



# THE COBOTIC EVOLUTION IN CLEANING

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New operational and commercial models  
for a smarter approach to innovation

## EXECUTIVE SUMMARY

## STEFANO BENSI, GENERAL MANAGER, SOFTBANK ROBOTICS EMEA

## The first six months of 2020 have challenged the global economy at a scale not seen in almost 100 years and the Great Depression of the 1930s.

It is impossible to predict exactly how deep and how long-lasting the economic impact of the COVID-19 pandemic will be, never mind the social and cultural impact.

Without doubt, the business world will change significantly as a result. New ways of working, servicing customers and managing supply chains will alter many industries for good. In many cases, organisations have moved from 'digital-first' to 'digital-only' operations almost overnight. Digital transformation and operational change programmes that would usually take years to implement have been rushed through in a matter of days.

More than anything perhaps, the COVID-19 pandemic has highlighted the importance of business resilience and agility across all operations. Those businesses that have managed to weather the storm (and in some instances meet heightened consumer demand) have been those with the processes, technologies and skills to adapt to a dynamic and rapidly changing environment.

It is therefore extremely timely that this research paper looks at the potential for cobotics (the collaboration between people and machines or robots) to drive performance, productivity and agility within the facility management industry. The research was carried out right at the beginning of the COVID-19 pandemic in Europe, just as business leaders were recognising the scale of the challenge ahead.

The research finds that leaders within the facility management sector recognise the potential for cobotics to improve overall performance within their operations and deliver commercial efficiencies. Interestingly, it also reveals the extent to which FM leaders are aware of the need to re-invent their resourcing and commercial models going forward, to take advantage of the relative strengths of both people and machines by forging a hybrid workforce.

Indeed, one of the biggest lessons of 2020 for organisations across all sectors is that so many business continuity or disaster recovery plans fail when they are completely reliant on having access to people on site. COVID-19 has exposed the vulnerability of businesses to the needs of people. Where staff have been unable to travel to a workplace or where significant numbers of workers have been off sick or required to self-isolate, resourcing has been a huge challenge.

This is particularly true within facility management where staff attrition and absenteeism has always been high. Activities such as cleaning will always be heavily reliant on the skills and commitment of people but by deploying cobots within a cleaning team to take on the repetitive and time-consuming tasks such as vacuuming, businesses can minimise their exposure to risk.

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Business leaders in the FM industry see cobotics as a way to embed greater agility and resilience into their operations, not simply to cope with extraordinary circumstances such as those we have seen this year, but to achieve greater control, transparency and insight on an ongoing basis.

The events of recent months will only heighten efforts to drive innovation within the FM industry, not just in terms of new technologies, but also in regard to new business and commercial models. This is where cobotics can play a major role in propelling organisations into the future.

Indeed, cobotics is already delivering game-changing benefits to facility management organisations on both the supply and demand sides. Innovation-led brands that are already deploying cobots in their cleaning operations

are seeing marked improvements in performance and productivity and minimising their exposure to risk from staff attrition and churn. Interestingly, they are also seeing a positive shift in levels of staff engagement, as cleaning teams are freed up from undertaking repetitive and strenuous tasks and able to focus on more varied and fulfilling work.

The paper is intended to be a useful resource for facility management professionals who are looking to drive positive transformation within their businesses, through new thinking, technologies and commercial models. As strategic partner to many of the most innovative FM leaders in the EMEA region, we believe strongly that cobotics can re-invent the FM industry to better serve the needs of businesses now and in the future economy, post-COVID-19.

## FIVE TAKEAWAYS FOR FM LEADERS

- 1 Minimise your risk**  
 Don't let previous failed innovation programmes deter you from driving change in your business. With cobotics you can avoid large up-front capital expenditure, with full visibility and control on costs.
- 2 Adopt a holistic approach to innovation**  
 Avoid taking a technology-only view and adopt a broader strategy for innovation. Innovation should be as much about being open to new ideas and fresh thinking, re-defining operational and commercial models, as it is about integrating new machines and solutions.
- 3 Take a partnership approach**  
 Find a strategic innovation partner who can help to achieve operational and cultural change within your organisation and is willing to work collaboratively and share risks and rewards.
- 4 Put your people first**  
 As with any new technology or digital transformation project, the success of cobotics depends largely on people on the ground embracing and utilising new technologies. Ensure staff have the understanding and skills to work alongside cobots.
- 5 Focus on business outcomes**  
 Innovation must be aimed at delivering bottom line impact. Ensure that your cobotics strategy is outcome-focused, with well-defined metrics for performance and productivity, as well as wider measures around health, sustainability and worker satisfaction.

## INTRODUCTION

## FACILITY MANAGEMENT AND THE COVID-19 CHALLENGE

As with all areas of the global economy, the COVID-19 pandemic has challenged the facility management industry on an unprecedented scale.

In many markets, the crisis has placed overwhelming demands on cleaning teams to deliver heightened levels of service, particularly within sectors such as healthcare, social care and retail, whilst also adhering to strict health and safety protocols to minimise the spread of the virus.

The evolving and still largely unknown nature of the coronavirus means that keeping essential spaces safe and clean for users is critical. It is believed the virus can survive for several hours on surfaces such as door handles, restroom surfaces and elevator buttons, and therefore the deep cleaning and sanitisation of such surfaces is essential to reduce transmission.

At the same time, facility management and commercial cleaning contractors have a duty to protect and maintain the ongoing health and wellbeing of cleaning staff, who are working long hours in the most difficult of circumstances. Employers are also having to accommodate higher staff absence rates, due to the need for people to self-isolate if they or members of their household experience the symptoms of COVID-19.



## A PERFECT STORM IN FM

Even prior to the outbreak of coronavirus, the facility management industry was facing severe challenges, confronted with squeezed profit margins and increased pressure from clients to demonstrate enhanced performance and innovation. Within commercial cleaning, so often the most critical area of service delivery, staff attrition rates were typically at 200%, with contractors facing a constant battle to recruit the people they need and manage high levels of absenteeism.

As a result, there has been a widely accepted view that the facility management industry needs to evolve and innovate in order to meet the changing requirements of buildings, clients and end users. The shift towards smart, connected buildings, changing and more agile usage patterns within many types of buildings, and the need to measure and report on performance and value have highlighted the limitations of traditional commercial and operational models within the sector.

## NO GOING BACK TO 'BUSINESS AS USUAL'

Without doubt, the coronavirus pandemic has brought about new challenges for facility management providers but, more than anything, it has exacerbated and accelerated many of the challenges that already existed within the industry.

Whilst there is still huge uncertainty around how and when the pandemic will eventually end and some form of normality will return across societies and economies all over the world, there can be no doubt that facility management, like so many other parts of the economy, will be changed forever.

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## INSIDE THE MIND OF THE FM LEADER

This report highlights the extent to which facility management leaders recognise the need for the industry and their own organisations to evolve and transform in order to remain relevant and competitive in a post-COVID-19 world.

Based on comprehensive research amongst FM leaders across the EMEA region, it highlights the harsh commercial and operational realities that the industry is now facing, and the barriers that have hampered efforts to deliver innovation to date. Importantly, it also details the risks for those businesses that fail to evolve over the coming years.

The research, which was undertaken in February and March 2020 at the very outset of the coronavirus pandemic within the EMEA region, exposes a clear need for a more strategic, holistic approach to innovation, one which looks beyond technology and encompasses every aspect of the business – from resourcing and purchasing models, through to performance-based contract agreements and innovation partnership models.

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## A COBOTIC FUTURE FOR FM

The research reveals a strong appetite for cobotics, the collaboration between front-line workers and machines or robots. Cobots are collaborative robots which carry out repetitive or strenuous tasks which would otherwise be performed by an employee, but they work alongside that individual or team, not in their place.

The introduction of cobots allows facility management providers to meet and exceed service levels without needing to take on additional resource. They can demonstrate how innovation within their operating model is delivering a cleaner, more hygienic building environment, and accelerating the wider smart buildings agenda. In this way, cobotics is seen as critical in the future, where smart buildings will require smart cleaning.

Importantly, adoption of cobotics is not just about technology; it also involves fresh thinking and innovative approaches to procurement and servicing agreements. Organisations benefit from flexible leasing models, deploying cobots ‘as a service’, rather committing to large capital expenditure up front, with little certainty of life-span or long-term value.

This cobotic commercial model provides business leaders with full visibility and control on costs, and far greater agility and resilience within their operations, something for which the coronavirus pandemic has exposed a need.

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The research highlights a desire from facility management leaders across both supply and demand side to forge a partnership approach to future innovation, where contractors work closely and collaboratively with client organisations to transform their operations and drive through effective change. This end-to-end partnership model is based around long-term relationships, jointly developed transformation strategies, and risk and gain sharing agreements.

As the facility management industry looks beyond the coronavirus pandemic, it has an opportunity to take a new approach to service delivery and commercial strategy, one which will enable it to drive efficiency and productivity and to deliver more sustainable and higher quality service levels. By taking the right decisions now, FM leaders can ensure their organisations are best placed to take advantage of future opportunities.

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## RESEARCH METHODOLOGY

SoftBank Robotics EMEA commissioned comprehensive, independent research among facility management decision-makers across the EMEA region.

Research was conducted in the following markets: UK, Germany, Switzerland, Austria, France, Sweden, Denmark, Finland, Norway, Abu Dhabi and Dubai.

The research consisted of a total of 201 online interviews across 11 countries in the EMEA region:

The research was conducted by Insight Avenue between 26 February and 16 March 2020.

- 101 interviews with directors and senior managers in 'supply side' facility management companies, including integrated service providers, multi-service providers and single service providers (commercial cleaning)
  - 100 interviews with directors and senior managers with responsibility for facility management in 'demand side' organisations, including hospitality and events, IT and media, professional services, office providers and commercial real estate owners
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## INNOVATION IN FM – A TALE OF DISAPPOINTMENT

# 70%

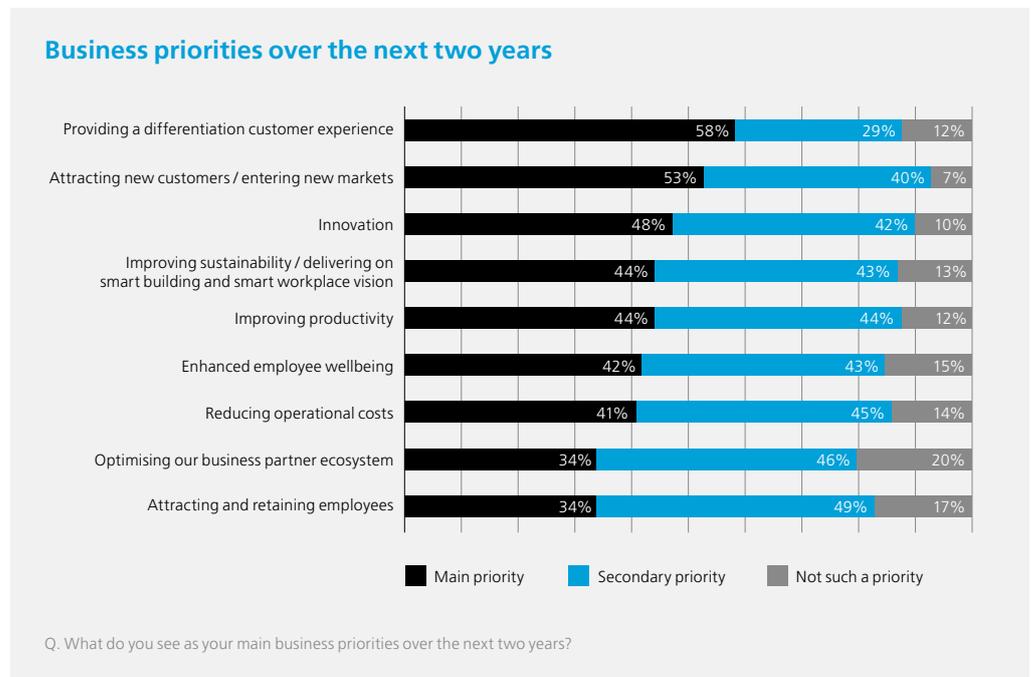
of supply-side organisations say they are facing increasing pressure from clients to demonstrate innovation

The facility management industry has long recognised the need for significant change and transformation within its operations as a way to respond to greater client scrutiny of performance and productivity and to overcome increasingly severe staffing challenges.

The research shows that innovation remains a key strategic objective within the facility management industry, with 90% of FM leaders citing it as a top business priority.

Linked to this, innovation is also important in delivering other major business objectives such as attracting new customers, providing a differentiated customer experience and improving productivity.

Significantly, 70% of supply-side organisations say they are facing increasing pressure from clients to demonstrate innovation.



However, despite a clear need to evolve and transform, it is widely acknowledged that many efforts to drive meaningful change within the facility management industry have fallen short. Indeed, the principal narrative around innovation within the sector has been one of wasted investment and resources, with too many projects which have ultimately produced little or no impact.

The research reinforces this lack of success, with 81% of FM leaders reporting that they have had innovation projects which have failed to deliver on required outcomes over the past two years.

There are a wide range of factors contributing to this lack of achievement and progress, including technical complexity and a lack of required skills and leadership in the business to drive through innovation and transformation programmes.

Importantly, 34% of FM leaders say that their innovation efforts to date have not been sufficiently focused on outcomes, and 30% point to high capex costs as a barrier to innovation within their organisation.

FM leaders think they are

4.5 years

behind the most advanced, innovative company in their sector

Understandably, given this wasted investment and lack of success, the vast majority of FM leaders are now sceptical and nervous about future innovation projects and are hesitant about further investment.

The research highlights a lack of confidence around innovation across all sides of the industry, with 83% of FM leaders fearing that they are now behind other companies in their sector when it comes to cleaning operations.

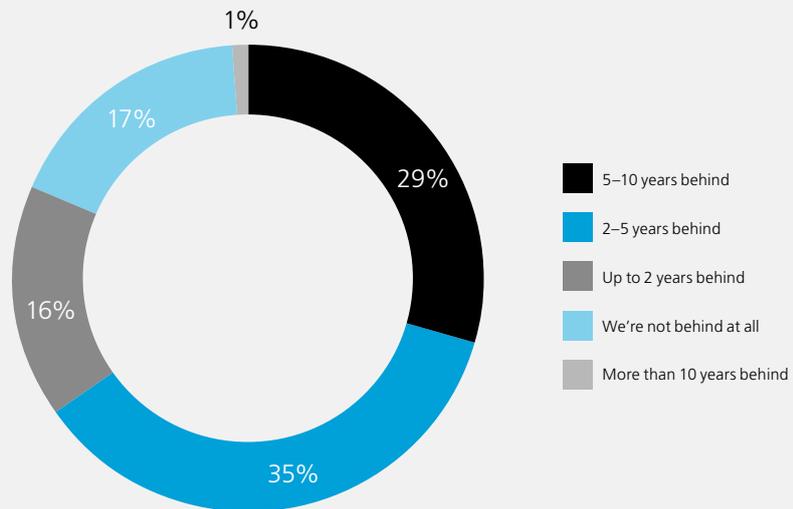
Remarkably, on average, FM leaders estimate they are 4.5 years behind the most advanced, innovative company in their sector.

This is something that the industry, and those that serve it, must address urgently in order to ensure that facilities management firms are able to survive and compete in the market, and to support businesses and economies that need to re-build in the wake of the coronavirus pandemic.

83%

think they are behind other companies in their sector when it comes to cleaning operations

FM leaders' perspectives on how they compare to the most advanced, innovative cleaning operations in their sector



Q. How many years behind is your organisation in its cleaning operations (at both a technology and business model level) compared to the most advanced, innovative company in your sector?



## THE COMMERCIAL CLEANING CHALLENGE POST COVID-19

Cleaning has long been recognised as arguably the most critical element of servicing for facility management companies and certainly one that has the capacity to make or break their relationships with clients and define their reputation in the market.

FM leaders regard cleaning as a hugely complex challenge and an area in which they have struggled to drive change. Indeed, two thirds of FM leaders (66%) state that innovation in cleaning is long overdue.

The main challenges with cleaning operations include issues with cleaning productivity and efficiency, ensuring consistency of cleaning performance, and the need to reduce the operational costs associated with delivering cleaning services.

86% of FM leaders point to the high capital expenditure involved in current cleaning approaches as a major operational challenge.

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There are also major resourcing challenges in a labour market where staff attrition rates are typically around 200% and many facility management contractors face a constant struggle to recruit the people they need. On top of this, absenteeism rates hover around the 25% mark, meaning that managers are continually balancing the need to ensure they have adequate numbers of cleaning staff to fulfil servicing levels with the need to manage cost.

The coronavirus pandemic will exacerbate further these staffing issues, both in the short and medium term. During the crisis, FM leaders have had to manage a dramatic fall in demand for cleaning services in sectors such as hotels and hospitality and office buildings. At the same time, where they have still been delivering services, in critical areas such as healthcare, social care and transport, they have needed to manage higher staff absence rates, due to the need for people to self-isolate if they show symptoms of the virus.

However, once the pandemic has peaked and restrictions on movement and travel are wholly or partially lifted, there is likely to be a sudden surge in demand for cleaning services across a range of industries that have been closed for business over recent months. This presents a further resourcing challenge for FM leaders who will need to scale up their operational cleaning resources at pace. This recruitment drive will lead to a dramatic spike in costs.

FM leaders point to a wide range of HR challenges that they need to address in order to build engaged and motivated cleaning teams. These include maintaining and protecting employee wellbeing, physical and mental health, developing cleaning staff and providing them with opportunities for advancement, and addressing their concerns about automation and job displacement.

The research highlights the extent to which FM leaders are acutely aware of the need to manage resourcing costs in the current market, whilst at the same time ensuring they have the processes, platforms and culture in place to recruit, retain and engage cleaning staff in order to drive performance.



## THE MEASUREMENT GAP

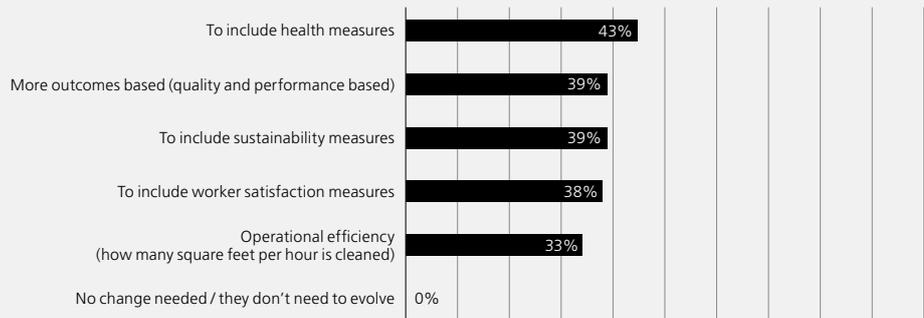
Alongside this, FM leaders acknowledge a need for far more stringent measurement and evaluation within commercial cleaning to demonstrate benefits and value to clients and end users. Only 17% currently report on KPIs such as return on investment (ROI) and total cost of ownership (TCO), and 18% don't formally measure or report on cleaning operations at all.

Overall, 80% of FM leaders state that measuring cleaning performance and validating cleaning results is a challenge.

Linked to this, there is a broad agreement that cleaning metrics need to evolve significantly over the next five years – to become more outcomes focused, and to include a wider range of measures around health, sustainability and worker satisfaction.

Only  
**1 in 4**  
supply side organisations has reviewed its cleaning KPIs in the last 12 months

### How cleaning KPIs and metrics need to evolve over next five years



Q. Beyond any measures needed for compliance with regulations, how do you think cleaning KPIs and metrics need to evolve over the next five years?

However, the research highlights how much progress and change is required within the industry in order to achieve this.

Only 1 in 4 supply side organisations has reviewed its cleaning KPIs in the last 12 months, and only 1 in 10 demand side businesses has done so.



## A PARTNERSHIP MODEL TO DELIVER INNOVATION IN FM

As within many other sectors, efforts to innovate and transform operations within the facility management and commercial cleaning sectors have tended to focus exclusively on the adoption of new technologies.

However, many FM leaders feel that their innovation efforts have been hampered because their organisation has taken a narrow and siloed approach. A huge amount of focus and investment has been directed towards the integration of new technologies, but there has been little consideration of the structural, operational and cultural changes which are also required to drive innovation and impact.

The majority of FM leaders recognise that future innovation strategies need to be more holistic in their approach, with 76% stating that it is as important to innovate their business model as it is to innovate with technology.

The research exposes a number of areas where FM leaders believe new approaches are required.

Firstly, there is a clear need for a more outcome or output-based approach to contracts and servicing agreements within the sector. Traditional input-based models (based around time and areas covered) still account for around 85% of all contracts within the facility management industry but there is a clear appetite for change.

Indeed, as we have seen over recent months with the coronavirus pandemic, rigid input-based contracts are simply no longer fit for purpose in a dynamic, agile and unpredictable business environment. Time is not seen as an adequate or relevant metric for delivery of cleaning services in the current marketplace; instead FM leaders point to quality, productivity and value as more appropriate, meaningful measures.

89% of supply side and 78% of demand side FM leaders think that performance-based contracts are positive for the industry.

The research uncovers a strong appetite for partnership models within facility management and cleaning, where technology providers work closely with facility management service providers and businesses to deliver innovation, with shared goals, risks and rewards.

FM leaders state that performance-based fees; gain-share models and contracts, commercial risk-sharing, and shared innovation roadmaps are attractive commercial models on which to base close and long-lasting partnerships with technology cleaning providers.

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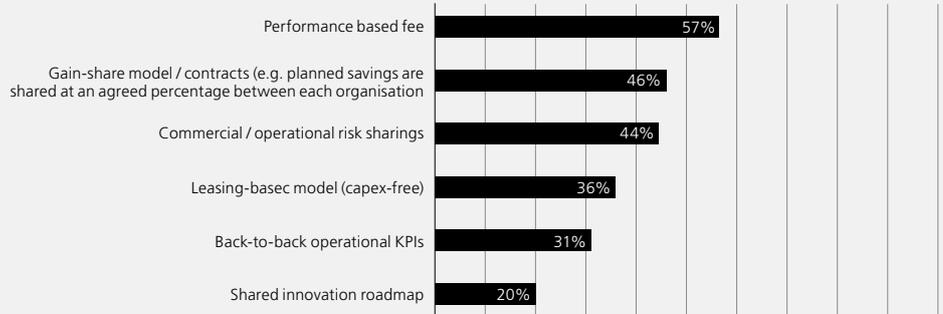
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# 70%

of FM leaders state that a leasing model that reduces their financial risk would make the adoption of new cleaning technologies more attractive

### Most attractive commercial models from a cleaning tech provider



Q. Which commercial models would you find most attractive from a cleaning tech provider?

Alongside this, FM leaders also see clear benefits in new procurement models which make new technologies more accessible and affordable, and minimise the financial risk involved in implementing new machines and cleaning solutions. As we have seen, the high capital expenditure involved in integrating new technologies and machines into cleaning operations is regarded as a major barrier to innovation.

Therefore, FM leaders are hugely enthusiastic about new commercial models which enable them to deploy new solutions in a highly agile and scalable way through month-on-month operational spend.

70% of FM leaders state that a leasing model that reduces their financial risk would make the adoption of new cleaning technologies more attractive. This figure rises to 73% within supply side organisations.

## THE BENEFITS OF COBOTICS IN FM AND CLEANING

The research explored attitudes and intentions around the introduction of cobotics into facility management and in particular within commercial cleaning operations.

### WHAT IS COBOTICS?

Cobotics can be defined as the genuine collaboration between front-line workers and machines or robots. Cobots are collaborative robots which carry out repetitive or strenuous tasks which would otherwise be performed by an employee, but they work alongside that individual or team, not in their place. Cobots are instructed and monitored by people on the ground and are there to support workers.

So within cleaning, a team of workers operates alongside a cobot with tasks assigned based on the relative strengths and capabilities of people and machines. That means that cobots do heavy-duty vacuuming of large areas of floor, which frees up workers to focus on other tasks, such as the deep sanitisation of hard surfaces, something which is critical in order to stop the transmission of coronavirus.

In basic terms, cobots carry out the repetitive and time-consuming tasks (where they can deliver a higher and more consistent level of performance than human workers), and cleaning staff undertake more valuable and varied tasks which make a real difference to overall service levels. Cleaning teams are able to focus on more fulfilling and less physically strenuous work, whilst at the same time they can develop skills operating cutting edge automation technologies.



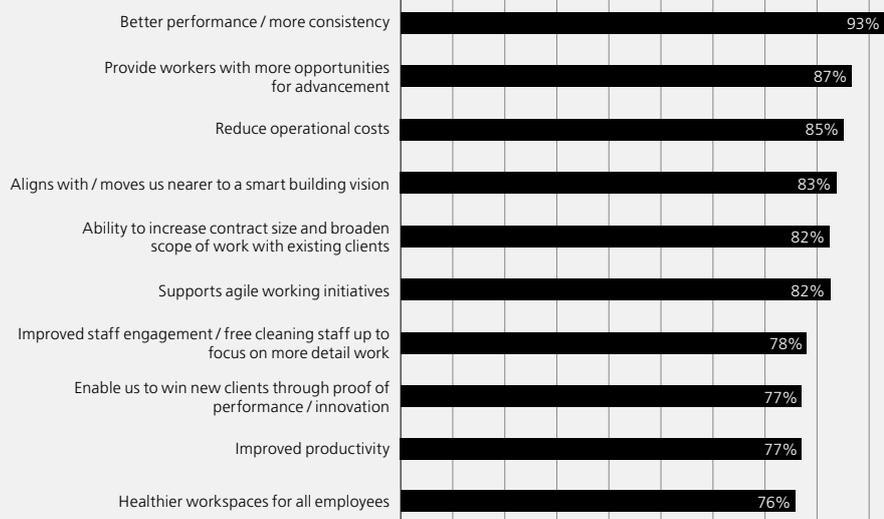
The research finds that FM leaders see huge benefits in cobotics within commercial cleaning and believe that the introduction of cobots into their operations can deliver a wide range of benefits to clients, staff and their own organisation. In doing so, it can overcome many of the barriers to innovation that have hold the facility management industry back over recent years.

This is closely followed by a range of other commercial, operational and cultural improvements that cobotics can bring about, including reduced operational costs, supporting agile working initiatives and providing workers with more opportunities for advancement.

FM leaders cite better performance and increased consistency as the number one benefit of introducing cobotics into their cleaning operations. 93% of respondents predict that cobots can increase the quality and consistency of service delivery.

### Benefits of introducing cobotics into cleaning operations

% saying "significant benefit" or "moderate benefit"



Q. What benefits can you see from introducing cobotics (collaboration between human and robotic resource) for cleaning operations across your organisation?

**81%**

of FM leaders believe that cobotics can play a significant role in aligning their commercial cleaning operations with their smart building vision

# 77%

of FM leaders predict that the introduction of cobotics into their cleaning operations will enable them to win new clients through proof of performance and innovation

On the demand side, 81% FM leaders believe that cobotics can play a significant role in aligning their commercial cleaning operations with their smart building vision. And on the supply side, 77% predict that the introduction of cobotics into their cleaning operations will enable them to win new clients through proof of performance and innovation.

Importantly, cobotics is seen to be highly attractive to the most senior stakeholders within an organisation.

52% of FM leaders believe that the CEO or Managing Director of their organisation is likely to be a major advocate of cobotics within their cleaning operations, and the same proportion believe that IT leaders are likely to look favourably on the introduction of cobots.

Overall, 81% of FM leaders see cobotics as a potential solution to cleaning challenges over the next five years) and 73% believe that cobotics has the potential to transform the cleaning industry.



## BREAKING DOWN THE BARRIERS TO COBOTICS

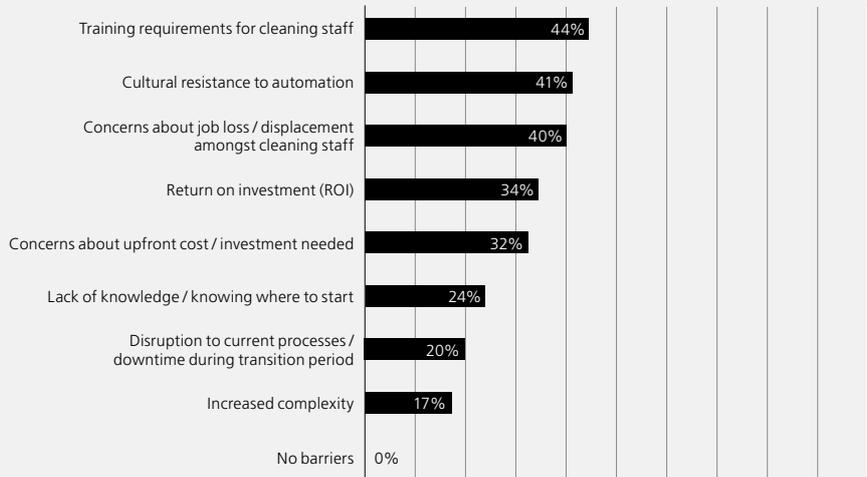
Understandably, in an industry that has a track record of failed innovation programmes, the research reveals a number of concerns or barriers to widespread adoption of cobotics within facility management and commercial cleaning.

FM leaders express concern about the need to train up staff on how to operate and work alongside cobots, cultural resistance to automation, and widespread concerns about job displacement amongst cleaning staff.

# 32%

of FM leaders point to concerns about upfront costs and investment as potential barriers to cobotic adoption

Barriers to introduction of cobotics in cleaning operations



Q. What do you think would be the barriers to cobotics (collaboration between human and robotic resource) for cleaning operations across your organisation?

Indeed, FM leaders believe the introduction of cobotics could be met with resistance or scepticism by internal stakeholders, including HR, cleaners themselves and the wider workforce.

Notably, 34% of FM leaders cite return on investment and 32% point to concerns about upfront costs and investment as potential barriers to cobotic adoption.

FM leaders believe the introduction of cobotics could be met with resistance or scepticism by internal stakeholders, including HR, cleaners themselves and the wider workforce

Evidently, the research exposes a need for technology education and support as FM leaders begin their journey towards cobotics. Organisations need help and advice to instil the necessary operational, procedural and cultural changes to ensure that cobotics is introduced in a strategic and sustainable way. This means ensuring that cleaning staff are given the training and reassurance they need to work harmoniously and effectively alongside cobots, and that the employer is able to communicate around cobotics in the right way. Staff across the business need to recognise the potential benefits of cobots, both to the organisation as a whole and to improving their own day-to-day working lives, rather than seeing them as a potential threat.

This is why it is crucial for FM leaders to work alongside trusted technology providers to ensure they have access to not only the very latest and most impactful technologies and services, but also to overcome perceived barriers to cobotics or innovation more generally. They need to work together to develop the right strategies to implement the wider operational and cultural changes that we have seen are so critical to delivering innovation and real commercial impact.



## CONCLUSION – THE COBOTIC EVOLUTION IS UNDERWAY

### THE SOFTBANK ROBOTICS PERSPECTIVE

**As this research shows, there is a genuine enthusiasm and excitement around the introduction of cobotics into the facility management industry.**

FM leaders see huge advantages in deploying cobots within their cleaning operations, with three quarters predicting that cobotics could solve the current challenges within commercial cleaning and potentially transform the industry itself.

However, it's natural for there to be a level of hesitation or suspicion around the potential game-changing benefits of cobotics. Too many FM leaders have had their fingers burnt by large-scale innovation projects that have failed to deliver. Such negative sentiments will have only been heightened by the uncertainty and disruption caused by the coronavirus pandemic this year.

It's important for FM leaders to recognise that cobotics represents an entirely new approach to innovation within the industry, and one that is completely in tune with the need for corporates and facility management providers to re-invent their brands and operating models in the wake of the coronavirus pandemic. It is agile, scalable and rapid to deploy, exactly what organisations will require in the months and years ahead.

Cobotics delivers almost immediate return on investment, does not require significant upskilling within the workforce and, most crucially, minimises financial and operational risk for both service providers and end-user organisations.

The proof is already there – within commercial cleaning, it is already delivering operational excellence and business impact across a range of sectors, including hospitality, retail and leisure, airports and office buildings.

The monthly fee structure eliminates any need for up-front capital expenditure so that organisations have full visibility and flexibility on cost. They can start small to test the benefits of cobotics and integrate cobots into their cleaning teams in a seamless and structured way. Once these proof of concept projects have delivered results, deployment can be rapidly scaled up.

Evidently, within the facility management industry, there is a need for close collaboration between technology providers and FM organisations, whether they be supply or demand side, to ensure that future innovation programmes are properly planned, managed and deliver against targets.

Within a cobotic partnership model, FM leaders can work alongside cobotic technology providers to drive innovation and success in a joined-up, strategic way. For instance, on the supply-side, service providers and technology partners can submit joint new business tenders and pitch for new contracts together. There is no requirement to commit to take on new machines to deliver servicing until the new deal is secured.

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This partnership model means the FM contractor can position itself as a forward-thinking, innovation-driven player in the market, with access to the very latest technologies and operational models, but with no cost commitment or risk.

Cobotics is set to transform the delivery and management of commercial cleaning operations over the next three years, as the global economy re-builds on the back of the COVID-19 pandemic.

Those FM leaders, whether supply side or within end-user organisations, that are embracing this cobotic evolution now, by adopting new commercial and operational models and forging meaningful, strategic relationships with technology providers, are positioning themselves to succeed in what is likely to be a very different marketplace.

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