration" area at ATU

# Becoming a service champion with a modern network

- The previously used MPLS network has been replaced with an agile SD-WAN to establish secure connections between locations
- The requirements were maximum security and flexibility, coupled with sustainable cost reduction, while ensuring the highest stability and reliability
- SD-WAN serves as the fundament for the entire branch network. The LANCOM Management Cloud acts as a central authority for automated processes and efficient management of the locations

## Customer benefits

- LANCOM was chosen because their products are known for their quality and security "Made in Germany"
- The focus on SD-WAN offers significant cost-saving potential, and the VPN technology provides a highly secure network
- Overall, the solution is a win-win: the customer is technologically up-to-date and can respond with maximum flexibility to all circumstances from a central point through the cloud

## Auto-Teile-Unger Handels GmbH & Co. KG

Sector: retail  
Connected locations: 530





# Renewal of the IT network infrastructure – Digitally sovereign

- Faced with growing geopolitical tensions, supply constraints and increased security requirements for critical infrastructures, the customer's need for greater digital sovereignty grew
- The main objective was to connect the petrol station branches with a trusted infrastructure solution "Made in Germany" that guarantees backdoor-free operation
- Solution: a fully managed WAN solution with a combination of platform operation, hardware and services

## Customer benefits

- A significant step towards digital sovereignty: a coordinated and centrally manageable all-in-one solution made & hosted in Germany, which fully meets both the performance and security requirements of the customer.
- Thanks to the access points with IoT-readiness, the customer now also benefits from future-ready digital application opportunities based on a powerful and expandable wireless infrastructure

### Oil company

Sector: retail

Connected locations: 440

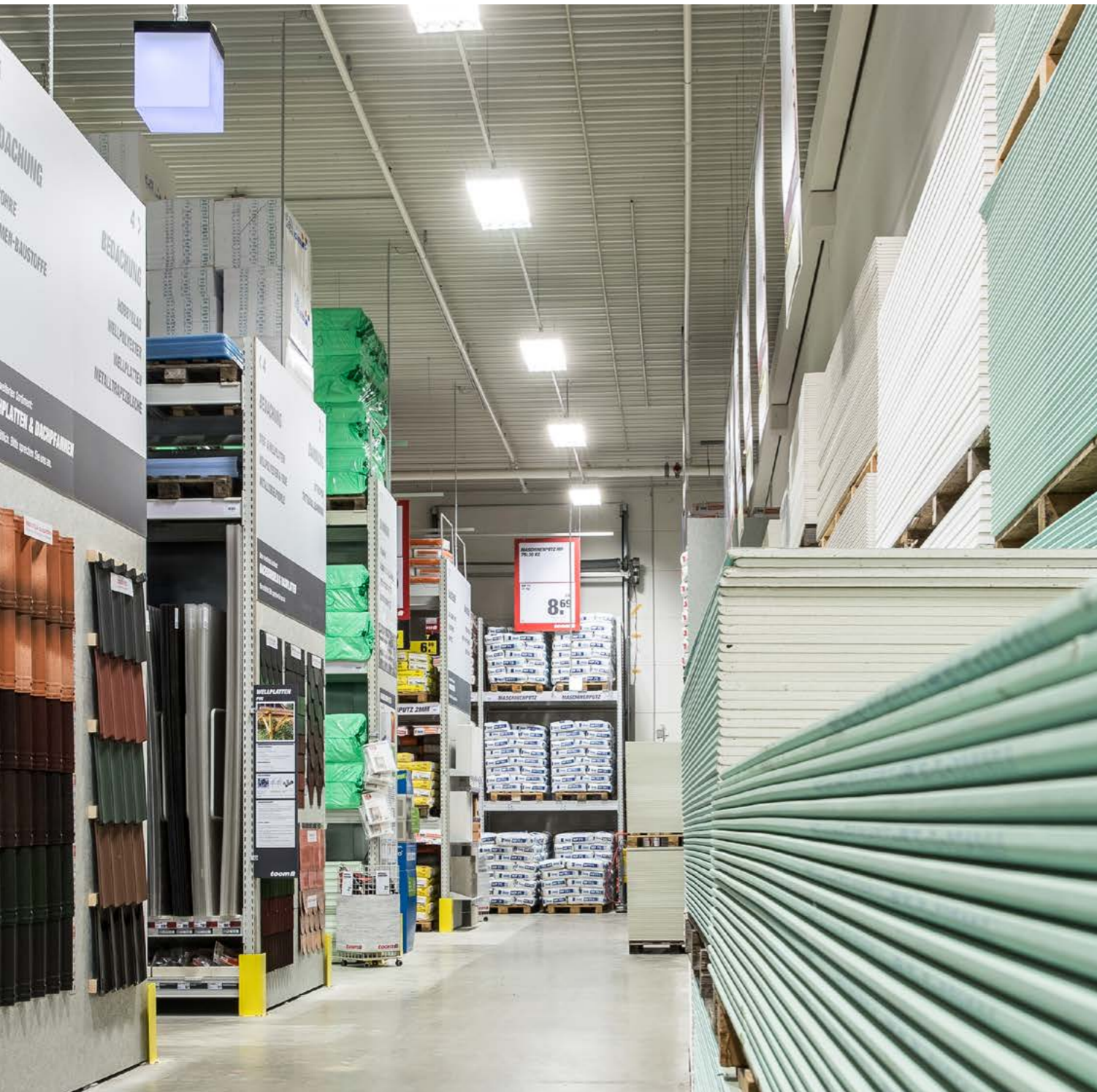


# Networking of a retail network with 330 branches

- Provision of a fully managed solution tailored specifically to the requirements of this industry
- The customer emphasized the importance of a competitive price-performance ratio, with an attractive price level, high functionality and guaranteed service with minimal downtime
- The network is designed to accommodate future expansion, such as through company acquisitions or opening new locations

## Customer benefits

- The networking of 335 locations based on VDSL2 and MPLS has created a flexible and high-performance branch network
- Critical applications, such as inventory management systems and electronic payment transactions, operate with high speed and reliability thanks to prioritization
- External partners can be securely integrated into the system



### toom Baumarkt

Sector: retail  
Connected locations: 330



# Public sector



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You can also find more information on our website!





*"A sensible, modern and mobile school solution is only possible with reliable, high-performance Wi-Fi."*

Immo Ulbricht, Head of Telecommunications and Information Technologies at the City of Helmstedt

## Modern Wi-Fi for curious learners

- As part of the German "DigitalPakt Schule" initiative, five elementary schools were equipped with a modernized Wi-Fi network
- A central requirement was to enable the use of school-owned mobile devices in the classroom
- For each school, two networks were established – one for classroom use and another guest network for private devices (BYOD) usage

### Customer benefits

- LANCOM Systems' modern access points, WLAN controllers and switches ensure a powerful and secure IT infrastructure
- Students can now stream, research and collaborate using Wi-Fi from the school server in all rooms
- The school Wi-Fi networks are also integrated into the city's overall network

### Stadt Helmstedt

Sector: public sector

Schools supplied with Wi-Fi: five elementary schools



**HELMSTEDT**  
Stadt der Einheit



*“The biggest advantage is the scalability and flexibility of Whyless and LANCOM. For example, we can now limit the signal strength for each access point.”*

Joey Aben, IT-Administrator at Udens College



# Udens College switches to **Wi-Fi 6**

- A total of 212 indoor access points and 15 outdoor access points provide comprehensive, high-performance Wi-Fi
- Wi-Fi 6 technology enables parallel transmit and receive for multiple devices
- Easy network management & monitoring thanks to LANCOM Management Cloud

## Customer benefits

- Stable and secure WLAN for over 3,000 students and employees including eduroam (Education Roaming) and BYOD functionality
- High-performance connectivity despite high end-device density
- Remote control, monitoring, and maintenance of the network via the LANCOM Management Cloud by LANCOM Partner Whyless

### Udens College

Entire campus of Udens College covered by modern Wi-Fi







# Network segmentation via the **LANCOM Management Cloud**

- Complete renewal and standardization of the entire LAN infrastructure towards a secure and unified network
- Efficient network segmentation achieved through LANCOM Management Cloud (LMC)-controlled switches

## Customer benefits

- The new GDPR-compliant network enables compliance with data protection regulations
- Hardware rollout was executed within one week as per the customer's request by LANCOM Partner
- Modern and optimized networking for the entire site, including management and security



### **Kindernothilfe e.V.**

Sector: public sector

Connected location: main headquarters





# A modern network for the operations control center

- The objective: a reorganization of the existing technical components of the command center and centrally managed technology into a modern and interconnected network
- The challenge was the remote maintenance of the mobile components to ensure their readiness at all times
- PoE+ ports and Wi-Fi 6 access points enable wireless communication

## Customer benefits

- The network design allows the connection of pre-configured devices to any interface
- The system is designed to switch to an alternative component in case of failure
- Configurations, monitoring and troubleshooting will be simplified through the LANCOM Management Cloud (LMC) in the future



## Feuerwehr & Katastrophenschutz Rhein-Hunsrück

Sector: public sector

Networking of the operations control center



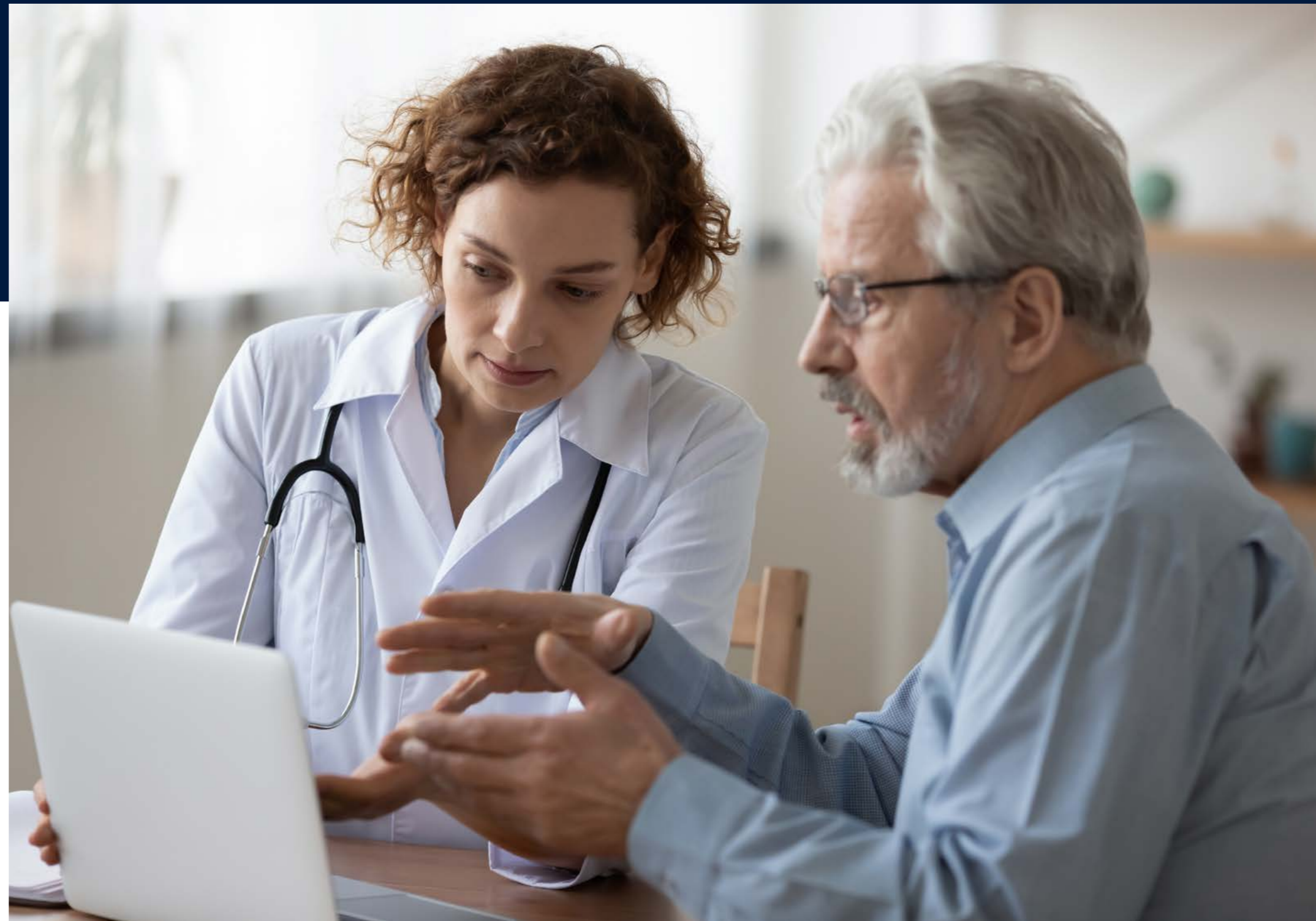
# Healthcare



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You can also find more information on our website!





*“The Wi-Fi fulfills two very important aspects to our complete satisfaction: first, it is extremely reliable, and second, it can be expanded easily and quickly.”*

Markus Kociok,  
Head of IT Infrastructure DIAKOVERE gGmbH

## Stable networking

- Comprehensive Wi-Fi coverage in the wards and centralized management of access points through WLAN controllers (WLC)
- Optimal network utilization with simultaneous operation in the 2.4 GHz network (patient hotspot) and 5 GHz network (mobile services)
- Logical separation of different applications through SSIDs and VLANs

### Customer benefits

- Electronic patient records and powerful Wi-Fi ensure optimized processes
- High scalability of the solution allows gradual expansion to new wards and all hospitals within DIAKOVERE
- High reliability: autonomous operation of the access points in case of WLC failure
- More time and efficient processes in patient care through the use of electronic records during mobile visits

### **DIAKOVERE gGmbH – Friederikenstift Hannover**

Sector: healthcare

Area covered with Wi-Fi: all wards





## Connected by prescription

- Stable networking of around 4,250 pharmacies via VPN routers
- Encryption of sensitive data using VPN technology
- Comprehensive coverage of the premises with Wi-Fi access points

### Customer benefits

- ADG can now rely on a reliable VPN connection and Wi-Fi
- Optimization of the entire goods flow logistics as well as cash register and ordering systems
- Highest availability: hardware allows various backup scenarios
- Highest confidentiality: operating system and components come from a German manufacturer and receive regular security updates

### **Apotheken-Dienstleistungsgesellschaft mbH**

Sector: healthcare

Locations: 4,250 Pharmacies

**ADG** 

Pharmacy Software

A company of PHOENIX group



*“Hospitals also live from the recommendations of their patients. In addition to medical care, the service provided to patients is also important, and a reliable Wi-Fi hotspot ensures a positive response.”*

Alexander Kern,  
Head of IT Management at Alice Hospital

## Hospital Wi-Fi for the best care

- 120 access points approved for medical environments cover 19,000 square meters simultaneously in the 2.4 and 5 GHz frequency bands
- Logically separated networks for patient hotspots and medical services
- Central WLAN controller (WLC) manages and configures access points

### Customer benefits

- Modern wireless network for medical applications and a patient hotspot that increases satisfaction
- Access to digital patient records via laptops and future integration of other WLAN-enabled devices possible
- High reliability of access points (operation via WLC and autonomous operation in case of WLC failure) and optimal network utilization

### Alice-Hospital Darmstadt

Sector: healthcare

Area covered with Wi-Fi: 19,000 m<sup>2</sup>



Have we sparked your interest?  
Our sales team will be happy to advise you!



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