

Smarter COVID-19 testing protects the Netherlands

SploedtestCorona Case Study

With COVID-19 spreading fast across the Netherlands, start-up SploedtestCorona aimed to help protect the public by offering faster and more affordable access to testing. To cut out costly manual work involved in capturing the results of lateral flow tests at mobile testing centers, the company developed an innovative, automated software solution.

Running on robust, high-quality Lenovo IdeaPad Duet Chromebook devices delivered by Google Partner Localyse, the software sends photos of test readings to a central team for analysis, helping SploedtestCorona to process over 40,000 samples per day quickly, accurately, and cost-effectively.

Founded in 2020 in Utrecht, Netherlands, SploedtestCorona offers rapid, reliable, and affordable testing for COVID-19. By combining on-site antigen testing with remote diagnosis by medical experts, SploedtestCorona aims to deliver dependable results within just 15 minutes—helping people across the country to rapidly confirm their COVID-19 status and go about their daily activities with confidence.

Racing against time

When COVID-19 began to sweep around the world in 2020, national governments quickly realized that mass testing would be a crucial tool to identify local outbreaks and prevent the virus from overwhelming healthcare capacity.

In the early months of the pandemic, rapid COVID-19 antigen tests were developed and certified by the World Health Organization. These tests involve taking a swab of a person's nose and throat, dissolving the sample in a liquid, and then placing a few drops of the sample into a lateral flow device. Like a home pregnancy test, the sample flows through absorbent material inside the device, which reacts with the sample to give a result. Within just



▶ **Founded**
in 2020

▶ **40,000**
samples
processed daily

▶ **15 minutes**
for dependable
results

**Smarter
technology
for all**

Lenovo



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Bart Van Spitaels, CTO, SpeedtestCorona

15 minutes, the test will show the person's likely COVID-19 status with greater than 90% accuracy.

Although lateral flow tests for COVID-19 were already being manufactured quickly and at relatively low cost by mid-2020, delivering access to rapid, effective testing proved a tough challenge in many countries around the world. As the situation unfolded during the first year of the coronavirus outbreak, an ambitious group of entrepreneurs and doctors in the Netherlands decided to join forces to make testing more accessible and affordable for people across the country.

Bart Van Spitaels, CTO at SpeedtestCorona, explains: "We knew that proactive testing would be essential to allow the country to reopen. While a number of companies were offering lateral flow tests in the Netherlands, the prices were extremely high—up to €250 for a single lateral flow test—and some took up to 48 hours to return results. If we could find a way to make the tests both cheaper and faster, we could play a role in preventing COVID-19 outbreaks and promoting the health and wellbeing of people across the Netherlands."

He continues: "Our vision was to establish dozens of mobile testing centers around the country, with trained experts to administer the tests. When processing large numbers of lateral flow tests, one of the main costs—and bottlenecks—is the labor required to set a timer for each sample and record the results after exactly 15 minutes. If we could automate that process, we could deliver tens of thousands of tests per day extremely cost-effectively."

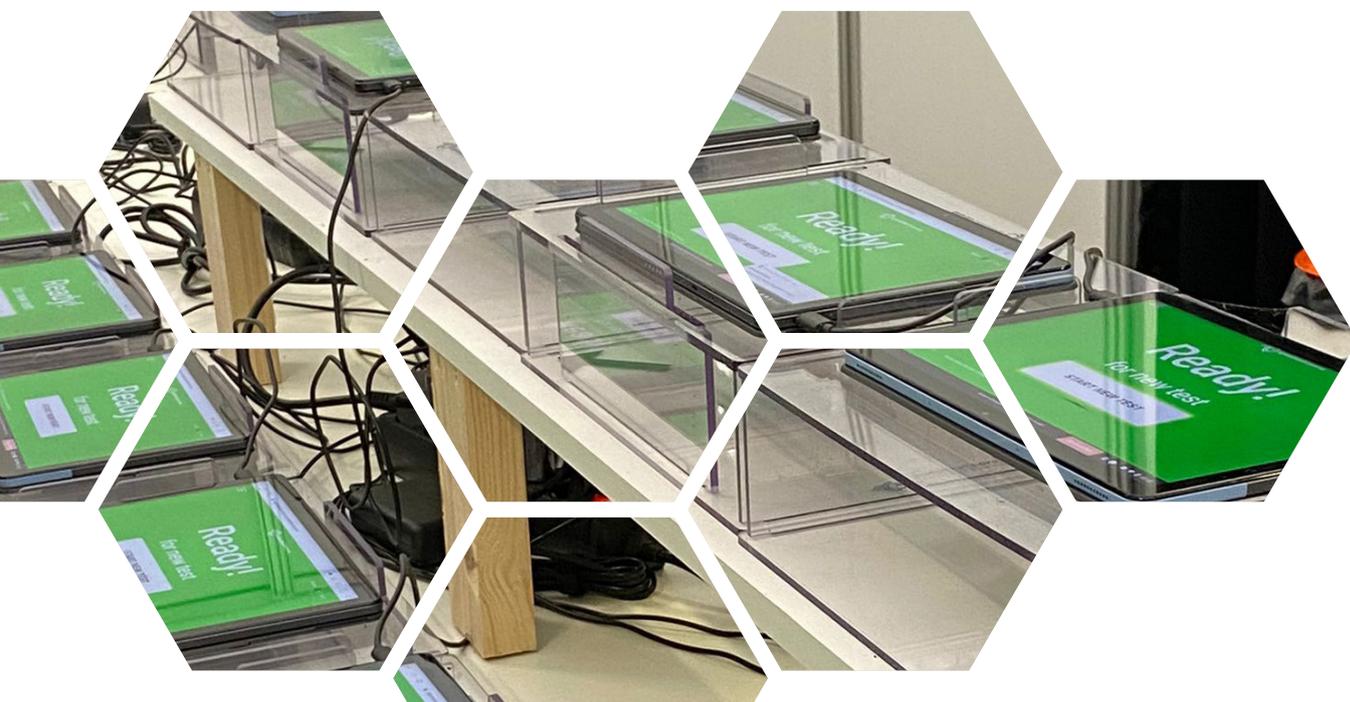
Accelerating testing

To achieve its goal, SpeedtestCorona developed an innovative software solution. After an employee adds a sample to a lateral flow test, the software waits for 15 minutes, captures a photo, and then uploads it to a secure online portal. Next, a team of experts at the company's headquarters confirm whether the result is positive or negative, and finally the customer receives an email or text message with results.

Bart Van Spitaels says: "To enable us to take our software solution off the drawing board and out into the field, we looked for a hardware platform that was rugged and secure while also cost- and energy efficient."

After a thorough review of several potential platforms, SpeedtestCorona engaged its trusted Google Partner Localyse to configure Lenovo IdeaPad Duet Chromebook devices for its software solution. Built on Chrome OS, the Lenovo IdeaPad Duet Chromebook tablets are mounted in a purpose-built plexiglass stands, ensuring they are always at the optimal distance to take clear pictures of lateral flow tests placed beneath them.

"When Localyse showed the Lenovo IdeaPad Duet Chromebook to us, we immediately saw its potential," adds Bart Van Spitaels. "As well as having an integrated, high-quality camera, the Lenovo IdeaPad has the performance to capture crisp, detailed images quickly and reliably, time after time. Using a demonstration model from Localyse, we sent the tablet directly to our development team to test out—and it worked flawlessly. Localyse also helped us to determine the optimal configuration for the new tablets, helping us to minimize the manual work required to prepare newly delivered devices for use in the field."



Fighting back

Working together with Lenovo and Localyse, SpoedtestCorona deployed Lenovo IdeaPad Duet Chromebook devices across all its testing sites in the Netherlands. Today, the company uses over 2,800 Lenovo IdeaPad Duet Chromebook tablets at 200 locations across the country, helping it to process over 40,000 samples per day quickly, accurately, and up to 80% cheaper than other providers.

“Because we are constantly handling sensitive information on our customers’ behalf, we greatly value that Chrome OS is secure by design,” continues Bart Van Spitaels. “Out in the field, the only software that runs on the devices is our proprietary solution—helping to mitigate the risk of data loss. To further enhance security, we manage every tablet remotely using Chrome Enterprise, which helps to ensure that every system is accounted for and up to date. In fact, we manage an estate of thousands of Lenovo IdeaPad Duet Chromebook devices with a lean IT team of just three people.”

With Lenovo IdeaPad Duet Chromebook devices supporting its services across the Netherlands, SpoedtestCorona is achieving its goal of making COVID-19 tests cheaper and easier to access—ultimately helping to protect people from the virus.

Bart Van Spitaels comments: “It’s really quite incredible how quickly we managed to get everything up and running. Lenovo and Localyse collaborated seamlessly to clear all the hurdles in our way, allowing us to take delivery of 2,500 tablets—pre-loaded with our software solution—within just two months. In more than 15 years in IT, I can’t recall a project that’s gone more smoothly. Not a single Lenovo tablet had a defect, and everything was ready to go right out of the box.”

Since it first partnered with Lenovo and Localyse, SpoedtestCorona has grown to become one of the country’s most trusted providers of rapid COVID-19 testing. The company now provides mass testing for Dutch schools and businesses, and aims to deliver all results within 15 minutes.



“Without Chrome OS running on a top-notch hardware platform like Lenovo IdeaPad Duet Chromebook, there’s no way we would have been able to scale our COVID-19 testing services as quickly or efficiently as we have,” adds Bart Van Spitaels. “COVID-19 will continue to be part of our lives for many years to come, so it’s never been more important to test people to stay one step ahead of the virus. We’re currently exploring the possibility of expanding our services to other countries in Europe—and if we do expand into additional regions, Lenovo will be our go-to partner.”



Spoedtestcorona selected the Lenovo **Ideapad Duet Chromebook tablet** to enable their COVID-19 testing operation to scale quickly and efficiently.

The Smarter Solution



The Right Features

A reliable, high-quality camera inside a cost- and energy-efficient tablet fit the bill for fast field deployment



Secure By Design

Tablets run only proprietary software and are managed remotely to keep sensitive data safe.



Critical Collaboration

Lenovo teamed up with Geo Square to pre-load the tablets with the necessary software, speeding time to delivery when every hour was vital.