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Research Article

Redefining Office Interactions for a Thriving Employee Experience

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While much of the current debate focuses on the hybrid work model, little attention has been given to what type of work tasks and dynamics companies should outline when employees are called to work in the office space. Designing meaningful face-to-face encounters becomes essential to engage employees and make in-person work more meaningful and effective for both parties. Thus, the paper explores how companies can engage employees in the post-pandemic changing office space environment. Building on theories of employee socialization and employee experience co-design, it identifies gaps and opportunities for developing meaningful encounters in the office space and cultivating a positive work culture. A case study was conducted in an aerospace engineering company with a hybrid working model to provide practical insights. The study employed an exploratory research design, incorporating qualitative methods such as in-depth interviews, observations, and a co-design session with employees. Content analysis was used to categorize areas of employee experience in the office space that needed to be redesigned positively. The results of the study confirm that the co-design of socialization, adding creativity, and fostering serendipitous encounters in the workspace improves the employee experience, strengthening the ties with the company, connecting with their colleagues, and helping in well-being and a sense of belonging. This translates into positive gains for the organization that wants to define a hybrid work model, giving flexibility to employees without losing the human bond that the face-to-face visit to the workplace provides through meaningful experiences. By involving employees in the collaborative process of redesigning socialization and interaction practices, organizations are committed to valuing individual perspectives and needs, resulting in a more relevant and satisfying employee experience.

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1. Introduction

In the context of growing hybrid working adoption, where employees alternate between the office and the remote environment, redesigning the employee experience has become a strategic priority for organizations^{[1][2]}. Understanding how to redesign the employee experience becomes crucial to creating a work environment that provides satisfaction, well-being, and productivity. The theoretical and industry debate is mainly driven by remote and hybrid work and not so much by what companies should ask employees to do when working in the office space^{[3][4][5]}.

Practice shows that companies with minimal office interactions face issues like low employee morale and high turnover rates. Designing proper employee encounters in the office space fosters engagement, strengthens team relationships, and makes presential work more appealing and meaningful. However, employees will need more arguments to leave the more convenient and less costly remote work environment to engage in meaningful interactions that can result in a thriving and engaged workforce^[3].

A substantial body of research is endorsing the return to the office, discussing several challenges and opportunities for emergent work models, e.g., fully presential, remote, or hybrid; the different types of offices today, as well as redesigning the office for the new needs^{[3][6][5]}. Particular studies are focused on the role socialization can play in reconnecting people, strengthening the bonds between employer and employee, and creating a purpose-driven and more open and positive company culture^{[6][7]}. However, there is a lack of empirical research examining what companies must do to engage employees in the office space^{[8][9]}.

Therefore, the paper addresses the following research question: How can socialization be used to co-design meaningful encounters in the office space, improving employee experience? By examining the above question, this paper attempts to overcome conceptual and empirical limitations in the literature on employee experience. It explores how organizations can engage employees in the office space substantially impacted by the changing environment after the pandemic. The paper draws on socialization and employee experience co-design theories to understand the gaps and opportunities for developing meaningful encounters in the office space. It argues that organizations promoting creativity and serendipity will be better positioned to engage employees in the office space, not to conduct all tasks, but those heavily relying on socialization.

This research is intended to advance the practices and approaches used by companies adopting a hybrid working model, particularly on how they can co-design the employee experience, focusing on socialization and interaction in the office space.

Co-design sessions provide a valuable space for employees to express their opinions, share their experiences, and actively contribute to the redesign of the socialization and interaction practices in the office^{[10][11][12][13]}. By involving employees in this collaborative process, organizations demonstrate their commitment to valuing individual perspectives and needs, resulting in a more relevant and satisfying employee experience^{[14][15]}. In this sense, co-designing the employee experience must involve employees in the process.

The research question is addressed by a qualitative study in which a case study in a real-life scenario was conducted to search for evidence and inputs to propose sound plans for employee encounters and socialization in the office space. The need to co-design the employee experience arises when organizations face significant challenges, such as employee expectations and difficulty combining remote with face-to-face interaction. The opportunity to work remotely presents advantages, such as greater flexibility and a balance between personal and professional life, but it also brings challenges related to socialization and a sense of belonging.

The single case study was conducted in an aerospace engineering company with over 20 years in the market, with approximately 85 employees, primarily men, following a hybrid working model. The qualitative research method employed in-depth interviews and observations to gather as many insights as possible and reliable information about the opportunities for improving employee interactions in the office space. Content analysis was used to analyze the data and identify potential

solutions. In the second stage of the research, an intervention was held with a group of employees to co-design concrete solutions, which were then applied internally within the organization.

The development of this empirical study followed the double diamond human-centered design approach^[16], which divided the empirical study into 4 phases, two diamonds; the first diamond focused on finding the problem, and the second focused on finding the solution.

The study's findings support the initial views that companies can deliver a better experience to their employees by promoting creativity and serendipitous encounters in the office. It offers concrete proposals to improve the employee experience, focusing on socialization and interaction, bringing a new tone to the office, and strengthening the bonds again.

The paper advances employee experience theory by providing a framework that helps to orchestrate successful onsite strategies and practices for redesigning the employee experience in a hybrid working model, focusing on socialization and interaction in the office space. This theoretical contribution will also be valuable for organizations seeking to improve employee engagement and well-being and strengthen organizational culture in a dynamic and flexible work environment.

2. Background Theory

2.1. Socialization in the post-pandemic future of work

Socialization is a critical process through which human beings acquire the necessary skills, attitudes, values, and behaviors to interact and function effectively in society. Learning the norms, habits, and beliefs of one's culture requires beginning at birth and continuing throughout one's life^[17].

Socialization is essential for the development of a sense of self-identity. People learn about their own cultural history, likes, dislikes, strengths, and limitations when they engage with others, which aids in their understanding of who they are and where they fit into society^[18]. Socialization is crucial for developing social skills like communicating, negotiating, and cooperating with others effectively^[17]. These social skills are necessary for success in personal and professional relationships and are critical for achieving individual and collective goals^[18]. Another critical issue about socialization is that it is vital for transmitting cultural norms and values. Every culture has its own set of norms, customs, and beliefs, and socialization is the process through which individuals learn about and internalize these cultural practices, helping to maintain social order and stability. Moreover, socialization is necessary for developing moral reasoning and ethical behavior because it helps individuals learn what is considered right and wrong within their culture^{[19][17]}. Lastly, socialization is essential for personal growth and development. As a result, individuals develop a sense of purpose and meaning^[20].

As stated above, socialization is very important for shaping the human being and for building the social being, and in this way, it directly resembles socialization within organizations. This process is translated into how employees learn and internalize their organization's norms, values, and expectations^{[21][22]}. Adequate organizational socialization is important for helping employees feel like they belong and understand what is expected of them in their new role. This process makes them feel more engaged, productive, and committed to the organization^{[23][24]}.

According to several authors, organizational socialization is a strategic process that brings several benefits (see table).

Benefits	Justification	Authors
<i>Enhances productivity</i>	Effective socialization helps employees understand their role in the organization and the expectations of their job. This can lead to increased productivity as employees feel more confident and capable in their work.	[21][23] [24][22]
<i>Reduces turnover</i>	Positive socialization can help employees feel more connected to the organization and its culture, which can reduce turnover rates. New employees who feel welcomed and supported are more likely to stay with the company in the long term.	[23][24] [22]
<i>Builds a strong culture</i>	Socialization induces employees to learn about the company's culture, values, and mission. When employees understand and share these values, it can lead to a stronger and more cohesive organizational culture.	[23][24]
<i>Improves communication</i>	Socialization provides opportunities for employees to build relationships and develop effective communication skills. This can lead to better collaboration and more effective teamwork.	[21][22]
<i>Facilitates learning and development</i>	Effective socialization programs provide opportunities for employees to learn and develop new skills. This can help employees feel more engaged and invested in their work and can also benefit the organization by increasing the skill level of its workforce.	[21][23] [24][22]

Table 1. Benefits of organizational socialization

Organizational socialization is a continuous process that must be directly linked to the employee experience because it must begin before the entry of the new employee (pre-entry phase), continue through his or her effective entry (integration phase), and remain throughout a lifetime (metamorphosis phase)^{[25][26]}. Adequate socialization is a critical component of a positive employee experience. When successfully socialized into an organization, employees are more likely to feel connected to their colleagues and the company's values and goals^[27]. This sense of connection and belonging can help foster a positive and engaging work environment, contributing to a positive employee experience.

Meanwhile, the pandemic arrived, and with it, everything changed. COVID-19 has profoundly impacted the future of work, leading to changes in how we live, work, and interact^[28]. In the job market, the uncertainties that came with the pandemic only weakened the bond between employee and employer, as, with the rules of social distancing, employees had to work from home, and companies had to adapt to the new way of working. With this, socialization in the workplace has been severely impacted in different ways, such as:

Impact	Justification	Authors
<i>Remote work</i>	Many companies have shifted to remote work in response to the pandemic, which has led to a decrease in face-to-face interaction and socialization. Employees are no longer able to interact with each other in the same way they did in the office, which can make it more difficult to build relationships and feel connected to the organization.	[6][7]
<i>Virtual communication</i>	With the shift to remote work, virtual communication has become the primary way that employees interact with each other. While technology has made it possible to continue working remotely, virtual communication can sometimes feel impersonal and make it more difficult to build rapport and establish a sense of camaraderie.	[7]
<i>Changes in organizational culture</i>	The pandemic has forced companies to make significant changes in how they operate, which can impact the organizational culture.	[6][7]
<i>Challenges with onboarding</i>	Bringing new employees on board during the pandemic can be challenging, as they may not have the same opportunities to interact with their colleagues and get a feel for the company's culture.	[7]
<i>Impact on mental health</i>	The pandemic has also had a significant impact on employee mental health, which can further impact socialization in the workplace. Employees may be dealing with increased stress and anxiety, which can make it more difficult to build relationships and feel connected to their colleagues.	[6]

Table 2. *Impacts of Covid-19 on employees and the workplace*

Now, post-pandemic, organizations are on a quest to redesign employee experiences, focusing on meeting the needs of workplace socialization to encourage employee encounters in the office space^[9].

The physical office is essential for employee socialization because it is where people meet, get to know each other, talk, and work together^[29]. It is the ideal environment for bonding, strengthening the culture, and creating team spirit during work hours or between breaks^{[8][9]}. This has always been the ideal office model, and now it needs to be the reality for companies to promote an environment that encourages socialization to stimulate creativity, again creating the need for employees to go to the workplace (Morse, 2022).

Some theories reinforce the necessity of socialization and creativity in the workplace, such as "Strength of Weak Ties" and "Serendipity." The first one is about the theory of strong and weak ties, in which the sociologist Mark Granovetter, in his paper "The Strength of Weak Ties (1980)," argues that weak ties are critical for accessing new information and opportunities, while strong ties provide emotional support and a sense of community. Since then, the concept of strong and weak ties has been widely discussed and studied in sociology, network science, and organizational behavior. In the business world, this theory applies to developing a work environment that promotes the strength of weak ties between your employees.

Another theory is “Serendipity,” which refers to the phenomenon of making unexpected and fortunate discoveries by accident. It is the notion that fortunate events or interactions that are not necessarily anticipated or sought after might occur. The Theory of Serendipity suggests that by being open to new experiences and having a positive outlook, individuals can increase their chances of making serendipitous discoveries and realizing unexpected opportunities. For companies, it is an excellent opportunity to get creative ideas from their employees, so they should promote this in the following ways:

- *Encourage Collaboration:* By fostering an environment of collaboration and open communication, companies can create opportunities for chance encounters and unexpected partnerships.
- *Provide Flexibility:* Allowing employees to explore new projects or take time off to pursue personal interests can lead to serendipitous discoveries and fresh perspectives.
- *Support Diversity and Inclusion:* A diverse and inclusive workplace can bring people with different backgrounds, skills, and experiences together, leading to unexpected insights and breakthroughs.
- *Encourage experimentation and risk-taking:* By encouraging employees to try new things and take calculated risks, companies can create a culture of innovation open to serendipitous discoveries.
- *Foster a Positive Work Culture:* A positive and supportive work environment can lead to a more open-minded and optimistic mindset, increasing the chances of serendipitous encounters and discoveries.

The COVID-19 pandemic has presented significant challenges for socialization among employees. Even today, in the post-pandemic era, companies are still trying to strengthen ties with their employees. They seek to build a work environment that promotes socialization and makes the physical workplace a space for creativity and serendipity again, which creates the need to be in the office^[8].

In conclusion, socialization is crucial for human beings, especially in the office space post-pandemic, reinforcing the need for interaction as a basis for fostering creativity and serendipity, and encouraging employees to have a real purpose for working in the office.

2.2. Co-designing employee experience

Recently, there has been a growing focus on employee experience as a critical factor in organizational success. Employee experience (EX) refers to the sum of an employee's interactions with an organization, including everything from the physical and digital workspace to the cultural norms and values of the company^[30]^[31]^[32]^[33]^[2].

Some EX studies advocate using Human-centered Design methodologies to better understand the employees in the organizations, thus delivering better answers^[34]. HCD can help create products and services that are truly valuable to the people who use them by keeping people at the center^[35]. The goal is to develop products, services, and systems that are usable, accessible, and desirable for the people who will be using them or working for them and that make their lives better in some way^[36]. In the same concept, it's a process that involves understanding the needs and perspectives of users with empathy so that products, services, and systems can be built that are easy to use, aesthetically pleasing, and meet the users' needs or employees' desires^[37]^[38].

For applying HCD in EX, organizations conduct co-design sessions with employees and other key actors to create the desired experiences. Co-design and human-centered design (HCD) share many principles, as they are both design methodologies that prioritize the needs and perspectives of users, like the *user-centric approach*: both co-design and HCD focus on understanding the needs and perspectives of users to create solutions that meet those needs, through research, observation, and feedback. *Collaboration*: involves collaboration between designers, stakeholders, and users. They both aim to create solutions that are co-created by all parties involved. *Iterative process*: an iterative process of testing and refining solutions based on user feedback, ongoing evaluation, and improvement. *Empathy*: these methodologies prioritize empathy and understanding for the user to create user-friendly solutions that address the user's needs and pain points. *Multidisciplinary approach*: involves a multidisciplinary approach to design, incorporating different perspectives and areas of expertise to create solutions that are holistic and well-rounded^{[39][11][40]}.

Co-design is a collaborative process in which designers, stakeholders, and end-users work together to create a product or service that meets the needs of all parties involved^[41]. The co-design process typically consists of a series of workshops or meetings in which participants discuss their needs, ideas, and perspectives on the project. One of the most essential advantages of co-design is that it promotes a more inclusive and collaborative approach to issue resolution. Involving stakeholders and end-users in the design process increases the likelihood that the resulting product or service will be relevant, usable, and practical^{[42][43]}. Furthermore, co-design can aid in the development of trust and mutual understanding between designers and non-designers, resulting in a more positive and productive working relationship.

Co-design can be a valuable tool for companies looking to improve employee experience. By involving employees in the design process, companies can better understand their needs and preferences and develop solutions that meet them. According to theories on the subject^{[10][11][12][13]}, there are some ways that companies can use co-design to improve EX, such as *conducting user research*: The first step in co-design is to understand the needs and preferences of employees. Companies can conduct user research, such as surveys or interviews, to gather information about what employees need and want from their workplace. *Hosting co-design workshops*: Companies can host co-design workshops with employees to brainstorm ideas and develop solutions. These workshops can be facilitated by a design professional or an internal team. *Creating prototypes*: Once ideas have been generated, companies can create prototypes of solutions and test them with employees. This can help identify any issues with the design and refine the solution before implementation. *Implementing solutions*: Once a solution has been refined, companies can implement it in the workplace. This could involve changes to the physical environment, such as new furniture, lighting, policies, or processes. *Evaluating and iterating*: Companies must continually assess and iterate on their solutions. This can involve gathering employee feedback and adjusting the solution based on that feedback.

These steps are critical in the post-pandemic era as companies start to return to in-person work and, with it, the need for the redesign of employee experience in the search for solutions to the problems of socialization, creativity, and serendipity in the workplace, these and other issues being lost during the pandemic^[9]. Thus, co-design can be an essential ally for EX to improve internal socialization and help employees transition to a hybrid workplace.

Through the above studies on the co-design process and other theories about the return to the office and the future of work^{[44][9][1][2]}, there are ways to use this methodology to improve internal socialization post-pandemic (see table):

Improve internal socialization	Justification	Authors
<i>Gather input from employees</i>	Companies can start by gathering input from employees about their experiences during the pandemic, what they missed about in-person work, and what they would like to see in the workplace as they return.	^{[44][9][1][2]}
<i>Co-design sessions</i>	Companies can host co-design sessions or meetings with employees to brainstorm ideas and develop solutions for improving internal socialization. These workshops can be conducted in-person or virtually, depending on the company's needs.	^[1]
<i>Redesign office space</i>	Companies can use co-design to redesign the office space to promote socialization and collaboration. This could involve creating shared spaces for employees to work and interact, such as break rooms, collaboration areas, or outdoor spaces.	^{[44][9][1]}
<i>Create opportunities for socialization</i>	Companies can use co-design to create opportunities for socialization, such as team-building activities, social events, or group projects. These activities can help employees connect with one another and build relationships.	^[1]
<i>Provide training and support</i>	Companies can use co-design to develop training and support programs to help employees adjust to the new workplace. This could involve providing training on new technologies, offering mental health support, or providing resources for managing stress and anxiety.	^{[44][9][1][2]}

Table 3. Steps to improve internal socialization on the future of work

Hence, co-designing employee experiences is a powerful approach to creating a work environment, whether physical and/or digital, that promotes more engagement and satisfaction^{[34][45]}, connection and belonging^[29], well-being^[2], and work-life balance^{[31][1]} to build a holistic Employee Experience process, with solutions that have a positive impact on employees' expectations. When involving employees in the design process, organizations can create experiences that reflect the needs and preferences of their workforce, leading to higher engagement and retention^{[14][15]}. Overall, co-designing employee experiences is essential for any organization to create a positive and productive workplace culture in the modern era.

HCD methodologies assume an essential role in EX design, and co-design gains even more prominence post-pandemic in the quest for companies to understand emergent and current needs of employees regarding the work model and particularly to identify the right incentives to work in the office space through socialization.

3. Methodology

3.1. Research approach

This study explores how socialization, creativity, and serendipity can improve the Employee Experience through an empirical study in a company, addressing the following research question: How can socialization be used to co-design meaningful encounters in the office space, improving employee experience? The relevance of the research is justified by the current post-pandemic moment that brought a new model of work and lifestyle, which reflected directly on employee interactions in the workplace. Moreover, it is based on the importance of socialization and how this process is essential for building a physical environment where employees can share moments and ideas, generating creativity and serendipity, thus helping in the return to the office. Seeking a more assertive answer to the research question, two specific objectives were defined: 1. Understand the emergent needs of employees regarding office space interactions; 2. Co-design employee socialization encounters to improve EX.

This exploratory study aims to acquire new knowledge about a phenomenon that has not been studied in detail. To address the research question and objectives, the study design followed a qualitative approach to obtain more complete and prosperous data, going deeper into the problem and gathering data more related to the emotions and experiences of employees^[46]. Qualitative research is used to understand and interpret social phenomena by examining individuals' subjective experiences and perspectives. It emphasizes in-depth data exploration and analysis to uncover complex meanings and patterns^[46]. Various techniques, such as interviews, focus groups, observations, and document analysis, collect rich and detailed information^[47]. Researchers aim to gather data that captures the participants' thoughts, feelings, beliefs, and behaviors within their natural contexts by means of non-numerical data, including textual or visual information^{[48][47]}. The data collected in qualitative research are typically in the form of transcripts, field notes, photographs, or audio/video recordings. Qualitative research is valuable when exploring complex or sensitive topics, gaining in-depth insights into individuals' experiences, or examining social processes within their natural settings^[49]. It allows researchers to capture nuances, contradictions, and diverse perspectives, providing a holistic view of the research subject^{[49][50]}.

For the empirical research, the case study method will examine how co-designing employee experiences focusing on socialization, creativity, and serendipity will encourage office space encounters. The choice of conducting a case study is because it provides rich and accurate data that contribute significantly to scientific research, helping to build reliable theories^{[51][52]}.

3.2. Study sample

The case study company is an engineering company focused on aerospace systems. With over 20 years of market presence, it has over 80 highly qualified employees working in different internal areas, called Business Units: corporate, IT, Flight Segment, GNSS, Ground Segment, and Space Safety. Regarding the organizational chart, the company has a general manager, CEO, BU managers, and their team members. The company is mainly composed of men aged 25-35 with no children. The working model is hybrid, mandatory to be in the office 2-3 days a week, which is agreed upon with each team manager - one can also request remote work; however, it is previously defined and accepted in specific locations. The company's culture is people-focused, reflected in the lighter environment and the mutual help,

coexistence, and personal needs, i.e., the company considers issues such as work-life balance. In addition, the company has a presence in other European countries with different business focuses, and all are part of a larger engineering group.

Purposeful sampling was used to select the company^[47]. Because of its attributes and characteristics that help to address the research question, Deimos can provide a diverse perspective and in-depth insights to understand the phenomenon. Firstly, it presented a scenario like what was sought in the research, being a good source of data for employee experience, new interaction needs in the workplace, and incentives to return to the office in a hybrid system. Secondly, the company and its employees yearn for improvements and changes after the pandemic, being willing to help in data collection. That is, the company was chosen because it presents contextually rich data to explore the research question and support empirical research in real-world settings^[52] and the internal processes of an organization^[53]^[54].

3.3. Study Design

This section describes the processes used to address research objectives. The empirical study at the company was divided into 4 phases to match holistic and more assertive objectives of the integrative nature of the employee-company-world. The study follows an adaptation of the HCD Double Diamond approach^[16], aiming to clarify the path to follow in the search for more assertive and employee-centered solutions. Each of the four phases of this approach is described below:

Discover and Define Diamond

1. Discover – It starts by mapping and systematizing the existing knowledge, considering the employee needs and the company expectations to understand the real problem to be solved.
2. Define—This step aims to find the problem/challenge that will be addressed by analyzing the data. The results help define the problem and start focusing on the solution.

Develop and Deliver Diamond

3. Develop – It deals with the solution. Based on a challenge identified, a specific experimental intervention to clarify and make visible what and how the organization should change is planned. A co-design session with employees was conducted to focus on a solution.
4. Deliver—This phase describes the application of the prototype of the proposed solution, the gathering of results, and the adjustment of improvements. Implementation for at least three months is needed to get relevant results and rich data.

As a baseline, proposed solutions should positively impact employee expectations identified in the literature on Employee Well-being^[2], Employee Engagement and Satisfaction^[45], Employee Connection and Belonging^[29], and Employee Work-life Balance^{[31][1]} to guarantee a holistic view of the problem, ensuring that the improvement of EX is internalized more assertively. Thus, the following guiding objectives were defined for the research and especially for data analysis: 1. To be safe and feel safe – new standards of safety; 2. To be productive – feeling that you are working with a purpose; 3. To have a more profound sense of belonging – shared purpose; 4. To achieve holistic comfort – physical-cognitive-emotional.

In the first diamond, discover and define, the study process took place through data collection and analysis, which resulted in the problem definition. For the second diamond, develop and deliver, an internal intervention—a co-design workshop—with a controlled group of employees was chosen. The result of this intervention was the creation of a prototype as a potential solution to the problem detected in the first diamond.

Co-design is an excellent internal approach to encourage an environment of mutual help and co-creation among employees. Moreover, it is an empathic process that brings more assertive solutions because impacted employees actively participate in the search for solutions^{[14][15]}.

The chosen problem was under the social sphere in developing actions to improve the employee experience because socialization was lost during the pandemic, and little was done post-pandemic to overcome its negative results. Therefore, the objective of the co-design was to promote socialization, making the workplace a place that fosters creativity and serendipity - the office employees want to go to and not because it is mandatory. The co-design session took place with a mixed group of employees, a sample of 8 participants, 4 women, and 4 men, from the following internal business units: Human Resources, Office Manager, IT, Ground Segment, Space Safety, Global Navigation Satellite System, and Flight Segment; professionals from the technical, business, and infrastructure areas, varying from 1 to 15 years of work in the company. The session design was conducted over 2 hours, and the first moment focused on awareness by providing an introduction and objective. Then, the production part took place with brainstorming and selection of ideas. Finally, in the closing, the next steps were discussed.

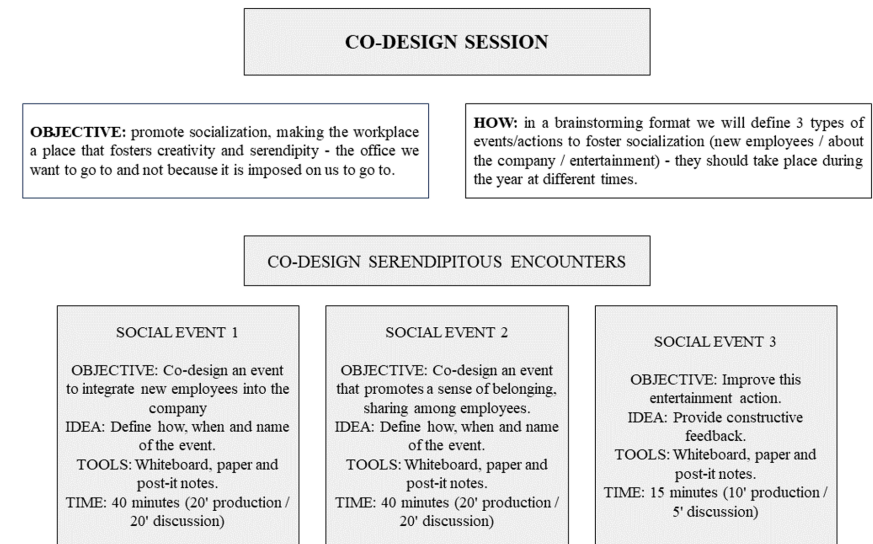


Figure 1. Co-design session planning: Co-design Serendipitous Encounters.

3.4. Data collection

The exploratory research relies on interview-based and observation data collection methods, data archives, and a survey. Having different sources supports the triangulation of data and their validation.

<i>Activities</i>	<i>Instrument</i>	<i>Data collected</i>
<i>In-depth interviews</i>	Semi-structured questionnaire; individual interview	11 respondents; 30 min per virtual meeting.
<i>Observation</i>	Workplace, employee, and social events	Photos (12 images of physical space; 6 images of events; 4 images of employee tasks) and several notes.
<i>Data archives</i>	Official documents, photos, and video	Employees' information, policies, and working model, organization chart, and official presentations.
<i>e-NPS</i>	Survey	50% of respondents – 41 answers.

Table 4. *Data collection*

The in-depth interview is a qualitative research method commonly used in the social sciences and psychology, and more recently in business and technology, to obtain detailed and comprehensive information about a particular phenomenon, experience, or topic. In this method, an interviewer engages in a one-on-one conversation with a participant, asking open-ended questions and exploring their thoughts, feelings, beliefs, and experiences related to the topic of interest^[55]. An in-depth interview aims to gather rich and nuanced data that cannot be obtained through surveys or other quantitative methods. This method typically involves a flexible and iterative process that allows the interviewer to follow up on interesting responses and delve deeper into specific areas of interest^[56]. The resulting data can be analyzed using various qualitative techniques to identify patterns, themes, and insights relevant to the research question.

To apply the in-depth interview approach, a semi-structured script (see annex) was defined and conducted virtually with 11 employees to understand the employees' personal lives, working hours, and expectations. The interview with each participant lasted 30 minutes, following a semi-structured script: i) Introduction: introduce the interview subject and ask the interviewee to introduce himself (personal presentation, hobbies, routine, habits, and aspirations). ii) Development: this session is focused on the purpose of the interview and contains 5 questions related to work (onboarding, physical work environment, the work itself – technology and tools, social environment, work-life balance). iii) Closing: to conclude, the last question was a dream question to better understand the feelings and thoughts about the work at the company in terms of what could be improved; after that, the interview was concluded and provided information about the next steps of the intervention in the company. The complete script is available in Appendix 1.

Observational research is a scientific method that involves observing and recording the behavior of individuals or groups in their natural settings. The observational research method is non-experimental, as it does not involve manipulating variables but instead relies on observing and describing phenomena as they naturally occur^[57]. This method was defined as supplementary to the study to add to the data collection and thus close the holistic view of the insights that it is intended to reach.

The following aspects were observed in the organization: social events, employee integration, and physical space.

Data archives were also collected to complement primary data sources. This secondary research method analyzes reliable information from publicly available sources, such as books, articles, reports, and statistics, to gain insights and knowledge about a particular subject. It is a more practical way of seeking existing information to understand the employee, the company, and the current context more deeply^[58]. In this company, data collected included presentations, official documents, and the company's website.

Data were also gathered from the e-NPS survey applied to company employees about cognitive and emotional motivations (sense of well-being, sense of belonging, productivity, and work-life balance), with 41 responses received (sampling almost 50% of the employees). The e-NPS results can be found in Appendix 2.

3.5. Data Analysis

Content Analysis was chosen because it is a flexible and accessible method that can be applied to various research questions and data types. It allows for a deeper understanding of the data and can generate valuable insights that more structured research methods may not capture^[59]. This method is used to analyze and interpret the content of various forms of communication, such as written texts, images, videos, audio recordings, and more. The process involves systematically examining and categorizing the content based on predetermined criteria or themes to extract meaningful insights^[59].

The primary objective of content analysis is to understand the qualitative and quantitative aspects of the information present in the content through manifest analysis, which is a more superficial analysis close to the data, or latent analysis, which is more profound with opportunities to discover what the data does not tell us outright^[59].

The data analysis came under the study's first diamond (Discover and Define) because it was in this part that the data were collected and analyzed to arrive at the results that were worked on in the second diamond (Develop and Deliver) in the co-design session of the proposed solutions. Content analysis followed the following planning in the image below (Figure 1).

DATA COLLECTION

Data archives, In-depth interviews and Observation

DATA ANALYSING

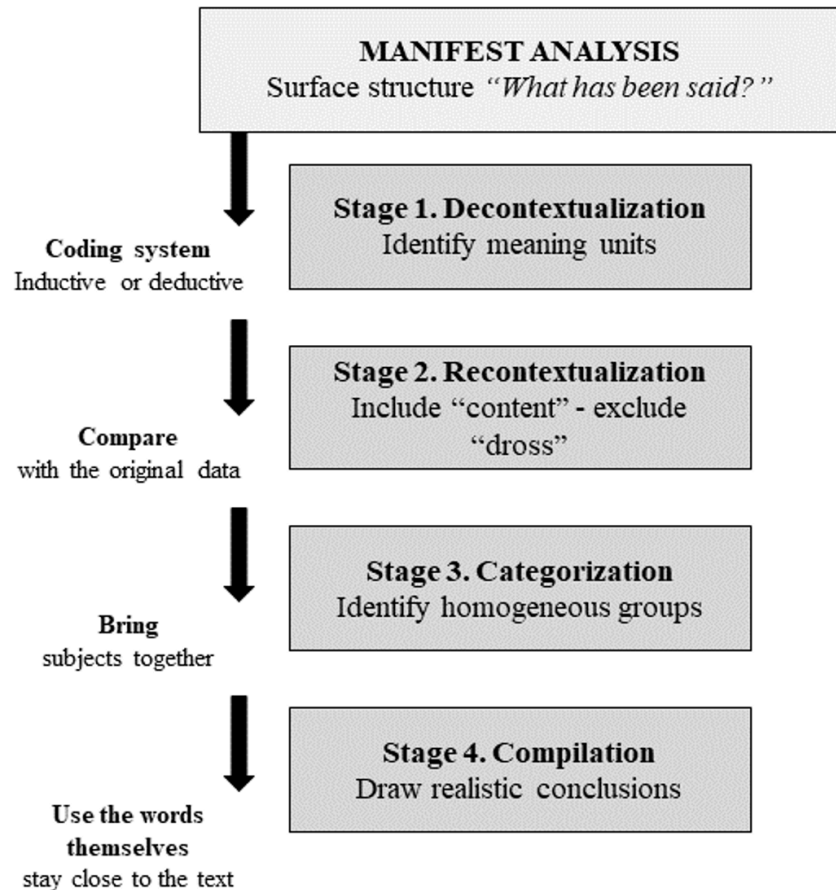


Figure 2. Adapted Content Analysis framework^[59]

The content analysis model followed the manifest analysis model, as the intention was to directly perceive what was being said through the words (text), a more direct and objective reading. The analysis in the study developed as described below:

- Stage 1 – Decontextualization (Meaning Unit): All data collected from primary research – interviews and observation – and secondary research – archive research and e-NPS – were organized to assist in reading and provide a holistic understanding of the problem in the deductive mode. This is because, based on the literature, the study was already directed at the level of Employee Experience and interaction needs in the physical workplace.
- Stage 2 – Recontextualization (Code): Based on the raw text created beforehand, the whole construction of the information is closer to the text of analysis (understanding what is meant). In this phase, the text was reviewed. After this, it was crossed with the EX-theories, and creating the first codes to direct the

categorization was possible. Here, it arrived in blocks of text already directed to potential categories.

- Stage 3 – Categorization (Category): With the text blocks made by similarity and based on the raw text of the collected data, it was possible to create categories reinforced by the 4 employees' expectations identified in the literature (1. To be safe and feel safe – new standards of safety; 2. To be productive – feeling that you are working with a purpose; 3. To have a more profound sense of belonging – shared purpose; 4. To achieve holistic comfort – physical-cognitive-emotional) and ensure reliability to the process.
- Stage 4 – Compilation (Theme): Finally, with the categories created under each type of employee expectation, it was possible to cross-reference the data with theory and practice and thus detect themes for improvement. These themes were areas of Employee Experience that need to be positively redesigned.

To close the empirical research, the content analysis arrived at potential solutions discussed in a co-design session with a select group of employees, which was part of the Second diamond (Develop and Deliver). The results of the data analysis of the first diamond and the co-design session are described in the next chapter.

4. Findings

The findings are divided into two moments of the empirical study. The first part of the findings is related to the data collection and analysis phases (Discover and Define diamond). These results led to a problem to address in the study's second part, the co-design session (Develop and Deliver diamond). The findings of co-designing supported the creation of the proposed solutions for the problem detected in the first part of the research (Discover and Define Diamond).

First Diamond – Discover and Define

As explained in the data analysis, all the data collected, including primary and secondary research, was subjected to content analysis to arrive at categories that were related to the 4 types of employee expectations and then to the Employee Experience themes of the organization selected for empirical study that needed to be improved. The results are described below:

1. To achieve holistic comfort (physical-cognitive-emotional)

Personal – Employees are highly qualified professionals for the work they do; they are passionate about what they do and always try to improve their skills; half of them have been working at the company for more than 5 years, and the other half are newer and more recent (2 years); most of them have hobbies as a way to release stress and for entertainment; at the routine level, all of them like the hybrid work model because they can manage their agendas and achieve more productivity. However, it was found that they also prioritize being in the office because of socialization and performance.

Company – From a human perspective, this is an excellent company to work for, focusing on people, care, flexibility, security, mutual help, transparency, and a great social environment. It encourages contact with people passionate about what they do, which motivates the day-to-day work tasks and improves performance. Employees choose the company because of the work environment (culture and people). However, some management issues, such as time management, task allocation, and career plans, translate into low talent retention.

2. To be safe and feel safe (new standards of safety)

Physical Space (location, temperature, cafeteria, equipment) – Because the office is open, employees recognize the opportunities to socialize, which is a positive point.

A negative is the noise made in meetings and when there are too many people in the office due to the lack of extra rooms or booths. Regarding the equipment, everyone agrees. They like the pantry and the food that is provided to everyone. The office temperature is a personal issue, and it is difficult to please everyone.

3. To be productive – feeling work with a purpose

Work Space (roles, training, tools) – The job descriptions (employee roles) are not well defined, so employees do more than previously required; tasks are sometimes confusing; training is not accessible and communicated. Employees need to recognize the need and go after the right training program. Time and task management must be reviewed in line with burnout and intense workload. Also, employees felt that compensation is unfair compared to the workload and the market in general. They are very positive and mention that monitoring colleagues and managers are always willing to help.

4. To have a more profound sense of belonging (shared purpose)

Social Space (culture, people)—The company provides a relaxed, friendly, and mutually supportive environment. It is always informal and open. The culture is human-centered, and the focus is always on people. They faced some socialization difficulties and lost bonds during and after the pandemic. Now, with the hybrid model, it is hard to integrate new people, but there is always openness and accessibility.

Integration – New employees had a more informal onboarding without a standard company process. They all felt welcomed by the team and company but missed a more institutional presentation, particularly about strategy and expectations.

Based on these results and cross-checking the research objectives, the following improvement areas were identified: 1. Employee roles and categories defined by the company; 2. Social Space (Integration and Socialization) category. As the company was already tackling the first problem, the social space was chosen to be addressed in the following research step, the co-design workshop. This choice was reinforced by the latent need in the organization, as well as the research opportunities in the academic area for socialization and new ways of interaction in the office space.

Second Diamond – Develop and Deliver

As a result of the co-design workshop, three solutions to improve the social space and serendipitous encounters were proposed (systematized in Table 5).

Action	Social Space – Serendipitous encounters	
New Employees (integration)	Company (shared purpose)	CHILL event (entertainment)
<p><i>Company Landing</i></p> <p>one per month</p> <p>Employees will be informed at the official onboarding that they will have an effective and standard integration into the company.</p>	<p><i>Small Talk</i></p> <p>one per month</p> <p>Create visual communication about the business areas, strategic guidelines, and employees to be shown on the office space's various monitors; Improve interior design; Include a specific section about the company strategy and business in the Newsletter; Promote seminars between teams for project presentations and knowledge sharing.</p>	<p><i>Improvements</i></p> <ul style="list-style-type: none"> • Picnic Thursdays. • “happy hour” more frequently; • Theme Fridays (at least 1x per month); <p>These internal events will be supported by the internal communication department.</p>

Table 5. Results from the co-design session: proposed solutions to improve social space

The third proposed solution, i.e., the chill event, already happens organically in the company. However, it needed to be more standardized and recurrent. Each action thought of and designed in the co-design session has the objective of answering an identified pain in the organization, and each event should interconnect and thus close an effective and assertive cycle of socialization in the company, with the physical space being a place of creativity and integration among the employees and a promoter of serendipity, thus seamlessly encouraging onsite interactions.

The company intends to present the proposals from the co-design session to the board of directors, and with approval, they will be applied internally for about five months. After implementing the proposed solutions, internal research will be conducted (with a new round of the e-NPS survey, interviews, and observations) to measure their effectiveness and improvement. The company believes these solutions will address the new socialization needs of employees, aiming to improve their creativity and serendipitous encounters when interacting in the office space.

5. Discussion

As discussed in the theoretical background, the global pandemic of COVID-19 has triggered significant changes in how people work^[28]. Remote working and virtual communication became the norm, shrinking face-to-face social interactions in the workplace^{[6][7]} (Kniffin et al., 2020). However, as companies began implementing a hybrid working model, examining the importance of socialization and interaction in the physical work environment as crucial drivers for redesigning the employee experience is critical.

The findings of the empirical study confirm that in the current context, workplace socialization and interaction play a crucial role in improving the employee experience. By promoting face-to-face socialization and interaction, the company creates a more collaborative, creative, and stimulating work environment in which employees feel valued and connected to the company's goals and values. This

contributes to a positive work experience, increasing employee engagement, satisfaction, and retention^{[23][24][22]}.

Company employees can share knowledge, experiences, and ideas more effectively through face-to-face interaction, strengthening learning and professional development. As the literature mentions, face-to-face interaction creates opportunities for recognition and immediate feedback, which can be a powerful driver of motivation and personal growth^[20].

Socialization and interaction in the workplace also contribute to building positive interpersonal relationships. This promotes a sense of community and belonging, strengthening the bonds between co-workers and facilitating collaboration on projects and tasks. Results show that this deeper interpersonal connection produces a more positive and supportive work atmosphere, directly impacting the employee experience.

Findings shed additional light on the company's cultural aspects. In addition, post-pandemic physical workplace socialization offers the opportunity to redeem the organizational culture and reinforce the company's values and purpose^{[23][24]}. Employees need some help socializing and have lost bonds with hybrid work. Therefore, informal moments of interaction allow employees to engage with the company's culture, share experiences, and better understand the impact of their work within the broader context^{[8][9]}.

There is evidence that co-design in a human-centered design methodology helps to redesign the employee experience with a focus on workplace socialization. The process is more assertive and empathetic because it places the employee at the center of the problem and focuses on them while searching for the solution.

Therefore, it is becoming clear that socialization and interaction in the post-pandemic workplace play a crucial role in promoting a positive Employee Experience, even more so with employees involved in the co-design process of the journey. By investing in these aspects, organizations can boost employee engagement, satisfaction, and development, contributing to a healthy and productive work environment and encouraging employees to go to the office.

Based on this discussion of the case study results against the literature, a conceptual framework is proposed to elucidate the employee experience co-design in the office space, focusing on socialization.

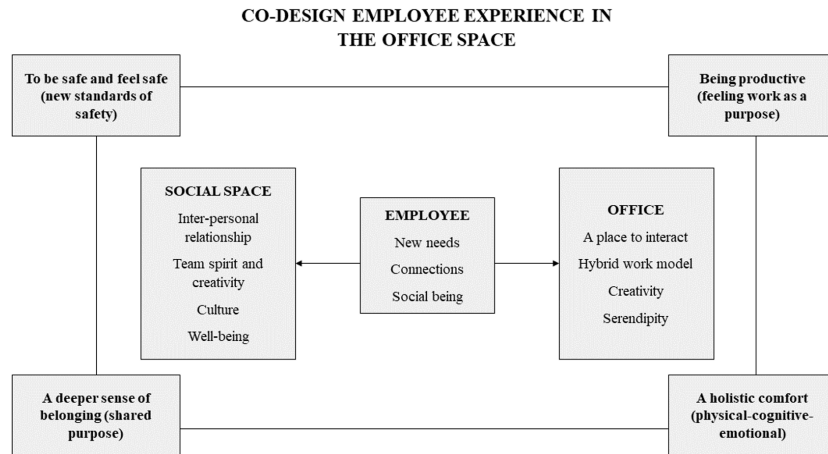


Figure 3. Conceptual Framework to Co-design Employee Experience

The following research propositions emerge from the framework, opening areas for future research:

- *Strengthening interpersonal relationships:* By promoting face-to-face interactions in the workplace, organizations create opportunities for employees to connect and develop stronger relationships. These personal and social connections are vital to creating a sense of belonging and community in the office, which can increase employees' motivation to attend and interact with their colleagues.
- *Fostering collaboration and creativity:* Face-to-face interaction facilitates spontaneous collaboration, informal discussions, and the exchange of ideas. These face-to-face interactions encourage creativity, innovative thinking, and joint problem-solving. By creating a work environment where collaboration is valued and encouraged, the company can attract employees to the office, as they perceive it to be a conducive environment for exchanging knowledge and experience.
- *Promoting organizational culture:* The physical office is a space where organizational culture can be experienced more tangibly. Workplace interactions allow employees to engage more meaningfully with the company's values, mission, and purpose. Companies can create an environment that reflects and strengthens their culture by redesigning the Employee Experience to emphasize socialization and interaction in the office. This can motivate employees to engage in that environment and connect with the organization's identity.
- *Supporting wellbeing and balance:* While remote working has provided greater flexibility, the lack of face-to-face social interaction can lead to feelings of loneliness and isolation. By reintroducing socializing in the office, organizations can contribute to employee well-being by providing a sense of community and mutual support. Work-life balance can also be improved through more defined face-to-face interactions, allowing employees to disconnect from work when out of the office.

There is evidence that by emphasizing socializing and interaction in the office, companies can create a more attractive and engaging work environment for employees. Through strengthening interpersonal relationships, fostering collaboration, promoting organizational culture, and supporting employee

wellbeing, organizations can generate a sense of purpose, connection, and satisfaction that motivates employees to attend the office space as demanded.

To conclude, the paper answers both research objectives. The interplay between socialization and human-centered design led to a theoretical discussion and framework that contributed to highlighting the emergent needs of employees regarding office space interactions (objective #1). Results from the co-design workshop offer socialization encounters that can improve EX (objective #2).

6. Conclusion

6.1. Contributions to theory and practice

Socialization plays a fundamental role in society and the workplace. During the pandemic, social distancing, conviviality, and working in the office substantially impacted the rules of socialization, generating problems of lost bonds currently witnessed in several companies. This paper advances the body of knowledge by proposing redesigning the employees' journey focusing on socialization and interaction, involving employees in this process (co-design) to bring meaningful experiences to their work in the office space.

The paper highlights that redesigning the employee experience with an emphasis on socialization and interaction in the office within a hybrid working model is a strategic and collaborative approach that aims to improve the working environment, generate more creativity and serendipitous encounters, and strengthen employee relationships. Through co-design sessions, organizations can actively involve employees in the redesign process, ensuring their voices are heard and their needs are considered.

The paper's theoretical contributions, delivered through a framework for understanding how office interactions influence work culture with testable research propositions, can significantly impact enhanced office interactions in both the private and public sectors. Fostering a culture of interaction can enhance teamwork, improve public service delivery, and boost employee morale in the public sector, leading to more efficient and effective public services. On the same page, private companies prioritizing interaction may see reduced turnover rates and a stronger organizational culture.

The paper's practical contribution lies in implementing the conceptual framework. Companies can elucidate their EX-redesign initiatives through co-design, focusing on social space. The paper also offers evidence that organizations that value employee participation demonstrate their commitment to creating a work environment that fosters meaningful connections and a sense of belonging. By redesigning the employee experience, companies recognize the importance of socializing and interacting in the office for employee well-being and strengthening bonds within the team.

Companies can implement initiatives such as shared food areas, collaborative breakout spaces, and regular social events, both face-to-face and virtual, which provide opportunities for interaction and promote healthy relationships between employees. In addition, redesigning the employee experience should consider employees' individual preferences and needs, ensuring that opportunities for socialization and interaction are accessible to all, even in a hybrid work environment.

Importantly, redesigning the employee experience promotes employee well-being, strengthens the organizational culture, and contributes to the organization's success. The following areas deserve special attention:

- **Productivity and Efficiency:** Face-to-face socialization and interaction in the workplace positively impact employee productivity and efficiency. Face-to-face contact provides richer and more transparent communication, allowing for the direct exchange of information and rapid problem-solving. In addition, the physical work environment offers informal discussions and spontaneous collaboration opportunities, which can lead to innovative and creative solutions. Face-to-face interaction also helps build stronger relationships between team members, fostering a greater sense of commitment and motivation.
- **Team Cohesion and Collaboration:** Socialization and interaction in the workplace play a crucial role in team cohesion and promoting effective and creative collaboration. Physical proximity allows colleagues to get to know each other better, strengthen interpersonal bonds, and develop a sense of mutual trust. These factors are essential for teamwork, facilitating open communication, exchanging ideas, and building a supportive environment. In addition, workplace interaction promotes a sense of shared identity and belonging to the organization, which contributes to employee motivation and engagement.
- **Employee Well-Being:** Social interaction is vital to individuals' psychological well-being. Studies have shown that social isolation and lack of interpersonal interaction can lead to mental health problems such as anxiety and depression. Working in the physical workplace allows employees to make meaningful connections with their colleagues, reducing feelings of loneliness and isolation. In addition, the face-to-face work environment offers a sense of routine and structure, promoting a clear separation between personal and professional life, which can improve work-life balance.

Companies can follow these practical recommendations to improve their internal communication and employee engagement strategies. A positive work experience tends to make employees feel more engaged, motivated, and productive, resulting in increased job satisfaction and talent retention.

In summary, redesigning the employee experience in a hybrid working model that focuses on socializing and interacting in the office is a strategic and collaborative approach that creates a creative, inclusive, and employee-centric working environment. When involving employees in the co-design process, companies can gain valuable insights and build an environment that fosters collaboration, a sense of community, and employee engagement, resulting in benefits for both individuals and the organization.

6.2. Limitations and research directions

The needs related to internal socialization in organizations, the hybrid working model, and the office - or several places that today can be the office - are emerging themes in companies, directly affecting the Employee Experience. The future of work is still being explored and brings several divergences for the moment, so there is a long way to go in academic studies on the above themes, and there are still research gaps that require further study.

In this complex scenario, involving employees in redesigning office interactions is essential to extract solutions to the current challenges and try, through empirical studies, to address the research gaps in the literature. In this sense, the study sought answers about workplace challenges through literature and empirical research, with socialization, interaction, and creativity as the first drivers of redesigning employee experience through co-design.

Proper approaches to mapping socialization in the office space were identified as study limitations. The empirical study's shortcomings were related to the gap between company work plans and the study timeframe. Since it's always important

not to disrupt working activities and hours, an additional effort was required to encourage participation in the research study. Nevertheless, it was possible to obtain an adequate sample and rich data, not skewed data, and to come up with concrete solutions to the challenges detected.

This paper focuses on the employee experience drivers for office space interaction, but the work model is not limited to the physical space. Besides the research propositions that open new directions for improving employee experience, there are other research opportunities to test the effectiveness of prototypes aimed at socialization and interaction in the physical workplace. As the office can be a suitable space for creativity and serendipitous encounters, it would be helpful to explore new technologies such as AI in the search for a more inclusive and engaging environment. The trend of using AI in search engines, email, content building, online meetings, and the metaverse will have substantial implications for human interactions, setting precedents for new scientific research. These advances are essential for promoting a positive experience that results in more satisfied, productive, engaged, and retained employees.

APPENDIX

Interview guide

Personal

1. Brief presentation (work, family constitution)
2. Hobbies
3. Routine - Habits
4. Aspirations

Work

1. How was the onboarding process at the company? From the company's presentation, interaction with colleagues, and work tools.
2. How is the physical environment at the company (space, equipment, cafeteria, temperature)?
3. How is the company's work environment (technology, tools, tasks, and training)?
4. How is the company's social environment? (Culture, colleagues, and supervisors)
5. What are the strengths of your work experience at the company (considering work-life balance)?
6. What could be improved in the company's employee experience?

Ethics Statement

This study adhered to established ethical principles for research with human participants. At the time of the research, the primary author's university lacked a formal institutional ethics committee. Ethical review and approval for this specific study were therefore provided by the case study firm's management board. The board's review ensured the study protocol aligned with established ethical research standards, particularly concerning participant protection, comprehensive informed consent, and data confidentiality. All participants provided written informed consent following a clear explanation of the study's purpose, their voluntary participation, and data protection measures. Written informed consent was also explicitly obtained for the publication of any potentially identifiable data.

Data Availability Statement

The datasets generated for this study contain potentially sensitive participant information. Requests to access the datasets should be directed to the corresponding author, contingent upon ethical considerations and participant confidentiality agreements.

Author Contributions

RP: Conceptualization, Methodology, Investigation, Writing – Original Draft. FN: Conceptualization, Supervision, Writing – Review & Editing.

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