



The Value of Data-Driven Cleaning for the Facility Services Industry

Introduction

With the fourth industrial revolution upon us, the rate at which technology develops seems to know no bounds. The rise of Big Data and the Internet of Things, in particular, is disrupting the way businesses operate in many industries, not least the facility services industry.

In this constantly changing environment, in which increasingly savvy customers generate growing demands on service providers, companies need to think and go about their business differently. This transformation, however, is not simply about companies introducing new technology for the sake of it, but rather about creating value by harnessing data to gain better insights and solve business challenges. Companies that fail to re-think and optimise their operations through data-driven insights will find it increasingly difficult to remain competitive, and could be rendered obsolete in the future.

For the facility services industry, the speed and ubiquity of change is profound. Facility service providers must be capable of continuously dealing with today's most pressing challenges – low profit margins, high staff turnover and absenteeism, frequent customer churn, rapidly changing workplaces – while also making sure to prepare themselves for the complexities of tomorrow. Data-driven cleaning is one solution that enables businesses to apply new forms of technology to overcome both long-standing and new challenges, helping them to stay competitive and increase their performance in the marketplace.

This paper focuses on data-driven cleaning, its value, and the effects it has on the facility services industry. It first discusses the major challenges facility service businesses face today, and then focuses on the opportunities and value that advanced data capabilities bring for both service suppliers and clients.

The Internet of Things is a technological revolution but more importantly it's driving a business revolution. New processes and business models emerge, helping industries to shift their focus from production details to actual outcome and value.

- Corine Schep, EMEA Director for Data, Artificial Intelligence, Advanced Analytics and IoT at Microsoft

It is not business as usual, and we are adopting new tools to challenge the way we work. Data-driven cleaning enables us to be leaner and optimise the organisation we already have

- Jean Dussaix, Senior Global Category Buyer at Sodexo

The facility services industry today

The facility services industry carries great economic importance and continues to grow around the globe. The global cleaning services market alone is expected to reach **US \$64 billion** in revenue by 2022, growing **6.2%** on average each year¹. The cleaning industry is not necessarily recession-proof, as there were declines in 2008 and 2009, but is not usually hit with expansion and contraction as other industries are during business cycles.

If we take the whole facility management sector into account, which besides cleaning also includes a number of other soft services (e.g., security, catering, pest control) and hard services (e.g., heating, plumbing, lighting), the numbers are even more staggering: **US \$672 billion** in global revenue in 2016, with **US \$815 billion** in global revenue expected by 2025².

Despite the rapid growth within the facility services industry, there are key challenges that are affecting both large-scale and smaller service suppliers. Four key challenges are (1) low profit margins, (2) high staff turnover and absenteeism, (3) frequent customer churn, as well as (4) rapidly changing workplaces.

Low profit margins

The facility services industry is facing profit margin pressure due to constantly high price competition between companies and gradually rising labour costs.

With its low barriers to entry, the industry is made up of a great number of small and larger, more established players that compete intensely in most markets. Although service quality has always been perceived as an important objective, the lack of objective data to assess quality has made it difficult for service providers to demonstrate work performance and achieved value. Thus, purchasing decisions in this industry tend to be heavily influenced by cost, and businesses compete predominantly on price.

Intense price pressure is accompanied by proportionally high total costs for labour. Costs related to labour make up an estimated **70-75%** of total costs for the average facility cleaning business³. Given the severe competitive pressure, it is difficult for companies to compensate for high labour costs by raising prices.

High staff turnover and absenteeism

The facility services industry relies heavily on its people yet continues to experience high employee turnover and absenteeism.

With high turnover rates, a lot of time and money is spent on the recruitment and training of new employees. Moreover, staff frequently being absent from work leads to inconsistencies in cleaning quality, putting the company at risk of generating complaints and thereby penalties, as well as difficulties when it comes to handovers between shifts.

High turnover rates can have a tremendous impact on company profitability and service delivery. Overall, there is a reason it's at the top of many [facility] managers' minds.

- **Cleaning & Maintenance Management Magazine**⁴

Frequent customer churn

In addition to experiencing high staff turnover rates, businesses in the facility services industry have to deal with frequent contract turnover. It is estimated that the average cleaning company loses up to **55%** of its total customer base every year⁵.

1. Allied Market Research (2017), Cleaning Services Market: Global Opportunity Analysis and Industry Forecasts, 2014-2022.
2. Frost & Sullivan (2016), The Future of Facility Management.
3. Jan Stegmann (2017), Koll på läget! Ansvar för lokalvård.
4. Cleaning & Maintenance Management Magazine (2015), Tackling Turnover.
5. Brandon Gaille (2017), 11 Notable Cleaning Industry Statistics.

Not always being able to demonstrate the quality of the work that has been carried out, inconsistencies in cleaning, difficulties in living up to expected quality requirements, as well as an increased price pressure can make it hard for service providers to establish long-term relationships with their customers.

Rapidly changing workplaces

Lastly, businesses in the facility services industry are challenged by increasingly complex workplaces.

The traditional office – designed to locate workers in dedicated spaces where they can be easily monitored – is no longer functional.



Choice, flexibility, and collaborative working are increasingly considered in the design of office buildings. Likewise, large facilities that house a great number of people, such as airports and stadiums, are becoming more versatile and complex in their design and usage. This means that service providers are more and more required to handle irregular and unpredictable people flows proactively. As a result, long-established and predetermined approaches towards cleaning are no longer enough to meet shifting customer demands.

Transforming the facility services industry and creating new value through data-driven cleaning

In order to meet the above-mentioned challenges and remain competitive, businesses in the facility services industry need to be innovative in adopting new ways of working. Although new technology cannot create value and new operational processes on its own, new technology can act as an enabler that makes it possible to harness real-time data that empowers cleaning teams and facility managers to work more efficiently and make other and better decisions.

Data-driven cleaning is one concrete example of the value that the Internet of Things and advanced connectivity can create in the facility services industry. By letting sensors throughout facilities collect data about visitor numbers, cleaning needs, and refill levels in real time, service providers are empowered to improve their cleaning operations in three ways: (1) driving operational efficiency, (2) increasing quality and customer satisfaction, as well as (3) boosting staff engagement.

As a company today, you cannot afford to miss out on the Internet of Things. Ignoring it would mean saying no to valuable insights at times when customer demands and the competition are only increasing.

- Corine Schep, EMEA Director for Data, Artificial Intelligence, Advanced Analytics and IoT at Microsoft

It is obvious that the whole cleaning industry will have to change and embrace new technology in order to survive the digital age.

- Professor Kaj Storbacka, Graduate School of Management at the University of Auckland Business School

6. Deloitte (2016), It's time for a workplace intervention: Commercial real estate and office space.

Driving operational efficiency

Given the margin pressure that service providers are facing, it is not surprising that the facility services industry constantly strives towards improving their operational efficiency. In the past, businesses have tried to boost efficiency by putting greater demands on their workforce, making staff work more in the same amount of time. With high rates of staff turnover and absenteeism, as well as high business costs related to this, it is critical for service providers to keep their employees happy and engaged.

Data-driven cleaning provides a completely different route for efficiency enhancements. It enables businesses to harness real-time data and make informed decisions, no matter the complexity of the facility. As static cleaning schedules are transformed into needs-based work, the workforce can focus their time and attention on what is needed, where and when it is needed. Unnecessary tasks are eliminated and cleaning resources can be optimised, with managers being able to feel safe that no over- or under-cleaning takes place.

Data-driven cleaning has been shown to reduce the number of cleaning hours by at least **20%**⁷. Moreover, it has been demonstrated to eliminate on average **24%** of cleaning rounds, while improving the quality of the cleaning⁸.

Applying new forms of technology both to enhance the management of facilities and to create new kinds of work experiences may be the single most important challenge facing facility management professionals.

- **Royal Institution of Chartered Surveyors (RICS) & International Facility Management Association (IFMA)**⁹

Fully replenished
washrooms
on average
99%
of the time¹⁰

24%
Fewer cleaning
rounds with
quality improved¹¹

At least
20%
Hours saved
through data
driven cleaning¹²

Increasing quality and customer satisfaction

Key factors for customer retention are proactive innovation and being able to guarantee a consistently high quality of service. Yet, quality of work performance has been notoriously hard to achieve and prove in an industry that competes so hard on price and lacks objective performance data and KPIs.

Data-driven cleaning enables cleaning service providers to move beyond a strong cost focus and achieve recognition for the value they provide. Being able to demonstrate work performance creates new opportunities for service providers to guarantee a high quality of service, and to bring user satisfaction up and complaints down.

7. Numbers based on the documented results achieved by three Tork EasyCube customers, measured before and after the implementation of Tork EasyCube.

8. Numbers based on the documented results achieved by two Tork EasyCube customers, measured before and after the implementation of Tork EasyCube.

9. RICS & IFMA (2017), Raising the Bar: From Operational Excellence to Strategic Impact in FM.

10. Based on Tork EasyCube® data from 10 customers measured over 789 days.

11. The weighted average of results achieved by two Tork EasyCube customers, measured over 158 days, before and after the implementation of Tork EasyCube®.

12. Based on the documented results achieved by three Tork EasyCube customers, measured before and after Tork EasyCube® implementation.

Cleaning teams can act on real-time data to deliver higher quality more effectively, and eliminate complaints by being able to proactively respond to refill and cleaning needs. This proactive approach to cleaning operations has been shown to generate increased visitor satisfaction by **30%**¹³, and lead to dispensers being replenished and ready to use on average **99%** of the time.¹⁴

In the digital age, the value of a solution for a customer is increasingly defined at the time of use. There is a huge opportunity to guide the customer and optimise their experience after the purchase.

**- Professor Kaj Storbacka,
Graduate School of Management at the University of Auckland Business School**

There's a convergence between B2B and B2C. Personal experiences also affect business people, even if they are digital experiences outside office hours. Each time a customer is exposed to an improved digital experience their expectations are immediately raised to a higher level

**- Corine Schep, EMEA Director for Data, Artificial Intelligence,
Advanced Analytics and IoT at Microsoft**

Boosting staff engagement

In the facility services industry, people are by far the most important resource. Yet, the industry has historically faced high levels of staff turnover and absenteeism.

Data-driven cleaning helps businesses make workforce productivity and well-being a priority in their operations. It puts technology in the hands of employees, letting them at all times have an overview, make informed decisions, and plan ahead. It bestows employees with a sense of urgency and significance when they get to focus on areas and tasks in need, rather than having to follow a predetermined schedule regardless of the situation. Data-driven cleaning is about working smarter, feeling less stressed, and having a more balanced working situation.

Think about value and how to augment your cleaners. It is not about replacing, but helping them. The system should work for the cleaners, not the other way around.

**- Professor Kaj Storbacka,
Graduate School of Management at the University of Auckland Business School**

Connecting employees with technology makes them happier, more loyal employees as they are able to interact with their employer in a richer way.

- Deloitte¹⁵

13. Measurement of visitor satisfaction in two Tork EasyCube washrooms and two traditionally maintained and equipped washrooms at ISSA/Interclean exhibition, May 2016.

14. Based on Tork EasyCube data from 10 customers measured over 789 days.

15. Deloitte (2017), The Connected Worker.

Data-driven cleaning: A paradigm shift for the facility services industry

Data-driven cleaning means enabling an industry to shift from introducing incremental updates to redefining what cleaning can achieve. It provides facility service companies and their staff with new and smarter ways of working in order to remain competitive, and a new logic for cleaning that not just meets the expectations of increasingly demanding customers, but exceeds them and shapes new ones.

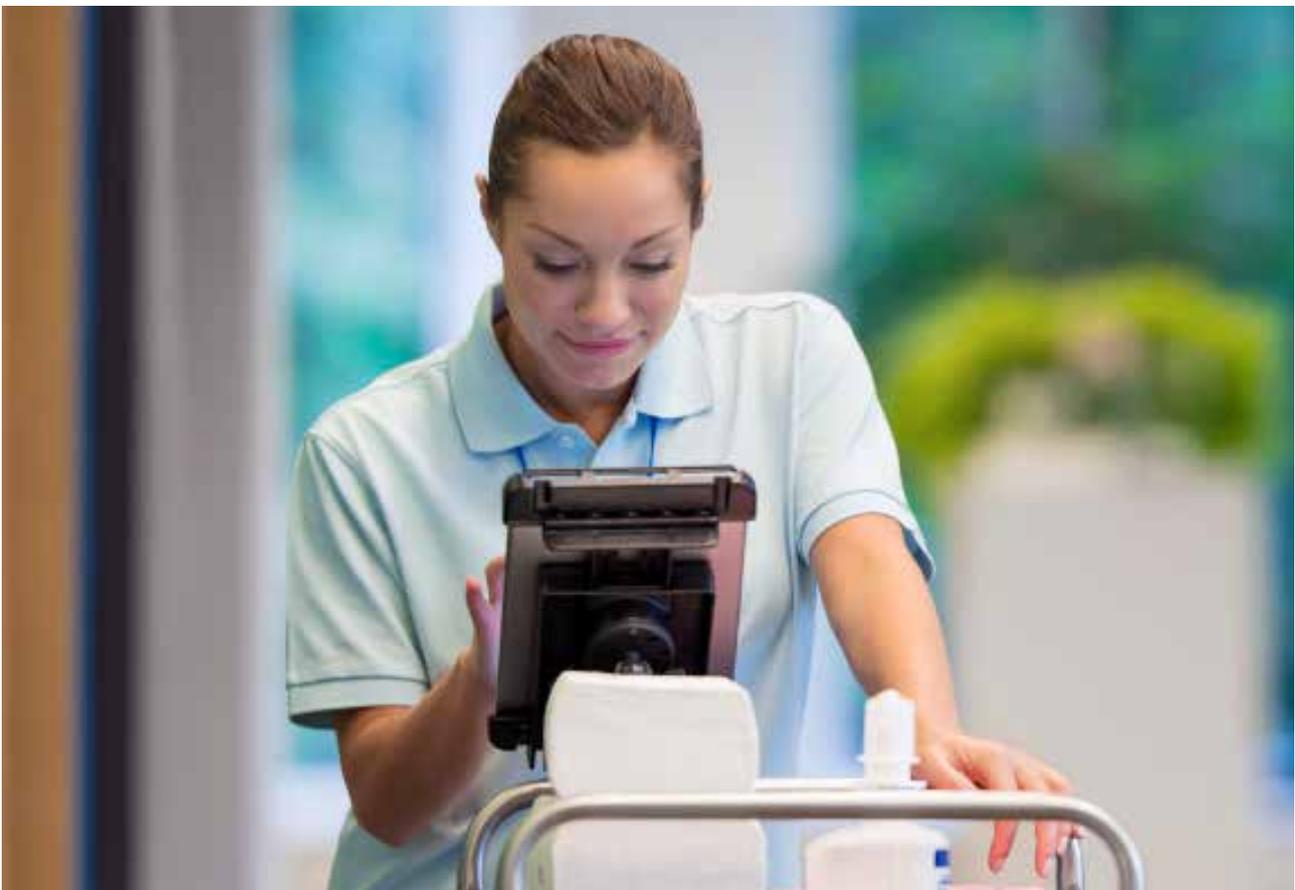
The core of data-driven cleaning is advanced technology and connectivity, but the value it provides lies in what it enables the humans who use it to do: empowering cleaners to act on real-time information to work more efficiently, eliminate unnecessary work, and ensure an even higher quality of cleaning, as well as enabling managers to make other and better decisions to optimise operations.

Industries tend to move and change very slowly due to certain institutionalised logic that dictates how they operate. If you want to innovate as a company today, you need to challenge that logic and come up with new ideas. You need to change the rules of the game.

**- Professor Kaj Storbacka,
Graduate School of Management at the University of Auckland Business School**

Data-driven cleaning changes the industry. Firstly, it dramatically improves efficiency. Secondly, it boosts staff motivation. We can see how it increases our staff's engagement. Thirdly, it creates a new and higher standard of cleaning for our customers. With real-time data, we are going to increase the performance of the whole market.

- Jean Dussaix, Senior Global Category Buyer at Sodexo





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