



10.15678/IER.2022.0801.06

Virtual management during the Covid-19 era: Changes in leadership and management

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ABSTRACT

Objective: The objective of the article is to understand the impact of the Covid-19 crisis on the management style and the relationship between managers and subordinates.

Research Design & Methods: We used a mixed-method combining a qualitative part based on 20 semi-structured interviews as well as a quantitative part based on a questionnaire intended to confirm the observed trends more precisely. All data were analyzed using the grounded theory method.

Findings: The analysis of the data shows an irreversible evolution towards a more frequent use of home-office. This situation, welcomed very positively by the leaders, requires however to review the way of operating of the managers as well as the interaction between managers and their subordinates.

Implications & Recommendations: We are entering a new phase of management, during which managers will have to create a closer relationship with subordinates, concretely entering the role of manager coach.

Contribution & Value Added: This research provides access to the vision that top managers have of the impact of the Covid-19 crisis. Despite many problems, they retain the interest of having accelerated the transition to home-office and remote management while beginning to question the concrete implications of this situation.

Article type: research article

Keywords: Management; Covid-19; leadership; virtual teams; change management; home-office;

remote management

JEL codes: M10, O15, P19

Received: 4 December 2021 Revised: 11 March 2022 Accepted: 14 March 2022

Suggested citation:

Montenero, V., & Cazorzi, C. (2022). Virtual management during the Covid-19 era: Changes in leadership and management. *International Entrepreneurship Review*, 8(1), 77-94. https://doi.org/10.15678/IER.2022.0801.06

INTRODUCTION

The spread of the Covid-19 pandemic has forced all companies to ask more of their employees and managers. For many, the discovery of the fragility of our economy and of our well-being was an element of surprise. The lockdown period has or should have opened the way to create new opportunities to change approaches, to reflect on the consequences of a system based on constant growth, and to establish new values. Moreover, this crisis has affected the world differently and it has accentuated the differences between poor and rich countries, but also within rich countries: populations who can stay at home on the one hand and people dedicated to production—or worse, employees and temporary workers—on the other hand. Finally, the lockdown suspended many civil liberties such as the freedom to move within a country, bringing about unprecedented growth in remote working. Thus, managers had to manage and energize individuals and teams remotely. They had no choice and almost no specific training. Nevertheless, generalized virtual management allowed people to discover the true meaning of work. To work is not only to act or to produce, but it is also to occupy a position as an individual within a company, pointing out our social relations and the sense of the consideration of each individual.

This imposed development has had several consequences: i) The discovery that the remote way is really a different job; ii) The emergence of new challenges between time devoted to work and to per-

sonal lives; iii) The fact that smart work may be different from remote work; iv) The conviction that managers must adopt new styles of leadership. A fundamental difference is that managing at a distance requires managers to change their point of view to encourage the autonomy of their subordinates. They still need to monitor results, but they must agree not to investigate how those results were achieved. On this point, the values carried by the company can help managers by creating this very rare link which makes it possible to unify the what and the how.

This article focuses on the vision that leaders have of the pandemic period, its difficulties and its possible contributions. It adopts the perspective of the top management team to analyze in greater depth, the last point mentioned above: How can managers strengthen the team without being present in person? How can the figure of the manager face the pandemic phenomenon and people's fear? How can managers remain in the same position and also assume a new role in the current global crisis that entails changing management methods?

LITERATURE REVIEW

Our research is rooted in two main theoretical fields: the literacy of change management and leadership styles.

Change Management

According to the Cambridge Dictionary, change management is "the planning and introduction of new processes, methods of working, etc. in a company or organization." At all times, change, even when it was considered necessary, has been difficult. Many models have been developed to limit the effect of various resistances and help teams and organizations move to a new state (Galli, 2018). As early as 1951, Lewin (1951) imagined a model comprising three stages: unfreeze, change, and re-freeze. According to him, for a change to occur it was essential to have a change motivator.

Kotter et al. (2008) later expanded Lewin's original change strategy by moving to an eight-step approach and highlighting the role of managers: "Leadership must create and sustain the kind of changes needed for successful organizations to compete in the current competitive world." He also insisted on what he calls a "need for change," which is supposed to create "a sense of urgency" at the level of the teams concerned. To move forward successfully, it is necessary to have a vision of transformation capable of uniting the group around the change. The model starts with the team or organization realizing a need for change. In step 2, the team creates a coalition for change that will be able, in step 3, to develop a strategic vision and align objectives and progress as a group (Calegari et al., 2015). After sharing the vision with all members of the group in step 4, employees are encouraged to then try new ideas and approaches in step 5. Step 6 is an essential moment of the model, as it brings short-term wins that help demonstrate that the change effort is constructive and helps the team to make necessary adjustments. In step 7, the organization should consolidate gains and produce more changes, before step 8, which was presented as the moment when the change is institutionalized and anchored in the organizational culture (Kanter, 2003). Failing to do this can pave the way for a return to previous habits and destroy the efforts made in the previous 7 steps. Coming later, ADKAR's model (Hiatt, 2006) focused much more on individuals and on how they adapt to the constraints of change. In this case, employees must have sufficient motivation to participate in the change as well as the ability to effect necessary changes. We find the importance given to the involvement of individuals in the names used to describe the stages: awareness, desire, knowledge, ability, and reinforcement. Employees need knowledge of what to change and what change entails. Ability refers to the skills required to implement change, whereas reinforcement is needed to maintain and sustain it.

The McKinsey 7-S Model was described by Peters (2019), who all worked at McKinsey at the time. Unlike previous models, it built on the different areas to work on to ensure change: strategy, structure, systems, skills, team, style, and shared goals. We find here, for the first time, a notion of structure that defines and confirms the roles and responsibilities of each member (Singh, 2013). Likewise, systems emerge to ensure the dissemination of information, the allocation of resources, as well as the measurement of performance in planning, budgeting, and reward. Additionally, Kübler-Ross (1969) tracked

the different stages of an individual's psychological journey through change, basing it on the observation of how people react emotionally to grief. Identifying what phases individuals undergoing a change are going through can help when deciding when to communicate information, what level of support is required, and when best to implement final changes.

All these models emphasize the iterative aspect of change (Rosenbaum *et al.*, 2018) and share a common awareness of the need for change, which brings motivation. The groups concerned feel, or are brought to feel, the necessity of transforming an unsatisfactory situation. Moreover, these developed models show the importance of evolving a new state considered preferable to the previous situation. Once achieved, if the process was successful, this desired state should remain for some time. Some models put more emphasis on the effort to be made in the final stages so that the change cannot be lost, and the team does not return to where it was at the very beginning.

The situation that we describe in this paper is different, mainly in that individuals are faced with an external intervention that asks them to change as quickly as possible, without going through the phases described in the models mentioned. It will be interesting to see if all people reacted the same way and to identify the factors that will undoubtedly determine the extent of the return to old habits after the crisis.

Virtual management and leadership

Leadership influences the group also in cases in which there are no hierarchical links (Burke *et al.*, 2006; Dirani *et al.*, 2020; Samimi *et al.*, 2020). In the modern concept of leadership, which belongs to the American tradition of the matrix company, creating a subordination link is not necessary (even if it may help), because the staff accept function links. To be influential, we need leadership at the team level and leadership values, a double binding that gives managers a double function: hierarchical and functional. In the literature, a large space is devoted to managing virtually, an approach mainly referring to those who have a team spread throughout the world and seldom referring to managers who stay close to their employees and make them use a virtual system due to the spread of Covid-19.

During the Covid-19 crisis and repeated lockdowns in various countries, the manager was obliged to avoid using a bureaucratic form of control and to instead use different approaches and practices to manage virtual teams.

New technologies are at the heart of the system. It would be impossible to manage efficiently without them (Karolak, 1999; Malhotra, 2000; Sotomayor *et al.*, 2009; Staples & Ratnasingham, 1998). Creating trust, the biggest item in a team, is very difficult to produce virtually (Bisbe & Sivabalan, 2017; Caulat & De Haan, 2006; Kanawattanachai & Yoo, 2002; Mumbi & McGill, 2008; Ridings *et al.*, 2002). Having a correct videoconference system and other technological tools can help the team to build trust but the virtual situation makes it difficult (Avolio *et al.*, 2010; Kahai *et al.*, 1997).

The flexible way of working is considered favorable (Liao, 2017; Sarros *et al.*, 2008), but effectiveness in leadership can be an issue. Only a change in management styles can favor the efficiency of management and give new roots for virtual management. Kurt Levin, also following the critics (Cherry, 2006; Hussain *et al.*, 2018), showed the difference between authoritative, autocratic, and democratic leadership modes. Schmidt (2014) and Caulat (2012) added that in this case, comparing to special context, leadership is strongly influenced by the medium and the frequency of the communication style.

Communication is important to see acting leadership and look at the managers' approach (Gibson & Cohen, 2003; Hambley *et al.*, 2007; O'Neill *et al.*, 2009). Communication style can be influenced by the difference between cross-cultural managers and the cultural frame (Arun & Kahraman-Gedik, 2020; Shah *et al.*, 2020). This is what allows us to understand the reason for laissez-faire in Afghanistan or authoritative methods in Turkey. Every country can influence the leadership style of the managers, but we should not forget that leadership styles have been created in the West.

Virtual management prefers transactional (Chaudhry & Javed, 2012) and transformational leadership modes (Bass & Avolio, 1993; Hwa, 2008; Sosik, et al., 1997; Sosik et al., 1998;). Transactional management is based on a complex system of rewards, whereas the transformational style is closer to the concept of the charismatic leader, as Weber considered (Masood et al., 2006). The exemplarity of the leader's own action and the coherence of his or her beliefs (Yammarino & Dubinsky, 1994) are considered

essential. This kind of leadership is based on learning cognition (Harris, 1970; Merriam, 2004), openmind mindset (Antonakis, & House, 2014), and one-to-one motivation. The effectiveness of the team (Chandani *et al.*, 2016; Paracha *et al.*, 2012) and innovation influence (Gumusluoglu & Ilsev, 2009) seem to directly be related.

RESEARCH METHODOLOGY

The Covid-19 crisis has pushed companies to innovate to continue their activities whenever possible. The question we are asking in the research is how this rapid evolution has affected methods of managing? More precisely, we wish to understand how this change happened, if it has brought with it a transformation of the relations between managers and their subordinates, and if this leads to modifications in the competencies that the managers should possess. We would also like to understand what is likely to happen once the pandemic is over.

To carry out this work, we favored a mixed research method. The quantitative part is intended to provide basic information on how managers operate during a pandemic, while the qualitative part should allow us to better understand the details of the functioning and daily experience of the managers concerned. The phrase "mixed method" has become an umbrella term used whenever more than one methodological approach is utilized (Bazeley, 2008). Using a combined design serves several different purposes (Adamson, 2003). First, there is a desire to verify, by using two different approaches, the credibility of the findings (triangulation). For this reason, a fundamental point, when one uses a mixed-method, is to check if the results of the two approaches are contradictory. The problem here is that in the event of contradictory information, one does not always know what conclusions to draw from it (Mason, 1998). Another reason for using a combined design is linked to the desire for complementarity. In this case, the strength of one method is used to increase the performance of the other (Morgan, 1998). Finally, one advantage of such research is that it makes it possible "to have two paradigms, or two worldviews, mixed throughout a single research project" (Tashakkori & Teddlie, 2003, p. 11).

Regarding the design of combined methods, Tashakkori & Teddlie identified 40 different types of uses. What seems most important, however, is knowing exactly which need each method responds to and avoiding transforming data acquired by a quantitative method into data acquired in another way or vice versa. In our case, we wanted to use a quantitative approach first to understand the extent of the change, for example, to measure the evolution of the use of remote management before and during the crisis. We also wanted to understand the feelings of managers forced to resort to this form of management. Consequently, we designed a questionnaire of 15 questions (see Table 1) to get a general overview of the situation. We knew, by carrying out this survey, that we would get very little information on the reasons and the conditions of the change, as well as on the evolution of the relations between managers and their subordinates.

While including closed questions, this questionnaire left the possibility for respondents to note individual remarks. It was sent to 200 people, managers, and employees alike, who worked in the French subsidiary of an American company. The responses, numbering 49 (representing 24.5% of requests), were free and anonymous. The questions were organized as follows: Firstly, we located the department where the respondents worked. Then we ascertained whether the IT platforms were well suited to managing remotely for the given function. The other three parties then asked questions about the Covid-19 crisis, in particular on virtual management as such, on the impact of the crisis on the method of managing, and finally, on the sustainability of the domination of remote management.

Our mixed-method also involved a qualitative approach, i.e., an ethnographic method based on a semi-structured questionnaire. The questionnaire was passed to 20 managers working in 12 different companies. Among these managers, only three belonged to the company where we carried out the quantitative study. The literature gives little information on the selection of the interviewed population, other than selecting the combination that best meets the reason why we chose a combination design (Tashakkori & Teddlie, 2003). We have deliberately decided to diversify the number of companies in order to enrich the information collected and to cover different situations. Table 2 describes the content of the interviews and Table 3 provides a short description of the interviewed population.

Table 1. Description of the survey sent to 200 managers in September 2020

First series of questions: locate	What is your function?
the people who are answering	How many people in your direct line?
Second series of questions: general questions	How do you consider the coronavirus situation?
	Why? How do you explain your answer?
	System and platform; How do you consider your situation compared to the system and internet network?
	System and platform: What kind of technical issues did you have?
Third series of questions: Experiencing virtual	Before the crisis, what was your level of experience with virtual management?
	How do you feel towards virtual management?
	Changing patterns: Since you have been managing remotely, what has changed in your way of managing?
	Changing patterns: What are the main features that you changed?
management	Changing patterns: What is the main challenge of virtual management?
	Changing patterns: What is the main difficulty of communication in remote management?
Fourth series of questions:	What do you do to bring the team to reach the objectives?
How do you do with the team?	What are your tips to motivate the Team?
Fifth series of questions:	Do you think that this crisis will have consequences on the way managers will work in the future?
The future	What are the two main features that you think will be changed?

Source: own study.

Table 2. Description of the semi-directive questionnaire used for interviews between April 2020 and February 2021

	- What makes it critical for management?
The pandemic as a crisis	- What could be the short term and long-term consequences?
	- What will happen after the pandemic will have been gone?
	- Towards the team
Changes in the way of managing	- Towards the direction / the headquarters
	- Towards customers
Managing uncertainty	- When, how and why?
Skills and / or competences	- New expectations for employees
	- New expectations for international managers

Source: own semi-directive questionnaire.

The managers' interviews were all done remotely and lasted between 20 and 40 minutes. They were often carried out as part of longer interviews on international management. The interviews were recorded and transcribed. They were subsequently analyzed using the Grounded Theory (Glaser, 1978; Glaser & Strauss Anselm, 1967; Strauss & Corbin, 1997). In a first phase, we questioned a certain number of top-managers on the consequences of the Covid-19 crisis. When we understood that the people interviewed considered that the increase in the use of the home office was a very positive consequence of the crisis, we wanted to better understand the extent of this increase and to know how this evolution was perceived by launching a survey (phase 2) while continuing interviews (phase 3). Throughout the process, we applied the Grounded Theory method to each piece of information collected, whether it was the results of the questionnaire or the interviews: while transcribing the information, we have each time extracted the key information that we have coded before returning to the field (phase 3 bis). In phase 4, we launched the final analysis during which we combined all repetitive elements. Our approach can be described as Grounded Theory applied to current flow. Finally, we did not want to look at linguistic issues and we contented ourselves with translating into English the quotes made in other languages while maintaining the original quotes.

Table 3. Characteristics of the interviewed population: 20 interviewees, 12 companies, 6 different nationalities between April 2020 and February 2021

Activity of the company	Functions of the managers interviewed	Dates of the interviews	Nationality	Number of subordinates
	Director Global Marketing	April 2020	French	40 people
Chemistry 1	Head of Country Cluster North West Africa	April 2020	Tunisian	200 people
	Country Manager Italy	May 2020	German	200 people
Chemistry 2	Vice-president	May 2020	German	150 people
Chemistry 3	Senior Vice-president EMEA	May 2020	German	400 people
Production of house equipment	Head of controlling	January 2021	Brazilian	20 people
	Head of controlling	January 2021	Brazilian	20 people
Production of house equipment	Head of CRM Projects	February 2021	Italian	250 people
	Head of IT	February 2021	Argentinian	90 people
Food – production of raw material	Plant Director	May 2020	French	800 People
	President of French subsidiary	June 2020	Czech	250 people
	Quality Director	June 2020	Czech	20 people
Production of hospital	Export Sales Director	June 2020	Czech	20 people
appliances	Managing Director	June 2020	Czech	2000 people
	Export Manager	November 2020		-
Construction material	CEO Czech Subsidiary	November 2020	Czech and German	150 people
Energy supply and installation	CEO Czech Subsidiary	November 2020	French	300 people
Startup Investor Company	CEO	November 2020	French	-
Energy	CEO Central Europe	December 2020	Polish	550 people
Construction and engineering	Vice-President	December 2020	Czech	150 people
Automotive Industry	Head Business Development	January 2021	French	40 people

Source: data used for semi-directive questionnaire.

RESULTS AND DISCUSSION

The results of the two approaches used for our mix-method are consistent. As we had imagined, the responses to the semi-structured interviews provided interesting additional information. For this reason, in each paragraph, we will start with the findings from the quantitative approach, followed by the information from the qualitative approach. When the Covid-19 crisis appeared, the patterns were always the same: in the first month companies had to organize themselves in a different way to continue their activities and ensure a minimum of services to their customers, involving protective measures against the spread and a reorganization of teams as well as the use of the home office or video meetings. A selection of quotes from the interviews used for our analysis is shown in Table 4.

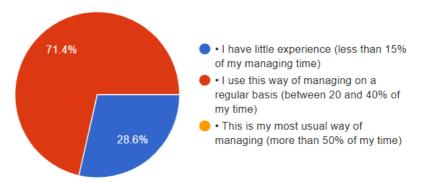


Figure 1. When virtual management becomes essential Source: own elaboration.

The responses to the questionnaire (See Figure 1) showed at first that all managers had some experience with virtual management. There were no technical limitations: the web platform was available and sufficiently powerful. Yet, we can see that the use of virtual management was far from dominant before the pandemic (no more than 50% of the time and less than 15% for 25.8% of those questioned). The Covid-19 crisis had therefore accelerated the drift from a transient practice to an almost exclusive one. The change took place without setting up a specific projector going through a complex process to ensure that direction and employees agreed on the benefit of the change.

As in the case of the questionnaires, before the crisis, the companies concerned used the "home office" to a greater or lesser extent. In all cases, managers were wondering when and how to increase its use. Several noted that it was impossible to imagine that such a change could have been implemented in such a short time. During its first three or four months, the Covid-19 crisis created many organizational problems, many constraints that generated a high level of stress among managers and employees. But, it was a strong accelerator of the use of teleworking. Managers interviewed after September 2020 recognized the positive contribution of the crisis and saw it as an opportunity. While all managers agreed that the move to remote management was imposed from the outside and was not made by choice, they admitted that it would be impossible to return to the pre-crisis situation once Covid-19 is tamed.

A second critical point, present in the word "revealer" used by some interviewees, is the fact that what happened in the case of the Covid-19 crisis highlighted the necessity of companies to operate in an agile manner. Clearly, not everyone is fit for agile work and the pandemic increased economic divisions. While remote working seemed to be easy for white-collar workers, this may not have applied to all of them. But on top of that, not all people working in the factory could be exposed to the possibility of teleworking in the same way.

The new constraints of remote management

For the past twenty years, several researchers have sought to understand the possible consequences of the progression of teleworking, perceived as a "spatial and temporal dispersion" of work (Taskin, 2006), which makes it possible to accomplish certain tasks necessary for the functioning of companies at anytime, anywhere (Kurland & Bailey, 1999). This approach often fell within the framework of a "regulationist" approach aimed at finding how to reorganize work processes and managerial activities (Taskin, 2006; Geary, 2003; Sisson & Marginson, 2003). No doubt, in 2019, very few people suspected that we would have a transformation as rapid as what was caused by the Covid-19 crisis. The form of remote management required changing the way people operated. The interviewees recognized particularly that this led to more frequent and sometimes longer interventions. The extra time was intended both to take stock of the work in progress, but also to create moments of free discussion. Moreover, the interviews showed that if managers wanted their teams to be efficient, they needed be reachable as soon as one of the employees had a problem.

Interestingly, it was rare for employees to adopt the exact hours they had in the office. Some may have been working at other times by personal preference or more often, due to family constraints such as the presence of children, or because they had difficulty organizing themselves when they needed to work alone. Two managers mentioned a case in which some employees tended to finish the tasks of the week on Sunday evenings when their children were sleeping. All of this impacts the follow-up of tasks, which cannot be done like it was when it was a question of simply going to the next office. If, as we have seen, it is necessary to set aside time for follow-ups, it is often necessary to define the tasks in a different way to be able to follow the employees' progress in another context.

Today, managers must be able to know the environment in which their employees evolve. Do they have a practical place to work? Can they isolate themselves? And at what time of day can they work? Moreover, they must also be able to estimate the capacity of the various employees to work in isolation, away from the company, and identify any decline in motivation, or increase in stress. As was demonstrated in other contexts, communication is becoming a key-point of teams' efficiency (Polowczyk *et al.*, 2021).

Generally, we observe that the new management must play on two different levels: 1) at the individual level, managers must try to be as close as possible to their subordinates to avoid any dehumanization and to support them steadily to make sure that they do not feel alone, 2) at the team level, they must motivate people, achieve the objectives, and maintain the team members aligned with the enterprise.

Acting at the individual level

Figure 2 shows that if $\frac{1}{2}$ of the respondents to the questionnaire considered that it was an opportunity to be able to change the management mode, $\frac{1}{2}$ indicated that this could create new problems. Many feared that employees would not be able to follow the evolution towards more home office because they felt isolated, and they could have the impression of being abandoned by their own managers.

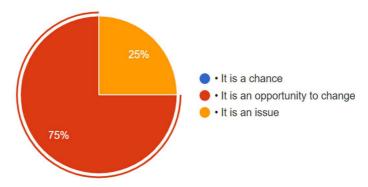


Figure 2. Perception of the consequences of the Covid-19 crisis for survey done in October 2020 Source: own elaboration.

Remote communication can be difficult. Indeed, how to virtually copy the tacit behavior or the silent communication of the body? Is it not just a problem of communication, of cultural hubbub, or of games of telephone, or is it rather linked to the need to see, to be looked at, to observe, and to be observed? (Howells, 1996; Nonaka *et al.*, 1996). In the SECI model, a large part of the onboarding of a new employee is carried out through tacit knowledge. Personal contact is also very important in selling and the relationship is a must, allowing people to be connected and to maintain that connection.

At the individual level, two aspects are important: the fact of giving a meaning to one's work and all anxiety-inducing aspects. For the anxiety-provoking aspects, managers must share with people who have difficulty in being agile, who are not used to it, or exchange on familiar reasons such as the pandemic phenomena. Large companies have normally provided practical training and psychological support for all teams. Other large companies have also provided small equipment such as printers, computer mice, or office chairs. At any rate, the role of the manager has always been important to cover and endorse every person in the team and to follow all of these issues and problems. Virtual calls are replacing normal knowledge: we know the people individually and for this kind of team we interact in a different way. To avoid it, several interviewees told us about the importance of increasing communication: to be open and to be available.

1. Increase communication

Communication can fill the gap between a physically distant management and the coffee system procedure: we must overcommunicate to be heard and we must listen to others' opinions. There is no system advised, but everything can be tested: phone calls, Visio, email, chat, and so on. It is just important that managers try using what they are comfortable with. At the individual level, the conversation should not limit itself to the job or the things to accomplish but also about life, the family, or regular fears. In this attempt to humanize virtual management, it is important to be open to the real fears of the people because it may be now the first time when nobody knows what the future will be like.

2. Be present and available

Virtual management first obliges managers to be nearer to the people, discovering themselves as human beings, showing interest to others, and discovering that the first characteristic of their tasks is to be a normal person. The second level is the continual availability of the manager: an interviewer told us that the most important thing is to always be "reachable and available." This can be very difficult to drive and can interfere with family life. This overcommunication can cause fatigue and exhaustion for the manager, creating new nearness with the employees also for the future.

Acting at the team level

It is useful to say that Covid-19 has for a long time determined our behavior and company acceptance. A manager must align and motivate the team to boost their effectiveness. This is why managers must reinvent themselves and try to reverse the trend. Figure 3 shows us the most important challenges in this way of management: 50% of respondents to the questionnaire believe that the way of communicating and motivating has changed. First, communication not only involves the ways in which people communicate, but there is also a necessity to overcommunicate to make everyone feels that they are part of the company and that their presence is useful. For the second aspect, we must create trust and a change of leadership.

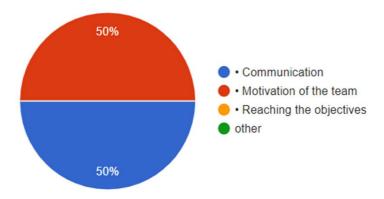


Figure 3. Results of survey done in October 2020: At the team level the key point is 'motivate the group'.

This can be possible only with a good communication.

Source: own elaboration.

1. Communication

A French manager told us that communicating to the team must be strengthened and done in a continuous way, that they would multiply the meetings and the calls. "In one conversation I had with an employee on a stage in another company, discussing the normal daily routine, she explained to me that she had many difficulties in a daily meeting because it was not only a job meeting but also a meeting among friends with long-held knowledge of the company."

The interviews showed a real distinction between communication in a single way and if managers had the whole team in face. The difficulty can be due to time and space ("availability of the people") but also due to the absence of feedback or the incapability of using virtual tools. The managers used all the items they could (Hangout, Visio chat, and so on) but it was always time dispensing. What we understand is not only a problem of communication but also an issue of reaching objectives and finding the way to do so.

2. Create trust

The need to function as a team will not change. The team is stable. It existed before and will carry on existing after the crisis. The literature has often considered virtual teams to be merely temporary, while the pandemic has shown us the ability of virtual teams to function as conventional teams, able to share initiatives, establish a high level of trust and to improve it. The literature often considered virtual team to be merely temporary, whereas the virtual teams that. Traditional teams will gradually

become virtual teams, able to maintain trust and motivation. The literacy of the trust explains that the construct is directly related to the knowledge of the objectives and the clear transparency of them. This point was highlighted by the managers interviewed when they described the changes in the organizations due to the Covid-19 crisis.

Changing Leadership

Leadership is the mantra of the new organization: the linear bureaucratic organizational system is yet throughout, and the new kind of chief is created. In Figure 4, 75% of interviewees answered that the actual crisis can also change the methods of managing teams in the future. The first is to trust in your team to do. The second is to create more flexibility and to "share experience and empathy."

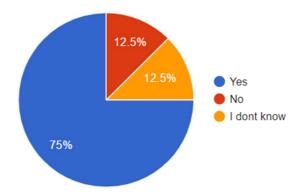


Figure 4. Survey done in October 2020: Answer to question on whether the crisis has changed the mode of management

Source: own elaboration.

More flexibility is something that we cannot control, and in this case, we must accept it. We cannot use bureaucratic ways to control (also it was very near in the French manner), but we can check if the objectives will be achieved. This means allowing a lot of autonomy and letting people be themselves and do what they want. It is clear that each company must have clear rules regarding what it wants to achieve and how to achieve it. Work not only helps people belong to a group but it also helps us do things that are useful for the entire community.

CONCLUSIONS

Our research answered several questions on the way the changes from in-person work to virtual work took place and the extent of the transformations of the workplace. Managers used teleworking, even when they had no prior experience. However, this use fluctuated according to government or company policies and it did not lead to a new structured system. Although few interviewees were able to imagine what would happen after the pandemic was over, they were convinced that the organization of work would never go back to what it was before. The models of change management insist on the importance of agreeing between managers and employees on the objective to be achieved and how to get there. The change in the workplace due to the pandemic happened fast because of necessity but not because there was a clear will to implement it. What is the sustainability of a change that took place without collective agreement? The question in the future will be not only about defining a new system, but also about creating cohesion around it. Interestingly, the pandemic made it possible to offer a concrete example of dominating remote management, whereas this was until now merely a textbook case. Many managers said the experience had been useful because it had shown that increasing teleworking and replacing many trips with videoconferencing was possible. This crisis had major consequences.

First, the pandemic obliged managers to become human beings again by ceasing to be supererogatory supporters of the direction of companies and it changed the idea that we have of leadership. It may thus have helped managers give another meaning to their function: 1. To be successful in the crisis required them to put their humanity more at the forefront than before; 2. It was not

sufficient for managers to give their employees objectives to achieve but they needed to explain them transparently; 3. They tried to replace the ability to give orders with that of being empathetic. This development may have led managers to rediscover themselves, to recognize their normality and admit that they do not always understand what is happening. It can be a very healthy discovery if it helps create a good work atmosphere and build stronger empathy among the team. The evolution of the workplace could consequently lead managers to understand that the best attitude is serving and listening the team rather than being served by them.

Secondly, we must understand the intentions behind the actions of managers, not only their way of acting but also what they have learned and what they want to put in place. This is the only way to guarantee sustainability. This will be an important part of a further investigation. Thirdly, the way of managing must change, particularly by avoiding bureaucratic control over the group. Control has less impact from a distance because it becomes difficult to identify the precise actions to criticize or blame without taking the risk of getting back to the starting point.

As the literature tells us, virtual management usually works best with transactional or transformational leadership models. The first model is useful because it helps the team become autonomous, but also leads managers to discover new ways to explain and share the objectives. It is a whole new approach of leadership: sharing goals, empathizing, and asking for help to reach the goal. The transformational path, typical of a charismatic leader, can be more difficult to set up with videoconferencing alone, without a face-to-face relationship. If the relationship is well established, a lengthy separation may cause the quality of the relationship to change if it is not nurtured by regular face-to-face contact.

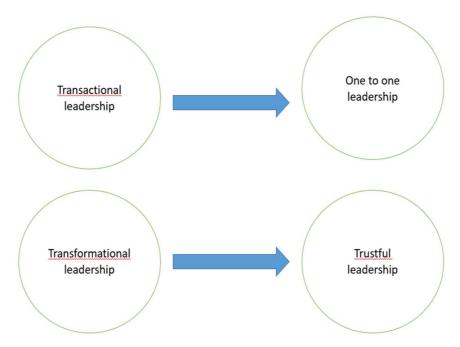


Figure 5. Potential developments of transactional and transformational leadership models after COVID-19 experience Source: own elaboration.

Figure 5 explains the main differences existing between transformational and transactional leadership and the new approach that may be required tomorrow. In effect, transactional leadership based on rewards would not disappear, but it would be transformed into a one-to-one relationship. This type of leadership can accept, for example, the individual level and it better explains overcommunication, which is one of the most important characteristics that we show in the field results (cocooning management). Transformational leadership based on charismatic leaders would be changed into a trustful leadership: Each individual in a team is worthy of respect and trust, not only the leaders. Everyone can be a leader and others can become followers (autonomist management). More generally, for the manager, if the autonomy of the members of the team is crucial, it is difficult

to teach or achieve it. It is at the heart of subordination relations, which can sometimes block the employee's ability to act freely. This is the real problem today: Will people who previously worked on well-defined tasks be as efficient tomorrow? Will they be sufficiently autonomous? This question can be extended to managers accustomed to the old bureaucratic approach. Are they aware of the need to evolve and will they be able to question themselves?

One limitation of this paper is the fact that we only interviewed managers and not employees. We cannot predict the employees' response. They could have the same attitude as the managers, or they could present the new situation as hectic and confusing. Is the new system so positive and will the future be as rosy as what the managers said? This point must be addressed in a further paper in which we will discuss the employees' position. Another limitation of our research is that we transcribed the new needs, but we were unable to describe the traits of the manager of tomorrow, as proposed for example by Zbierowski & Gojny-Zbrowska (2022). This work would be interesting to organize in continuation of our research.

The Covid-19 crisis has shown certain trends that will impose choices on the businesses of tomorrow. Will we be able to function without changing the form of management? Will gender and age issues be experienced the same way in the future as they are today? Maybe it is too early to discuss, but we need to lay the groundwork for this discussion.

Finally, the interviews revealed some obvious economic implications. The development of the home-office will make it possible to save on office space. Indeed, three managers contacted at the end of 2020 and the beginning of 2021 declared that they had already reduced the size of their offices. At the corporate level, we note also substantial savings in business travel. Whenever this element of change was mentioned by the respondents, they declared that we would not return to the previous situation because the crisis had forced people to adapt and to understand the interest of certain meetings organized in using Zoom, Teams or Meet.

Conversely, companies now admit having to participate in equipping employees working in the home office. Currently, the aids are different from one company to another, but participation in the costs seems to be accepted. Surprisingly, only one person interviewed asked whether training should be organized to help managers change roles. But it was probably too early at the end of 2020 to ask these kinds of questions. However, we believe that such training is important, in the same way that it will be necessary to support employees to help them work independently, considering the separation between private life and professional life.

On the side of the employees themselves, the increase in the use of the home office leads to a reduction in the costs devoted to travel, but above all it makes it possible to reduce travel at a time when we are trying desperately to reduce CO2 emissions. Generally, even if it will be necessary to plan for several types of expenses when we approve the transition to hybrid operations, the complete changes will be positive for companies, employees and the planet.

Changing the form of management cannot be done so simply. It is linked to other developments. Several managers indicated that the success of this system depended on the managers' confidence in the employees who were teleworking, but it is also linked to the employees' trust in the manager, with whom they should be ready to share any difficulties. Trust is at the heart of this new system. We are convinced that it is not compatible with the preservation of a time-control system that is supposed to replace clocking. The question that arises here revolves around knowing how to train and support the manager evolving in a system where telework would represent a significant portion of office hours. On top of this, such a change is impossible if corporate culture does not change too. We can imagine a continuation of our research in the form of interviews with managers and HR managers to check whether they have identified the need for change and whether the HR department takes this into account in the process of selecting new training staff and support.

Table 4. A short selection of quotes from the semi-directive interviews (April 2020 and February 2021)

	Table 4. A short selection of quotes from the semi-directive interviews (April 2020 and February 2021)					
Paragraph	English version	Original version				
The neces- sity of virtual manage- ment	"The word that I have in mind is "revelator". A revelator and the accelerator of two dimensions"	« Le mot qui me vient à la tête, c'est révélateur et un accélérateur. Il y a deux dimensions. »				
	"Everything is done remotely. So, we [need] to organize ourselves"	« Tout se fait à distance. Donc, on s'organise »				
	"And all this "happened very quietly, without having to tell people 'I will slap you on the fingers if you don't do it'!"	"Et tout s'est passé très, très calmement, sans qu'on ait besoin de dire aux gens, «je vais te taper sur les doigts si tu ne fais pas."				
	"All companies understood that "agile working" doesn't mean less working"	Toutes les entreprises ont compris que le télétravail, non, ne veut pas dire forcément pas de travail."				
	"and in the future, there will be a better balance between professional and private life"	« [il est certain] qu'on aura, dans le futur, un mix un plus sain, un plus équilibré entre [vie professionnelle et vie privée] »				
	"[easiness]depend[ed] on the task"	« [Le degré de facilite], cela dépend de la tâche »				
The new constraints of remote manage-ment	"In effect, how to copy virtually the tacit behavior of the silent communication of the body?"					
	"Eye contact is important. In this configuration communication is sometimes not easy."					
	" Sales is also a matter of human relationship"					
	"People are searching for social interaction. A little Team building is lacking"	« L'interaction sociale, les gens en demande. Un petit team building, il y a des choses comme ça [qui] manquent vraiment »				
	"The exchanges with each other around the coffee machine, this is tremendous! You can create a virtual coffee, but it is not the same thing!"	« Les échanges, vous savez bien les échanges informels autour de la				
	[Newcomers] are not so efficient because they don't know the job and to whom they worked"	« [Les nouveaux] n'étaient pas aussi efficaces qu'ils pouvaient parce qu'ils (ne) connaissaient pas avec qui ils travaillent »				
	"We have to organize daily crossing points"					
	"[It was necessary to add] additional hangout sessions to understand also how it was going from a personal perspective based on situation" or [we would have] more emails"					
	"We have identified with a manager, the most important point which always, always show employees that they belong to the company and that they are important for the company, that they belong to the company and that they are an important part of the company!"	« On a identifié avec un manager, un des points les plus importants, toujours, toujours, présenter aux gens qu'ils appartiennent à la société et qu'ils sont importants pour la société, qu'ils font partie de la société, et qu'ils sont une partie importante de la société! »				

Paragraph	English version	Original version
		« Donc oui, ces actions ont
	"Yes it's multiplied, yes but also the network"	multiplié. Je pourrais dire, cela a
		multiplié les réseaux. »
	"At least we can have a real discussion, to be in touch with	
	our agents for example and share some training"	
	"Communication one to one is quite easy. Communication	
	as a team is more difficult".	
	« [It is essential] that people should be available each time	"Que les personnes soient
	it is necessary."	disponibles le moment voulu"
	"Not all the employees are used to work in agility. The first	
	days was not easy to achieve the same reaction as per face	
	to face meetings or discussions."	
	The managers used all the items they could such as "giving	
	the right message using hangout chats but "The calls have	
	increased a lot and the working time has expanded and it is	
	more difficult to share and motivate the team."	
	"To motivate the Team, we are keeping as Team, a routine,	
	where at the end of business topic discussions, we are also	
	exchanging tips on how to improve our life in lockdown	
	mode sharing on line initiatives can support all we need."	
	" try to spend more times with them to set priorities and	
	keep a high morale"	
	"[Take more time] Making them aligned on objective and	
	means to reach them"	
	"Eliminate stress and provide support for priority activities."	
	"It is important to have confidence in your team If I trust	
eam Level	[my employee] I understand that agile working or smart	
	working is not 'No work', but 'work in a different way'.	
	"Working by priority and focusing on the goal give a lot of	
	autonomy to the employee and they are only controlled by	
	the facts, what they have done, and not by the balance of	
	the time dedicated to work and to family and personal ac-	
	tivities"	
	"[Managers] must use smart working, giving flexibility to	
	employee to be able use more days in agile."	
	"Once back at office we will appreciate how is important be	
	part of a community".	
	"To motivate the Team, we are keeping as Team, a routine,	
	where at the end of business topic discussions, we are also	
	exchanging tips on how to improve our life in lockdown	
	mode sharing on-line initiatives can support all we need."	
	iniode sharing on the initiatives can support an we need.	« On anime nos équipes. Par
	"We federate the teams For example, we are cooking to-	exemple, pour Noël, on va cuisine
	gether at Christmas time. This is important. But it is also im-	ensemble on line. Ça passe par ça
	T	
	portant to communicate clearly on what we are doing,	mais ça passe aussi par une
	where we want to go and what the impact on the team will	communication très claire de ce
	be." "	qu'on fait, où est ce qu'on va, que
	s to semi-directive questionnaires (interviews).	est l'impact sur nous. »

Source: answers to semi-directive questionnaires (interviews).

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Acknowledgements and Financial Disclosure

We would like to thank the Board of the Franco-Czech Chamber of Commerce which helped us identify and contact top managers and leaders.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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