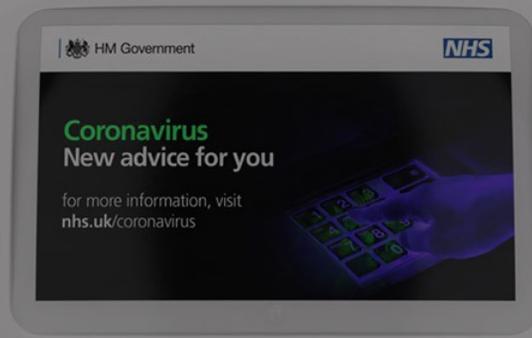


SAVORTEX and Arm Pelion team up to make buildings safer with smart sanitization



arm

Case Study



Company Snapshot

Name: SAVORTEX

Industry: Connected buildings

HQ: London, England

SAVORTEX is a British, multi-award-winning hand-hygiene technology manufacturer serving the corporate washroom facilities sector. The company sells internationally and through its growing reseller network, has deployed over 400 projects worldwide to sustainability focused customers such as Gatwick Airport, Rolls Royce, MITIE and many more.

www.savortex.com

Revolutionizing the workplace hygiene industry with IoT

Business objective

SAVORTEX is striving to bring data-driven hand hygiene to change user behaviour in traditionally environmentally unfriendly and unhygienic workplace facilities. With 1 in 5 people not washing hands and considering that 80 percent of all infections are transmitted by hands, its costing employers \$225.8 billion annually, and leading to a loss of user confidence and productivity.

SAVORTEX have pioneered the use of Internet of Things (IoT) technologies to revolutionize the workplace hygiene industry, with the first smart connected hand dryer and their newly released smart hand sanitizer range which has a track and trace feature to encourage optimum hand hygiene standards. Their vision is to leverage IoT for significant energy, operational and cost savings and deliver data-driven hand hygiene. They're currently deploying solutions for customers such as L'Oréal, Shell, Gemin-i analytics, Gatwick and RBS, who are seeking to tackle hygiene concerns in a post-COVID world.

The SAVORTEX Solution

SAVORTEX's Smart series connected hand dryers use an eco-friendly digital brush-less motor powered by an electrical current to create air speed, which consumes 3x less energy compared to other dryers. While the dryer is used, data is being captured and fed back in real time, provided by sensors which track from the point of dryer activation until the end user finishes and removes their hands. SAVORTEX's algorithm calculates the energy usage and footfall into the washroom and uses the data to help building owners set cleaning thresholds in their washrooms. The feedback data enables predictive cleaning, moving away from more outdated cleaning methods.

The range of SAVORTEX smart dryers includes a model with built-in screens, which can display video. This allows the building owners to push hygiene messages in real-time to users as they dry hands to raise awareness and encourage correct behaviour. Building owners can also choose to partner with SAVORTEX media partners to serve ads on their dryer units, tailored to audience demographics such as gender, time and location.

If 99% of the building is clean and hygienic, a single person who doesn't sanitize on entrance is endangering the rest of the population of the building.

Transforming waste into revenue, this model helps the landlord to improve their ROI and reduces the payback to 3-6 months, instead of the industry standard 5+ years.

Since washrooms can be located in a variety of places, a lot of detailed analysis and testing was done by SAVORTEX around collecting data from hand dryers in many locations in real time and ensuring that data transfer is robust, has integrity and is being provided at the right cost. After thorough testing of various SIMs and connectivity options, SAVORTEX CTO Chris Dockrill quickly identified Arm Pelion as the best solution to address their needs.

Driving hygiene innovation

SAVORTEX are continuing to innovate and are now bringing their award-winning combination of technologies into the recently released product the SAVORTEX Smart hand sanitizer. The Smart Sanitiser is a cellularly connected smart hand sanitizer which offers non-touch liquid dispersal, tracks device usage in real time and has the intelligence to alert building managers if a user does not sanitise their hands, and in extreme cases it can prevent or allow access to a building via RFID, based on usage of the sanitizer. In the post-COVID world, they predict that technology will be critical to address building owners' and organisations worries about hygiene.

"Hand sanitizers have been around for decades but are now more important than ever. Historically, we've found that people simply walk past a sanitizing station and there's no way of policing or encouraging use," said CEO Syed Ahmed.

SAVORTEX Smart hand sanitizers is also available with a video screen option for real-time hygiene messaging to capture the users attention and encourage use, while providing the data which tracks usage of the sanitizer. Post-COVID, if 99% of the building is clean and hygienic, a single person who doesn't sanitize on entrance is endangering the rest of the population of the building. The Smart Sanitiser helps organizations to drive optimum hygiene within their buildings. With the hygiene industry growing at an incredible rate, SAVORTEX will be continuing to scale out their deployments worldwide, with the help of Arm Pelion Connectivity Management.

Benefits of Arm Pelion

- + Multiple protocols enable flexibility
- + Streamlined reliable connectivity anywhere
- + Technical support and innovative partnership
- + Multiple protocols enable flexibility

“Anyone looking to incorporate a SIM solution into their connected device that provides them reliable connectivity which can be scaled up should look no further than Arm.”

Syed Ahmed, CEO and Founder

When originally developing their hand dryer product early in 2013 SAVORTEX found that 3G prices were high and most connectivity options were cost prohibitive. As the product requirements changed and connectivity technology matured, they needed a connectivity platform that was flexible enough to fulfill a variety of use cases. The newest built-in screen model requires larger volumes of data being transferred, with the size of videos being transmitted at approximately 7-15 MB, which made WiFi a more attractive option. In anticipation of the price of cellular connectivity decreasing in the future, SAVORTEX designed the dryer with 4G/3G connectivity also integrated. CTO Chris Dockrill then discovered Arm Pelion and learned how competitive cellular costs had become. Combined with the security risks, restricted access and additional set-up required for WiFi connectivity, these factors made cellular a much more attractive option.

SAVORTEX was able to leverage Arm Pelion Connectivity Management to easily adapt their products as needed, from their original “WiFi first” perspective now to 3G/4G connectivity being predominant, with WiFi as a fallback if needed.

Arm Pelion also enables SAVORTEX to provision devices remotely; their end user purchases the solution with no hands-on setup required. The ability to switch to a “cellular first” product was a huge enabler for SAVORTEX, with a faster roll out process.

“Quick deployment is key; as soon as the product is on the wall, its generating value from a data perspective and improving efficiencies. Arm enabled us to lower our time to value drastically.” – Chris Dockrill, CTO

✦ Streamlined reliable connectivity anywhere

Another area where Arm Pelion provides value is streamlining the deployment process. “Our customers are buying in larger volumes, so processing that kind of data and integrating with our fulfillment process is difficult. The APIs that Arm offers streamlines that quite a bit,” said CTO Chris Dockrill. Once the customer calls to confirm that the equipment has been installed, SAVORTEX can easily activate it via their portal which connects to Arm Pelion via an API.

Throughput and reliability are also critical considerations for their end users. They’re looking for guaranteed uptime of a device, from not only a customer experience point of view, but also from a revenue perspective. If a device isn’t working, it’s not generating the much-needed data to analyze.

Recently, SAVORTEX trialed a deployment in numerous client buildings in the UK and Internationally. The 4G coverage was good so a large part of the optimization of the solution involved trying to determine which was the best network to service the deployment. The Arm Pelion roaming SIM allowed them to switch between networks to find the best signal strength and throughput. And, with all their SIMs being grouped onto a single plan, they’ve also been able to ensure predictable costs for the deployment.

“From a coverage perspective, the Arm Pelion SIMs that we have in place are the best we’ve ever used. We’re transferring large amounts of data over the network, so that’s been important.”

Chris Dockrill, CTO

“We required a SIM card that could give us robust data coverage from harsh environments anywhere in the world, that was also reliable and at the right cost to allow us to scale. Arm was able to meet all those criteria for us.” – Syed Ahmed, CEO

+ Global support and innovative partnership

SAVORTEX foresee increased market demand post-COVID, which will primarily focus around encouraging optimum hygiene. As they drive to expand and scale out massively, working with a partner like Arm decreases the likelihood of potential data supply issues. Globally, they’re currently seeing many new opportunities, with partnerships in Hong Kong, Saudi Arabia and Dubai among many others. They have also developed strong links to the US, Europe and Africa. Arm is the perfect partner to help SAVORTEX deploy their devices with truly global connectivity.

And the technology partnership provided by Arm has also enabled them to innovate and push into new markets. Their newest product, the Smart hand sanitizer leveraging Pelion Connectivity Management, was recently released and SAVORTEX predicts that it will transform the hygiene industry. The worldwide market for hand sanitizers was valued at \$3B in 2019, and post-COVID is expected to grow to \$37B by 2026. Thanks to their collaboration with Arm, they’ve been able to quickly pivot their hand dryer technology into this new product and grow their business to address the industry needs. SAVORTEX CEO Syed Ahmed stated that, “Our experience has been so good that we wish we’d made the connection with Arm sooner.”

“The fact that Arm is one of the world’s largest technology companies opens more doors and allows more collaboration. When you’re innovating in a space, credibility is very important and Arm provides that.” – Syed Ahmed, CEO

+ To learn more about Pelion Connectivity Management, visit <https://www.arm.com/products/iot/pelion-iot-platform/connectivity-management>

