

Cleaning Technology: How Covid and hybrid working have changed the game



MAR Facilities Management
White Paper 2023

www.marfm.co.uk

Document date: 20/10/23
Document number: 00123



FACILITIES MANAGEMENT



The pandemic has given society the breathing space to redesign what a workplace should offer and in the age of the invisible virus, the humble mop and bucket will not cut it.

The mass experience of the recent pandemic has changed the way we all look at cleanliness and hygiene. Covid-19 redesigned the way we operate in large groups in public spaces, on transport, venues and workspaces. This virus did not discriminate: all environments had to adapt to government compliant mandates for safety. Offices, construction sites, retail, sports facilities, public venues, theatres, hotels and restaurants all experienced the impact of being starved from engagement from their usual end users.

What did Covid-19 teach us?

One benefit to concentrate on was the introduction of hybrid working. It meant offices had to become more collaborative and a new reverence for the social aspect found within the typical workplace was built. However, these new work styles demanded a new level of hygiene methodology: one with continual improvement as the pandemic developed. Now it is thought that we are moving toward the endemic phase of Covid-19 because some countries are treating it as such; due to their daily decrease in deaths and drops in infection rates. However, in the UK this is not the case as Covid-19 may not come to natural end for the near future whether new strains emerge or not. For workspaces we have had to apply caution and compassion to handle infections between colleagues without judgement. We have learnt to live in a new normal whilst remaining conscious of hygienic practice. The same virus can cause endemic, epidemic or pandemic infections: it depends on the interplay of a population's behaviour, demographic structure, susceptibility and immunity. In workspaces adapting has meant reduced numbers of staff, hotdesking and hybrid working with remote access have become the new standard. We've learnt that when recruiting in the cleaning sector, people

will want compassion and flexibility on the job in times of feeling unsafe, unwell and under pressure to perform when the risk of viral infection is at play.

Secondly, it has required cleaning and M & E companies to deliver on assurance: for those coming back to work a designated amount of structure both seen and felt is necessary for people to feel at ease. MAR Facilities Management has amped up the application of smart cleaning technology across the last 24 months to provide the change our cleaning staff and office staff deserve. Providing the minimum standard has changed: it now entails immediate fogging if someone is infected with Covid-19, touch point cleaning, lunch break cleaning and after work sanitising etc. This responsibility lies with the companies because you cannot see Covid-19; you cannot see many invisible diseases and so the only way to combat them is to increase the level of hygiene you maintain in the space. Whilst traditional equipment and methods like mopping or dusting would show cleanliness, it is not enough. To ensure cleanliness is different from ensuring safety. Today, MAR Facilities Management applies data driven methods and metrical analysis to cleaning output to formulate high rates of sanitisation.

Data & Analysis



Investing in technology to ‘compliment’ cleaning and hygiene for the workplace. MAR Facilities Management utilises data and analysis to ensure that each ‘touch point’ is clean in the world of hybrid working environments.

Companies can see when spaces or desks have been used to create a hygiene routine based on demand, not availability or accessibility. This aids management of the workplace and prevents cleaning operatives wasting time on areas that aren’t needed to be cleaned due to not being used. It therefore allows concentration on the spaces and areas that are in frequent or constant use. This forms part of a multi-laned approach which is viable for the future of cleaning: it allows new cleaning methodologies to be bolted onto existing output specifications as data retrieved from use provide actionable trends to base changes upon.

The traditional broom and pan will always

have its need, time and place. However, the more we can integrate technology aspects into cleaning routines, the better we can maintain an accurate reflection of workspaces per sector in life post pandemic. To MAR Facilities Management, cleaners are not just cleaners: they are operatives with specific skillsets that are developed to allow specialist technical ability to compliment the cleaning services. The knowledge needed today by cleaning teams should incorporate more than just a routine traditional sanitisation. It contains the ability to triage a room’s real needs, the purpose and initiative to go the extra mile when spotting a problem and the adroitness to apply data and record data per audits or issues. The cleaning and hygiene sector has been in concentrated discussion with ministers within the All-Party Parliamentary Group, defining an open conversation about the importance of public safety and hygiene. Historically this topic is always an afterthought: whereas now it is the first thought many have when stepping out of their homes for the day. There is scientific understanding needed for today’s cleaning operatives: it is not a simple frontline, labour-based job.

The Tech



Air cleaning technology like UVC cleaning systems and robotics can be integrated into a cleaning routine for clients across a variety of sectors. From government offices, retail, public venues, educational facilities and banks there are opportunities to apply beneficial changes for an enhanced service. UVC air filtration units provide employees that are returning to work with reassurance that their space for 9 hours will have clean air. The level of pathogens on carpets can be cut by 60% through robotic vacuums. As little as 10 machines can be fully charged in an hour using 30% the energy a traditional tub vacuum may use in 30 minutes. Research into new products that are recognised by the biocide register to control pathogens are emerging, with Cithrox (the antibiotic medicine) being reimaged to tackle bacteria in office spaces. Whilst this solution would eradicate germs and pathogens, MAR Facilities Management remains selective in choosing products as we operate with a strict Zero Harm policy. Whilst we apply chemical free cleaning to all suitable sites, we adopt new products that are in line with our CSR mission and control pathogens accordingly.

This development of medicinal technology being adapted for cleaning to handle contaminants at first point of

cleaning is useful for high footfall areas such as stadia, theatres and retail spaces. It shows that our understanding of achieving suitable levels of hygiene has changed and more technology embedded into cleaning outfitters will benefit the pace of development across industry standards. There has already been a rise in the implementation of technology and AI within contract cleaning which drives improved performance and efficiency. The use of robotic floor cleaners introduced in 2020 rapidly rose in popularity in both contract and consumer cleaning.

Research from top UK universities specialising in medical engineering, facility management methods and public facing technology courses are emerging as pivotal points for FM businesses to partner with. They allow cutting edge research to be trialled in real-life settings whilst allowing educational spaces to develop their experience within settings too; allowing cleaning technology to accelerate with widened public interest. Covid-19 has been a kick-starter for the way we think about cleaning more effectively. Now the task is to go beyond Covid-19: to understand how the cleaning industry can create happiness; how it can provide confidence and reassurance for people.



Three trends changing the contract cleaning market

Demand for contract cleaning services has grown significantly over the past year, meaning commercial cleaning businesses need to remain savvy to rapidly changing developments.

Whilst technology has been an increasing component of cleaning contracts, it remains a key trend due to the pace of advancement and application across different sectors: whether large venues or SMEs. Secondly the balancing game of remote working and returning to offices is novel: it is entirely new ground for companies and managing the need for cleaning comes with closer inspection. The instability of a clear structure regarding employees entering the office on a timetabled agreement affects corporate agendas when deciding on cleaning. This trend surges to the top of needs: relying on technology and communication methods to outline footfall in buildings.

Green cleaning and sustainability initiatives are increasingly wanted from partnerships and companies with robust knowledge and applied targets in this realm are at the height of the emerging trends.

Trend one: Technology



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The use of technology continuously brings more benefits to the commercial cleaning market. The use of floor-cleaning robotics powered by AI, may make some cleaning services redundant whilst enhancing or complimenting others as Co-robotics (that work alongside humans). Such technology will fill the gap in job vacancies, as well as reducing labour costs across the industry. Intelligent cleaning conducted by technology will be the result of further reliable and consistent services and can even help reduce work-related injuries. Cleaning robots can teach themselves the basic training needs over time, building patterns of behaviour. These technologies also can understand its location and record its run time, which will be useful when saving battery charge levels.

After COVID-19, we can expect to see a shift in hygiene behaviours. Technology can improve hand hygiene and overall cleanliness in healthcare facilities. For example, the solution can alert the most relevant person when to refill dispensers to avoid complaints and the risk of contamination. It can also clean based on demand rather than a human-operated schedule. Using knowledge powered by technology will allow cleaners to monitor the environment which will then assist

them on when and where they need to apply the best practices.

However, this modern technology will require excellent maintenance by cleaning operatives who will benefit from adapting their roles to suit these innovations. Cleaning operatives will be encouraged to learn how to use new equipment and equally, be ready to cover spaces that are unreachable by innovative technology or in case of emergency.

Trend two: Return to office



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The Covid-19 pandemic has resulted in many changes to the way we work – traditional offices spaces are some of the most affected work environments. Prior to the pandemic, only 1.7 million UK workers had experience working from home and 73% had never worked from home. Fast forward to the lockdown and this figure increased to more than 20 million people using a work from home model – a historic shift to the average workers' experience and perception of their working life.

Having spent two years working from home because of UK government lockdown restrictions, many employees have naturally adapted to this new way of working. With less socialising amongst colleagues, the result has been a dip in the spread of infections causing businesses to rethink their working models. For Facilities Management companies, this leads us to assess and evaluate the implemented cleaning schedules. Most working adults will spend much of their week in the workplace, resulting in more sick days off and more time away from work, something that was significantly reduced during the pandemic.

Hybrid working is now considered a way of life for many businesses and

their employees: It enables them to adapt to the changing environment whilst continuing to be productive and according to a survey by the British Chamber of Commerce, 40% of people would like their employer to offer hybrid working in future. As we 'return to normal', businesses who have adopted the hybrid model must reassess how often they clean their environment and adjusting their cleaning policy appropriately. Although we are at the other end of the pandemic, businesses will still expect an elevated level of cleaning that protects against the spread of harmful viruses such as Covid-19.

High-tough surfaces including elevator buttons, sink handles, microwave doors and machine buttons will need to be sanitised more frequently to minimise the spread of Covid-19 and limit contamination. Commercial cleaning companies can provide the correct procedures and knowledgeable advice around touch point cleaning. By cleaning and disinfecting office amenities, the spread of viruses is highly reduced. Organisations should also look to provide hand sanitiser and disinfection wipes for employees to reduce the spread.

It is firstly the responsibility of employers to ensure that all employees are equipped

Trend two: Return to office

(Continued)

02

with adequate knowledge and support to prevent the spread of the virus, as more employees return to work. Many employees will rightfully have concerns about the virus and being near many people which is why cleaning companies need to ensure visibility of cleaning staff across workplaces to provide them with greater confidence that it is safe to return to the office.

Employees are now far more aware about the spread of viruses and are keen to see evidence of their business prioritising their health. From this shift, we can expect to see a significant boom in daytime cleaning, with cleaning operatives more present during working hours, ensuring colleagues are reassured. A further benefit is this increased presence will enable cleaning companies to respond immediately to cleaning incidents whilst providing a more bespoke service to clients.

It is estimated that by 2023, 60% of workers will prefer a wellness-equipped smart office to a traditional corporate environment and less than one third of digital workers will choose the corporate office as their main place of work. The facilities management industry must evolve to meet this new hybrid, distributed way of working. Clients need the support of cleaning companies now more than ever: 72% of organisations expect a reduction in their real estate footprint, according to a recent survey conducted by Gartner. They are seeking methods to provide great working environments for employees whilst also giving them more flexibility. The changes will not just be around physical workspaces but also around service levels that go beyond the traditional 9-5. This shift will transform service provision for many facilities organisations and it



is a shift that will continue to grow over the coming years. FMs should prioritise understanding their clients and their changing requirements for service provision. Understanding how clients use your services, will enable businesses to adjust your offering and value proposition. Many clients now expect a more flexible service – to fit the flexibility of their workforce. This means facilities managers will need to work on building strong relationships with clients to ensure they understand their needs and can adapt services for each unique client.

Trend three: Sustainability



03

Facilities Management industry has placed an emphasis on green cleaning in recent years and a focus on sustainability will be key for all businesses moving forward. Companies are finding more ways to clean safely and prioritise health whilst moving away from traditional cleaning products or equipment that are detrimental to the environment and instead using cleaning tools and chemicals that have a positive impact. Businesses are seeking to promote sustainability amongst their colleagues and clients through utilising natural and renewable resources where possible. For example, the introduction of eco-friendly products with an increased focus on sustainably packaging or even how the product has been transported.

Many organisations are now using an effective green cleaning strategy to not only meet the needs of customers but to raise the bottom line. Leadership teams are seeking to centre their business around sustainability to benefit the planet whilst raising profits – disproving the assumption that being more environmentally friendly is costly and demonstrating that is possible for businesses to make large savings by choosing to operate more sustainably. This can be achieved through carefully assessing the technologies, products and

services that the commercial cleaning company provides.

Technology and sustainability are the key trends we can currently observe in the contract cleaning market.

- Technological innovations are key to sustainability and Innovations can be introduced gradually to allow teams to adapt and fully reap the benefits.
- Implementing the use of sustainable technology will boost efficiency, which helps productivity of staff by reducing the time spent on each task.
- Waste disposal is a key focus for many businesses and an area for FMs to focus on. Introducing recycling initiatives and reducing the use of plastics on contracts can serve to educate clients on sustainability and enable cleaning companies to assert themselves as experts on environmental concerns
- Conserving water can also make a tremendous difference: Cleaning uses large amounts of water causing a negative environmental impact. Small daily changes and investing in methods that use less water can significantly reduce this.

Embracing technology and Internet of Things

The shift in working patterns has brought about a rapid change in the technology used to monitor building occupancy – how do you keep data on employees when they are all working under unique hybrid patterns or following government guidelines to isolate? The Facilities Management industry needs to adapt urgently to support clients adopting this hybrid working model.

Historically, the facilities management industry has consisted of overseeing and managing spaces and all the additional tasks this involves. However, recent technological advances have resulted in the development of a new role: agile facilities management. Gone are the days where clients simply expected “a safe environment.” FMs are expected to deliver a service that maximises and organises space for clients in the most reliable and efficient way. This is becoming increasingly more possible, through the wider range of data and analytics that are available.

There is an opportunity to optimise resources and processes through the visual data that will become available across all stakeholders. The insight gained will enable FM's to introduce automation in operations and maintenance.

Automation will allow businesses to offer clients a more flexible facilities management service for example, the use of sensors in various parts of the building to understand when and how often the space is used. This would help in designing cleaning schedules, ensuring availability of meeting rooms, and optimising real estate planning. Additional benefits include:

- Automate work order (conducting periodic cleaning) management – help clients close work orders faster, reducing time for facilities.
- Automate cleaning scheduling based on usage patterns – ensure that high touch points are cleaned more frequently than others.

- Automate monitoring of assets – such as air conditioning units or AV equipment, so issues can be addressed to minimise negative effects on productivity.

Initially, this will require in-depth research and an understanding of building usage as well as measurements on building occupancy. The line between physical office spaces, for example, and virtual office spaces has been blurred and traditional measures of occupancy such as desk utilisation, won't be enough. The new hybrid working environment requires accurate insight into how employees are using their workspace.

Occupancy sensors can be used to monitor the use of different areas of a building. They can help inform things like:

- Understanding where people sit, when they sit there and how often they sit there.
- Identifying underutilised areas and making sure cleaning service rotas/schedules reflect this.
- Assessing the success of specific office areas. Are more people using collaborative space or desk space?
- Identifying where people congregate outside of their designated workspaces (e.g. café spaces) and assessing the need for enhanced day janitorial services.

The greatest benefit of occupancy sensors is the accurate information they provide which both FM's and clients can share to facilitate a more precise delivery of hard and soft services. The combination of this data enables cleaning companies to make informed decisions about how best to maintain spaces, taking into consideration the clients' changing needs.

The real-time data provided from building management systems (BMS) can be used to inform effective delivery and track progress or to make building data accessible across entire FM teams.

How Technology Impacts Hybrid Working

The more complex working models become, the more building usage changes and the need for support services follows.

In 2021, multi-year service contracts fell by 25% in comparison to 2019. FMs will have to adapt to a new service model, such as a pay-as-you-go or consumption-based services which offer clients the flexibility they need. As well as the opportunity to support clients' sustainability objectives through reduced travel, energy usage and waste products.

The Internet of Things (IoT) could serve to improve efficiency across facilities management services. IoT connects devices over the internet so that they can communicate with each other, providing a digital infrastructure for data-sharing and automation. It has already been used for several years to manage building equipment and create smart environments; however, the facilities management industry is adopting this technology to find innovative ways to improve efficiency and flexibility by:

Reducing costs of operations through predictive maintenance and energy

optimisation.

Improving customer experience by providing faster access to information on space booking, availability and maintenance issues.

Improving employee experience by increasing productivity through automated processes.

Improving sustainability by reducing energy consumption through predictive energy analytics and control technologies.



FACILITIES MANAGEMENT

Head Office

Ashlyn House
Terrace Road North
Binfield, Bracknell
RG42 5JA

T: 01344 462 345

London Office

The Metal Box
30 Great Guildford
Street, London
SE1 0HS

T: 0207 402 4040

info@marfm.co.uk
www.marfm.co.uk