



The insider's guide to data-driven cleaning

How to put the new evolution of facility cleaning into practice for your business



 **Industry outlook**

 **Customer experiences**

 **Practical tips**

What is data-driven cleaning?

As societies and facilities have developed, new cleaning tools have developed with them. However, the next leap in professional cleaning is not a new tool as we're used to thinking about them. Rather, it's something that helps you make more out of the resources you've already got. Welcome to the era of data-driven cleaning.

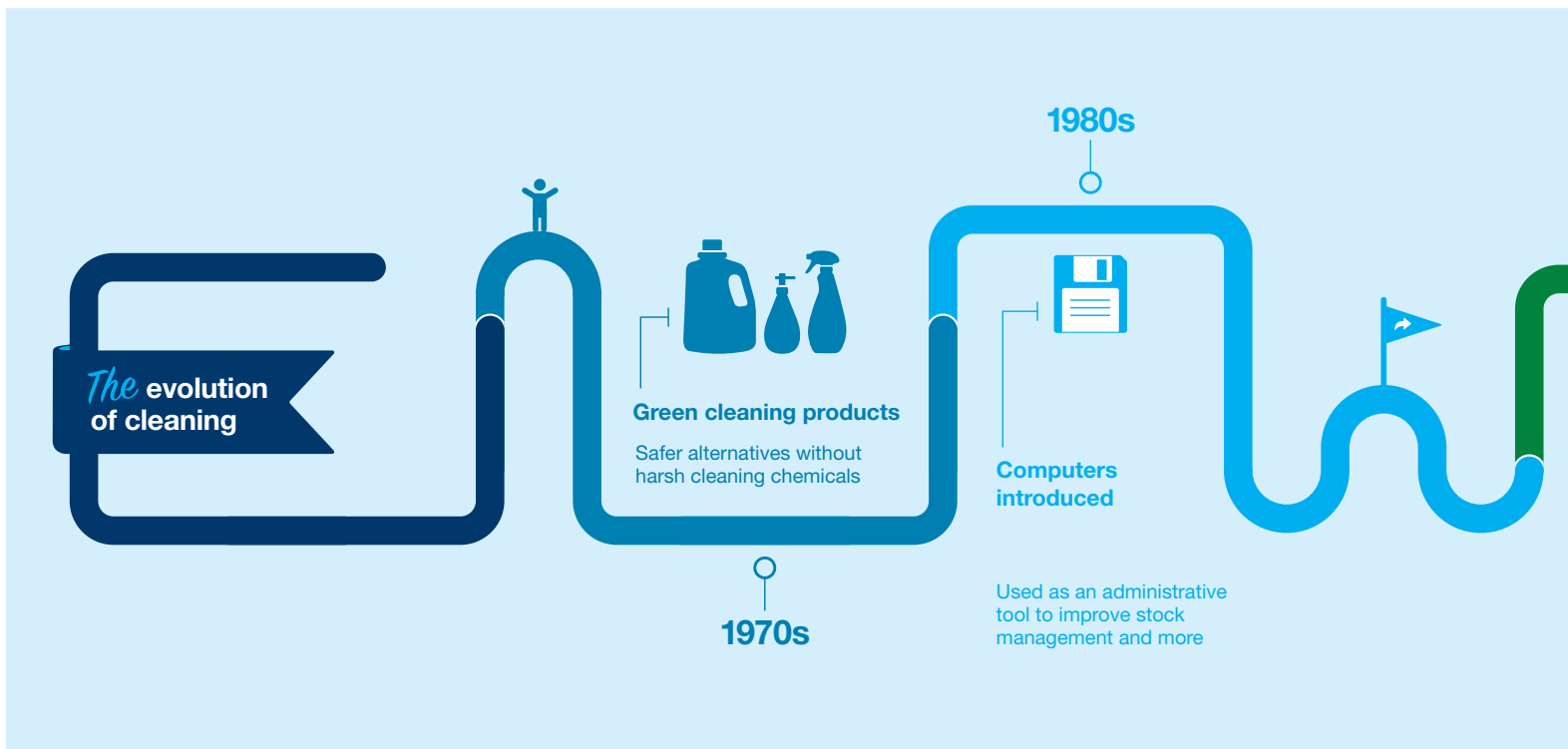
Everything from coffee machines to restroom dispensers are being connected to the internet. Yet the value lies not in connectivity itself, but in the actions you can take based on the new information collected. When cleaning staff and their managers get real-time data about cleaning needs, the very logic for how cleaning can be done changes. It becomes possible to stay ahead of the game and do exactly what's needed when and where. This is data-driven cleaning. Handling a complex facility like a hospital or university is transformed into a fact-based science.



"If you keep doing what you've always done, you'll keep getting what you've always got. Now suppliers are bringing new technology to the market, and it's time for end users – in this case the customers – to get on board."

Dorothee Stein

Head of Facility Care, Airport Company



How can data-driven cleaning benefit business?

Real-time data on actual cleaning needs makes it possible to dramatically improve cleaning operations in three important ways:

1

Take staff to maximum efficiency

Knowing exactly what's needed means no time is wasted. More time means staff can go the extra mile when cleaning. Managers can feel safe that nothing is neglected, and analyze data over time to improve planning, purchasing and logistics.

2

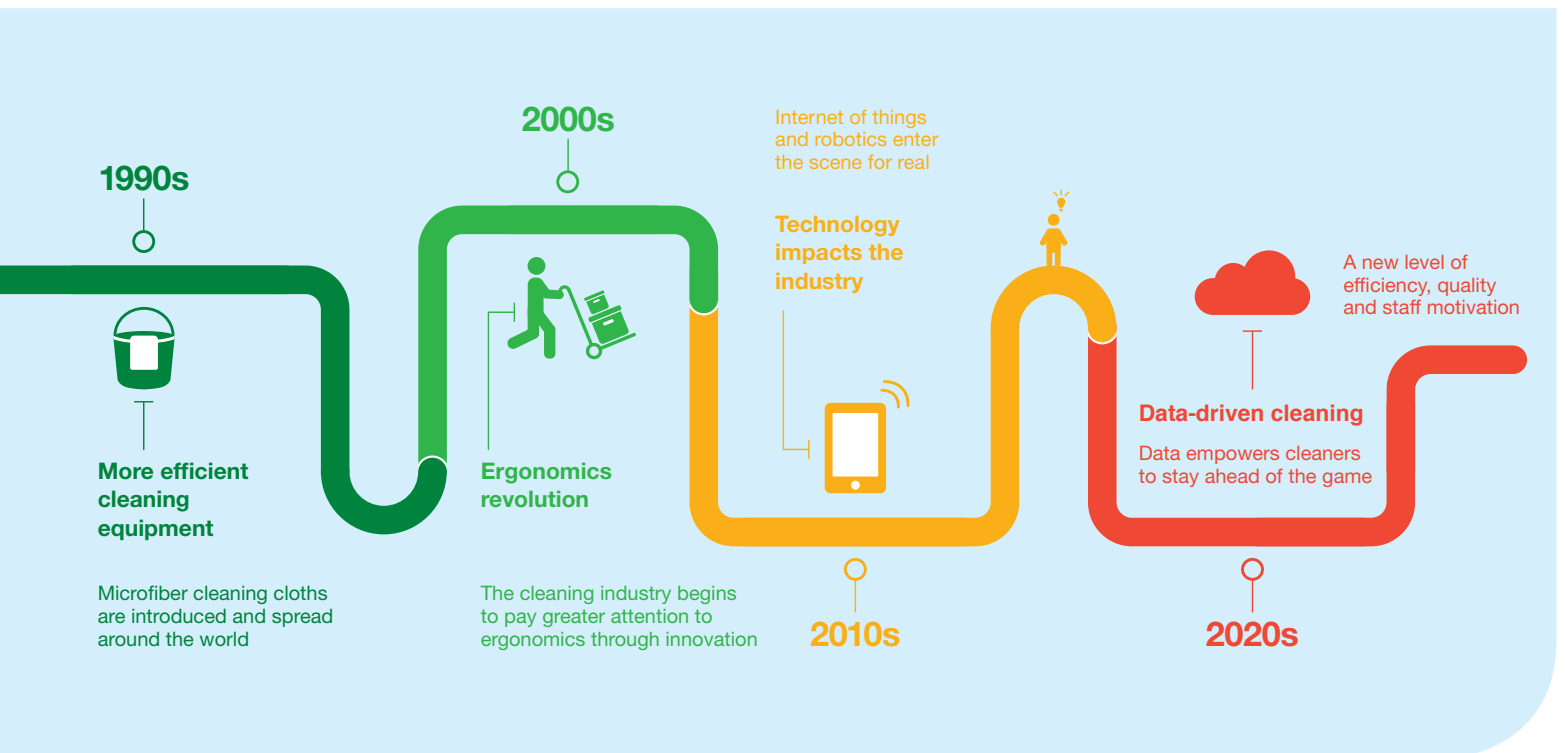
Boost staff engagement

Your people are your most important resource. Work feels meaningful when they know that every task matters, and better control means less stress and a more balanced working situation.

3

Set a new standard of customer satisfaction

Data-driven cleaning enables higher quality – no more empty dispensers and untidy areas. Instead it becomes possible to eliminate complaints and radically increase customer satisfaction.





A revolution on a global scale

Cleaning is not unique – data is driving change in almost every industry, improving efficiency by allowing better use of resources. Leading companies in the shipping business have recently brought their fleets online, tracking both ships and containers. With data on exactly where they have empty containers and shipping needs, the companies have been able to streamline the refilling process to avoid unnecessary transports of empty containers. By using data to rationalize their empty container management, one shipping company is already reporting savings of over \$100 million.*

Buildings also stand to make massive efficiency gains using data. Seeing the potential, tech giants have entered the field with products such as smart thermostats. Smart thermostats automatically learn your temperature preferences and keep track of when you are away to avoid heating or cooling more than necessary. With buildings currently using about 40% of global energy**, these kinds of improvements make a real difference. As data becomes the driver of development in industry after industry, we are becoming more efficient as a whole.

\$100m
savings
with data-driven
container management*

“This is a major trend, taking place not only in the cleaning industry, but everywhere. New technology will allow cleaning companies to solve problems right when they appear – or even before they appear.”

Andreas Lill
General Director, European Federation of Cleaning Industries

*From the article “Profits overboard”, The Economist, 10 September 2016, <http://www.economist.com/news/business/21706556-shipping-business-crisis-industry-leader-not-exempt-profits-overboard> **According to the United Nations Environment Programme, <http://web.unep.org/resourceefficiency/buildings>

From man vs. machine to man + machine

In recent years, the cleaning industry has seen a boom of technology overall, such as automated cleaning robots. But the latest shift, toward data-driven cleaning, is not about replacing humans with machines – it's about them working together.

Machines can perform specific, well-defined tasks much more reliably than humans, like a robot vacuuming the same clearly delineated area over and over again or a sensor keeping track of exactly how many people visit a restroom at all times. In such cases, automation can free up valuable time for cleaners to focus on tasks that add more value.

However, machines are bad at handling uncertainty. You can't pre-program a response to an event that you didn't know was going to happen. Then you have to improvise, which requires judgment and intuition, quintessentially human skills. The more uncertainty a task involves, the harder it is to automate.

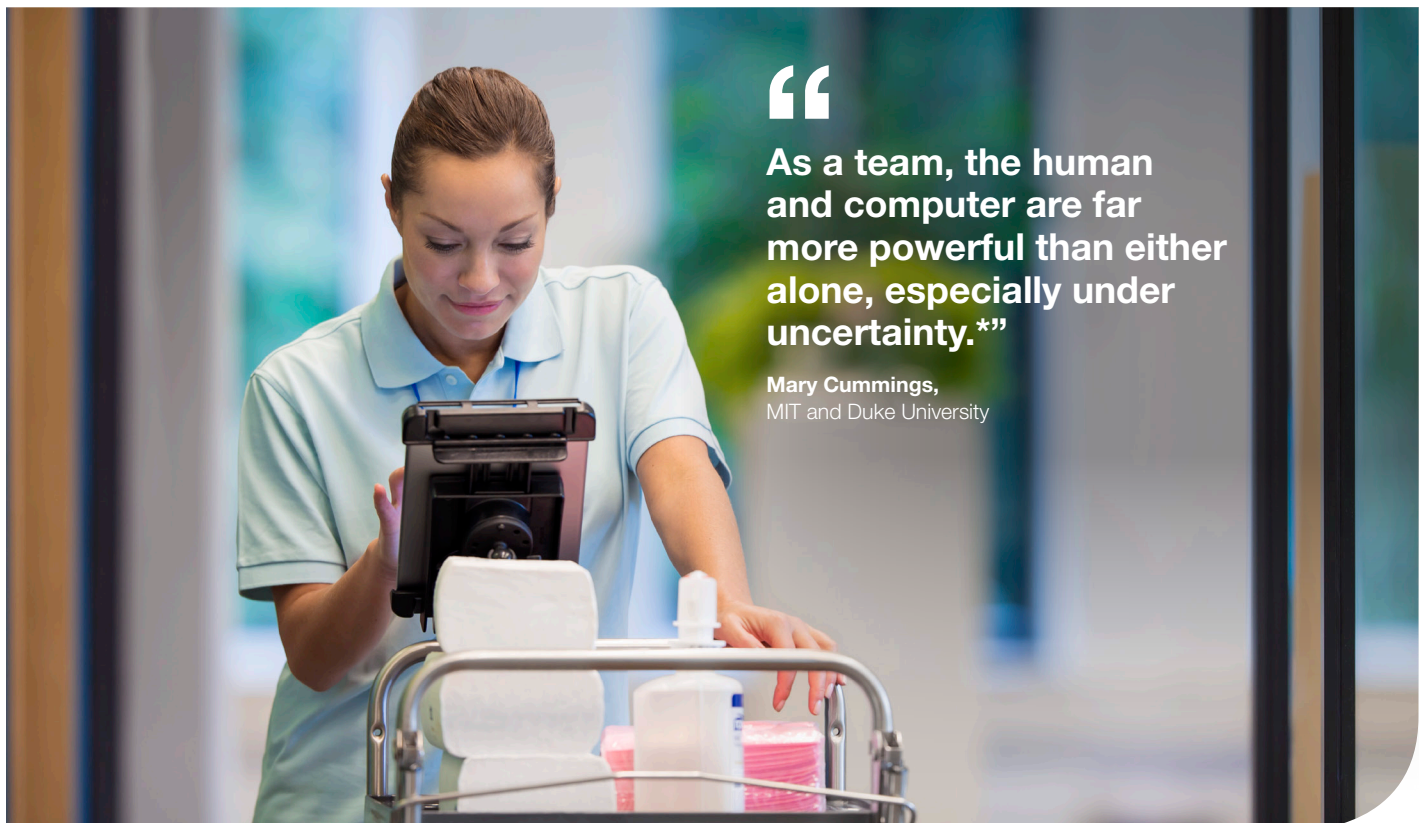
But that doesn't mean machines can't help in complex situations. Machines can gather and calculate vast amounts of reliable information nearly instantly, providing an invaluable aid to human decision making. Leading academics studying human-machine interaction, such as MIT and Duke University researcher Mary Cummings, emphasize this collaborative approach: "As a team, the human and computer are far more powerful than either alone, especially under uncertainty."^{*}

Professional cleaners have to handle uncertainty all the time, especially in large, complex environments such as universities or airports. With technology providing information like which restrooms are getting traffic and which dispensers need refilling, cleaners get the overview they need to rapidly respond to shifting circumstances. Data-driven cleaning changes the entire logic of how facility managers and cleaners can work, relieving them of the stress of not knowing what is needed. It allows cleaners to focus entirely on addressing existing cleaning needs and predicting future ones, rather than having to spend time and energy finding out what those needs are.

"People are what this industry is all about. Embracing new technology giving them the tools to do a more efficient job is key not only to raise productivity, but also to decrease stress levels and make the industry a more attractive employer overall."

Andreas Lill

General Director, European Federation of Cleaning Industries



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As a team, the human and computer are far more powerful than either alone, especially under uncertainty.^{*}”

Mary Cummings,
MIT and Duke University

^{*}From the article "Man versus Machine or Man + Machine" by Mary Cummings in IEEE Intelligent Systems 2014, vol. 29, no. 5.



**Data-Driven Cleaning
Navy Pier**

50 acres

Of parks, restaurants, attractions, retail shops, sightseeing and dining cruise boats, exposition facilities and more.

9 million

Guests annually

12,000

Daily restroom visitors

Data-driven cleaning creates a world-class entertainment experience

Located on Lake Michigan, Navy Pier is one of the top-attended nonprofit cultural destinations in the Midwest, stretching more than six city blocks. Pressure is constant on the facility management team to maintain a spotless image. This venue shifted to data-driven cleaning with Tork EasyCube™ intelligent facility cleaning system. We talked to J.R. Westveer, Aramark General Manager, about the impact on their business with Navy Pier.

Why is cleaning so important?

Navy Pier is a combination of an amusement park, food court, mall and convention center all in one... But we are also much more than that - we consider ourselves a global attraction with millions of visitors. Everyone who visits the venue uses the restroom at least once, if not more. An untidy venue would have an immediate effect on everyone, and even the smallest imperfection can have a huge impact on our reputation and relationship with our client.

What were your challenges before?

Synchronizing our cleaning efforts with inconsistent visitor flow and major events did not work as well as we wanted. Even if the grounds were kept clean, we would still get complaints about things like empty dispensers or paper on the floor in the restrooms.

“We have the visibility to improve cleaning efforts and be proactive with real-time data.”

J.R. Westveer
Aramark General Manager

What have been the results from working with Tork EasyCube so far?

We have seen a variety of different benefits. It is a big relief that we can act immediately if issues arise – before it is elevated to a complaint. We have the visibility to improve cleaning efforts and be proactive with real-time data. Thanks to the data from Tork EasyCube, we can see which restroom needs attention and which doesn't.

How has your staff reacted to data-driven cleaning?

When we begin working with the system, we immediately saw the benefit to having access to real-time data. We keep a large screen dashboard in our situation room for all to see. With the ability to clean an area before it became a problem, the staff feels like they are making an impact on customer satisfaction and efficiency.

Practical tips

How to shift successfully to data-driven cleaning

Changing how you work can be a complicated process, so approaching it methodically is important. We've gathered some key insights from our customers across the world on how to ensure the shift is as efficient as possible – making it easier to reap the benefits of data-driven cleaning right away.



Evaluate challenges

What is crucial to the success of your facility cleaning program, and what areas need improvement? Evaluate any issues you want to address.



Involve key stakeholders

Shifting to new ways of working affects all levels of your organization. Especially cleaners who will use the solution should be involved early on to secure easier implementation.



Choose the right partner

If you are self-managed or partner with a Building Services Contractor, it is important to align with some proven solutions that have had real business impact for other customers.



Request a demonstration

Make sure adequate time is dedicated to explaining the solution so that you and your teams are making full use of its potential, maximizing positive business impact.



Set specific goals

What do you want to accomplish with data-driven cleaning? Setting specific goals and prioritizing helps you focus initial efforts on what's most important.



Support everybody in implementation

Consider who is going to use the new solution in practice. For example, you might think everybody is comfortable using smartphones and tablets, but this is not always the case. Keep a close dialogue with users to ensure they get the right support throughout implementation.

Stay ahead of the game with Tork EasyCube

Tork EasyCube™ intelligent facility cleaning system empowers your staff with data on cleaning needs, letting them see on a tablet exactly what's needed, when and where. The result is a whole new level of efficiency, staff engagement and customer satisfaction. Tork EasyCube already connects over 4000 devices for customers across North America and Europe.



1

Sensors measure visits and refill levels in real-time.

2

Real-time information lets cleaners act on what's needed, when and where.

3

Managers are in control and can plan and follow up with less time and effort.

Learn more about Tork EasyCube at torkusa.com/easycube or email us at TorkEasyCube@essity.com



Are you ready to use data-driven cleaning to improve efficiency while providing a better visitor experience?

For more information visit:
torkusa.com/easycube
or contact
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