

# Health and disease protection: new quality standards in the security industry

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Sterilisation and protection against infectious diseases are developing into a core new aspect of security, with holistic solutions addressing both prevention and control – all at the same time.



**“The office building of the future is virus-free. At the moment, developments are happening that nobody thought about a year ago,”**

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says Thorsten Burgsmüller, one of the two developers of a new system that links hand hygiene to access control.

In his role as sales manager at Nedap partner company GST, Thorsten Burgsmüller is observing how a new, collective awareness around virus security is emerging. He cites the coronavirus as a trigger for this change in thinking, but is convinced that the awareness of health security won't disappear – even after the pandemic. He says: “The question of how to prevent the transmission of infectious diseases, for example flu, will remain an important issue afterwards.”





# The access and hand hygiene belong together

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A hygiene barrier on a building's outer skin ensures that every single person sanitises their hands before first access. This entry control kills a lot of viruses. In practice, however, it's not enough to set up manual dispensers for sanitiser products because it doesn't guarantee they'll actually be used by everyone entering the building.

"With the hand-hygiene access solution, it's possible – for the first time – to verify that employees and visitors actually comply with a building's hygiene standards," says Stefan Krusenbaum, GST managing director and the other person behind this system.

The interior of a building is significantly more germ-free thanks to our new hand-hygiene system, which helps to maintain a minimum level of cleanliness.

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**63% of respiratory pathogens are on the hands**

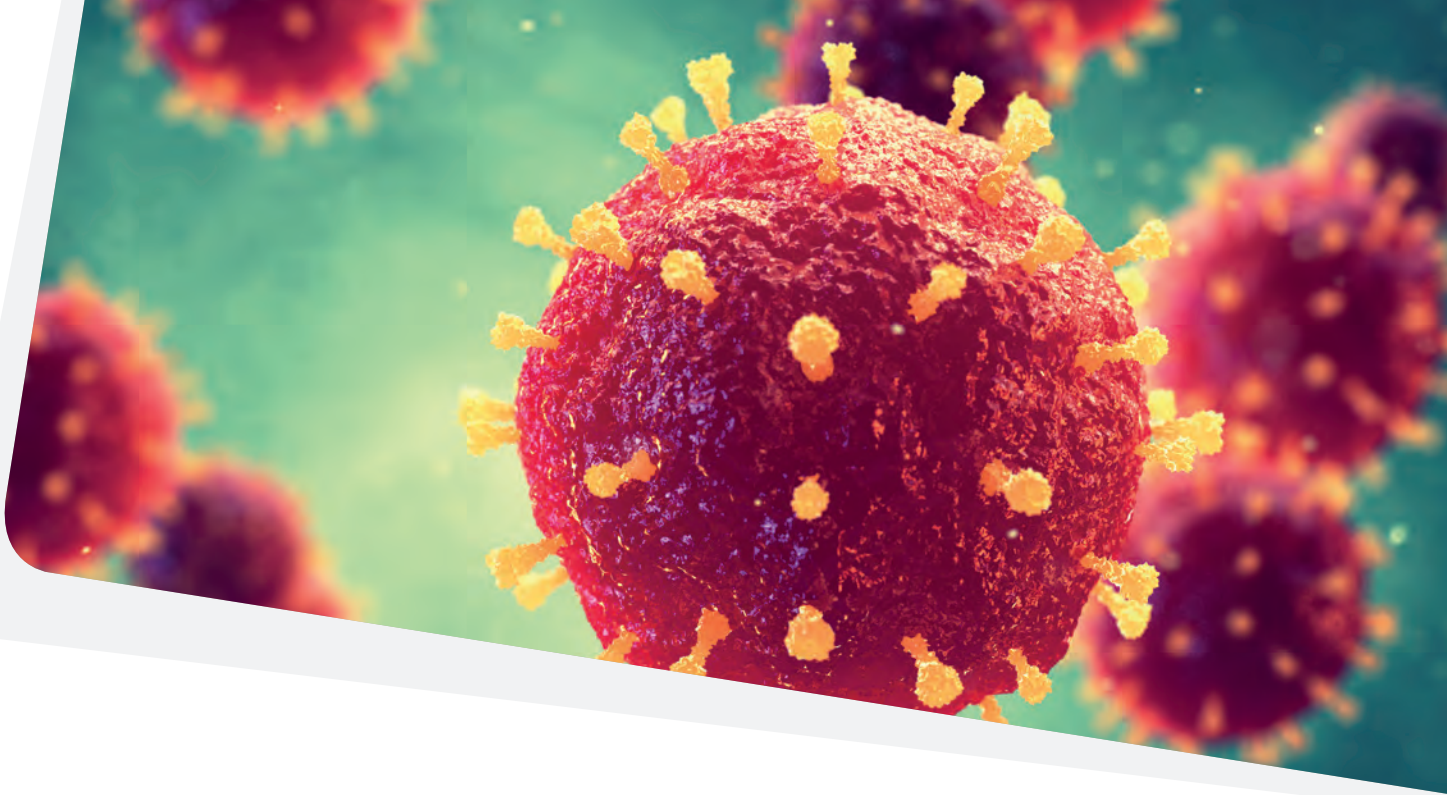
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**Thorough hand-hygiene practices result in 20% fewer sick days.**

Various studies show that thorough hand hygiene very effectively removes germs from the hands. Germs which, otherwise, are often transferred to other people via lift buttons, snack-machine keypads, door knobs and office telephones.

In a comparative experiment in an office, employees who followed thorough hygiene practices recorded significantly fewer sick days than those who didn't pay particular attention to hand hygiene. Another study of a university dorm found 43% fewer respiratory problems in students who regularly sanitised their hands.





# Virus security awareness had to be raised first

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Early on, Stefan Krusenbaum recognised an urgent need for action in the area of hand hygiene by automating safe, guaranteed sanitisation. In fact, the idea for the hand-hygiene access control solution came to him a few years ago. At this point, however, there was little awareness of virus security.

Three or four years ago, hardly anyone was interested in access control being connected with hand hygiene. “But when we asked our customers again in the middle of the pandemic, the reaction was very different. Suddenly there’s demand in almost every office building, or wherever several hundred people come together every day,” says Stefan Krusenbaum.

“The system is already in use on three speed gates in one client’s building and we use it in our office,” he continues. “The response from major customers who have already installed a Nedap access control system was also very positive when we presented the hand-hygiene solution as an extension.”

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**Inadequate hygiene measures are responsible for  
around a third of all hospital infections.**

## **Benefits for employers, employees and visitors**

On a human level, an environment in which people can interact with one another as free from viruses and germs as possible creates a better health situation. From an economic perspective, the figures speak for themselves: sick employees incur high costs, both direct and indirect, for the health system and employers.

In Germany, for example, companies have to bear a total of around 85 billion euros in direct costs caused by production downtime. There are also indirect losses due to employees who come to work despite illness and are therefore less productive.

Even a common cold has a negative impact on productivity, reaction times and attention spans. In hospitals in the EU, nosocomial infections result in direct additional costs of around 7 billion euros per year – but every third hospital infection could be avoided with stricter hand-hygiene measures.

# Security market trend: demonstrably aseptic

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“We see a movement towards traceability and control on the security market,” is how Stefan Krusenbaum describes the latest developments. Allowing unchecked access to buildings is no longer appropriate. Holistic solutions are needed that can increase the control of access to workplaces and public and private buildings.

With this hand-hygiene system, employers, businesses and hospitals can not only protect themselves to some extent from germs carried by employees but also by visitors. Because the AEOS system on which the solution is based enables verifiable quality control of hand-hygiene measures for the first time. And takes care of both employee access control authorisations and visitor management.

“At the customer’s request, we create very detailed personal or group-based evaluations. So, if someone’s confirmed as infectious, we could theoretically even show exactly when and how often they’ve sanitised their hands,” explains Stefan Krusenbaum.

## What will the security systems of the future look like?

Digitisation and data analysis are becoming increasingly important. Intercoms are already paired with cameras. In the future, a second question will be added to the question ‘Is this person authorised to access?’ – the security system will also ask ‘Is this person a health risk?’.

This creates the need for access control systems across most industries. Fever screening and mask detection, especially important during an epidemic or pandemic, are already possible and are being used.

Mask recognition will probably lose some of its importance again, but the aspect of health control remains. A standard temperature control, for example, could help to spot waves of infection early on. It can enable a fast response, with people quickly being isolated before they come into contact with many other people.

“The extension of our hand-hygiene solution to include fever screening is quite conceivable,” says Stefan Krusenbaum, giving an insight into possible future plans. “The potential uses for such a solution are practically unlimited.” The reason being, this combination creates a complex, versatile health system that works both preventively and as an early warning.

# Ongoing analysis and remote-control potential

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The digitisation of security systems also enables scheduled in-depth analysis and real-time monitoring. Sensors are installed in the hand-hygiene system, for example, that show the liquid level in each dispenser at all times. If it falls below a certain level in one dispenser, a warning is sent.

“We’re also using a visualisation system for one of our customers, which is one of the many possibilities that we have with AEOS software. With this visualisation, we keep an eye on how many people enter the building. Once it reaches a certain number, we can lock the door and so limit the number of employees in the building,” says Stefan, describing yet another potential application of new access control features.





## 3 key questions for Stefan Krusenbaum and Thorsten Burgsmüller of GST, our Nedap partner company

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### **Where do you see the need for hand-hygiene access control systems?**

In every office and administration building, but also in other areas where lots of people come together. For example, in hospitals and medical practices, schools and kindergartens, food processing companies, the travel industry, restaurants and even retail.

### **How does this hand-hygiene solution help companies to protect themselves?**

It can certify that hygiene requirements have been met. It's a form of quality control that's never existed before.

### **Where is the security market moving?**

Health security is a big issue now. We see a desire for more control and traceability, and video systems and data analysis are gaining in importance.



Gesellschaft für  
Sicherheitstechnik mbH



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