

“The cleaning industry’s silent revolution”

At first glance, the cleaning industry seems an unlikely candidate to benefit from advances in artificial intelligence and internet technology. It is far more common for medicine, genetics and space flight to dominate conversations when talking about disruptive technologies.

But cleaning? Not so much.

Emma Corder, country manager for [Nilfisk South Africa](#), argues that this is not actually the case and that we could see meaningful benefits in the very near future.

“Globally, there is a keen awareness that we need to produce food at an ever-increasing scale to feed our growing population. An undesired outcome from this pressure to produce more food more quickly could be a failure to maintain standards along the supply chain.

“We’re already inundated with food scares and actual infections that have very real consequences for society. It is therefore hardly surprising that we’re seeing a growing interest in automation of varying degrees in the cleaning industry.”

With a global footprint and interests in virtually every type of industry, Nilfisk is uniquely positioned to respond to this need. Lessons on how to deploy these technologies and the possibilities they unlock are constantly being fed into its product development programmes.

The company also recently published “Connecting to the Future”; a white paper that explores the opportunities that connected devices and systems can deliver. Drawing from Nilfisk’s Global Cleaning Trends survey, this report paints a picture of how technology is expected to impact the industry.

“The results were enlightening, but not especially surprising,” Corder says. “For instance, 29% of respondents believe connected cleaning will be a major trend this year, with a third saying they were ready to use connected cleaning solutions now. A further 28% expect to start using connected cleaning equipment in the next two years.

“This evidence supports our conviction that the benefits will become ever more clear as companies see the value.”

The potential for technology to automate mundane, but critical cleaning functions is wide ranging and includes a mix of autonomous and human-aided applications.

The Nilfisk white paper lays out predictions for three distinct phases that the integration of connected devices will undergo in the near to mid future.

The paper acknowledges that not everyone and every company is ready yet to adopt this vision of automating processes and functions.

The first steps toward this hi-tech future are being taken by companies using the technology to monitor machines and processes remotely. The increased visibility into how and whether cleaning is happening as it should is a big advantage, but still only a small step toward an integrated future.

This initial wave of embedding technology will lead to increased integration of functionality and systems. For instance, remote monitoring of equipment can identify faults or failures and immediately set processes in place to fix or repair machinery.

By the same token, predictive maintenance that relies on data from the field can further promote uptime and best use of equipment.

Nilfisk research supports this view, with a study showing that between 20% and 30% of contract cleaners' equipment fleet will be autonomous within the next five years. The company believes the market for autonomous cleaning equipment is currently worth more than US\$3.5 billion, which is roughly 40% of the total professional cleaning equipment market.

"The question of how the cleaning industry will change has to be seen in the context of the broader environment. And that environment in the next 20, 30 or 50 years will increasingly be dominated by smart cities.

"Technology is going to become not only indispensable, but fully integrated into broader ecosystems like smart city grids. It would not be beyond the bounds of reality, I think, for simple and complex cleaning processes to form part of a building's automated maintenance processes."

The same concept applies to industries or value chains that are becoming increasingly connected.

There is no reason that a batch of milk, for instance, cannot have a fully traceable and auditable record from source to table. Such a trail could include the schedule of automated cleaning and maintenance for cleaning equipment used at any point along the value chain.

"We are very excited about the future and the role technology can play in transforming industries and value chains by enabling them to be more efficient, cost-effective and transparent," Corder says.

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