THE DIGITAL TRANSITION IN THE CLEANING INDUSTRY IN FRANCE

SYNTHESIS DOCUMENT - JANUARY 2019

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INTRODUCTION

What are the main digital trends operating in the cleaning industry? How mature are the technologies and what are the foreseeable impacts on business activities in the short and medium term? Are all areas of companies affected and, if they are, in what way?

The Fédération des Entreprises de Propreté (FEP) hoped to answer these questions better by means of a qualitative survey, carried out from March to July 2018, in partnership with Accenture Strategy, of some forty cleaning companies, clients and suppliers, and by organising four themed Focus Groups on the issue.

Among the many definitions of an all-encompassing and sometimes vague concept, we will here use ‘digital transition’ to refer to all the available digital technologies that facilitate improvements in company performance and user experience, by modifying processes and relations between stakeholders.

The development of autonomous robots, embedded professional software, new communication and reporting tools and the Internet of Things are levers that can bring about radical change and which in some cases are already substantially modifying the way cleaning companies operate, develop or sell their services.

This overview document of the study presents a situational analysis of the impacts on the value chain (customer relations, core activities, management and cross-cutting functions) according to company size. It also analyses the principal foreseeable developments in the short to medium term which cleaning companies should anticipate so they can turn them into opportunities for future development.
A TRANSITION UNDER WAY
but with only moderate scope and speed

Compared to other sectors, the digital transition in cleaning and associated services has up to now made only a moderate impact, in particular because of the nature of this type of services. The idea of total ‘disruption’ of the core business, by mass substitution of people by autonomous machines, does not seem foreseeable in the short or probably the medium term, yet major developments are under way and are speeding up, especially in customer relations and back-office management. This is a summary of the principal tendencies at work in the sector and their level of maturity.

CONNECTED MOBILITY
Connected mobility (or digital nomadism) includes some or all of the advantages of mobility in space yet without some of its drawbacks, including the need to physically move around. It therefore describes uses and users of wireless electronic and information technologies that provide access to media and digital information and enable users to modify or communicate this (by mobile phone or Internet) and to work online and offline wherever they are (e.g.: laptop, tablet, smartphone, etc.).
This is now clearly the most mature digital trend in society. This is also the case in the cleaning industry, in which telecommunication tools facilitate and accelerate the circulation of data (e.g.: pointing systems, online quality controls, geolocation of staff and equipment). It is an essential dimension in a profession where the core activity is done externally, at the client's premises, and not at company headquarters.
For some years now we have therefore seen a real but as yet partial deployment of management platforms and mobile solutions that enable the optimisation of the customer relationship (transparency, reactivity, ultra-personalisation). Today we can see rapid acceleration of this trend, in parallel with the generalised use of smartphones in the general population. These information and telecommunication tools have been adopted and understood by groups which were a priori the most distant and some of which are to be

* Disruption because of a rupture, a radical business and technological innovation which throws the practices of an established market into total upheaval.
found in the operational staff of the profession. The conditions are therefore ripe for these trends to continue to be seen in the cleaning professions over coming years, in a similar way to the increasing customer demands in this area.

Nevertheless, although information mobility makes it possible to increase productivity, especially by saving time and reducing some physical journeys, for the moment it does not suggest that the nature of the activity will undergo a major upheaval, which still requires the input of workers on the ground.

ONLINE PLATFORMS AND SOFTWARE PACKAGES
Platforms offer an open online communication service based on connecting several parties for the purpose of selling goods, providing a service or sharing content. (e.g.: producing a quotation and attending a meeting remotely to provide a timely cleaning service). The software packages are general application software with multiple functions, made up of a set of customizable programmes intended to be used for a wide range of customers (e.g.: HR management software).

In the cleaning industry, the development of platforms and software promises, as in many other sectors, to optimise certain costs and to dematerialize back-office processes (support services, internal administrative management).

These are particularly important in view of the volumes handled in a sector that is very intensive in manpower (especially in salary management and administrative aspects). They also make it possible to facilitate the management of customer relations (CRM, etc.). There still remain major technical challenges to be resolved in order to develop management platforms that are perfectly adapted to the activity. The performance and compatibility of solutions in terms of software and software packages are not sufficient at present. Increasing information flows pose the question of Data processing in a sector with a low level of control: the accumulation of data exposes the risk of ‘infobesity’ (information overload which tends to prevent classification or distinguishing the important from the urgent). In fact, the intuition and ability

Cleaning companies now provide their colleagues with tools such as tablets or smartphones from the level of team leader.

The high cost of ‘volatile’ tools, the phenomena of multiple employers, part-time working, etc., act as brakes to generalising their use to all employees.
of the human being to analyse, cross-reference and interpret are indispensable when selecting the information that matters and optimising performance. At present there is no professional software that is able to do this; they facilitate and accelerate processes, but do not fundamentally alter them.

Robots

A robot is a mechatronic (linking mechanics, electronics and information technology) piece of equipment designed to accomplish tasks automatically by imitating or reproducing human actions, within a precise setting, (e.g.: autonomous sweeper-scrubbers, autonomous vacuum cleaners). They have been present for many years in the world of cleaning but are as yet little used,

- The cost of robots is tending to come down and some suppliers may be tempted to acquire their equipment directly from cleaning companies with a purely technical approach to cleaning, where the idea of service is ignored.

- There is as yet no embedded software that is perfectly adapted to the profession and which makes it possible to process every aspect at the same time, but this is potentially a major lever for progress in the cleaning industry.

Nevertheless, the development of man/robot synergy, with the former providing supervision and finishing off, and the latter the more repetitive and routine tasks with little added value, and the prospect of developing new, more intelligent robots, mean that robotics is likely to play a potentially
increasing role in cleaning. Rather than a mere substitution of man by machine, one may expect the development of a logic of cobotics (the collaboration of people and robots), with technology representing a lever to ‘enhance’ human abilities and offer the prospect of reducing professional constraints and improving the quality of life at work (reducing the more onerous tasks with little added value, improving working conditions and developing more satisfying roles).

IOT AND CONNECTED BUILDINGS

The Internet of Things (IoT) is the extension of the Internet to things or places in the physical world (e.g.: a sensor which measures the level of liquid soap in the dispenser and sends a warning via the Internet when the gauge goes beneath a minimum threshold and needs refilling).

The development of the Internet of Things, with the appearance of connected buildings equipped with all kinds of sensors is not the most mature trend today, but is doubtless the one with the greatest ‘disruptive’ potential for the production model of cleaning companies. Intelligent buildings may eventually make it possible to develop increasingly bespoke cleaning services, rationalised to be as close as possible to the real requirements of users. This aspect is even more important within the context of the increasing nomadism in activities (teleworking, co-working spaces, virtual meetings, etc.) which challenges the principle of the routine repeated cleaning of premises in the classic logic of the industrial approach. Buildings could therefore themselves become ‘disruptive’ and in the medium to long term they could completely shake up cleaning services. Connected buildings are still in their infancy, which is by its nature gradual, as it is much easier to achieve in new buildings than in old (and old buildings make up the vast
majority of premises where cleaning companies operate). There is therefore a tendency to think of this more in the medium to long term. It offers the prospect of transitioning from the classic B to B model to a B to B to C model of ‘services by use’, with contractualization linked to results (on-request operations; ultra-personalised service offer) breaking with dominant model of today. This is becoming a rational of transition from standardised cleaning (the routine, undifferentiated cleaning of square metres in exchange for euros) towards a production model with a more marked service dimension. Under this logic, the agent providing the service plays a key role in the quality of the service and in the lifetime of the relationship, beyond the mere technical action of cleaning, and even more so in situations of joint activity such as continuous work/daytime work. Paradoxically, intelligent connected buildings, like robots themselves, invite us to re-focus human action on areas which most distinguish Man from machines and to perform functions which machines are not capable of.

With the multiplication of sensors installed in buildings and offices that can accurately measure the uses and requirements of cleaning services in real time and over long periods, the question of data ownership and the ability to utilise it, quantitatively and qualitatively, will be a major issue for the sector. Because of its presence on sites and its knowledge of usages and ways of working, the cleaning company can position itself as a source of proposals and advice on data management, as long as it knows how to collect and process information efficiently.

**These evolutions will produce a growing need for ‘soft skills’ and ‘self-management’: personal, relational and behavioural skills (empathy, goodwill, adaptability, etc.) to improve the quality of the service delivered and the way it is perceived.** On the other hand, **digital skills (IT, digital data management) to process the data collected and offer new bespoke services adapted to the real requirements of users will have to be improved.**
CONTACT WITHOUT INTERMEDIARIES ‘UBERISATION’

‘Uberisation’ is the phenomenon which consists in using services that allow professionals and clients to contact each other directly, in an almost instant manner, thanks to the use of new technologies.

Up to now the cleaning industry has not really been affected by this phenomenon, as the contact platforms are particularly suited to anonymous one-off services with no long-term contractual commitment (transport from one point to another, sale of a product, temporary provision of premises, etc.). The continuous and recurrent nature of cleaning services and the fact that they are carried out at the client’s premises, with the issues of trust that this implies, has slowed the development of these platforms for cleaning services. However, the growth in mobility and the increased fluidity of location use may in the long term, by challenging the logic of regular visits by staff, considerably modify the way cleaning services are ordered, and make the use of these contact platforms more relevant to the client, at least for certain one-off tasks supplementary to what is considered the minimum necessary continuous service (exceptional activities).

VIRTUAL REALITY

Virtual reality is reality simulated by computer (e.g. the virtual visit of an apartment on a computer screen).

At the moment it only impacts the margins of the cleaning industry, in the training of some managers and directors and by some experiments in the area of quality control. By definition, the physical work on items being cleaned means that the core profession is not impacted.
To sum up, the degree of maturity of digital trends in the cleaning industry is in general not very high compared to other activities, but some are increasingly asserting themselves (connected mobility, platforms and software, robotics). The IoT and data are less mature but with the emergence of connected buildings they may be considered as having the greatest potential for disruption for cleaning companies. Contact platforms with no intermediaries and virtual reality do not really have any impact on the sector as yet but may emerge in the medium term.
THE EVOLUTION OF CLIENT EXPECTATIONS

The digital transition offers a development opportunity for the cleaning industry, but it also constitutes a challenge to be addressed. The reign of hyper-reactivity, the growing demand for accountability, transparency, traceability and real-time feedback produce client expectations that are ever more demanding. New technologies therefore offer opportunities for differentiation to meet these requirements but the act of embedding them throughout the industry may also produce greater difficulties for cleaning companies (the tyranny of speed, a trend towards continuous monitoring, the adoption of an attitude of justification).

TRACEABILITY AND TRANSPARENCY:
These two items are increasingly featured among the prerequisites expected by clients, who require companies to reinforce their ability to produce scoreboards and indicators to justify the activity.

“We have ever greater expectations concerning traceability and access to information on the effectiveness of services provided”

“This has become indispensable; those who are not able to do it will be excluded from the market”

client statements
THE NEED FOR REACTIVITY:
This is an essential quality which cleaning companies are expected to possess, even more so because of the existence of telecommunication tools that can transmit information in real time.

“The crunch point is when consumables need to be replaced in toilets; cleaning companies must be able to respond within an hour”

client statement

OPTIMISATION OF PLANNING:
Thanks to dedicated software, planning optimisation can make it possible to organise activities according to the priorities of clients, who increasingly want to know how everything is managed, and thus be assured that the service will be correctly provided.

“We now pay more attention to the organisation than to the number of people and the surface areas we are dealing with”

client statements

“Their ability to manage, monitor, and organise the work have become determining criteria for us in selecting service providers”
USER SATISFACTION AND COMPANY PROACTIVITY:
Client companies increasingly expect their service providers to be able to anticipate the needs of users and to propose bespoke services.

"Ideally, we would like the company to intervene before the problem becomes apparent. It is no longer the frequency of cleaning that is the issue, but the quality of the service and the satisfaction of those who use it."

However, the extent of these requirements varies according to the type of client. Large account clients with a headquarters and a network of branches spread across the region often express high demands for results in terms of quality and user satisfaction. Their expectations increase in line with the services offered by cleaning companies, in particular with the diversification of services offered and the more general contribution to the quality of life at work. In this context the digital transition operates as a lever for innovation and commercial differentiation.

Medium-sized client companies, located on sites that generate a cleaning market, are more likely to seek to establish a close partner relationship with the service provider. This requires an excellent knowledge of the specific features of the site, its physical characteristics and usage, and any particular requirements as a result of these. The digital transition is seen by this type of client as a lever to personalise the service and develop the client relationship. For clients whose sites is smaller 10-15,000 euros/year, the requirements expressed are generally those of the more traditional services, and it is excellence in performance that is most sought after, at the best possible price. In this case, the digital transition is seen by the client above all as a lever to optimise operational excellence and a way of reducing costs.

→ It is therefore often with intermediate sized clients that cleaning companies will potentially find the greatest scope for relaxing the rationales to reduce prices.
“For large companies, the digital transition represents a major issue. After working for large companies in the sector for a long time, I have created my own structure by putting this type of solution in place. I am surprised to discover that my clients with very small companies are not very receptive to it.”

“Statements by cleaning companies”

“We must make the digital impact more relevant. Many small clients still ask for paper monitoring.”

“It can take a long time to set up digital solutions. It is only of interest to clients when considerable turnover is involved.”

The evolution of the expectations of clients, who are themselves variously impacted by the digital transition, is a reality that varies in magnitude according to the type of actors involved and the value of the contracts. Depending on the market segments under consideration, one normally finds service-providing companies of different sizes which are impacted by the digital transition to a greater or lesser degree.
A TRANSITION WHICH IMPACTS COMPANIES DIFFERENTLY ACCORDING TO THEIR SIZE

The extent and impact of the digital transition are differentiated according to the size of the company: intermediate companies and large groups have already begun their digital transition and must now anticipate the impact on their business models, whereas the very small companies and SMEs often lack the tools and resources to make any greater commitment to the digital transition, and the self-employed and companies with only one employee at most remain overall the furthest removed from this transition.
The 4 external factors with disruptive potential

External forces (suppliers, new entrants, clients and substitutes) that can affect intra-sectorial competition have varying degrees of impact and disruptive potential on companies, depending on their size. The largest evolutions may involve SMEs in the matter of software packages, and small companies by the possible arrival of new entrants who are highly digitized. Intermediate companies and large groups which develop their own internal strategies appear to be more protected, but may be impacted in the medium to long term by new client competition (risk of in-sourcing) especially where autonomous cleaning robots are developed.

**Suppliers**

- Suppliers of software packages play an increasingly important role in the value chain (payment solutions becoming strategic), even if market solutions remain at this stage insufficiently adapted to the specific requirements of the sector
- Large groups develop their own tools
- Very small companies/SMEs struggle to identify and set up such tools

**New entrants**

- An embryonic development, limited to linking platforms of the ‘Uber’ type, with the potential impact therefore confined to one-off services with low added value
- Some large groups ‘internalise’ this ‘Uber-like’ platforming strategy
- A potential development of new small-size entrants who are highly digitized
Digital services are becoming a factor in commercial differentiation to better meet expectations, especially with the largest purchasers, yet do not affect price increases.

No a priori risk has been observed of cleaning activities being insourced again, in terms of either personnel or machines; clients outsource these services which are not part of their core activity.

A boom in autonomous robots limited to one single type of specification (large flat areas with no obstacles)

The technological lever may encourage machine suppliers and facilities managers to develop a direct cleaning offer.

Reinforcement of intra-sectorial competition
The impact of the digital transition according to the size of the cleaning companies

Generally speaking, the larger the company, the greater is the impact on its various functions in the short and medium terms. In the short term the potential and observed effects of the digital transition are greatest in the management of the client relationship and in managing cross-cutting functions. In the medium term, the business will mainly be impacted by the development of connected buildings and the IoT, which will principally affect large accounts and intermediate companies.

<table>
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<tr>
<th>COMPANIES WITH 1 EMPLOYEE AT MOST</th>
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### Client relationship (prospecting and managing contracts)

<table>
<thead>
<tr>
<th>Impact observed</th>
<th>Impact in the short and medium term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low use of technology and little client demand</td>
<td>The potential for ‘uberisation’ to be watched yet this would probably be limited (services that are strictly one-offs)</td>
</tr>
</tbody>
</table>

### Core business activities

<table>
<thead>
<tr>
<th>Impact observed</th>
<th>Impact in the short and medium term</th>
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</thead>
<tbody>
<tr>
<td>Technologies which are poorly adapted to the nature of the operations (tertiary and small offices)</td>
<td></td>
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</table>

### Steering the business & Cross-cutting Functions

<table>
<thead>
<tr>
<th>Impact observed</th>
<th>Impact in the short and medium term</th>
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<tbody>
<tr>
<td>Potential for increased dematerialization of back-office processes (accountancy)</td>
<td></td>
</tr>
<tr>
<td>VERY SMALL COMPANIES/SMES</td>
<td>INTERMEDIATE COMPANIES/ LARGE GROUPS</td>
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<tr>
<td><strong>Impact observed</strong></td>
<td><strong>Impact observed</strong></td>
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<tr>
<td>LOW</td>
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<tr>
<td><strong>Impact in the short and medium term</strong></td>
<td><strong>Impact in the short and medium term</strong></td>
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<td></td>
<td>MEDIUM</td>
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- **Increase demand for transparency, traceability and reactivity from clients gradual deployment of online and mobile solutions in the management of customer relations**

- **No major impact but the prospect of reducing professional constraints and improving the quality of life at work**

- **A lever for operational excellence and cost control → productivity gains still linked to the improvement and spread of market solutions**

- **Potential for technology to support the transition from a rationale of service/resources to a rationale of services by use/results**

- **The buildings themselves become disruptive (IoT) Prospects of reducing professional constraints and improving the quality of life at work**

- **Optimising of costs and activities with the improvement of solutions (large groups developing their own solutions)**
CONCLUSION

In a sector which is still based on the human being, digital acculturation and the appropriation of the issues of digital transition, especially in very small companies/SMEs, occur in a gradual and uneven way. The risk for companies in the sector which do not commit to a dynamic of evolutionary change and of adopting new tools will be that of downward differentiation and a return to an ‘out-of-date’ and poorly regarded image for the profession. That would result in ever lower prices, and even, with the development of robots and autonomous digital solutions, in the clients being tempted to insource the business.

THE VICIOUS CIRCLE OF THE DIGITAL TRANSITION HAPPENING WITHOUT THE CLEANING COMPANIES

Companies which are subjected to and bypassed by the digital transition, which are not able to innovate or offer solutions adapted to new requirements

Companies which have an outdated image, which are not attractive on the labour market, which have problems recruiting younger and more qualified staff

Ever-increasing customer requirements as the digital transition gathers pace, the temptation to resort to robots or other solutions not involving an intermediary, and without going through a cleaning company

Ever lower prices because of the downgraded image of services with low added value, an impression of a lack of professionalism and modernity in the business
Training and support for managers in the digital transformation of their company (accessibility and deployment of solutions; evolution of professional processes) is a major issue in fully grasping the opportunities offered by these evolutions, and thus enabling the whole sector to progress.

By anticipating and supporting the evolution of business models in SMEs, intermediate companies and large groups, alongside the evolution of requirements in professions and skills, companies should be prepared for the potential impact of, in particular, the use of the intelligent building park of the future. ‘Soft skills’ and digital skills will be essential keys for the successful transition from a routine industrial approach to a vision of B to B to C user services focussed on the end client.

An astute understanding of client usage and expectations must help in this transition from a service provider relationship based on resources to a relationship based on personalisation, intervention on demand, and even an anticipation of needs and the joint planning and provision of services. The automatization and robotization of administrative tasks and of the simplest jobs makes it possible to focus activity on the tasks with greater added value, and to develop the client relationship, →

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THE VIRTUOUS CIRCLE OF A SUCCESSFUL DIGITAL TRANSITION IN THE CLEANING INDUSTRY

- **Increased value proposition of the sector**
- **Optimisation of costs and activities**
- **Support for raising skills in the workforce and a strengthening of the attractiveness of the profession**
- **Improved customer relationship and loyalty levels**

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The diagram illustrates the virtuous circle of a successful digital transition in the cleaning industry, emphasizing the following aspects: increased value proposition, optimisation of costs and activities, support for raising skills in the workforce and strengthening of profession attractiveness, and improved customer relationship and loyalty levels.
while management platforms and mobile solutions, together with the IoT and data, are levers to promote the optimisation of the business by only cleaning where it is necessary, and when it is necessary. The employee perspective of skills ‘enhanced’ by technology (cobotics), and work that is more productive and less restrictive, as well as being more rewarding (autonomy, self-determination, daytime work), is likely to reinforce the attractiveness of the profession, especially to young people. In addition, the appearance of new professions in the cleaning sector (data officer/director of digital strategy) and improved management of planning (centralised and in real time) may permit a new economic model with cleaning services that are closer to the real needs of users and the development of new services with high added value (raising awareness of the rules on selective sorting, identification of dangerous equipment and predictive maintenance, raising awareness of hygiene, consultation on optimising work spaces, etc.).
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The Fédération des Entreprises de Propreté (FEP)* is supporting the evolution of the sector, especially as regards economic development. The digitisation of activities leads to changes in all professional domains, including those such as services where human input remains essential, and where technical solutions cannot entirely replace human beings.

The digital transition in the cleaning sector takes various forms, and impacts less directly on the core profession than it does in mechanical industries or those which produce objects (robotization) or in services delivered on-demand and non-recurrent (transport, hotel reservations, etc.). While there may be no Uber, Blablacar, AirBnB or Booking in the cleaning industry, subtle changes are nevertheless beginning to be seen in the sector. They are tending to accelerate in the way services are marketed and provided and contracts are supported, and in the management of both ‘Front Office’ and ‘Back Office’. These changes modify relationships within companies and with clients. In a business sector where the activity is performed at the client’s premises, there is great awareness of all the transformations which may come into play in the operation; the digital transition that revolutionises certain activities also necessarily has a direct impact on their service providers.

Based on the results of a study undertaken in partnership with Accenture Strategy, this document proposes to present an overview and to assess the trends currently in operation, to seek to anticipate future evolutions and the shape the digital transition could take in cleaning companies in the years to come.

*French Federation of cleaning companies