

Louvain School of Management

What is the impact of the COVID-19 health pandemic on the collaboration in the context of hybrid work ?

Author : BOVY Mélanie
Supervisor : TASKIN Laurent
Academic year 2022-2023
Dissertation for the master of Business Engineering

Foreword

I would like to thank all those who have contributed in any way to the writing of this thesis.

First and foremost, I would like to thank my supervisor, Professor Taskin, for his guidance throughout the entire process of developing and writing the thesis. His accessibility, extensive feedback and encouragement enabled me to produce a final thesis of which I'm proud.

I'm also thankful towards my internship supervisor, Sébastien Collard, for the time and support he gave me. Despite his busy schedule, he was always willing to answer my questions. I'd also like to thank him for putting me in touch with the HR managers.

In addition, I would like to express my sincere gratitude to the HR team at BDO for their help, their availability and for the extensive information they gave me on BDO's office policy. They connected me with various employees according to the profiles I was looking for, and provided me with the company's most recent office policy document. That document undeniably helped me enormously with my thesis.

More generally, I'd like to thank everyone at BDO for their willingness and time to talk to me, despite the current very difficult context, and for their interest in my project.

I'm also grateful to my family, who have never ceased to support and encourage me throughout the writing of this thesis and my studies.

Finally, I'd like to recognize the involvement of my friends and the importance of our relationships based on mutual help and support.

Abstract:

Following the COVID-19 crisis, between 40 and 60% of Belgians (Thisse et al., 2021) found themselves teleworking. This was a real disruption to the way companies were organized, but it was the only solution that enabled them to maintain their activity. The spread of home-based telecommuting has supported the development of what is now known as "hybrid work", alternating presence and co-presence within work teams. This type of work organization is made possible by the development of technological communication methods. Although hybrid working has enabled many companies to maintain their economic activity during the crisis, it is associated with social and collaborative risks for employees.

This master thesis attempts to define what hybrid working is, in the light of existing management science literature and related notions, and presents the results of a case study carried out at a Belgian audit and consultancy firm. Following the pandemic crisis, this company implemented an Activity Based Office work structure, allowing people to decide on the environment in which they wish to work, depending on their activity. Collaboration is approached from the angle of knowledge sharing, and thirteen workers were questioned about the conditions of collaboration in a hybrid context, and more specifically, in the ABO context, through semi-structured interviews. Although hybrid working has a negative effect on collaboration, the workers interviewed show that they have re-regulated their work interactions to preserve a minimum of quality knowledge sharing and remain collaborative.

UNIVERSITÉ CATHOLIQUE DE LOUVAIN
Louvain School of Management

Place des Doyens, 1 bte L2.01.01, 1348 Louvain-la-Neuve
Boulevard Emile Devreux 6, 6000 Charleroi, Belgique
Chaussée de Binche 151, 7000 Mons, Belgique
www.uclouvain.be/lsm

Table of contents

Part 1 : Theoretical framework

Chapter 1 : Hybrid work

- 1.1 History and evolution of hybrid work
- 1.2 Definition
- 1.3 The implications of hybrid work
- 1.4 Conclusion

Chapter 2 : Collaboration

- 2.1 Definition
- 2.2 Obstacles to collaboration
- 2.3 Levers to enhance collaboration
- 2.4 Conclusion

Chapter 3 : Impact of COVID-19 on the collaboration

- 3.1 Levers for collaboration in hybrid work environments
- 3.2 Challenges for HR management

Chapter 4 : Methodology

- 4.1 Research method
- 4.2 Method for analyzing the data collected

Part 2 : Practical framework

Chapter 5 : Results

Chapter 6 : Discussion

- 6.1 Contributions
- 6.2 Activity-based office
- 6.3 Managerial implications
- 6.4 Limitations and perspectives

Bibliography

Appendices

Introduction

The experience of the exceptional situation of the health crisis in 2020 has led companies to face up to this challenge quickly by implementing new procedures and managerial practices. Due to the seriousness of the crisis, the Belgian government instituted measures to protect the population and reduce the spread of the virus. Subsequently, the Belgian government cancelled numerous cultural and social events and closed the country's borders, thereby generating economic disruptions. Managers were forced to rethink their organizational practices in order to maintain a cohesive work organization, while respecting the sanitary measures imposed by the government. To this end, it is undeniable that the design and organization of businesses had to be reorganized to ensure that collaboration among employees was not overly impacted. Many companies introduced a hybrid work policy, enabling employers to work remotely and/or on site. Consequently, it seems meaningful to analyze the impact that the COVID-19 health pandemic has had on the collaboration in a hybrid work environment among coworkers. The present thesis will therefore attempt to answer the following question: "What is the impact of the COVID-19 health pandemic on the collaboration in the context of hybrid work?" This will first be done through a theoretical analysis allowing to define and analyze the key concepts of this question. As such, the first part of this paper will be subdivided into three chapters, namely, "hybrid work", "collaboration" and "impact of COVID-19 on the collaboration". After defining hybrid work in relation to similar notions, and considering collaboration as a knowledge-sharing process, we conducted a case study and questioned the members of an organization that structures work according to the Activity Based Office organizational form. Through thirteen semi-structured interviews, we seek to understand the impact of the pandemic crisis on workers' collaboration, and the extent to which this work organization supports, or does not support, collaboration. These semi-structured interviews support our theoretical observations and confirm the essential role of presence in the maintenance, development and sharing of knowledge, but also show how employees appreciate the ABO structure as a work organization, encouraging exchange and collaboration. Finally, our research questions the capacity of the conceptualization of both social ties and knowledge sharing to render the human dimension necessary for the existence of work communities. The question of collaboration in HRM is thus finally placed in perspective with Human Management, offering a critical and moral perspective to the study of these social phenomena in the workplace.

Part 1 : Theoretical framework

Chapter 1 : Hybrid work

1.1 History and evolution of hybrid work

First of all, we will retrace the history of the office through this section. The office as we know it today is not the same for everyone, and has not always been so. In fact, traditionally assigned to administrative tasks and intellectual production, office work has triggered changes in the work space over the centuries. These transformations of the space are due to the increasingly fast treatment of information, productivity and the constant evolution of technologies.

Initially, work manifests itself in a nomadic form. The first appearances of intellectual work are found in the work of monks and scribes. They did not have their own work station but went wherever they were called. Later on, when the worker became sedentary, the workplaces started to become more functional and productive. This sedentarization will then create workplaces where social interactions and the human dimension exceed the concept of productivity and profitability.

Therefore, this section will explore the history of the office and describe how it has progressed from a place of isolation and concentration to a place of co-working and open spaces.

Isolation and concentration

The work we know today really emerges in the Middle Ages. This is why it is interesting to begin the study of its evolution at this time. The way of working we are referring to here is the wage-earner. (Pelegriin Genel, 2006) Indeed, in the Middle Ages, the first jobs that are closely related to those of employees were filled by monks. The space dedicated to their activity is called the scriptorium, and consists of a writing cabinet and a bench. As thus, the scriptoria can be considered as the ancestors of the offices. Monks performed these writing activities in the monasteries and in complete isolation and concentration.

So far, the intellectual production was exclusively present in the religious world. However, the intellectual production will appear in the scientific and commercial world from the beginning of the renaissance, in the 13th century. (Jaccard, 1960) This marks the emergence of

entrepreneurship. Techniques are becoming more sophisticated and the economy is looking for workers who have obtained an education. Profit is sought because it is no longer immoral.

But until now, commercial spaces were in the form of family counters. In general, these counters were in the same space of the house. The whole family participated in its development and the father of the family was responsible for it. In this context, there is no separation between the work space and the personal space. Traders will then start to use work tables for their accounting and for drawing up contracts. (Pesqueux, 2001)

Later, these tables will serve to calculate thanks to counting masters, known today as "computers". The office is thus considered as a place of processing and production of information. (Schronen, 2003) However, this system will evolve and specific rooms for storage and writing will be created in the houses. Thereafter, the craftsman will begin to hire personnel in order to be able to delegate part of his work. Starting from this moment, a hierarchy will appear between employer and employee within the family offices. From these changes in the functioning of the family counter, home and business become two separate places that live at different rhythms. There is now a separation between the personal space and the work space and between private time and work time.

Industrial company and rationalized offices

The first commercial headquarters and international exchanges began in the 18th century. At the time of the first international exchanges of the sovereign states and their colonies, the authorities multiplied the creation of centralized administrations also called commercial seats. Their purpose was to facilitate the administrative and monetary distribution. The exchanges being globalized, it became easier to centralize the process. The major capitals therefore built imposing buildings that grouped workers together to increase efficiency.

From the 19th century, the work spaces will undergo great mutations. The banks built buildings dedicated to their business. These spaces had their proper architecture. The image that the company gives, through the architecture of the building becomes very important. It takes on a new symbolism. (Hsin-Wei Lin, S, 2017)

Shortly after the Second World War, the "bürolandschaft" was born. This concept refers to "office layout" and was attributed to a post-war office model that was popular in Europe. (Hsin-Wei Lin, S, 2017) The bürolandschaft was one of the first movements to organize offices in open space. It

was organized around the needs of the worker and sought to break the rigid structures erected by Taylorism. Management consultants consider that these new spaces should promote group work and the exchange of information, but also reduce hierarchy and encourage decision-making.

Counter-effect of the open office

However, these great changes were not without effect on the way of life in the office. After 1970, the open space had a counter-effect. The lack of privacy has led workers to have an ever-increasing sense of control, thus creating discomfort in the office design. Architects will then look for new solutions to respond to these problems and their first goal will be to encourage more social relations between employees and increase the notion of well-being at work. Architects and designers will try to respond to this problem by proposing unassigned, which will offer a new way of conceiving space. (Hsin-Wei Lin, S, 2017)

COVID-Pandemic

The beginning of the year 2020 has been marked by an unprecedented health crisis, characterized by experts as the greatest challenge the world has faced since the Second World War (UNDP, 2022). Being highly contagious, the virus spreads throughout the world in a few months and this infectious disease reaches the status of a global pandemic. Considering the critical nature of the situation, the reaction of various countries to this new virus, for which there is at that moment no treatment, the government decided to confine the population. Consequently, companies have been forced to adapt to these new measures and review their organization. As such, many companies have adopted hybrid work, allowing to combine face-to-face work with remote work.

In this work, we will explore hybrid work, its challenges for human resources as well as the challenges for collaboration.

1.2 Definition

This pandemic has led to the emergence of hybrid work, combining face-to-face and remote time. In order to ensure business continuity, the glass bottom of the all-presence system has been broken (Autissier, Peretti, Besseyre des Horts et al., 2021). Although not widely covered in the scientific literature, hybrid work was first mentioned in 2005 by Halford. However, as this concept is gaining widespread recognition, how does it differentiate itself from similar concepts such as teleworking/telecommuting, commuting, distributed work, open space, flexwork and activity-based office?

Teleworking/telecommuting	Refers to the exercise, wholly or partly at a distance, of a professional activity by means of information and communication technologies (Taskin, 2021). Nevertheless, the following three conditions characterize the exercise of telework: physical distance, the use of information and communication technologies (Taskin, 2003; Breton, 1994) and the frequency the time teleworked (Taskin, 2006).
Distributed work	Implies that workers are enabled to combine multiple workplaces, including a combination of their home location, the employer's workplace, and any other third location (e.g., train stations, buses, hotels, etc.) in order to perform the required work (Hislop & Axtell, 2009; Taskin & Dietrich, 2020). Several features are characteristic of this concept (Rober & Kim, 2009): (1) multiple workplaces, (2) with the use of information and communication technologies for communication and interaction, and (3) workers may come from different parts of the same organization or from different organizations.
Open space	Refers to a collective workspace in which the different desks are not separated by any partitions. Employees do not have assigned workstations. This practice is also known as non-territorial offices, desk sharing, flexi desk, desk sharing, or hot-desking (Wohlers & Hertel, 2017).
Flexwork	Refers to the combination of home and/or mobile telecommuting and the implementation of flexible workspaces (Ajzen & Taskin, 2021; Taskin et al., 2019). This organizational mode combines both spatial and temporal flexibility, with floating schedules for workers flexibly using workspaces.
Activity based office	Characterized by a varied offering of zones - areas - and modules, where all of them are established to meet specific types of tasks (Kingma, 2018). Wohlers and Hertel (2017) define the activity-based workplace as a work environment featuring an open-space main area along with spaces providing more privacy. Spaces are multiple and flexible, such as closed offices, small lounges, coffee area, open spaces, phone booths, and meant to serve the different tasks and needs of employees.

Table 1 – Definition of close notions of hybrid work (Jullien, Taskin, 2022)

Consequently, hybrid work refers to a way of organizing work structured around the activities to be performed, shared in different workplaces (home, company premises, cyberspace and any third place) while using information and communication technologies to perform tasks and nurture relationships as well as providing flexibility for workers to organize themselves in these different locations according to their activities. (Halford, 2005; Rabha, 2021; Kaul, 2021)

1.3 The implications of hybrid work

As we saw, Hybrid work can be associated with other work methods, such as flex office, co-working or smart office. As such, the hybrid employee does not necessarily enjoy his own office, within the company. The space and working hours of the hybrid worker are more flexible than those of an employee working only on site, which allows him to be more productive.

Many of the benefits of hybrid work are identical to those of telecommuting, such as increased productivity and engagement (Rabha, 2021). According to Halford (2005), the hybrid model also offers a gainwin situation, combining on-site presence that allows for the maintenance of face-to-face interactions and telecommuting that creates a space for privacy and cost reduction.

However, hybrid work also brings some challenges. Indeed, social ties are more difficult to create, the mental strain is heavier, and unplanned interactions are rare (Miller, 2021; Dixon, 2020). Accordingly, Miller identifies the following 4 major issues:

First, hybrid work comes along with some issues in terms of information sharing and accessibility. Facilitating the flow of information is one of the key challenges of hybrid organizations. Indeed, poorly organized and/or unavailable information can lead to wasted time, wrong decisions, and even misunderstandings between colleagues.

Secondly, in terms of communication, it is important to organize interactions more in a hybrid work mode, as interactions are often less spontaneous, or even less frequent, when a team is spread out across different sites.

Thirdly, the management of a hybrid team represents a major challenge for the manager of a hybrid team. Indeed, it is no longer possible to evaluate the work of each person according to the time spent on a task. To keep his teams motivated and committed, the manager should regularly check in with each of his collaborators, by privileging direct conversation modes (for example: chat rather than e-mail, and videoconference rather than telephone) in order to make communication more fluid.

Finally, because of its flexible nature, hybrid work can also tend to blur the boundaries between work and private life. This can leave employees feeling pressured to be available 24 hours a day, and can lead to demotivation and isolation. These considerations point towards a distancing of workers from work collectives, a less frequent relationship with work, and relations that become more instrumental and distant. Hybrid work can therefore have significant consequences on social ties by increasing workers' feeling of representing "resources" for the organization and justifying the behaviors observed: feelings of isolation, distance and instrumentalization.

Moreover, when hybrid work is combined with an open space environment, a feeling of depersonalization among employees is even more noticeable. In fact, the more an employee works

in an open and depersonalized environment, the more he might experiment a feeling of dehumanization. (Parmentier, M., Donis, C., Taskin, L., & Stinglhamber, F. (2016)).

This "organizational" dehumanization refers to "the experience of an employee who feels objectified by his or her organization, denied any subjectivity, and who feels like a tool or instrument to achieve the organization's goals" (Bell & Khoury, 2016). The more shared and depersonalized the type of office, the more the worker will experience a feeling of dehumanization." (Parmentier, M., Donis, C., Taskin, L., & Stinglhamber, F. (2016). Given this observation, alternative approaches should be considered, such as Humane Management, which focuses not exclusively on measuring and reducing people to indicators, skills, knowledge, contracts, working hours, etc. (Taskin & Dietrich, 2020).

From this perspective, individuals are considered as human beings, thoughtful persons who must be managed in a humane way. According to these authors, the purpose of human management must be to consider work recognition, which is influential on the employee's commitment, and consequently, on the work result as well. This recognition is linked to three work experiences, namely, objective work (production of something of value), subjective work (unique life experience) and collective work (collective experience of collaboration and identification). Human Management therefore plays a crucial role in the re-humanization of work (Taskin & Dietrich, 2020).

Besides, many authors highlight significant implications in terms of collaboration in a hybrid work mode. Therefore, it seems relevant to devote the following section to the analysis of collaboration in the first place, and then to analyze it in the context of hybrid work.

1.4 Conclusion

Following the previous analysis, it seems that the design of work organisation in the corporate sector has evolved in recent years. Indeed, this reorganization of work spaces is part of a broader context of work transformations and financialization of the economy and management. The mutation of the "office" responds both, to two different needs, namely, the needs of workers for flexibility and well-being at work and, the needs of companies seeking to reduce their costs and "modernize" their management practices through their office designs, with the aim to promote a renewed conception of work and of the company (Felstead, Jewson and Walters, 2005; Kelliher &

Richardson, 2012). As such, hybrid work appears to provide a satisfying solution during the COVID-19 crisis by allowing collaborators to alternate physical presence in the office and telecommuting from home.

Chapter 2 : Collaboration

In the continuation of this analysis, it is necessary to define the notion of collaboration, to apprehend its obstacles and to enumerate the levers to facilitate collaboration in a hybrid work environment.

2.1 Definition

In order to better understand the concept of collaboration, it is important to define it through a comparative table, in relation to similar concepts, namely, communication, cooperation, coordination and organization.

Communication	Represents the sharing of knowledge and information. Thus, the communication allows to establish a set of signs and information that are useful for it towards its target in order to achieve its objectives. (Chrislip, 2002)
Cooperation	Collective organization of work in which the task (expected result) is fragmented into subtasks. The work is done by the accumulation of individual activities, where each person (actor) knows what he has to do from the beginning and whose communication, exchanges or sharing of elements will be to achieve his individual goal. The achievement of the set objective is done through a progressive and coordinated succession of actions of each person (Girard, 2014)
Coordination	Coordination refers to actions and procedures designed to make the behavior of various actors (or groups or individuals) coherent or at least compatible with each other. (Alpe, Y. & Beitone, A., 2013)
Organization	An organization is the rational coordination of the activities of a number of people for the achievement of a common explicit goal, through a division of labor and a hierarchy of authority and responsibilities. (E.H. Schein, 1970)

Table 2 – Close notions to the concept of collaboration

Therefore, collaboration can be defined as the organization of work which is understood on a situation of collective work where the tasks and the goals are common. The work is done through the amalgamation of individual contributions with continuous adjustments and realignments and implies a mutual commitment of people (actors) in a coordinated effort to perform the same task

and/or solve the same problem together. Thus, the work requires greater interdependence, motivation, and interpersonal trust from the team. (Girard, 2014)

Therefore, the purpose of collaboration is to create a shared vision and articulated strategies for the emergence of common interests beyond the boundaries of each particular project (Chrislip, 2002).

Based on the forms of organization described by Mintzberg (2002), we consider "adhocracy", also called innovative organization, as the form of structuring that is the most adapted to the specificities of collaborative work and adaptable to different types of projects. This type of structure is organic and corresponds to an evolving environment, allowing to meet the requirements of a complex environment. Indeed, in order to adapt to such a context, one must be able to innovate, and as Mintzberg highlights : "sophisticated innovation requires a configuration (...) capable of merging the work of experts belonging to various disciplines in project groups formed according to needs and working smoothly" (Mintzberg, 2002). This is coordinated by mutual adjustment and thus by an exchange between the parties and relies on project groups bringing together different skills.

The main characteristic of this type of structure is that it does not have a technostructure, since it is not possible to standardize work processes, knowledge or results. The composition of the groups varies according to the project. It is a flexible organization designed to respond to the variability of markets, but it is the project, that unites the group. Therefore, the leader's role is to coordinate and synthesize the work carried out by the various collaborators. (Mintzberg, 2002)

2.2 Obstacles to collaboration

As mentioned previously, in collaborative work, the individual participates in the result but often without his or her participation being identified or even measured. Indeed, the action is individual but integrated in order to achieve a collective project. It is consequently a way of sharing knowledge, contributions and results, which makes it essential to distinguish between individual and collective obstacles. (Pomian, Roche, 2002)

Individual obstacles

Therefore, we will first specify the individual challenges, namely, the cognitive factors (in particular the knowledge related to the specialty of collaborative work and the procedural

knowledge), the volitional factors, the individual spirit of competition and the protectionist temptation. (Pomian, Roche, 2002)

Cognitive factors	- Knowledge related to the specialty of collaborative work, which implies intellectual knowledge required in the specific framework. - Procedural knowledge to enable the handling of tools.
Volitional factors	The fact of not feeling legitimate in one's contributions and fearing the critical look of the other participants. Volitional factors lead to questioning the conscious process of organizing actions, with the aim of deliberately reaching the predefined objective. These factors lead individuals to act or refrain from acting after having processed the information available to them.
Individual spirit of competition	Traditionally opposed to the spirit of collaboration and based on an ideal image of oneself with a desire to outperform others and get personal recognition, which is often incompatible with a collective approach where the personal contribution is not identifiable and where, as a result, the individual value is not measurable.
Protectionist temptation	When the apprehension of a loss of power linked to the possession of information and to the possibility of deciding on its dissemination or its retention, the “knowers” might be reluctant to share their knowledge.

Table 3 – Individual obstacles to collaboration

Collective obstacles

Collaborative work is a form of collective intelligence resulting from the pooling of knowledge. Therefore, some of the obstacles to collaborative work are also located at the collective level. In this context, we will distinguish successively the obstacles in an organizational framework.

Organizational configuration	The choice of an organizational configuration must be in line with the collaborative model of the organization. (Mintzberg 2002, Pomian, Roche, 2002)
Degree of autonomy	The more uncertainty there is in the realization of a project, the more initiative should be encouraged. The employer can therefore look for either an ability to obey or an ability to take initiative. (El Kadiri et al. 2008)
Financial and technical obstacles	This might concern the complexity of tools, their limited availability, the restrictions brought about by the security systems put in place, the insufficient capacity of the computer tools or the high cost of certain proposed solutions. (El Kadiri et al. 2008)
Free riders	A few members of a group who cluster together and evade the collective effort while seeking to benefit from it, minimizing or even avoiding any involvement. The larger the group, the less sensitive the marginal contribution will be, and the more individuals may be tempted to remain on the sidelines if the ratio between the individual cost and benefit of the collective action is thus more favorable. (Fontaine, 2014)

Table 4 – Collective obstacles to collaboration

2.3 Levers to enhance collaboration

Now that we have identified the obstacles that may compromise an effective collaboration between employees, it is important to highlight the levers that promote collaboration between collaborators.

To this end, we can refer to the synthesis of the research done by Nancy Aumais, Stéphanie Laflamme and Catherine Venne in the context of the international seminar on the analysis of levers favouring inter-team collaboration. The authors identified individual, psychosocial and organizational levers. In the context of our study, we focus on the organizational factors, which are the most relevant in our analysis. (Aumais, N., Laflamme S., Venne, C., 2012)

Accordingly, the first organizational factor identified concerns the organizational structure of the company. The authors state that neither a centralized nor a decentralized structure influences inter-team collaboration. Indeed, although the organizational structure seems to have an impact on collaboration, the type of structure (centralized or decentralized) that promotes it remains uncertain.

Second, the report emphasizes the critical necessity of clarity regarding roles and responsibilities. Indeed, it is essential that roles and responsibilities are properly clarified and communicated in order to improve collaboration.

In addition, organizational culture has an impact on inter-team collaboration. As such, fostering a sense of belonging to the organization, creating opportunities to openly share good practices and maintaining an open climate are actions that promote inter-team collaboration. In this context, establishing and communicating a common purpose and vision facilitates work and collaboration.

Besides, the research (Aumais, N., Laflamme S., Venne, C., 2012) encourages companies to set up a policy for allocating and sharing resources between teams. In this context, it is important to establish a clear coordination mechanism and known procedures. Hunt (1992) suggests a way to bring cohesiveness to a team, by using team-building activities. According to the author, the essential criteria for group cohesion are collective problem-solving, motivation, avoiding status differences and having a good time together. However, although inter-team collaboration is a collective mechanism and can be measured by collective performance indicators, their approach remains individual, meaning they must be evaluated on the competence "teamwork" or "collaboration" on an individual basis.

For the purposes of this paper, it is interesting to think of collaboration in terms of knowledge sharing. Indeed, collaboration is a relatively unoperationalizable, rather broad notion whose definition will depend on the context analyzed (Patel et al., 2012). To understand collaboration, we therefore consider it as knowledge sharing. Indeed, according to Suto & Patitad (2015), "collaboration is first and foremost a communication process emphasizing knowledge transfer functionalities". Furthermore, Coutant & Caillet (2015) equate collaboration with a state of mind that enables two individuals to work together to achieve a common goal. They add that "this way of thinking generates permanence in the notion of sharing. Permanence, which materializes in a constant willingness to share, synchronously or not, activities, thoughts or knowledge" (Coutant & Caillet, 2015). We can conclude that collaboration is only possible on the basis of permanent knowledge sharing.

Therefore, it also seems relevant to call on the research of Cabrera & Cabrera, which highlights practices encouraging knowledge sharing between employees. Knowledge sharing can be defined as interpersonal interactions involving the communication and reception of knowledge from others. The underlying idea is that human interactions are the main sources of knowledge sharing (Argote & Ingram, 2000; Sergeeva & Andreeva, 2016). This process therefore refers to knowledge sharing both interpersonally, and between groups, divisions or departments. More globally, it refers to the contribution of individuals to the collective knowledge of an organization (Cabrera & Cabrera, 2002; Lu et al., 2006). Sharing knowledge is crucial in business and can be likened to an indicator of efficiency and effectiveness. (Trong Tuan, 2012; Wang et al., 2014; Lu et al., 2006).

In this way, we highlight the main socio-psychological and HRM levers for improving knowledge sharing. (Cabrera & Cabrera, 2005)

Socio-psychological levers	Explanation
Social ties	Social ties are defined by Cabrera & Cabrera (2005) as "the ties or connections among network members". In the case of a "strong tie", the frequency of interaction is high and the proximity between individuals is considered strong, increasing knowledge sharing.
Common language & communication	" Le langage et les récits partagés augmentent la compréhension mutuelle entre les individus, ce qui les aide à communiquer plus efficacement " (Cabrera & Cabrera, 2005).
Trust	"The willingness or motivation to share will be higher when employees trust and identify with one another » (Cabrera & Cabrera, 2005)

Group identification	According to Cabrera & Cabrera (2005), when employees identify strongly with the group, they are more likely to share and contribute to knowledge sharing.
Time	Employees may be genuinely reluctant to devote their time to knowledge sharing if they don't see the point. (Cabrera & Cabrera, 2005). In this context, it is necessary to provide formal and informal spaces for taking the time to share knowledge, as well as to acquire new knowledge (Goh, 2002; Seba et al., 2012).
Leadership	Cabrera & Cabrera (2005) explain that by supporting their employees, leadership develops an organizational culture of trust, respect and benevolence, encouraging them to share their knowledge.
Organizational structure	The organizational hierarchical structure impacts communication, which in turn is a lever for knowledge sharing (Seba et al., 2012).
HRM levers	Explanation
Work design	Rather than designing individualized tasks, work could be conceptualised as different assignments where employees work closely with other employees. This kind of designs would encourage lateral linkage across functions, geographical locations, business units and companies. (Cabrera & Cabrera, 2005)
Recruitment	According to Cabrera & Cabrera (2005), it is important to pay attention to shared norms and group identification in staffing activities, and to establish a recruitment process that identifies individuals who share the same values as the organization.
Communication	Cabrera & Cabrera (2005) emphasize two-way, face-to-face discussions as a means of exchanging information.
Development and training	The use of training and development programs can be implemented to increase employees' sense of self-efficacy, fostering knowledge sharing (Cabrera & Cabrera, 2005).
Performance appraisal and reward	Recognizing and rewarding knowledge-sharing behaviors shows employees that they are valued (Cabrera & Cabrera, 2005).
Organizational culture	An organizational culture conducive to knowledge sharing fosters an environment conducive to sharing, caring and trust, and thus encourages the creation and sharing of knowledge among its members (Cabrera & Cabrera, 2005).

Table 5- Socio-psychological levers and HRM levers for knowledge sharing (Cabrera & Cabrera, 2005)

In the context of collaboration, it therefore seems obvious to focus more on knowledge sharing, which implies that one unit (eg. a group) benefits from the experience of another, thus contributing to the collective knowledge of the organization (Argote & Ingram, 2000; Cabrera & Cabrera, 2005; Lu et al., 2006). Using to these identified levers, we can explore the impact of COVID-19 on collaboration in the context of hybrid work in the following section.

2.4 Conclusion

Finally, this section provided an in-depth analysis of collaboration in the office design. Indeed, we considered it crucial to firstly establish a clear definition of collaboration. Afterwards, we discussed the different mechanisms of collaboration and traced the history and evolution of collaboration within the office design. In addition, we decided to define collaboration as knowledge sharing and identified obstacles as well as critical levers for knowledge sharing.

Chapter 3 : Impact of COVID-19 on the collaboration

Now that we have defined hybrid work in relation to related and more well-recognized concepts, as well as discussed collaboration in a general sense along with its barriers and implications, it is important to explore collaboration in the context of a hybrid organization.

For several months, the health crisis and the imposed confinement made hybrid working more prevalent. Although confinement is no longer imposed, and health measures no longer restrict working practices, many companies maintain an organizational structure that promotes hybrid working (Gartner Research, 2021).

In this context, it is important to take into account the levers associated with knowledge sharing mentioned in the previous section and the various implications of hybrid work (section 1.3), according to Miller and Dixon (2021; 2020). By comparing these implications with the levers in the previous section, we see that the social link is a considerable lever for knowledge sharing, and hence for effective collaboration, but also a consequent implication in the context of hybrid work. Indeed, social ties are both a fundamental lever for knowledge sharing (Cabrera & Cabrera, 2005), and a major concern for the hybrid work context, notably through the importance of preserving presence, team cohesion and collaboration (Taskin, 2020; Miller, 2021; Dixon, 2020). Indeed, Taskin (2021) states that, "in terms of social ties, the relationship between telecommuting frequency and social isolation was quickly established". Taskin (2021) continues: "Thus, the more an employee teleworks, the more socially isolated he or she feels. This social isolation can itself lead to a form of desocialization, invisibilization and even dehumanization that hinders collaboration at work, particularly the ability to share knowledge". Social ties, potentially threatened by the hybrid work context, are nonetheless decisive for knowledge sharing and hence

collaboration. As a result, we can consider the social ties between collaborators as essential to knowledge sharing and collaboration in the context of hybrid work. It therefore seems relevant to highlight the elements that strengthen the social ties.

Miller and Dixon (2021 ;2020) also mention that, in the context of hybrid work, unplanned interactions are rarer. This can be linked to the study by Cabrera & Cabrera (2005), highlighting the importance of interactions between collaborators and of good communication to improve knowledge sharing. Indeed, Cabrera & Cabrera (2005) point out that when employees are face-to-face, together and in the same space, the frequency and number of exchanges between them is greater, which not only increases the frequency of information exchanges, but also strengthens their bonds of familiarity. This reinforces the feeling of belonging to a community and encourages the likelihood of sharing. As a result, co-location seems crucial to effective communication and knowledge sharing. Additionally, due to the pandemic, there has been a decline in synchronous communication and an increase in asynchronous communication. Together, these effects tend to make it more difficult for employees to acquire and share new information across the enterprise network. (Yang, L., Holtz, D., Jaffe, S. et al., 2022)

However, Cabrera & Cabrera (2005) state that, although technology and its means of communication can be effective in facilitating certain exchanges, they cannot replace face-to-face exchanges, which are essential to the development of trust between employees.

Furthermore, Cabrera & Cabrera (2005) point out that a corporate structure that brings employees together in an informal setting, such as a lounge, coffee bar or informal activities, increases opportunities for increasing social capital through high band-width communication. It would seem that this type of corporate structure described by Cabrera & Cabrera (2005) corresponds to an Activity Based Office work organization, as described in Table 1 in section 1.2, and represents a hybrid form of work. It is therefore important to note that to encourage collaboration in a hybrid environment, humane management also has a crucial role to play and must provide support and adequate infrastructure to ensure effective collaboration between collaborators.

3.1 Levers for collaboration in hybrid work environments

Hybrid collaboration involves that the communication between collaborators is not only based on live interaction - meaning that there may be a delay in responses between communicating parties.

This allows collaborators to work together on each other's schedules without being active at the same time. Employees connect when they are available, do their work separately and exchange via an asynchronous tool or platform.

As previously mentioned, it appears that the social link is a fundamental lever for knowledge sharing (Cabrera & Cabrera, 2005). However, the practice of hybrid work could question and threaten the conditions for the preservation of presence, team cohesion and collaboration (Taskin, 2021a; Van Caloen, 2021; Miller, 2021; Dixon, 2020; Kaul, 2021). Therefore, it is important that in order to ensure effective collaboration between collaborators in the hybrid work environment, the social connection between them is maintained despite their dispersed work.

Therefore, the company can stimulate asynchronous work through different mechanisms, such as allowing employees to work at their preferred rhythms (chronobiology), setting synchronous and asynchronous time blocks in their agenda, to think together asynchronously and to co-construct a presentation, reducing the time of meetings, or even establishing time slots where meetings are prohibited. (Gartner Research, 2021) Moreover, using high band-width communication can also facilitate knowledge sharing. (Robertson & O'Malley, 2000)

A recent scientific analysis from Yang, L., Holtz, D., Jaffe, S. *et al.* demonstrates that remote working on an organizational scale made the employees' collaborative networking become increasingly more static and silo-based, with less cross-over between separate entities. Moreover, the study suggests that knowledge transfer and collaboration are also affected by the modes of communication that workers use to collaborate with one another. On the theoretical front, media richness theory states that richer communication channels, such as in-person interaction, are best suited to communicating complex information and ideas, whereas asynchronous communication channels (such as email) are better suited for conveying information and synchronous channels (such as video calls) are better suited for converging on the meaning of information. (Yang, L., Holtz, D., Jaffe, S. *et al.*, 2022)

It would seem that changes in collaboration patterns may impede the transfer of knowledge and reduce the quality of workers' output. (Soda, G. B., Mannucci, P. V. & Burt, R., 2021)

Cabrera & Cabrera (2005) also suggests multiple HR practices that could strengthen social ties and encourage knowledge sharing. In this sense, open communication, egalitarianism, fairness in

decision-making processes seems to increase trust and enhance collaboration among collaborators. Creating a culture of knowledge sharing and caring, as well as rewarding knowledge-sharing behaviours would increase such behaviours. Moreover, supportive HR practices, such as training and development programmes (Beugelsdijk, 2008), seem to have positive effects on the behaviors of collaborators, as they feel that the organization is willing to invest in them. (Cabrera & Cabrera, 2005).

3.2 Challenges for HR management

As we saw, in order to enable collaboration in a hybrid work environment, humane management also has a crucial role to play and must provide support to ensure effective collaboration between employees. With this in mind, the challenge for human management is to align HR strategies with the company's strategy. Taskin and Dietrich (2020) point out that an HRM practice cannot be evaluated in isolation but is assessed in terms of its fit with other corporate strategies. This links the company's objectives to HRM in order to improve worker productivity and develop a corporate culture that promotes innovation and flexibility (Truss & Gratton, 1994, as cited in Chaher and Ali Dhen, 2007). HR actions should be aligned with the specificities of the organizational, economic, cultural and technological context of the concerned organization (Taskin & Dietrich, 2020).

Our objective is not to promote nor to discourage the adoption of particular practices but to consider the management by bringing the people aspect to the forefront of its objectives. Exploring the different types of collaboration methods in hybrid environments as well as the levers for knowledge sharing should allow managers to implement a structure that will enable them to deal with the current issues related to the health crisis. This leads us to the problematic addressed by this report, which is : What is the impact of the COVID-19 health pandemic on the collaboration in the context of hybrid work?

To answer our question, we will carry out an exploratory, qualitative case study of the impact of the COVID-19 health pandemic on the collaboration on various teams who work in a hybrid work environment. This case study constitutes the empirical part of this dissertation.

Part 2 : Practical framework

Chapter 4 : Methodology

In order to answer our research question, and given that we are dealing with the perception of the elements of the pandemic crisis and collaboration, it seems interesting to us to carry out a qualitative study via a dozen semi-directive interviews. With this in mind, and in an attempt to answer our research question, we conducted a qualitative, exploratory case study of the impact of the COVID-19 health pandemic on the collaboration on 4 teams who work in a hybrid work environment at BDO. This chapter describes the methodological approach taken in this study and justifies our choices.

4.1 Research method

Approach: qualitative

Given that the research question, social ties and collaboration are concepts that cannot be measured, the quantitative approach is not relevant. Therefore, the research is called "qualitative". The intention is to "give meaning", based on the study of action and behaviour (Roussel & Wacheux, 2005). Indeed, this approach aims to explore a phenomenon, a behavior, in order to develop an in-depth understanding of it based on a precise research question (Willig, 2013). The primary objective of a qualitative analysis is to study a social phenomenon in depth. It is a widely used analysis in management science. In terms of data collection, qualitative research allows for greater flexibility because of its extensive interview guide. (Aubin-Auger et al., 2008).

Besides, this technique allows for a clear and structured idea of the order in which the themes will be addressed. It also makes it possible to come back to what the interviewee is saying and to rebound with additional questions. This technique is flexible because the interviewer has the opportunity to change the questions slightly during each interview and to allow freedom in the interviewee's responses. Qualitative research is particularly appropriate when the factors observed are subjective and therefore difficult to measure. The perception of an organizational structure and team collaboration are indeed subjective factors that cannot be measured. This type of study allows

us to understand the behaviors, personal experience and perception of the interviewees on a given subject (Aubin-Auger et al., 2008).

Research strategy: case study

Our qualitative method is based on a case study. The researcher, Robert K. Yin (1994), has defined the case study research method as an empirical inquiry that explores a contemporary phenomenon in its actual context; where the boundaries between the phenomenon and its context are not clearly established; and in which multiple sources of evidence are used. According to Yin (1994), this choice is particularly appropriate when the research question is exploratory (formulated as a how), when there is little control over events, and when studying a contemporary phenomenon in its actual context (managers and team were interviewed in the workplace). We therefore meet all three criteria.

According to Yin (2003, cited in Musca, 2006), there are four types of case study design, depending on the number of units of analysis (one or several) and the case(s) studied (single or multiple). (Appendix 1) In our case, we prefer a single case with several units of analysis. Indeed, we are focusing on a single organization, with the aim of interviewing people subject to the same organizational context. Within this organization, we will be looking at several teams, so there will be several units of analysis, which is then considered an "embedded case study". The study of several units enables us to multiply the angles of approach to the phenomenon under study, to bring out new understandings, to confront them with rival explanations, and to test their relevance with other units during the course of the study itself, thus reinforcing its internal validity and the validity of the construct (Yin, 2003, cited in Musca, 2006).

According to Albarello (2011), the case study must integrate various methodological constraints in order to not be limited to a description: specify the case, specify the research object, justify the choice of case, guarantee the richness of the data and write the report. The case is collaboration within teams working in a hybrid context at BDO, the research subject is how managers and employees perceive this collaboration since COVID-19 and the hybrid working measures put in place by BDO, the reasons for the choice of case are set out later in this chapter, the richness of the data is guaranteed through the use of a variety of sources (study of internal documents, observation and semi-directive interviews) and the report is the writing of this dissertation.

Choice and presentation of company

In order to answer our research question, we conducted the case study within the company BDO Belgium. BDO is a network of audit firms, and more specifically, the 5th largest audit firm in the world. This company aims to be a dynamic company able to quickly adapt to environmental or political changes, as well as according to the needs of its employees. The health crisis also impacted BDO Belgium, which, following the measures imposed by the government, reviewed its organizational methods in order to provide its employees with even more remote working. However, due to the frequent appointments with clients or travels abroad, the company had previously implemented extensive teleworking procedures in combination with on-site work. However, the company was required to extend its mechanisms to all its employees and to develop a large-scale hybrid work system, allowing its employees to combine remote and on-site work on a larger scale. (BDO, 2023)

The data collection

Semi-structured interviews (primary data)

We combined several sources of information, namely primary data, the semi-structured interviews, and secondary data, internal documents.

In the management context, the interview is the most widely used qualitative data collection tool (Romelaer, 2005; Demoncy, 2016). Different types of interview are possible, some being more directed and directive than others. In the context of management studies, the "semi-structured interview" is the most appropriate, i.e.: « An interview mode in which the researcher leads the respondent to communicate numerous, detailed and quality information on subjects related to the research, influencing him or her very little, and therefore with guarantees of absence of bias that go in the direction of good scientificity. » (Romelaer, 2005) Semi-structured interviews were used to enable direct, two-way, interactive communication between source and investigator (De Ketele & Roegiers, 1996). In view of our problem, semi-structured interviews were the main method of data collection in our research methodology. The predetermined questions are generally open-ended, but room is left for other questions to emerge from the dialogue with the interviewee (DiCicco-Bloom & Crabtree, 2006). These questions are organized by theme in the interview guide (Appendix 3).

Internal documents (secondary data)

Following various exchanges with the person in charge of the office procurement for different entities of BDO Belgium, we were able to use the most recent, dated April 2023, office policy document of the company. This document, which contains the company's policy, concepts and philosophy regarding office design, allowed us to better understand the different principles of conformity of the office spaces and their layout within the company. As these documents are for internal use within the company, they cannot be appended to the thesis, nor published.

This paper confirms to all BDO employees the adherence to the Activity Based Office workspace design, and attempts to convey this image externally. Indeed, the company defines the Activity Based Office as a concept of free choice and leaves behind the principle of fixed assigned places in favor of workspaces chosen according to the nature of the work to be done by the collaborator and the degree of collaboration necessary for the task (group work, concentrated work,...). In this context, collaboration and motivation are important so that each employee can feel positive about his or her work environment. The ABO therefore emphasizes the notion of meeting during the tasks to be performed and applies to all employees, without distinction of Business Practice, departments or functions, except for the reception functions. Consequently, it seems relevant to us to carry out our case study within this company. (Office policy document BDO, 2023)

The calculation of the surface areas allocated to the different functions is supported by the use of the BDO Virtual Office, which allows the necessary surface areas to be defined according to the size of the different work groups so that the spaces are best adapted to the number of employees per office. In fact, this digital tool is intended to determine in a theoretical way the rental surface to be planned for a precise occupation scenario. In this way, the tool makes it possible to determine the number of workstations in openspace, in "flex" work, in external and internal meetings to be taken into account after weighting the attendance rates. In addition, the company favors a layout of work spaces that favors flow and ease of movement. Thus, internal meeting rooms, bubbles, lockers, relaxation areas, and technical rooms must be arranged centrally and be accessible to all employees present in the surrounding area. (Office policy document BDO, 2023)

The following table summarizes the main initiatives implemented in terms of knowledge management, tools and collaborative spaces. (Office policy document BDO, 2023)

Knowledge Management	Collaboration tools	Collaboration spaces
There is currently no general knowledge-sharing policy that applies to all BDO Belgium. Knowledge management takes place at the level of each department, which has its own methods that vary according to need. For example, some departments use a specific space where they can store the various pieces of information, while in other departments, one person is dedicated to sharing 'best practices' and providing in-house training in these areas.	In order to collaborate, general and cross-departmental tools provided by the Microsoft Office suite are made available to employees, such as Outlook, Teams and SharePoint, as well as the ability to work simultaneously on shared documents. These tools are available and used by the various teams and departments according to their own needs. Other, more specific collaboration tools can also be used within a specific department, such as M-Files for the Tax&Legal department.	Various spaces (in the context of the ABO policy) are available on the La Hulpe site to encourage collaboration between employees: - Open space: open-plan offices to facilitate exchanges. - Formal meeting rooms: rooms that need to be reserved to accommodate up to 40 people. - Bubbles: small, informal rooms that cannot be reserved, where workers can make a phone call or have a quick chat with 2 or 3 people. - Coffie corners, terrace, recreational space: for stand-up meetings and informal discussions. - Boards: set up in different places for quick discussions and ideas ideas between 2 or 3 colleagues at the same time.

Table 6 – Summary of the main initiatives implemented in terms of knowledge management, tools)

Above all, BDO wishes to guarantee the well-being of its employees and an environment that is favorable to work and concentration. Therefore, special attention is paid to the different areas in order to promote conviviality and interaction between all departments. With regard to the specific "COVID-19" policy, the document mentions that offices, bubbles, customer and internal meeting rooms, common areas and kitchens must be cleaned and disinfected according to "COVID" principles. (Office policy document BDO, 2023)

During this exploratory interview with HR manager A, who provided us with the office policy document, we also decided which teams and individuals to interview (A, 2023).

Team selection

Several selection criteria were taken into account when targeting teams and interviewees:

- People working mainly in the BDO La Hulpe office. Focusing on a single organizational context allows us to capitalize on the links forged within this division.
- Teams where collaboration is essential.

- People who practice hybrid work.
- Teams where collaboration is known to have been impacted since the pandemic crisis.

Following the analysis of this document describing the most current office policy of the company and an exploratory interview with the procurement manager, we decided to conduct 13 semi-structured interviews within the different departments and with employees of different hierarchical positions. Four teams were therefore selected.

The first team is based on an hybrid organization of work already in place before the health crisis. Its virtual network is very developed and indirect communication is common. Collaboration is very good and is considered essential to the functioning of the team.

The second team represents a team with a traditional organization before the health crisis. Following the crisis, a new work organization was put in place. Within the team, collaboration is very good and is considered to be essential due to the numerous exchanges and the team's common agendas.

The third team is a mixed team: overseas management, external consultants, etc., which has undergone a lot of changes due to the health crisis. It is characterized by problems of collaboration, which is nevertheless considered important due to the geographical dispersion of the team members and the different cultures present within it.

The fourth team is characterized by a traditional, stable organization that experienced few changes before the health crisis. The team is homogeneous (very little diversity in member profiles). However, it is characterized by problems of collaboration, considered important due to the nature of the tasks. The organization was therefore disrupted following the health crisis because direct exchanges were mostly favored before the crisis.

A total of 13 people from different hierarchical levels and from the four teams were interviewed. The interviewees are aged between 25 and 33 years. The table in appendix 2 shows the profile of the interviewees. The three different hierarchical levels are: employee (no subordinates), manager (in charge of a team) and top manager (in charge of a business unit).

Interviews are relatively short, between 30 and 47 minutes, with an average length of 38 minutes. This can be explained by the high workload of most employees, and the numerous meetings and

calls in their schedules. Some preferred to schedule the interview during their teleworking day and « back-to-back meetings » (meetings scheduled one after another), and therefore had little time to devote to initiatives other than their daily tasks. The answers to the questions were concise, with some workers avoiding going into too much detail.

The interview guide

Once the teams and people to be interviewed had been identified, we were able to draw up the interview guide. (Appendix 3) This is structured in 4 parts. The first consists of a presentation of the interviewee and his or her work habits. The second part focuses on BDO's organizational culture, the Activity Based Office, and its advantages, disadvantages and key success factors. Next, we look at collaboration within the team, its key points and how it has evolved in the wake of the pandemic. Finally, we look at what can be done to optimize collaboration.

The information gathered was then used for qualitative analysis.

4.2 Method for analyzing the data collected

Our data corpus consists of observation notes, internal documents and interview transcripts. Qualitative analysis aims to construct meaning from these data. The aim of this section is to clarify the approach we have taken, and the methods and techniques we have used in our qualitative analysis. An appropriate research method is one that is constructed according to the research objectives (Paillé & Mucchielli, 2012). Before beginning the analysis proper, the audio recordings of the interviews were transcribed almost in their entirety. " Recordings are crucial to understanding and conveying the richness of an interview. They are essential when resorting to in-depth textual analysis". (Hlady Rispal, 2002). Appendix 5 contains the interview transcripts. The results of our analysis are presented in the following chapters.

Thematic analysis: definition

There are several possible approaches to qualitative analysis, but thematic analysis is the one chosen for this thesis. Indeed, in thematic analysis, the main operation is thematization, i.e. "the transposition of a given corpus into a certain number of themes representative of the content analyzed, in relation to the research orientation (the problematic)" (Paillé & Mucchielli, 2012). . Therefore, thematization fulfils two functions: a detection function (identification of relevant

themes in a corpus in relation to the research objectives) and a documentation function (construction of a thematic tree to represent major trends and ensure that themes are repeated, converge or diverge from one case to another). We opted for thematic analysis as it corresponds well to a first research experience, to a need for rapid diagnosis and to a rather descriptive intention.

Firstly, a thematic analysis enables us to identify relevant themes. Secondly, the various themes are compared in order to identify convergences and divergences between them, with the aim of merging, subdividing, grouping or even prioritizing them. This process is therefore carried out systematically, enabling the deduction of one established proposition from another on the basis of corpus-based reasoning (Paillé & Mucchielli, 2012).

Thematic analysis : in practice

Writing is first and foremost essential, and takes place at three levels identified by Paillé & Mucchielli (2012): (1) transcription, which enables the transition from observation or interview to a written format; (2) transposition, which corresponds to the analysis of the field notes transcribed at the previous level; and finally (3) reconstitution, i.e. the writing of the thesis as such, which will lead to an understanding of the phenomenon studied.

We first transcribed the interviews conducted on the basis of the audio recordings. This makes up the corpus of data and can be found in Appendix 5. We then proceeded to a qualitative thematic analysis of the content. To do this, we followed the continuous thematization approach, one of the two thematization approaches outlined by Paillé & Mucchielli (2021). This approach is based on the assignment of themes without interruption: "themes are identified and noted as the text is read, then grouped and merged as necessary, and finally hierarchized in the form of central themes grouping associated, complementary, divergent themes, etc." (Paillé & Mucchielli, 2021). This analysis led to the construction of the thematic tree. "This tree is built progressively, throughout the research, and is only truly completed at the very end of the corpus analysis" (Paillé & Mucchielli, 2021). The simplified thematic tree required for this methodological section is proposed below. In the third stage, the reconstruction is written up according to the different categories presented in the thematic tree.

Simplified thematic tree

The following diagram represents the simplified thematic tree, starting with the research question. The tree is then divided into three parts, reflecting the three general themes addressed in this study: hybrid work, collaboration and the impact of health crises on collaboration. A definition is provided for each subject. The subjects are further categorized into different sub-themes. This thematic tree, which does not include any verbatim or sub-theme definitions, is therefore simplified. The complete thematic tree, including all verbatims and definitions, is available in Appendix 4.

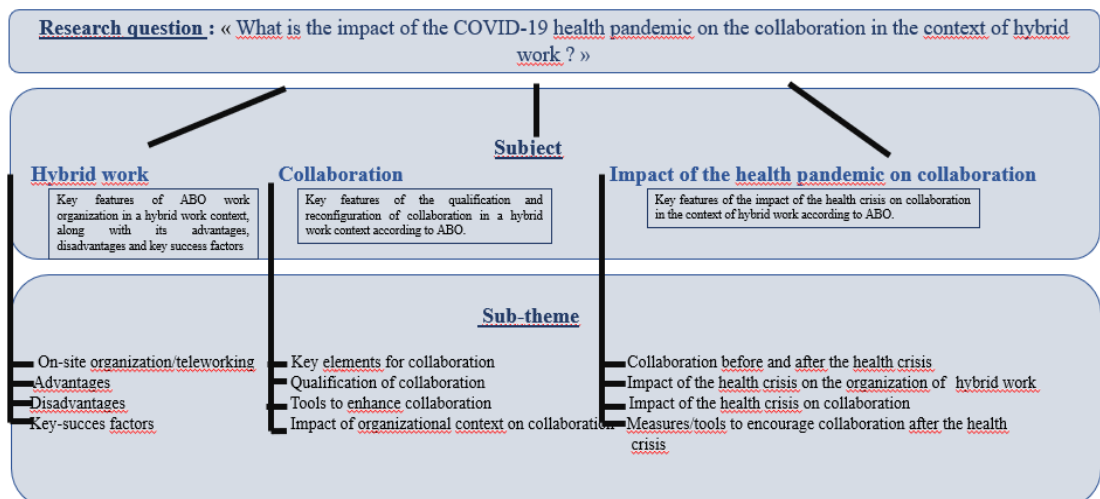


Figure 1 - Simplified thematic tree

Chapter 5 : Results

The results of the interviews will be structured according to the different topics addressed, i.e. their opinion or feelings about hybrid working and the activity-based office, then about the evolution of collaboration between employees following the COVID 19 pandemic.

The various interviews were conducted in such a way as to ensure a heterogeneous sample population, and thus a certain diversity in the results. Of the 13 interviews, 6 were conducted with women and 7 with men. In addition, the interviews were conducted with employees working in different departments, and at different hierarchical levels.

Within BDO, a new working policy was gradually implemented following the COVID-19 pandemic, which forced remote working for all BDO employers. Consequently, it was essential to draft a more up-to-date version of the work policy, one that would redefine the organization of

work. Indeed, of the 13 interviewees, 7 said they rarely teleworked before the pandemic, whereas they now telework 2 to 3 days a week.

Hybrid work and activity-based office

This new work policy allows them to work at least 1 day a week from home, and 1 day from the office. The remaining days depend on the employee's preference. This brings us back to the main features of hybrid working, i.e. the alternation between physical presence and telecommuting.

In addition, this new work policy (BDO, 2023) underlines the implementation of an activity-based office organization in the office. Since the pandemic, offices have featured open spaces, bubbles, meeting rooms and places for informal discussions. In this way, Activity Based Working is based on people's choice of the environment in which they wish to work, the one that suits them best according to their activity. This approach is based on the fact that employees carry out different activities in their day-to-day work and that, consequently, different work environments and different technologies are needed in order to carry out these activities. (Mengual, 2019). The comments gathered from the workers interviewed confirm the implementation of this new policy and the flexibility it implies.

- « *C'est clair que cela permet une plus grande flexibilité pour l'employé. Tu dois faire un travail administratif, voilà, tu as ta zone open space, tu as un travail de un peu plus de concentration, tu vas dans un bubble, tu dois brainstormer avec ton équipe, tu vas dans une salle interne, tu veux prendre une pause avec un collègue, tu vas dans le cozy corner.* »- Alison (Manager (Procurement))

Taskin (2021) explains that the organizational logic is now different, and that the reflection no longer revolves around the days on which to telework, but the focus is more on activities requiring the presence of teams in the workplace. Based on the interviews, we note that the logic is based on days when presence is beneficial, and when the organizational context, according to ABO, is conducive to the activity to be performed. In this way, we can observe that most of the interviewees plan their presence in agreement with their team, in order to optimize their use of the ABO structure.

- « *On s'est dit on prend un jour commun. Ça, c'est le jour qu'on essaie d'être là pour ce sentiment d'équipe.* » - Sébastien (Top Manager (Tax))

- « *On s'est mis d'accord avec l'équipe de se voir au moins 1 ou 2 jours par semaine et d'essayer d'aller les mêmes jours au bureau. Au moins le mardi, ainsi on se voit quasiment tous.* » - Pierre (Top Manager (Risk))

The hybrid work environment offers numerous advantages, as highlighted by employees. For example, this organizational context enables employees to plan and organize their working days optimally, with shorter commuting times, a better work-life balance and the freedom to choose between on-site and teleworking days, boosting employee satisfaction, attendance and motivation. (Rabha 2021, Halford, 2005) We see this confirmed in the interviews.

- « *Se rendre au bureau, c'est sacrément fatigant, cela met un stress en plus que tu peux éviter, se réveiller pour être sûr de partir à une heure précise pour être sûr de ne pas avoir trop de bouchon.* » - Murielle (Manager (Tax))
- « *J'aime beaucoup cette situation de win-win, où je peux choisir d'où je travaille en fonction mes autres occupations la journée. Cela me permet d'être plus productif, moins stressé et plus épanoui.* » - Nicolas (Employé (Risk))

In the context of ABO, employees highlight the following advantages: informal, relaxed discussions, exchanges with other departments, the flexibility of open space, and the fact of feeling less alone than in an isolated office.

- « *Tu as quand même un esprit de cohésion, un esprit d'équipe où tu rencontres plus tes collègues. Parce que c'est vrai qu'avant, quand on avait nos bureaux, des fois tu montais dans ton bureau, t'étais tellement occupé, t'étais focus que le soir tu repartais, t'avais vu pratiquement personne.* » - Alison (Manager (Procurement))

However, the following disadvantages are also to be taken into account in the hybrid working context: the lack of interaction with the team, the difficulty of separating professional and private life, and the fact that this makes it difficult for starters to integrate into a new team. In addition, some of those interviewed also mentioned the fact that they were meeting fewer and fewer colleagues from other departments, and that exchanges were becoming shorter at meetings. This confirms our theoretical research (Miller, 2021; Dixon, 2020).

- « *On remarque que maintenant qu'on peut faire plus facilement du télétravail, on croise beaucoup moins de collègues qu'avait dans les bureaux. Certains jours lui n'est pas là,*

d'autres jours moi, et on finit par se croiser que quelques jours par mois, ce qui affecte nos échanges. »- Valentine (Manager (Tax))

We have reported two cases that presented during this confinement the feeling of "organizational dehumanization" as described by Bell&Khoury, as well as Parmentier, M., Donis, C., Taskin, L., & Stinglhamber, F. (2016)

- *“C’était une période très difficile pour moi. Les échanges informels au début d’un appel devenaient de plus en plus court et parfois même absent. On se levait travail et on retournait se coucher travail. Je me sentais une machine, qui n’existait que pour travailler. Je ne saurais quoi faire si cela se reproduit plus tard. » - Valentine (Manager (Tax))*

In the context of ABO, we find the following disadvantages: the lack of a bubble or the difficulty of finding a free one when it's busy in the office, seating habits and lack of respect for the clean desk, and the difficulty of concentrating when working in open space.

- *“Certains collègues ont peu de respect, ils laissent trainer une farde, des taches de café ou des feuilles. Et puis d’autres commencent à discuter dans les couloirs ou y faire des appels, alors qu’il y a des bubbles à cet effet et des endroits cozy. » - Arnaud (Manager (Risk))*

Finally, we find similar key success factors in the context of hybrid work and OBA, such as: respect for material and planning, trust and communication on days of attendance to ensure moments of sharing.

Collaboration

Subsequently, we asked employees about collaboration, both between colleagues in the same team, and between colleagues in different departments. Our aim was to understand the evolution of this collaboration since the COVID19 pandemic, and the influence of hybrid working and ABO on this collaboration.

Out of the 13 interviews, 10 employees cited communication as the key to good collaboration. However, 7 employees mention presence and real contact at least once a week as a point of attention. These findings are in line with the social-psychological levers for improving knowledge sharing evoked by Cabrera & Cabrera (2005) (Table 5), namely communication and social ties.

- « *La communication c'est vraiment LE point clé à mes yeux. Sans une bonne communication, on ne peut pas collaborer à long terme. une bonne collaboration ça vaut une bonne communication.* » - Pierre (Top Manager (Risk))/Sébastien (Top Manager (Tax))/ Fabrice (Manager (HR))
- « *Le télétravail c'est bien, mais il faut tout de même au moins 1 jour par semaine au bureau. Pour l'équipe, mais aussi pour soi.* » - Arnaud (Manager (Tax))
- « *Een essentieel element van samenwerking is communicatie, want om te kunnen samenwerken moet je echt luisteren, luisteren naar hun behoeften om te proberen een oplossing te bieden.* »- Georgia (Employé (Risk))/Koen (Employé (IT))

As regards the evolution of collaboration following the pandemic, 10 employees affirm that collaboration is now back to pre-pandemic levels. However, most of them stress that during the health crisis, and when they were confined and forced to work remotely for several months in a row, collaboration and team cohesion were impacted. Depending on the team and the department, this collaboration was more or less weakened. The employees of the RAS team emphasized that they had put various elements in place to maintain good cohesion, and that this was beneficial.

- « *Des activités étaient mises en place pour continuer à se voir virtuellement et garder un contact. On faisait des calls réguliers pour le boulot, mais aussi des visio apéro et des activités virtuelles, style escape game. C'était vraiment gai et on gardait cette connexion. Finalement personne n'a démissionné après cette crise.* » - Nicolas (Employé (Risk))

In contrast to the RAS team, we found that when very few contact moments or mechanisms were established, employees lost their sense of belonging and collaboration was weakened. As a result, they felt isolated, sometimes demotivated, and lost their sense of belonging to the team.

- « *Non, on faisait juste des calls planning pour discuter des projets. Et ça devenait pénible car on ne parlait que boulot. La petite discussion informelle du début disparaissait au cours des semaines.* » - Valentine (Manager (Tax))

As a result, we can assume that the social connection has a real impact on collaboration, confirming Cabrera's theory. Furthermore, as mentioned in the theoretical section, it is important that in order to ensure effective collaboration between collaborators in the hybrid work environment, the social

connection between them must and can be maintained despite their asynchronous and dispersed work.

As for the ABO's impact on collaboration, most of the comments were in the direction that this work organization is favorable to collaboration, as it encourages interaction in the open space and the hallways, but also informal discussions. Moreover, this more relaxed and attractive structure seems to improve employees' working conditions and represents added value compared to their home-based work, encouraging them to come to work with greater pleasure and motivation.

- « Ik vind dat dit ABO concept echt een meerwaarde biedt aan het bureau. En dat merk je ook wel, want een groot aantal collegas zijn teruggekomen op kantoor na de pandemie en dat is omdat ze zich hier goed voelen en dat dit echt iets meer brengt. Het stimuleert ons om te komen.. » - Lieselot (Manager (Admin))
- « *Après la pandémie, il fallait trouver une solution pour faire revenir les employés au bureau. Grâce à cette structure, ils sont plus motivés à venir, et on remarque qu'ils échangent beaucoup plus.* » - Alison (Manager (Procurement))

Regarding technology, a first group of workers asserts that activities can be performed without problems from a distance, thanks in particular to the use of tools such as: Teams, shared planning, document sharing, webinar and online training, regularly updated intranet, and efficiency is not impacted. This confirms the theory of authors Aumais, N., Laflamme S., Venne, C., (20212) encouraging the company to implement a knowledge-sharing policy. However, other comments underline the importance of presence for (1) collaboration with customers first, as information sharing is not the same at a distance, and (2) in collaboration with colleagues second, to carry out certain creative or idea-generating tasks, to perceive non-verbal language and feelings, and to maintain unplanned and more spontaneous collaboration.

In this sense, Laurent Taskin (2020) warns us. We need to pay attention to the relational side of the relationship at work. Indeed, our communications must be more than just information transactions: we need to keep the connection. If we want to continue innovating and collaborating from a distance, we must constantly consider the relational side too, and not just the transactional. The practice of hybrid working could hinder employee presence, team cohesion and collaboration. Taskin also points out that informal interactions enrich us (Taskin, 2020). According to the author,

the best solution, would be for everyone to telecommute on the same day(s), so that employees are all together on company premises at least several days a week.

- « *Il faut être à l'écoute, sentir le verbal. Et il faut pouvoir communiquer. Et donc c'est aussi quelque part le problème du travail à distance, c'est que si tu n'es pas connecté avec la personne, tu ne peux pas sentir les choses. Moi je peux travailler en face de quelqu'un pendant une journée, ne pas lui parler, mais me rendre compte qu'il y a quelque chose qui ne va pas. C'est une question d'attitude, c'est un regard, c'est une énergie qui n'est pas là, c'est une manière d'interagir, qu'on n'a pas avec le virtuel.* » - Pierre (Top Manager (Risk))
- « *Team cohesion is created by the synchronisation of tasks between people, mutual support, but also by moments of friendship and laughter while working. A team is cohesive when the atmosphere is good. It's harder to have a group atmosphere when you just have googlem meetings. When you're telecommuting, you don't have a fun time, you just log in when you have to.* »- Francois (Top Manager (IT))

Besides, BDO has set up an IT department, open from 9am to 6pm for all company employees, in order to respond as quickly as possible to any requests and resolve any IT problems employees may encounter.

Finally, many employees cite teambuildings and training workshops as a good way of creating and strengthening bonds and communication between employees, sharing knowledge and thus, encouraging collaboration at work. This, in turn, leads to collective intelligence and greater added value for the company.

- « *A mes yeux, les teambuildings sont vraiment importants. On apprend à mieux se connaître, à rigoler et à se serrer les coudes. Cela renforce les liens lorsqu'on fait face à des projets difficiles, et on apprend comment mieux collaborer avec chacun.* » - Pierre (Top Manager (Risk))/Myriam (Top Manager (HR))
- « *Ce qui est bien chez BDO, c'est qu'il y a souvent des teambuildings et des trainings qui sont organisés, aussi bien intra qu'inter équipe. C'est donc très intéressant pour apprendre à se connaître et s'épauler sur des projets.* » – Arnaud (Manager (Risk))

This confirms Hunt's theory that teambuildings represent a solution for a group to become cohesive. This also reflects some GRH levers that can encourage knowledge sharing outlined by Cabrera &

Cabrera (2005). Indeed, according to Cabrera & Cabrera, the use of training and development programs can be implemented to increase employees' sense of self-efficacy, thus promoting knowledge sharing. It's necessary to tackle problems together, even if team members are geographically separated. It's also necessary to spend quality time together to strengthen team cohesion. Almost all the interviewees made this argument. Indeed, laughter and informal relationships are necessary for decompressing and ensuring team performance.

Impact of the COVID-19 health pandemic on collaboration

As previously mentioned, the social link is a considerable lever for knowledge sharing, and hence for effective collaboration, but also a consequent implication in the context of hybrid work. Indeed, social ties are both a fundamental lever for knowledge sharing (Cabrera & Cabrera, 2005), and a major concern for the hybrid work context, notably through the importance of preserving presence, team cohesion and collaboration (Taskin, 2020; Miller, 2021; Dixon, 2020). Given that with hybrid work, interactions are limited, thereby affecting the social ties, we observe that in some cases, the pandemic crisis has had a negative impact on collaboration, while for other employees, it has had no effect.

- « *Pour moi la collaboration est impactée, et elle n'est plus comme avant. Les gens viennent beaucoup moins au bureau et les échanges teams, beaucoup plus nombreux, ne permettent pas d'avoir une aussi bonne collaboration qu'avant le COVID.* » - Valentine (Manager (Tax))
- « *Ik heb altijd met teams op afstand gewerkt (...) Dus COVID heeft mijn dagelijks leven niet echt veranderd.* » - Lieselot (Manager (Admin))
- « *Waar ik een verandering zou zien, is in de ontmoetingen met klanten. We delen niet dezelfde manier, we bespreken niet dezelfde dingen wanneer we Teams of videoconferenties gebruiken dan wanneer we face-to-face zijn. Er is altijd de angst om bekeken en bespied te worden. Dus durven niet te veel te praten, informatie te delen die te informeel is, te vertrouwelijk.* » - Koen (Employé (IT))

It would seem that the impact is influenced by the team itself, by the frequency of exchanges and interactions within it, and by the team's cohesion.

- « *Est-ce qu'il y avait des petits trucs fun ou bien juste des trucs, des teams... Pour moi, rien. Non? On a rien mis en place. Des teams planning ou des meetings planning? Ce genre de choses? Écoute, ouais, on avait peut-être de temps en temps des teams, ouais, pour faire le planning ou quoi, mais c'était peut-être aller une fois par semaine* » – Valentine (Manager (Tax))
- « *Je ne remarque pas vraiment de différence sur la collaboration. Il est vrai que la façon et les moyens ont un peu été impacté, mais je trouve que infine, on collabore toujours autant et aussi bien. Mais ça c'est peut être grâce aux mesures qui ont été mises en place au sein du departement RAS.* » – Arnaud (Manager (Risk))

However, it's undeniable that the pandemic crisis, which forced employees to work from home, had a negative impact on communication and knowledge sharing. Indeed, as mentioned by Cabrera & Cabrera (2005), although technology and its means of communication can be effective in facilitating certain exchanges, they cannot replace face-to-face exchanges, which are essential to the development of trust between employees. This was confirmed in our interviews.

- « *What was really lacking were exchanges or 'unexpected' collaboration, where we bump into each other in the hallway, talk about something and share knowledge. Professionally, it's clear that teleworking is a limiting factor when it comes to working with different departments. It's easier in a face-to-face environment.* » - Myriam (Top Manager (HR))
- « *Pour moi la collaboration est impactée. Les échanges Teams, beaucoup plus nombreux, ne permettent pas d'avoir une aussi bonne communication qu'en réel. La communication par Teams ou en face à face n'est pas la même.* » – Valentine (Manager (Tax))
- « *Si vous montrez quelque chose sur le papier face à face, c'est parfois plus facile et plus rapide à comprendre que via un écran.* » - Murielle (Manager (Tax))

However, as suggested by Cabrera & Cabrera (2005), the organizational culture implemented within a company can represent a socio-psychological and GRH lever to foster knowledge sharing among employees. Thus, a culture and organizational design that support interaction and knowledge sharing would seem to encourage employees to come to the office and interact.

- « *Après la pandémie, il fallait trouver une solution pour faire revenir les employés au bureau. Grâce à cette structure, ils sont plus motivés à venir, et on remarque qu'ils échangent beaucoup plus.* » - Alison (Manager (Procurement))

- « *Il faut qu'il y ait une plus-value à venir au bureau, sinon je reste chez moi. L'ABO propose une structure qui est très agréable et permet des échanges avec les collègues que je n'ai pas chez moi. Cela m'incite à venir au bureau.* » - Pierre (Top Manager (Risk))

Cabrera & Cabrera (2005) point out that a corporate structure that brings employees together in an informal setting, such as a lounge, coffee bar or informal activities, increases opportunities for increasing social capital through high band-width communication.

- « *Telecommuting is a barrier to social contact and collaboration. When you're at home, all you have to do is work. When you're at work, well, you can take a break, go for a coffee, chat with people. You get to know their problems, even in the private sphere. Telecommuting puts the brakes on social relations and interactions.* » - François (Top Manager (IT))

Team analysis

A closer look at the analysis by team reveals that, in the end, social ties and collaboration have not been greatly impacted by the pandemic crisis. Indeed, the majority of employees in the various teams agree that, even if collaboration and social ties were weakened during the crisis, hybrid working will help restore the situation to normal. It seems that employees have found a balance in their functioning in the context of the implementation of ABO hybrid working, which should encourage collaboration and knowledge sharing. Although some employees experienced a degradation in collaboration during the pandemic crisis, most of those interviewed seemed positive about the future and the improved collaboration and social ties within their team, thanks to the hybrid context that has been put in place.

Conclusion

To conclude, some key findings with regard to the research question can be highlighted. It seems that hybrid work and the pandemic crisis, by placing workers and work collectives at a distance, negatively impacted social ties. On the basis of the data collected, several negative consequences of distance on social ties were in fact highlighted, such as a reduction in relationships, a loss of informal exchanges and a formalization of relations. As a result, collaboration and knowledge sharing were also negatively impacted. Although some employees claim that work can be carried out at a distance and that efficiency is not affected, the majority of comments tend to support the

negative impact of distance on collaboration. Indeed, the importance of presence is underlined for collaboration with customers and colleagues, for completing certain creative tasks, for perceiving non-verbal language and feelings, and for maintaining unplanned collaboration.

If we look at the opinions regarding the hybrid work environment, namely the Activity Based Office, that has been put in place, it is generally very well perceived by workers, who see many advantages and opportunities for knowledge sharing and collaboration.

Chapter 6 : Discussion

Our research question addressed the following issue: "What is the impact of the COVID-19 health pandemic on the collaboration in the context of hybrid work?" This research question emerged in the course of writing the theoretical section, and provided the foundation for the methodological approach and the empirical study followed by analysis of the results. This comprehensive work concludes with a pragmatic statement open to future research perspectives. It includes a presentation of the results obtained, based on the interpretation of the analysis section. It then presents the managerial implications of this interpretation. Finally, some limitations and perspectives will be highlighted.

6.1 Contributions

Our approach is qualitative, aiming to explore the behaviours and patterns studied in the research question, with a final goal of developing an in-depth understanding of those behaviours and patterns (Willig, 2013). In management science, and more specifically in the case of exploratory research, case studies are an obvious choice (Gombault, 2005). The embedded case study was chosen in order to focus on a single organization, BDO Belgium.

By imposing hybrid work and placing workers and work collectives at a distance, the pandemic crisis was expected to have a negative impact on collaboration. Based on the data collected, we were able to identify a number of negative consequences of working at a distance on collaboration, such as a reduced tendency to ask questions, a loss of informal exchanges, a formalization of relationships and the difficulty of separating professional and private life (resulting in a loss of motivation and project ownership). As these factors are essential to successful communication, and therefore to effective collaboration and knowledge-sharing, we expected that if these factors were

impacted by distance, communication would also be affected, and hence have a negative effect on collaboration.

The majority of the comments gathered tend to support a negative impact of distance on collaboration. Indeed, the necessity of presence is emphasized for collaboration when working with customers and colleagues, for carrying out certain creative tasks, for perceiving non-verbal language and feelings, and for maintaining unplanned collaboration.

However, the context of hybrid working has been developing strongly in recent years, and is generally well perceived by workers, who see many advantages in terms of flexibility and foresee numerous possibilities. Hybrid working increases productivity, offers a win-win situation by combining on-site and remote working, and optimizes travel costs.

6.2 Activity-based office

With regard to the implementation of the activity-based office as a work organization within BDO, we observe that all interviewees perceive this way of working positively. Indeed, this structure, characterized by a varied offering of zones - areas - and modules, where all of them are established to meet specific types of tasks offers multiple and flexible spaces, such as closed offices, small lounges, coffee area, open spaces, phone booths, and meant to serve the different tasks and needs of employees. Consequently, it generates an increase of productivity through the stimulation of interaction and communication while retaining employee satisfaction and reducing accommodation costs. As a result, this work organization seems to offer a genuine added value to employees who come to the office, compared to staying at home. Therefore, to ensure that employees are motivated and effective when they come to the office, it is important to organize the office in a way that enables employees to carry out all their activities, as an ABO organization allows.

In view of the results presented above, how can we explain the perceived impact of distance on communication and collaboration, if the hybrid working environment seems to be well received and many workers would not wish to return to a 100% on-site working model?

It would seem that the health crisis has had a detrimental effect on this. Not only were workers totally overwhelmed by the new health measures and forced to adapt very quickly to a new way of organizing their work, the health situation outside of work was also difficult and distressing, creating doubts and fears.

Nevertheless, after this period of upheaval, and with a certain amount of hindsight, it seems that the workers have reconfigured their organization, their work and their collaboration, keeping only the positive aspects of this health crisis. All those interviewed were of the opinion that the advantages of telecommuting should be retained, while the disadvantages (most of which occur with permanent telecommuting) should be eliminated. The hybrid working environment is therefore well received and seems destined to take root.

6.3 Managerial implications

As part of our theoretical research, we highlighted certain managerial implications that could strengthen inter-team collaboration. Thus, the critical necessity of clarity regarding roles and responsibilities was highlighted. Indeed, it is essential that roles and responsibilities are properly clarified and communicated in order to improve collaboration. In addition, organizational culture has an impact on inter-team collaboration. As such, fostering a sense of belonging to the organization, creating opportunities to openly share good practices and maintaining an open climate are actions that promote inter-team collaboration. In this context, establishing and communicating a common purpose and vision facilitates work and collaboration.

Finally, the research of Aumais, N., Laflamme S., Venne, C. (2012) encourages companies to set up a policy for allocating and sharing resources between teams. In this context, it is important to establish a clear coordination mechanism and known procedures.

In the case of BDO, most employees are satisfied with the company's management policy. In fact, they report a good regular flow of communication via the intranet, intra- and inter-departmental teambuildings and an Activity Based Office organization of work, encouraging the sharing of knowledge and exchanges, and enabling employees to decide in which environment they wish to work according to the task at hand.

As far as collaboration is concerned, a number of elements have been highlighted to improve remote collaboration. These revolve around the importance of good communication, which therefore seems essential to maintaining collaboration, notably by multiplying formal and informal contact with employees, involving employees, highlighting teamwork and maintaining initiatives such as direct communications made by senior managers to coworkers. As far as contact is concerned, many employees underline the importance of real contact, and that collaboration based

solely on virtual contact is not a viable long-term solution. In this context, it is important to organize the office so that it is attractive to employees, and provides them with added value compared to working at home. It would also be advisable for members of a teleworking team to work together on the same days when they are in the office. It's been demonstrated that being physically together leads to innovation, creativity and better ideas. In fact, the kind of collaboration that brings added value to work is found in the face-to-face environment, creating collective intelligence. From a distance, we can carry out more individual tasks that don't require innovation. Therefore, it's interesting to divide the tasks according to teleworking days, and to organize your week according to teleworking days and presence days.

With this in mind, the challenge for human management is to align HR strategies with the company's strategy. HRM practice cannot be evaluated in isolation but is assessed in terms of its fit with other corporate strategies.

6.4 Limitations and perspectives

There are certain limitations to our research. Firstly, a limitation stated by (Cossette, 2010) may be the lack of subjectivity. Indeed, in our research, it is possible that the subjectivity of the researcher and interviewees could lead to a bias in the results (Cossette, 2010). Savall and Zardet (1996) discuss the "cognitive interactivity" between researcher and interviewee, which is pursued by the desire to increase the significant value of previously studied information in scientific literary work (Cossette, 2010). Knowledge is not created individually, but comes from the discussion between researcher and interviewee. It may be that the wording of the questions prompts the interviewee's response. When reviewing the literature, we relied on articles or parts of articles that seemed interesting to us. However, if someone else had carried out the same search, they might not have found the same articles as relevant.

Secondly, the most appropriate method for understanding the phenomenon of collaboration would have been direct observation. This method of data collection enables us to get as close as possible to the situations in which social practices are revealed, which then engages greater precision in their restitution (Arborio & Fournier, 2021). Job shadowing would have enabled us to get a precise idea of the worker's experience at their workplace, and to observe the concepts being studied directly in action (Makovec, 2020). However, in the context of this research, such a practice was

hardly feasible given that employees work some days a week from home, and other days from the office. It would therefore have taken much longer to properly analyze their collaboration and draw conclusions. Furthermore, if we wanted to extend our sample to multiple departments and teams, more time would have been needed to successfully conduct the research.

With regard to the sample selected, we took care to include men and women of different ages, hierarchies and departments. However, this sample may not accurately represent the overall population, making the research subject to "sampling bias" or "selection bias" (Ionos, 2020). Furthermore, as previously mentioned, the average age of those interviewed is quite young, between 25 and 33 years. This might make communication and collaboration within teams easier, since it's easier to exchange and interact with people of the same age. On the other hand, it may be more constraining for people of a previous generation to implement the use of current technology, hindering communication. Finally, the selected sample worked mainly in the La Hulpe office, which is 95% French-speaking, making communication and exchanges between the employees working there (assuming they are French-speaking) much easier. Consequently, a multilingual office with French-, Dutch- and English-speaking employees could make this spontaneous communication more complicated, as employees would be forced to communicate in a general language, namely English, and would therefore be less at ease and less likely to engage in informal exchanges.

In addition, the most common criticisms of qualitative research are objectivity, methods of analysis, field interaction and lack of representativeness in terms of generalizability (Cossette, 2010). Given that we carried out this study within a single organization, in particular an audit and consultancy firm, we cannot generalize these results. Indeed, an organization operating in a different sector, or in a different region, might present different results. Besides, BDO is a large company with around 1,000 employees in Belgium. A smaller audit and consultancy firm with fewer employees, that could therefore be characterized as a more familiar company, where employees interact more with each other, might present different results. A similar hypothesis applies to a very large company, employing over 1,000 people, where communication and collaboration might be affected. In this same context, we have studied the activity-based office form of work organization. However, it might be interesting to analyze the impact of the pandemic crisis on collaboration within a different work organization, to see which work organization would be to recommend.

Bibliography

- Ajzen, M., & Taskin, L. (2021). The re-regulation of working communities and relationships in the context of flexwork: A spacing identity approach. *Information and Organization*, 31(3). <https://doi.org/10.1016/j.infoandorg.2021.100364>
- Albarelo, L. (2011). *Choisir l'étude de cas comme méthode de recherche*. UCLouvain.
- Alpe, Y. & Beitone, A. (2013). *Lexique de sociologie*. Dalloz.
- Aubin-Auger, I., Mercier, A., Baumann, L., Lehr-Drylewicz, A.M., Imbert, P., & Letrilliart, L. (2008). *Introduction à la recherche qualitative*. *Exercer*. 84. 142-145.
- Aumais, N., Laflamme, S., & Venne, C. (2012, 09). Les leviers qui favorisent la collaboration interéquipes. Récupéré sur USherbrooke: https://www.usherbrooke.ca/gef/fileadmin/sites/gef/documents/synthese_projets_recherche/2012_-_Collaboration_inter-equipes-rapport.pdf
- Autissier, D., Peretti, J.M., & Besseyre Des Horts, C.H. (2021). Travail & organisation hybride. *Organiser le travail et manager en mode Présentiel/Distanciel*. MA édition.
- Arborio, A-M., & Fournier, P. (2021). *L'observation directe*. Armand Colin.
- Argote, L., & Ingram, P. (2000). Knowledge Transfer: A Basis for Competitive Advantage in Firms. *Organizational Behavior and Human Decision Processes*, 82(1), 150–169. doi:10.1006/obhd.2000.2893
- BDO Services. (2023). *Notre cabinet*. BDO Belgium. Online <https://www.bdo.be/fr-be/notre-cabinet>
- Bell, B. S., & Kozlowski, S. W. A typology of virtual teams implications for effective leadership.
- Bell, Chris & Khoury, Careen. (2016). Organizational powerlessness, dehumanization, and gendered effects of procedural justice. *Journal of Managerial Psychology*. 31. 10.1108/JMP-09-2014-0267.
- Beugelsdijk, S. (2008). Strategic Human Resource Practices and Product Innovation. *Organization Studies - ORGAN STUD*. 29. 821-848. 10.1177/0170840608090530.
- Breton, T. (1994). Le télétravail en France : *Situation actuelle, perspectives de développement et aspects juridiques*. La Documentation Française.
- Cabrera, A., & Cabrera, E. F. (2002). Knowledge-Sharing Dilemmas. *Organization Studies*, 23(5), 687–710. <https://doi.org/10.1177/0170840602235001>
- Cabrera, E. F., & Cabrera, A. (2005). Fostering knowledge sharing through people management practices. *International journal of human resource management*, 16(5), 720-735. 10.1080/09585190500083020
- Coutant, C., & Caillet, C. (2015). Communication 678 – Atelier 12 : TICE « Coopération vs collaboration dans les classes virtuelles ». *Biennale internationale de l'éducation, de la formation et des pratiques professionnelles 2015*, Jun 2015, Paris, France. {hal-01186384}
- Chaher, M. & Dhen, M. (2007). La contribution des pratiques de GRH au développement de la productivité des travailleurs du savoir : cas des ingénieurs et des informaticiens tunisiens. *Management & Avenir*, 14, 61-79. <https://doi.org/10.3917/mav.014.0061>
- Chrislip D., *The Collaborative Leadership Fieldbook, A Guide for Citizens and Civic Leaders*, San Francisco: Jossey-Bass, 2002.

- Cossette, S. (2010). De la recherche exploratoire à la recherche appliquée en sciences infirmières : complémentarités et finalités. *Recherche en soins infirmiers*, 102, 73-82. <https://doi.org/10.3917/rsi.102.0073>
- De Ketele, J.-M., & Roegiers, X. (1996). *Méthodologie du recueil d'informations*. Bruxelles-Paris: De Boeck Université.
- Demoncey, A. (2016). La recherche qualitative : introduction à la méthodologie de l'entretien. *Kinésithérapie, la Revue*, 16(180), 32-37. <https://doi.org/10.1016/j.kine.2016.07.004>
- DiCicco-Bloom, B., & Crabtree, B. F. (2006). The qualitative research interview. *Medical Education*, 40, 314-321. <https://doi-org.proxy.bib.ucl.ac.be:2443/10.1111/j.1365-2929.2006.02418.x>
- Dietrich, P., Eskerod, P., Dalcher, D. et Sandhawalia, B. (2010). The dynamics of collaboration in multipartner projects. *Project Management Journal*, 41(4), 59-78.
- Dixon, L. (2020). How to make a hybrid workplace work: Recognize the risks, prepare the solutions. *Rochester Business Journal*, 36(21), 20.
- El Kadiri, Soumaya & Philippe, Pernelle & Delattre, Miguel & Bouras, Abdelaziz. (2008). *An approach to control collaborative processes in PLM systems*.
- Felstead A., Jewson N., Walters S., Dir. (2005), *Changing Places of Work*. London, Palgrave.
- Fontaine, Philippe. (2014). Free riding. *Journal of the History of Economic Thought*. 36. 359-376. 10.1017/S1053837214000376.
- Gartner. Hybrid Work HR Leader Survey. (2021). Online <https://www.gartner.com/en/newsroom/press-releases/2022-05-17-gartner-says-hr-leaders-are-struggling-to-adapt-current-organizational-culture-to-support-a-hybrid-workforce>
- Girard, S. (2014) Coopération et collaboration au travail, quelle est la différence? <http://conseilrhcoaching.com/cooperer-et-collaborer-article/>
- Goh, S. C. (2002). Managing effective knowledge transfer: An integrative framework and some practice implications. *Journal of Knowledge Management*, 6(1), 23-30. <https://doiorg.proxy.bib.ucl.ac.be:2443/10.1108/13673270210417664>
- Gombault, A. (2005). Chapitre 2. La méthode des cas. Dans : P. Roussel & F. Wacheux (Dir), *Management des ressources humaines: Méthodes de recherche en sciences humaines et sociales* (pp. 31-64). De Boeck Supérieur. <https://doi.org/10.3917/dbu.rouss.2005.01.0031>
- Halford, S. (2005). Hybrid workspace: re-spatialisations of work, organisation and management. *New Technology, Work and Employment*, 20(1), 19-31
- Hislop, D., & Axtell, C. (2009). To infinity and beyond? : Workspace and the multi-location worker. *New Technology, Work and Employment*, 24(1), 60-75
- Hlady Rispal, M. (2002). *La méthode des cas. Application à la recherche en gestion*. Louvain-la-Neuve: De Boeck Supérieur.
- Hsin-Wei Lin, S. (2017). Evolution of Office Design In and Beyond the 20th Century. *BA architecture*. Architecture Honours degree, Newcastle University.
- Hunt, J. W. (1992). *Managing people at work* (third edition). McGRAW-HILL Book Company europe.
- Jaccard, P. (1960) *Histoire sociale du travail de l'Antiquité à nos jours*. Sociologie du travail, 2^e édition.

- Kaul, A. (2021). Hybrid workplace is the new future – are you prepared?. *HR Strategy and Planning Excellence Essentials*. Online <https://www-proquest-com.proxy.bib.ucl.ac.be:2443/magazines/hybrid-workplace-is-new-future-are-youprepared/docview/2557509466/se-2?accountid=12156>
- Kelliher, C., & Richardson, J. (2012). New ways of organizing work. *Developments, perspectives, and experiences*.
- Lu, L., Leung, K., & Koch, P. T. (2006). Managerial Knowledge Sharing: The Role of Individual, Interpersonal, and Organizational Factors. *Management and Organization Review*, 2(1), 15–41. <https://doi-org.proxy.bib.ucl.ac.be:2443/10.1111/j.1740-8784.2006.00029.x>
- Makovec, D. (2020). *Job shadowing as learning experience*. *Revija za Elementarno Izobraževanje*, 13, 22-50.
- Mengual, C. (2019). *L'activity Based Working, le concept qui transforme l'espace de travail*. Ubiq. Online <https://www.ubiq.fr/blog/activity-based-working/>
- Miller, B. (2021). Implementing a hybrid workplace plan. Brentwood: Newstex. Online <https://www-proquest-com.proxy.bib.ucl.ac.be:2443/blogs-podcastswebsites/implementing-hybrid-workplace-plan/docview/2493386054/seaccountid=12156>
- Mintzberg H., *Structure et dynamique des organisations*, Editions d'Organisation, Paris, 2002.
- Musca, G. (2006). Une stratégie de recherche processuelle : l'étude longitudinale de cas enchâssés. *Management*, 9(3), 153-176. <https://doi.org/10.3917/mana.093.0153>.
- Paillé, P., & Mucchielli, A. (2012). *L'analyse qualitative en sciences humaines et sociales*. Paris: Armand Colin.
- Parmentier, M., Donis, C., Taskin, L., & Stinglhamber, F. (2016). Déshumanisation au travail dans un contexte de développement de l'open space, du hot desking et du télétravail, Rapport de recherche de la Chaire laboRH, vol. 5, 150 p
- Pelegrin, G. (2006). *L'art de vivre au bureau*. Flammarion.
- Pesqueux, Yvon. (2001). Du taylorisme au post-taylorisme: pour une déconstruction de la transversalité. *Entreprises sans frontières: quelles mutations pour la comptabilité et le contrôle organisationnel?* Online [document \(archives-ouvertes.fr\)](http://archives-ouvertes.fr)
- Pierre Jaccard. (1960). *histoire sociale du travail : de l'antiquité à nos jours*. Persee.
- Pomian, J., Roche, C. (2002). *Connaissance capitale : Management des connaissances et organisation du travail*. L'Harmattan, Paris.
- Rabha, M. (2021). Hybrid workplace: Is it the new future?. *Workforce Management (Time and Attendance) Excellence Essentials*. Online <https://www-proquestcom.proxy.bib.ucl.ac.be:2443/magazines/hybrid-workplace-is-newfuture/docview/2556369985/se-2?accountid=1215>
- Reynaud Emmanuèle. Olson Mancur, *Logique de l'action collective..* In: *Revue française de sociologie*, 1980, 21-3. pp. 451-454.
- Robbins S., DeCenzo D., Gabilliet P. (2008), « Management L'essentiel des concepts et des pratiques » 6^{ème} Edition Pearson Education, France, p.177
- Robertson, M. and O'Malley-Hammersley, G. (2000) Knowledge Management Practices within a Knowledge-Intensive Firm: *The Significance of the People Management Dimension*. *Journal of European Industrial Training*, 24, 241-253. <https://doi.org/10.1108/03090590010321205>
- Romelaer, P. (2005). Chapitre 4. L'entretien de recherche. Dans P. Roussel, & W. Frédéric, *Management des ressources humaines - Méthodes de recherche en sciences humaines et sociales*. Louvain-la-Neuve: De Boeck Supérieur.

- Roussel, P., & Wacheux, F. (2005). Introduction. Dans : P. Roussel & F. Wacheux (Dir), *Management des ressources humaines: Méthodes de recherche en sciences humaines et sociales* (pp. 5-8). De Boeck Supérieur. <https://www.cairn.info/management-des-ressources-humaines--9782804147112-page5.htm>
- Satya Nadella & Jim Euchner (2018) Navigating Digital Transformation, *Research-Technology Management*, 61:4, 11-15, DOI: [10.1080/08956308.2018.1471272](https://doi.org/10.1080/08956308.2018.1471272)
- Schein, E. H. (1970). *Organizational psychology*. Englewood Cliffs, N.J. : Prentice-Hall.
- Schronen, D. (2003). *Le management à l'épreuve du bureau : Concevoir un immobilier adapté aux besoins de l'entreprise*. L'harmattan.
- Seba, I., Rowley, J., & Delbridge, R. (2012). Knowledge sharing in the Dubai Police Force. *Journal of Knowledge Management*, 16(1), 114-128. <https://doiorg.proxy.bib.ucl.ac.be:2443/10.1108/13673271211198972>
- Sergeeva, A., & Andreeva, T. (2016). Knowledge Sharing Research: Bringing Context Back In. *Journal of Management Inquiry*, 25(3), 240–261. <https://doi.org/10.1177/1056492615618271>
- Silva, F. & Ben Ali, A. (2010). Emergence du travail collaboratif : Nouvelles Formes d'Organisation du Travail. *Management & Avenir*, 36, 340-365. <https://doi.org/10.3917/mav.036.0340>
- Silva F. & Hugon S. (2009). Rapport CIGREF - ORSE: Emergence des nouveaux usages liés à l'introduction des nouveaux outils dans les grandes entreprises.
- Soda, G., Mannucci, P., & Burt, R. (2021). Networks, Creativity, and Time: Staying Creative through Brokerage and Network Rejuvenation. *The Academy of Management Journal*. 64. 10.5465/amj.2019.1209.
- Suto, H., & Patitad, P. (2015). *A representation model of collaboration in design process*. 1-5. 10.1109/ASCC.2015.7244776.
- Sylvain, M. (2021). Le taylorisme - le cerveau. Online [taylorisme.pdf \(mcgill.ca\)](https://taylorisme.pdf(mcgill.ca))
- Taskin, L. (2003). Les Enjeux du télétravail pour l'organisation. *Reflets et perspectives de la vie économique*, XLII, 81-94. <https://doiorg.proxy.bib.ucl.ac.be:2443/10.3917/rpve.421.0081>
- Taskin, L. (2006). Télétravail: Les enjeux de la déspatialisation pour le Management Humain. *Interventions économiques*, 34, 73-94. doi:10.4000/interventionseconomiques.680
- Taskin, L. (2012). Déspatialisation: Enjeux organisationnels et managériaux. (E. U. Européennes, Éd.) Saarbrucken.
- Taskin, L. (2021a). Télétravail, organisation et management : enjeux et perspectives post-covid. *Regards économiques*, 164, 13-19. <http://hdl.handle.net/2078.1/249895>
- Taskin, L. (2021b, Novembre, 19). *Les enjeux du télétravail pour l'entreprise : productivité, bien-être et lien social* [Conference Paper]. 24è Congrès des économistes de Belgique, Bruxelles. <http://hdl.handle.net.proxy.bib.ucl.ac.be/2078.1/254359>
- Taskin, L., Caesens, G., & Donis, C. (2019). Considering the combination of office designs and telework practices in the study of flexwork effects on well-being and performance. *Louvain Research Institute in Management and Organizations Working Paper Series*, 2019(08), 16.
- Taskin, L., & Dietrich, A. (2020). *Management Humain : une approche renouvelée de la GRH et du comportement organisationnel*. De Boeck Supérieur
- Thomas, C., & Durand, S. (2020). Télétravail : comment créer une culture d'entreprise à distance. Récupéré sur HBR France: <https://www.hbrfrance.fr/chroniquesexperts/2020/02/29310-teletravail-comment-cree-une-culture-dentreprise-a-distance>

- Trong Tuan, L. (2012), Behind knowledge transfer. *Management Decision*, 50(3), 459-478. <https://doi-org.proxy.bib.ucl.ac.be/2443/10.1108/00251741211216232>
- Truss, C. & Gratton, L. (1994) Strategic human resource management: a conceptual approach, *The International Journal of Human Resource Management*, 5:3, 663-686, DOI: [10.1080/09585199400000053](https://doi.org/10.1080/09585199400000053)
- United Nations Development Programme. (2022). *COVID-19 Pandemic*. Online [COVID-19 pandemic | United Nations Development Programme \(undp.org\)](https://undp.org/covid-19)
- Van Caloen, A. (2021). *Axa Banque a-t-elle ouvert la voie au télétravail illimité ?* La Libre. Consulté le 22 septembre 2021 sur <https://www.lalibre.be/economie/entreprisesstartup/2021/07/15/axa-banque-a-t-elle-ouvert-la-voie-au-teletravail-illimite6QOO6EXY5RAU7HX5CEK6OQDAOI>
- Wang, S., Noe, R. A., & Wang, Z.-M. (2014). Motivating Knowledge Sharing in Knowledge Management Systems: A Quasi-Field Experiment. *Journal of Management*, 40(4), 978– 1009. <https://doi.org/10.1177/0149206311412192>
- Willig, C. (2013). *Introducing qualitative research in psychology (3rd ed.)*. Open university press.
- Wodociag, S., Ghislieri, C., & Desmarais, C. (2019). Mobilité pendulaire : examen du dévouement et de l'épuisement émotionnel des cadres. *Psychologie du Travail et des Organisations*, 25(3), 167-176. <https://doi.org/10.1016/j.pto.2019.02.001>
- Wohlers, C., & Hertel, G. (2017). Choosing where to work at work – towards a theoretical model of benefits and risks of activity-based flexible offices. *Ergonomics*, 60, 467 - 486.
- Yang, L., Holtz, D., Jaffe, S. et al. The effects of remote work on collaboration among information workers. *Nat Hum Behav* 6, 43–54 (2022). <https://doi.org/10.1038/s41562-021-01196-4>
- Yin, K. R. (1994). *Case Study Research. Design and Methods*. Thousand Oaks: Sage.