

Office of the Future

A Study on Office Reduction and Perceived
Employee Productivity of Global
Pharmaceutical companies in the
Netherlands

Colophon



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Abstract

Restrictions from the covid pandemic are lifted. However, the office remains changed, the hybrid way of working seems to stick. Employees want flexibility and choose when to work from home and when they work in the office. The norm of a hybrid work week is working three days in the office and two days from home. Resulting in office space that is not used as much as before the pandemic. Therefore organizations are looking into reducing their office space (Syme, P., 2023).

When considering the reduction of office space, it is also important to consider an organization's employees. In this research, the focus lies on the impact space reduction might have on the perceived productivity of the employees. The focus on productivity is due to the impact productivity has on the performance of an organization (Aziri, 2011). If office space is reduced and the office therefore has a higher occupancy level, what does this do to the employee productivity? According to research done by Center for People and Buildings (2023), a higher occupancy level in the working environment results in employees being less satisfied with the availability of workplaces. With a higher occupancy, employees are forced to have video meetings in the open workspace, while other employees/colleagues are doing concentration work in the same space at the same time (Center for People and Buildings, 2023). Looking at these uncertainties, the main research question therefore is: *'How can global pharmaceutical companies reduce their office space in the Netherlands while still maintaining perceived employee productivity?'* The research focuses on global pharmaceutical companies that are reducing their office space. The focus lies on these companies, in order to define the research on a specific branch and due to the timeframe. In order to answer the research question, the research starts with a literature study. After the literature study, a series of case studies including interviews are done on global pharmaceutical companies. These companies have already experienced an office reduction and are planning on implementing a second reduction within the same project or with another project. The case studies provide insight into potential challenges concerning office reduction and maintaining employee productivity. After analyzing the case studies a cross case study analysis has been done. With the insights from the cross case analysis solutions have been found on how global pharmaceutical companies have tried to successfully reduce office space while keeping employee productivity. The research can help organizations with the decision-making on their office use.

Keywords: Office reduction, Hybrid working environment, Perceived employee productivity, Office of the future, Global pharmaceutical company.

Executive summary

1. Introduction

Context

There is a lasting impact of the pandemic on the work environment, hybrid working has become the new standard for many organizations (Barrero et al., 2021). With this shift in ways of working there has been an increase in remote working, therefore companies are re-evaluating their office spaces due to a decrease in physical workspace needs (Lund et al., 2020). However, while organizations are strategizing to reduce their office space, the perceived productivity and satisfaction of employees must not be forgotten. Office design is a factor that influences employee productivity and satisfaction.

The research focuses on global pharmaceutical companies in the Netherlands that have reduced their office space. The research study aims to explore how the reduction of office space influences perceived employee productivity. Furthermore, the research will explore the decision-making process behind the reduction of the office space, the barriers these companies face and how they try to solve these problems. The research will discuss three case studies, all of which are global pharmaceutical companies that have gone through an office reduction, excluding laboratory space. The case studies will explore how the companies prioritize perceived employee productivity in their decision-making and will look at the potential challenges and solutions.

Problem statement and scope

Organizations are downsizing their office space, largely driven by the success of hybrid working (Syme, P., 2023). While reducing office space is cost effective for an organization, it poses challenges in terms of perceived employee productivity and satisfaction. Downsizing offices makes them denser, which can lead to employee discomfort, noise distractions and reduced attention and creativity (Ahmed et al., 2020 & Yunus et al., 2018). These issues are associated with open office layouts and negatively impact employee well-being and perceived employee productivity. As global pharmaceutical companies are reduce their office footprints, this research aims to understand how these companies are implementing office reductions while considering and addressing these challenges. The study focuses on how global pharmaceutical companies in the Netherlands consider perceived employee productivity when reducing office space, identifying the barriers they face and the strategies they employ to mitigate these challenges.

2. Methodology

Research questions

Reducing the office space results in a higher density in the office, this causes problems regarding the productivity of employees, such as spending an increasing amount of time searching for a workspace. In order to look at the problematization of this research, a main research question has been formulated:

‘How can global pharmaceutical companies reduce their office space in the Netherlands while still maintaining employee productivity?’

In order to provide an answer to the main research question, 5 sub questions have been formulated. The sub questions are:

- Sub question 1: How has the office environment changed over the years?
- Sub question 2: What trends can be identified concerning office use?
- Sub question 3: What do global pharmaceutical companies take into consideration while reducing the office space and how is this received?
- Sub question 4: What do global pharmaceutical companies perceive as potential barriers between office reduction and perceived employee productivity?
- Sub question 5: What can be seen as potential solutions for these barriers?

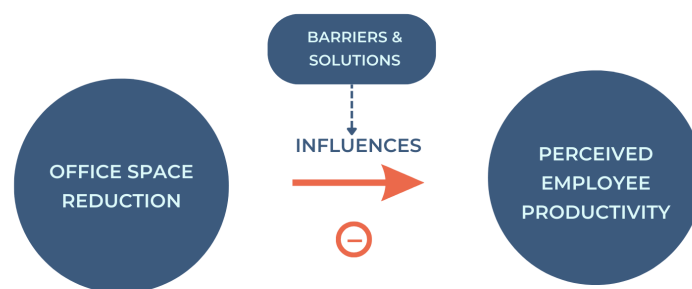


Figure 1: Conceptual model (source: own image)

Research methodology

The first two sub questions will be answered by literature study. The last three sub questions will be answered through empirical study. The empirical study will consist of three case studies and interviews. The research will be validated through an expert panel.

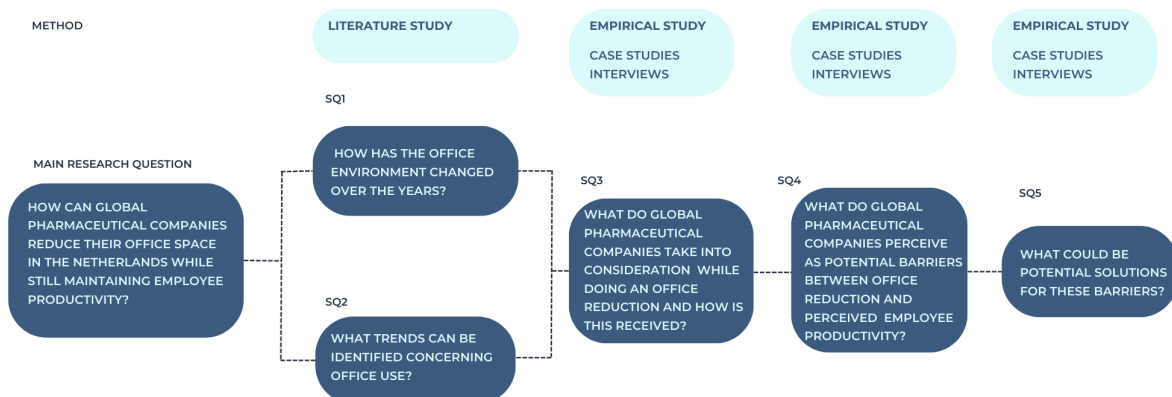


Figure 2: Research methods and link between research questions (source: own image)

3. Findings

Decision-making process

The interviews with the three pharmaceutical companies revealed a common goal of reducing costs by reducing real estate. The pandemic made a more aggressive approach possible, as offices were underutilized due to the shift to hybrid working. Furthermore

employee productivity is a driver for global pharmaceutical companies, but not a top priority. However, measuring productivity is challenging, therefore the companies use satisfaction and utilization studies to assess if the real estate is supporting the perceived employee productivity. The qualitative and quantitative data are used by the company to assess the real estate portfolio performance and identify the improvement points. Key decision drivers for the different companies include cost reduction, employee productivity through employee satisfaction, real estate utilization, sustainability, talent retention, and the creation of effective and efficient office spaces that promote collaboration. The reaction of the employees to the change project cannot be predicted. However, it helps to perform some change management activities to inform the employees about the change. Informing and making employees understand the change helps them to accept the change.

Barriers and solutions

Global pharmaceutical companies often face challenges in their office space and workplace strategies. It is complex to balance the preferences of global and local teams, who have varying aims regarding office space. Therefore, the different layers within a global organization should understand the decisions that are made by the other layer. When the global team implements a reduction, it helps the acceptance process if the local team understands the decision. The COVID-19 pandemic has accelerated the adoption of desk sharing, requiring caution to avoid overcrowding. The need for collaboration, video calling capabilities, and support for team and individual productivity is crucial. Effective communication, stakeholder involvement, and change management processes facilitate successful workplace changes. Providing employees with quality alternative spaces and involving them in decision-making increases employee engagement. Regular policies, regulations, and satisfaction surveys ensure efficient use of office space. Guidelines and acoustic measures address the challenges of open office layouts.

4. Discussion

The research examines the relationship between office space decisions and productivity, where productivity can be influenced by many factors including employee satisfaction and well-being. It acknowledges that while productivity is critical to organizational success, measuring it remains challenging. Companies often rely on satisfaction and utilization studies to assess the performance of their real estate, prioritizing cost reduction driven by underutilization of office space.

Barriers to productivity include aspects like office design, workplace quality, availability of spaces, privacy, collaboration, and generational differences. These factors influence employee satisfaction, wellbeing, and ultimately, productivity. Moreover, organizational culture, resistance to change, and challenges in adapting different teams' needs into reduced office spaces also impact productivity.

Solutions to these barriers could be effective communication, employee support, and leadership openness for successful change implementation. Establishing office use

agreements, slowly moving from policies to a natural adaptation of the rules, and encouraging higher-level employees' presence in the office to foster collaboration and adaptation to new concepts. Stakeholder involvement, change management activities, and the creation of a local office identity are critical for successful transitions.

Furthermore, there is a need for clear policies and regulations, which need to be repeated, technological support for hybrid work, tailored office layouts, and acoustics to support different activities. Involving employees in the planning process is recommended to ensure that office designs align with their needs and activities.

5. Limitations

The research has some limitations that might impact the conclusion. One limitation involves potential biases arising from participant perspectives, such as recall bias when participants are asked about past events and researcher bias when the researcher's beliefs influence data collection or design. The focus on perceived productivity in the study, may overlook correlations with satisfaction and wellbeing, is also a limitation, as it restricts the research's scope to make it more feasible within its timeframe.

Another limitation is the research's timeframe, which constrained the number of case studies and prevented a deeper analysis. Quantitative data was not included, limiting insights into specific aspects affected by reduced office space and team variations. The qualitative nature of the data from interviews might introduce biases as well. In addition, due to time constraints, the research took a more general approach to pharmaceutical companies, whereas with more time, it could have delved into specific teams within a multinational company to understand how they were individually affected by office reduction.

6. Conclusion

In order for global pharmaceutical companies to reduce their office space in the Netherlands while still maintaining perceived employee productivity, they should consider perceived employee productivity when making the decision to reduce real estate. Employee reaction to change cannot always be predicted. However, if employees understand why a change is taking place, they will be more likely to accept it. In addition, giving something in return, such as office quality, rather than just taking something away, will help employees accept the reduction. In addition, there are some barriers you need to consider. These barriers are:

- The different layers of an organization do not always agree.
- Employees need time to adjust to change, which can cause a dip in the perceived employee productivity at the beginning of a change project.
- Creating an effective workplace for different employees and job descriptions.
- Employees are closer together in a more open and reduced floor plan. This can lead to noise pollution and a reduced sense of privacy.

However, there are some possible solutions to these barriers. These are:

- When different layers within the organization are not in agreement, it helps to make them understand each other by explaining the reasons behind the decisions.
- Helping employees adapt to and understand the change can be done through change management activities, stakeholder involvement, and effective communication. Change management activities can include: town halls, workshops, explanatory manuals and change ambassadors.
- Policies and regulations can help employees to gain more clarity on what is expected of them in the office and what to expect in the office.
- To balance out the different employees for an effective workplace, it helps to create an office that supports their different needs and activities. This can be done by involving the employees, getting their input and feedback through surveys.
- In order to avoid noise nuisance and privacy issues, different spaces should be implemented in the office. Where the office design should include rooms such as focus rooms where employees can perform confidential work activities or have confidential conversations and not be disturbed and have privacy. In addition, the office layout must be well thought out. It is important to consider the routing of traffic as well as where certain work activities take place.

In conclusion, in order for global pharmaceutical companies to reduce their office space while still maintaining perceived employee productivity, they must consider perceived employee productivity as well as the various barriers mentioned. These barriers may be addressed by the solutions presented above.

Table of content

Colophon	3
Abstract	4
Executive summary	5
Table of content	10
Graphic index	12
1. Introduction	13
1.1 Problem statement	15
1.2 Relevance of the research	16
2. Methodology	17
2.1 Research questions	18
2.2 Research method	18
2.3 Type of study	19
2.3.1 Literature study	19
2.3.2 Empirical study	19
2.4 Methods and techniques to be used	20
2.4.1 Case studies	20
2.4.2 Interviews	21
2.4.3 Expert panel	21
2.5 Data collection and analysis	21
2.6 Data plan and ethical considerations	22
2.7 Research output	23
2.7.1 Goals and objectives/deliverables	23
2.7.2 Research plan	23
2.7.3 Dissemination and audiences	24
3. Literature study	25
3.1 The changing workplace	26
History till now (1950-2020)	26
Future trends	29
3.2 Employee	31
Productivity	31
Satisfaction	32
Wellbeing	33
3.3 Correlation between productivity and space	34
Influence of different generations on the relation between office space and productivity	37
3.4 Change management	38
Reaction to change (implementing successful change)	41
4. Empirical study	43

4.1 Preparation	44
4.2 Case 1: Global pharmaceutical company_01	46
4.3 Case 2: Global pharmaceutical company_02	53
4.4 Case 3: Global pharmaceutical company_03	60
4.5 Cross case analysis	67
4.6 Validation	76
5. Discussion & Limitations	80
5.1 Discussion	81
5.2 Limitations	84
6. Conclusion & recommendations	85
6.1 Conclusion	86
6.2 Recommendations	91
References	93
Appendix	100
Appendix A.1	102
Appendix A.2	105
Appendix A.3	108
Appendix B.1	109
Appendix B.2	111

Graphic index

List of figures and tables

Figure 1.1: Problem statement (Source: own image)

Figure 2.1.1: Conceptual model (Source: own image)

Figure 2.2.1: Research methods and link between research questions (source: own image)

Figure 2.7.1: Goals and objectives related to the research questions (source: own image)

Figure: 2.7.2: Deliverables (source: own image).

Figure 3.1.1: Workplace evolution timeline (source: own image)

Figure 3.1.2: Overview on important trends (Source: own image)

Figure 3.2.1: relation between employee satisfaction, productivity and well-being (source: own image)

Figure 3.3.1: Important workplace characteristics that support productivity (source: adapted from Palvalin et al., 2017).

Figure 3.4.1: Field theory of Kurt Lewin (source: image adapted from Lauer, T. 2021)

Figure 3.4.2: Typical performance curve in processes of excessive change (source: image adapted from Lauer, T. 2021)

Figure 3.4.3: Three phase model of change according to Lewin (source: image adapted from Lauer, T. 2021)

Figure 4.2.1: City size of case 1 (Source: own image)

Figure 4.2.2: Amount of employees of global pharmaceutical company_01 (source: own image)

Figure 4.2.3: Project context & change gap (source: own image)

Figure 4.3.1: City size of case 2 (Source: own image)

Figure 4.3.2: Amount of employees of global pharmaceutical company_02 (source: own image)

Figure 4.3.3: Project context & change gap (source: own image)

Figure 4.4.1: City size of case 3 (Source: own image)

Figure 4.4.2: Amount of employees of global pharmaceutical company_03 (source: own image)

Figure 4.4.3: Project context & change gap (source: own image)

Figure 4.5.1: Cross case analysis of office location, city size (source: own image)

Figure 4.5.2: Comparison amount of employees per company globally (source: own image)

Figure 4.5.3: Comparison amount of employees per company in the Netherlands (source: own image)

Figure 4.5.4: Cross case analysis table (source: own image)

Figure 4.5.5: Cross case analysis office days per case (source: own image)

Figure 4.5.6: Balancing office reduction and perceived employee productivity (source: own image)

Chapter 1

Introduction

1. Introduction

During the pandemic, employees were forced to make the transition from working from the office to working from home. Now that the covid-19 restrictions are lifted and employees can come back to the office, we see that the pandemic left a permanent mark on the workplace. Many employees are continuing to work from home and have a demand for flexibility (Barrero et al., 2021). This demand for flexibility has introduced a new way of working. The term used most often is hybrid working, this is defined as a form of 'future of work' that is a combination between a part-remote and part office schedule (Xu, 2023). Hybrid working has become a new norm for most organizations. Office managers expect an increase in work time outside of the office of 36 percent. This affects the offices of companies, meaning that companies will need less office space in the future. Besides, it is predicted that the office vacancy rate will climb. Therefore, several companies are already planning on reducing their real estate expenses and thereby reducing their office space (Lund et al., 2020).

As hybrid working has become a new norm for most organizations, there are some companies that have developed strategies for the office after the pandemic. These organizations prefer to reduce the number of employees that work from the office and are developing strategies to enhance remote working practice (Oladiran, 2023). As mentioned before, the positive working from home experience will likely increase organizations to reduce their office space. However, looking at this office space reduction, there are some aspects that need to be taken into consideration. Research has found that office design is one of the aspects that directly impacts work productivity. An organization's performance is positively impacted by a high work productivity (Yunus & Ernawati, 2018). Therefore, it is of importance for organizations to look at employee productivity, while making changes in their office space. In addition, satisfied, loyal and highly motivated employees represent the basis of a competitive company. Where the growth of satisfaction from the employees can be reflected in, is the increase of productivity (Gabčánová, 2011). Hence, this research proposal has been made. The research focuses on how global pharmaceutical companies have reduced their office space and how that might influence perceived employee productivity and what they take into consideration while making an office reduction. The focus on global pharmaceutical companies is in order to define the research on a specific branch, moreover this is due to the timeframe of the research.

The office reduction of global pharmaceutical companies in the Netherlands has the main focus in the research. This is researched on the basis of three case studies. Due to the office reduction that these companies have been through or are going through they are interesting to look at. With these case studies the lab spaces are not taken into account and the office space is the main focus. The focus lies on how these companies weigh out employee productivity into the decision-making process for office reduction. In addition, the research looks at the potential barriers these companies encounter while going through an office reduction and how they tried to solve those barriers.

1.1 Problem statement

Organizations are looking to reduce their office space, this is partially due to the global working from home experiment which made clear that hybrid working works. As a result of organizations implementing the hybrid work norm, employees can choose to work remotely or work from the office. This results in organizations realizing they need to change and/or reduce their office space. In addition, downsizing the office is profitable for organizations as it derives costs (Brunia et al., 2016). However, while reducing the office space, the employees and the perceived employee productivity also need to be taken into consideration. As with cutting back office space, there might be some challenges concerning the employees. Barrero (2021) mentioned that as a result of downsizing the office, the office becomes more dense, which can be uncomfortable for employees. Employees dislike crowds around their desks, this results in concentration and noise complaints (Barrero, et al., 2021). Employees experiencing distractions due to noise and having less privacy is related to an open office layout. Employees experiencing these aspects results in a reduced employee's attention, productivity, creativity and satisfaction (Ahmed et al., 2020 & Yunus et al., 2018). The density of the office might also cause employees to have an increased amount of time on searching for a workspace. This is associated with lower productivity and well-being (Van der Voordt & Jensen, 2021). Looking at these problems concerning employee productivity with a higher density in the office caused by the downsizing of the office space, the research question arises on why and how are global pharmaceutical companies reducing their office space. This problem statement is illustrated in Figure 1.1.

Productivity is influenced by many factors, such as: advanced technology, appropriate leadership, proper areas to take a break, personal control over the indoor climate and many more (Palvalin et al., 2017). This is why the direct relation/correlation between office reduction and employee productivity is difficult to pinpoint. Therefore, this research focuses on how perceived employee productivity is taken into consideration while performing an office reduction. What kind of barriers do companies encounter concerning employee productivity while performing an office reduction and how are they trying to overcome those barriers.



Figure 1.1: Problem statement (source: own image)

1.2 Relevance of the research

The pandemic made organizations realize that the workplace is in need of a change. The massive working from home experience showed that employees can also work remotely. The office might not be needed the way it is used now. According to research by JLL (2020), employees have shown that they can work remotely and efficiently without a significant loss in productivity, if supported with the right technology. In addition, JLL mentioned that the pandemic showed that employees can still be engaged in an organization in challenging times. However, in return employees are expressing new expectations concerning their well-being and a healthy lifestyle. Looking at the expectations of employees it can be discussed what is important while changing the office and what are decisions that need to be taken into consideration. For example, the space employees actually need and if employees are as productive as they say they are.

This research looks at how the productivity of employees weighs out in the decision-making process of office reduction and how employees might react to office space being taken away. However, having experienced a perceived 'successful' office reduction does not mean the second reduction would also work. As mentioned before, having a higher density in the office could cause problems regarding employee productivity. In addition, implementing changes within an organization can be difficult, due to the unpredictability of the reaction of the employees to the changes. Employees might react to the changes if they believe that it will disrupt the working environment (Stavros et al., 2016). Looking at these uncertainties and companies struggling with these uncertainties makes this research of relevance. In addition, the different perceptions concerning employee productivity and office reduction are explored. While further deepening the knowledge in the *conversation* on office reduction and the *influence* perceived employee productivity has on the decision-making of the reduction.

The scientific relevance of the research is that this research tries to deepen the knowledge on the influence of office space reduction to perceived employee productivity and how companies take this into consideration. Employees are an important part of an organization, therefore keeping the employees satisfied and productive is of importance in order to retain the employees. The societal relevance of this research is that it contributes to the future office space of pharmaceutical companies as mentioned above. The research fills in the gap between the two research topics, perceived employee productivity and office reduction.

Chapter 2

Methodology

2. Methodology

2.1 Research questions

Reducing the office space results in a higher density in the office, this causes problems regarding the productivity of employees, such as spending an increasing amount of time searching for a workspace. In order to look at the problematization of this research, a main research question has been formulated:

'How can global pharmaceutical companies reduce their office space in the Netherlands while still maintaining perceived employee productivity?'

In order to provide an answer to the main research question, 5 sub questions have been formulated. The sub questions are:

- Sub question 1: How has the office environment changed over the years?
- Sub question 2: What trends can be identified concerning office use?
- Sub question 3: What do global pharmaceutical companies take into consideration while reducing the office space and how is this received?
- Sub question 4: What do global pharmaceutical companies perceive as potential barriers between office reduction and perceived employee productivity?
- Sub question 5: What can be seen as potential solutions for these barriers?

The conceptual model, shown in Figure 2.1, shows the different components of the main research questions. The conceptual model discusses the relation between office space reduction and perceived employee productivity. There are many factors that could influence employee productivity, these are discussed in the literature study. In this research, the link between office space reduction and perceived employee productivity is seen as the availability of office space for employees and how they will respond to the changes. The conceptual model represents the relation between the two research topics. The first represents the cause (office space reduction) and the second topic represents the effect (perceived employee productivity). The relation between the two topics implies a negative impact, which is an assumption. The interactive factors are indicated above the negative assumption, the terms barriers and solutions describe elements that affect the relationship between office space reduction and perceived employee productivity.

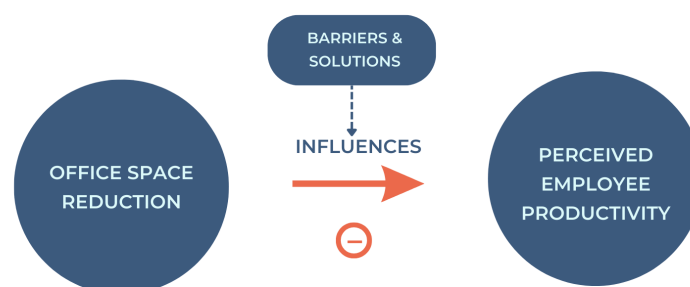


Figure 2.1: Conceptual model (source: own image)

2.2 Research method

The research methods are explained in this chapter. First the type of study is discussed, starting with the literature study followed by the empirical study. After which the methods and techniques that are used in this research are discussed. Lastly the data collection, analysis, plan and ethical consideration are discussed. Figure 2.2 shows an overview of the link between the research questions and the research methods that are used.

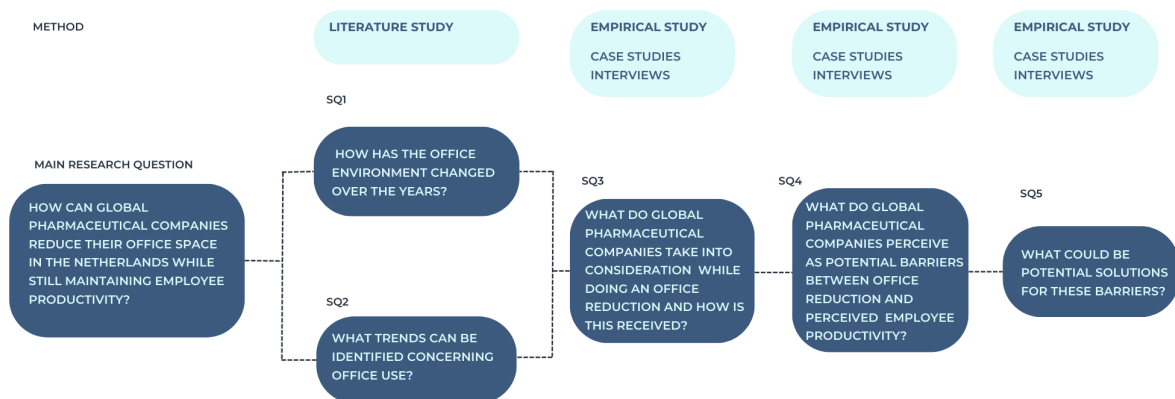


Figure 2.2: Research methods and link between research questions (source: own image)

2.3 Type of study

This study has a qualitative approach, the techniques/methods used are case studies, interviews and an expert panel. Empirical research and literature study are used as the main study types.

2.3.1 Literature study

This research begins with a literature study. With this literature study background information is given on how the office environment changed over the years and what trends can be identified in the future of office use. It is important to know the history and the future of the office to understand the context. In addition, the definitions of the terms used in the research questions are explained in the literature study and the correlation between the terms is explained. The literature study gives the basis of the research to build upon. The literature that is used in this research comes from trustworthy sources, such as the TU Delft repository and the multi-disciplinary databases Scopus and google scholar.

2.3.2 Empirical study

After the literature study follows the empirical study. This part consists of case studies and interviews. After the case studies and interviews an expert panel is held to validate the research. The methods used in this research are further explained below.

2.4 Methods and techniques to be used

The methods that are used within this research are case studies, interviews and an expert panel to validate the research. The interviews have an inductive approach. The specific techniques that are used are described in this part.

2.4.1 Case studies

The method used in this research is case studies. The case studies must consist of companies that have made an office reduction. These case studies are thoroughly investigated. The facts of the case studies need to be analyzed, but also the process, the risks and the learning points. This is described in this part.

One of the criteria of the studies is that they are all global pharmaceutical companies. The global pharmaceutical companies are similar companies and have been through similar changes. All of the case studies have done a reduction of their office space already and are looking to do another reduction in the future with the same office or with different offices globally. The case needs to be set in the Netherlands. The case studies are selected on the following criteria:

1. It is a global pharmaceutical company
2. It has been through an office reduction
3. Another office reduction will take place either within the same location or with a different location
4. Project is situated in the Netherlands

Together with the graduation company (Jones Lang LaSalle) optional case studies are selected. There are four optional case studies which meet the above mentioned criteria. Three out of the four potential case studies are chosen. All of the companies are considering a second reduction for other offices globally or are already performing a second office reduction, this implies that the first office reduction was successful or that they are under the impression that it was successful. This makes these case studies interesting to look at. The first office reduction gives insight on how successful the reduction was and how they are planning on performing the second reduction or how they are planning to implement the same strategy with other offices.

The case studies consist of three parts, the first part examines the first and finished office reduction. The second part of the case studies explores what happened after the office reduction of every company. The third part of the case studies explores the future office reduction. The first reduction might be a success or a perceived success, however this does not ensure future success. These parts are researched by using different types of sources. During the case studies the conducted interviews and reports are the main sources. After researching these three parts of the case studies a cross case analysis has been performed to compare and explain the differences within the case studies. The successes and pitfalls of the different case studies are compared.

2.4.2 Interviews

After having thorough knowledge on the case studies a series of semi-structured interviews are conducted. These consist of directors of real estate, program managers, workplace experience managers, consultants and facility managers. The contact with the interviewees is done with the help of the graduation company. These interviews help to better understand the decision-making process within the case studies and help to better understand the case studies. The interviews are analyzed with an inductive approach.

2.4.3 Expert panel

To validate the collected data an expert panel is held. The research and the conclusions from the research are discussed with the expert panel. This panel consists of managers and professionals on workplace strategy. In this expert panel the following aspects are discussed to reflect on the research:

- If the research would be performed a second time, what could have been added to the research?

Secondly, this expert panel is also used as dissemination, therefore the conclusions of the research are discussed with questions such as:

- Do you recognize this outcome of the research?
- Does the research have a plausible outcome?

2.5 Data collection and analysis

To verify the data and to be able to collect a variety of data, interviews are conducted. The language during these interviews varies from Dutch to English, due to the research on global companies. The interviews are recorded with the permission of the interviewees. Before the interview is conducted permission to record and transcribe the interview is asked via email, verbally before the interview begins and again once the recording has started. Afterwards the interviews are transcribed and the interviewees are made anonymous. The name of the interviewee is deleted, only the job description is mentioned. For example Interviewee01_Senior-real-estate-manager is used in the interview transcript. The case studies that are used in this research are provided with the help of the graduation company (Jones Lang LaSalle). Lastly the expert panel has the same data collection structure as the interviews. The expert panel is recorded and transcribed. The transcriptions are made anonymous only the job description is mentioned.

In order to form a conclusion on this research the collected data needs to be analyzed. This is done by first recording and then transcribing the interviews. This way the interviews can be analyzed in more detail. To analyze the interviews ATLAS.ti is used, this is a tool to help with the analysis of qualitative data. This tool can help with managing the data from the interviews and make handling of this data easier (Burnard et al., 2008). In order to analyze the transcribed interviews in ATLAS.ti codes have to be linked to selected pieces of data. These codes can also be seen as labels, description, definition or a category name (Frieze,

2023). The initial coding of the data is done by looking at theories from literature and knowledge that is already extracted from the case studies. The second round of coding complements the first round. Codes used include: company culture, office strategy drive, challenges, enablers, employee productivity, impact on employees, employee involvement and more. The second round groups the codes into various categories. The expert panel is also analyzed with the help of ATLAS.ti. However, the difference to this analysis is that it is done with open coding. After applying codes, code groups and document groups to the transcripts in atlas.ti, it is used for the data analysis. For data analysis, the quotation manager is mainly used. Filters are applied in order to analyze the different aspects, for example case 1 with the code's challenges, risks and employee concerns.

2.6 Data plan and ethical considerations

The data in this research is collected with the FAIR guiding principles in mind. The personal recorded files of the interviews are put onto the project storage drive, where they can be safely stored. After the research these recordings are destroyed and only the anonymised transcripts remain. The research is posted onto the TU Delft repository site for people who are interested to read the research. The sources used in this research are all mentioned at the end of the thesis under references and are cited in APA style.

While collecting data ethics need to be taken into consideration. Blaikie and Priest (2019) discusses duties, consequences, situations and virtues that need to be taken into account with the design of a research. Obligations and rights in the research are important and preserve the rights of the participants of the research. The participants of a research must contribute voluntarily, have given informed consent, have the freedom to withdraw and have the right to privacy. The informed consent must be provided before participants contribute to the research. This can be done by having participants fill out an informed consent form or via an informative email. Researchers should also make sure that they do no harm and should always minimize harm to the research participants. This means that the participants should always give informed consent and that the data participants provide should be handled carefully. Participants have the right to leave a research at any point, or if they want their data removed from the research this should always be complied to.

Dealing with global pharmaceutical companies means coming into contact with vulnerable data. This caused the companies to not be willing to put their name into the research and are only willing to contribute if their company name is made anonymous. Therefore the company name is not mentioned, instead it is mentioned as globalpharmaceutical_company_01 in the report.

2.7 Research output

This research provides knowledge on office reduction in correlation with employee productivity. This chapter discusses the goals, objectives, deliverables, dissemination and audiences of the research.

2.7.1 Goals and objectives/deliverables

The goal of this research is to provide knowledge on office reduction in correlation with employee productivity in global pharmaceutical companies in the Netherlands. In addition, the barriers and potential solutions of office reduction and employee productivity are sought after. This is done by the sub goals and objectives formulated in Figure 2.7.1.

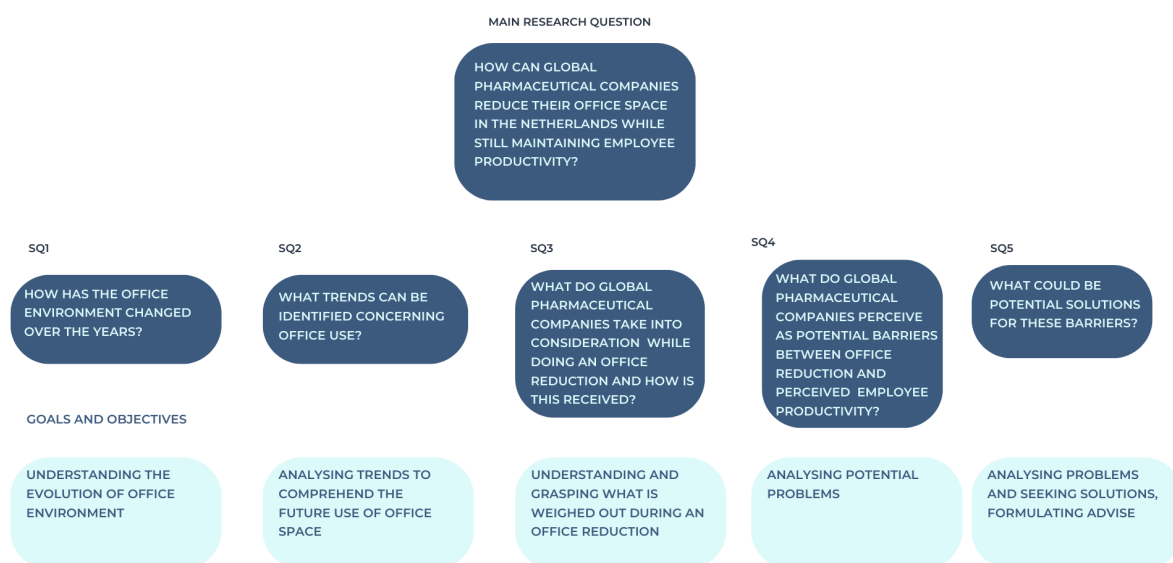


Figure 2.7.1: Goals and objectives related to the research questions (source: own image)

2.7.2 Research plan

The research consists of a couple of set deadlines. The first report has to be delivered at the P1 deadline, this report consists of a draft of the research proposal and literature study. The second deadline is for the P2. This report consists of the research proposal and framework, the literature study and takes the P1 report a step further into the research. The P3 deadline is all about collecting all of the data necessary for the research and should consist of the final literature study. With the P4 report all of the necessary data has been collected and the final analysis and conclusions are made. In the last report for the P5 deadline the final feedback is implemented. The expert panel and the P4 presentation provides the feedback for the final report. Figure 2.7.2 shows what deliverables are when, with which data it is going to be accomplished and what the output is.

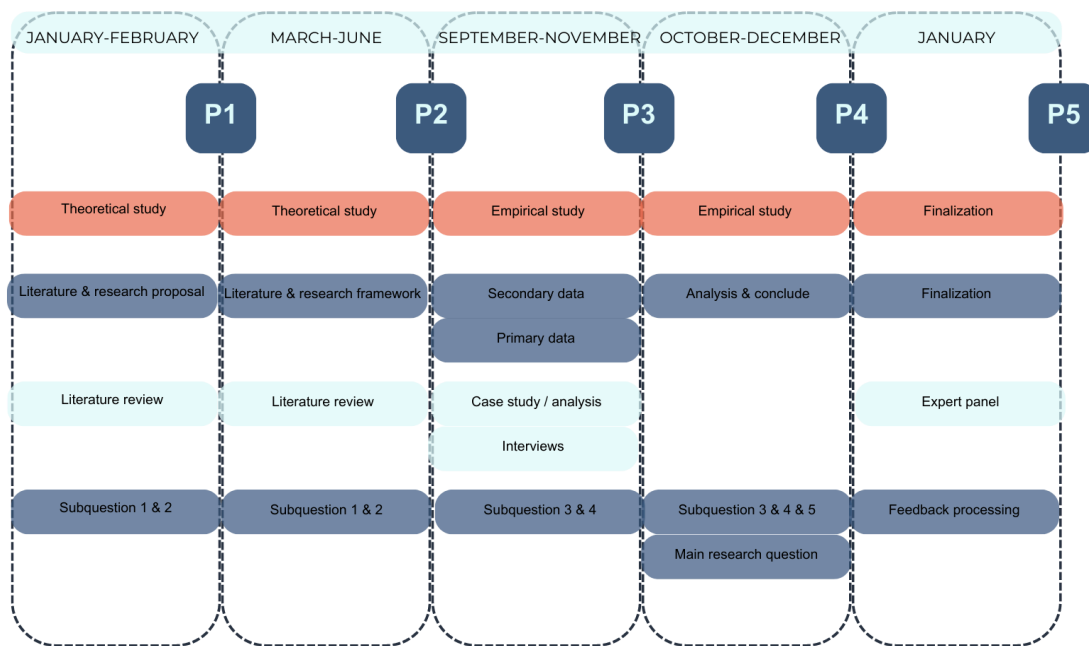


Figure 2.7.2: Deliverables (source: own image)

2.7.3 Dissemination and audiences

This research can be used for actors who are interested in the preservation of employee productivity while doing an office reduction. Organizations can use the research to look at challenges, pitfalls and solutions for the office reduction and learn from it. Organizations or other global pharmaceutical companies can also use this research to gain insight on what other global pharmaceutical companies are doing with their real estate.

The graduation company, JLL, can use this research for future reference if they help clients with the implementation of office reduction. In addition, the graduation company can use this research to gain insight into the decision-making process of their clients. This research is published online at the TU Delft repository for people who are interested in this research. The research can also be used as a reference on further research on the office reduction and productivity topic.

Chapter 3

Literature study

3. Literature study

This literature study first looks at how the workplace has changed over the years. This background information is necessary to be able to understand future changes. After looking at the changing workplace, the future workplace trends are discussed. Discussing the future trends gives insight into future demand and in the future of the workspace. Looking at the workplace evolution, the employee is also of importance, thus after looking at the workplace the employees productivity, satisfaction and well-being in the workplace is discussed. After the employee, the correlation between space and productivity is discussed. Followed by the influences on the correlation between space and productivity. Lastly change management and the reaction to change are discussed.

3.1 The changing workplace

The pandemic has shown that work that was typically conducted within the office can also be accomplished at home. The flexibility of choosing where to work is seen as a positive influence (Oladiran, 2023). Some employees have discovered that they are more productive at home and they prefer not to commute to work everyday. However, while the trend of working from home has a positive side, it also has its limitations (Oladiran, 2023). Face-to-face interaction and collaboration is still valuable. For younger employees the office has a more important role for their learning opportunities. Companies have also realized due to the pandemic that they can downsize their office space (Oladiran, 2023). This research looks at this office space reduction and how it relates to perceived employee productivity. The reduction hereby stands for the physical space of the office that is downsized or reduced.

Workplace and workspace

Appel-Meulenbroek et al. (2021) define the workplace as the overall place where work is done and they define the workspace as the physical space allocated for the work to be done. However the physical workplace can also be seen as the entire office building whereby the workspace is a smaller subset within the physical building. The space and place are both defined as physical. However some sociologists see the place as a physical spot where the meaning is attached to it by people (Appel-Meulenbroek et al., 2021). In this research workplace can be seen as the office layout, whereas the workspace can be an individual workstation.

History till now (1950-2020)

In order to understand the changes in the workplace right now and for the future we need to understand what has happened in the past. Starting off in the early mid-twentieth century. In this period, efficiency was the main concept to keep in mind while designing the office, according to Rishi et al. (2021). The quality of the environment for employees wasn't important and employees were squeezed together as a matter of speaking and were watched by their supervisors. This is to boost productivity (Rishi et al., 2021). According to

Haynes (2010), these office designs in the 1950's adopted Taylor's scientific management principles. This methodology was made for factory-type of activities. Workers only did one part of the production line and it was the management's responsibility to monitor the overall performance. This is also an example of 'command and control' management (Haynes et al., 2010).

In the 1960s, the 'office landscape' was introduced and rows of desks were broken apart into smaller organic clusters (Rishi et al., 2021). These clusters of workspaces offered more privacy. This idea was introduced with creating a less hierarchical workplace and could enhance collaboration and socialization not just productivity. However, with this office landscape there were some potential individual disadvantages raised. These disadvantages are disturbance, loss of confidentiality, loss of identity and status, loss of managers privacy and physical discomfort. As opposed to the organizational advantages of improved productivity, individual productivity might suffer from this new office design (Haynes et al., 2010).

According to Rishi (2010), buildings as well as offices grew taller and the possibility to be creative with space was introduced during the upcoming years. Space was available for work, secretarial teams, meetings and eating. The cubicle was introduced in order to not be too close to coworkers and have more privacy to perform work. A cubicle is a small, partially partitioned space in a larger office space, it is usually intended for one employee. However, this evolved into the uninspiring 'cube farms'. In the 1980's the primary focus was back on productivity with a primary motive for profitability. Employee workplace collaboration, comfort and workplace enjoyment were not a priority. This was due to the homogeneous offices no matter the workforce demographics. The office environment mostly stayed the same throughout the end of the twentieth century. The layout from most offices were the same format, some private offices, some conference rooms and some other amenities such as a café or a vending machine (Rishi et al., 2021).

According to Quelch & Knoop (2018), the downfall of the cubicles was related to multiple factors, they were linked to a loss of productivity due to absenteeism and presenteeism. Absenteeism meaning employees that have an unscheduled absence and presenteeism meaning employees that were present at work but are not actually working.

The combi-offices came up in the 1990's to combine the benefits from the cellular offices, which are privacy, concentration and personal control and the benefits from the open offices, which is the contact with colleagues (Brunia, 2016). According to Haynes et al (2010), this concept is also called commons and caves and was a way of trying to establish balance between an open plan and cellular offices. Instead of one or the other the office environment is both. This concept attempted to reconcile the connection between the workspace and the activities of the individuals using the space. (Haynes et al., 2010).

By the start of the 2000's new and fresh ideas came into play as companies began with creative office designs (Brunia et al., 2016). This was to attract new talent. Companies realized that collaboration results in better ideas and information sharing. The cubicles were

replaced by open work areas and other facilities that helped start open discussions and dialogue. Changing the cellular office design into an open office also saves quite a lot of square meters. Through an open office, the space that is allocated to the workstation in square meters is reduced by 50 percent. This was due to the reduced construction space and fewer corridors and less walls. In addition, firms save up to 80 percent on costs related to office space leasing (Yunus & Ernawati, 2018). The open offices were expected to improve flexible use of the office, due to the ease of rearranging the workplaces. However, the open office floor plan was not received well by employees, because of the lack of privacy, the difficulty to concentrate, distraction from colleagues and lack of personal control (Brunia, 2016). Companies were exploring ways to incorporate art or other fun facilities to brighten up the office space. Flexibility became more important than privacy, focus and practicality. The office was no longer a place to just work but it should be a place for creative thinking (Rishi et al., 2021). Non-assigned activity workspaces were introduced that were supposed to be shared. These workplaces were meant to support various activities for employees. The goal of the activity-based workspaces from organizations was to improve the effectiveness and efficiency of costly resources (Brunia et al., 2016).

By 2015 organizations worldwide had adopted this concept of “New Ways of Working” (NWoW) (Brunia et al., 2016). The shared activity-based workplaces were also referred to as new offices, flex offices, flexible offices or non-territorial offices. Brunia et al. (2016) mention that the goal of the flex offices is the same as with the open offices, which is stimulating communication, collaboration and cost reduction. Within the modern office environment there is still a requirement to be able to find a private quiet place to concentrate, especially with activities such as reflecting, thinking, analyzing or problem solving. Productivity and performance can be enhanced by giving office workers the opportunity to concentrate on a particular task without distractions or interruptions (Haynes et al., 2010).

With the arrival of the pandemic it showed possibilities for more diverse workplace settings. The rapid need for working from home has shown that remote work is effective. Organizations realized that the workplace likely needs to change. However, not everyone wants to work remotely all the time. C-suite leaders (executive level managers within a company) are wondering how much space the company actually needs, how productive their employees have actually been and what the real purpose of the office space should be (Rishi et al., 2021).

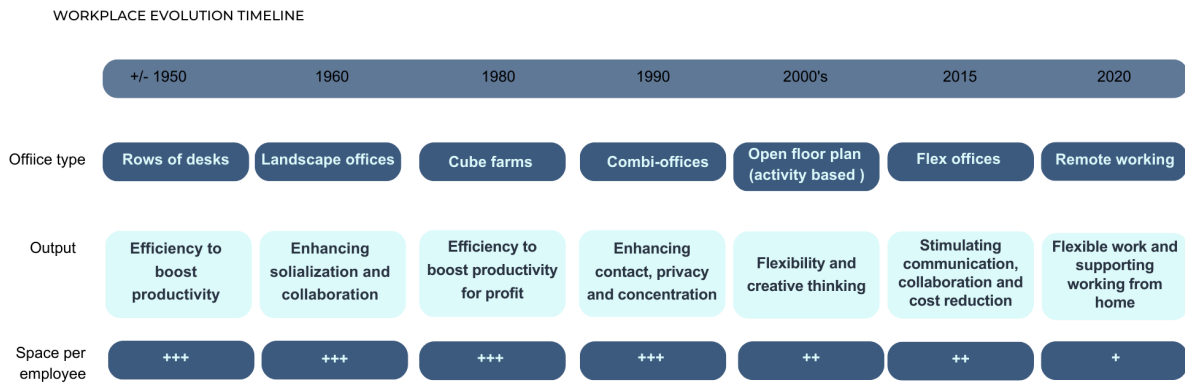


Figure 3.1.1: Workplace evolution timeline (source: own image)

Figure 3.1.1 above shows the workplace evolution timeline, it shows the office type placed in the different timeframes. In each timeframe a different office output can be observed, moving from only focussing on efficiency and productivity towards more collaboration and employee wellbeing focus. In addition, Figure 3.1.1 shows a decline in space per employee. The decline in square meters can easily be explained as a more effective use of the office space, due to changes such as activity-based working, flex offices and now remote working. Resulting in the need for less space per employee. In conclusion, the evolution of the workplace and the office environment has been through different phases. Each of these are marked with a different output, ranging from a sole focus on productivity to an emphasis on collaboration towards a more flexible office. These office environment changes include a change in the amount of office space, in square meters. Due to a more efficient way of the use of the office, in terms of the office layout. The changes were brought about due to different trends or other factors, such as in 2010 the “New ways of working” resulting in the first activity-based spaces. Furthermore, the pandemic accelerated the acceptance of hybrid working, which caused organizations to reevaluate their real estate portfolio while still needing to ensure the well-being of employees. Looking at the changes in the office environment provides the research with background information.

Future trends

Looking at the future of work trends, it has become clear that the future is hybrid. The hybrid working arrangement is expected to be implemented by employers, senior leaders and employees. Two to three days a week is hereby the preferred amount of days working from home. The number of employees that work from home is increasing, causing a shift in the demographics of those who work from home. Meaning that there is an increase in the amount of younger employees that work from home. It is not just older managers that are working from home. In addition, there is a broader range of occupations that are hybrid working. With hybrid working, retaining the organizational culture is important. The organizational culture in hybrid working has become more dependent on middle managers. Bucknall et al. (2021) notice that organizations that foster a sense of belonging and make an effort to bring people together, experience benefits in the workplace (Bucknall et al., 2021).

As mentioned above, organizations are keeping a higher focus on hybrid working. Alongside this, they are trying to improve workforce resilience by enhancing health and wellbeing. The research participants of the JLL global future of work survey say that they want their future office to enhance collaboration and productivity and have creative space that fosters employee wellbeing (JLL, 2022). In addition, the research shows that decision makers should plan for a future where flexible working is the norm and should look at the potential of workspaces to enhance employee creativity, productivity and wellbeing.

Looking at the hybrid working office environment, there are a few trends. These are: the workplace management systems, end user involvement and/or co-creation of the office space and office call cells (M. Niekel, 2023). Workplace management systems gives employees insight on how many other employees are in the office and gives more control on the office space use. Many organizations are involving the end users into the creation of the office space. Co-creation or end user involvement helps to create an office space that supports the employees in their way of working. Organizations do this on the basis of utilization studies and surveys. The phone booths are also a trend, but mostly the aspects of acoustics and how to make sure employees do not disturb each other while doing certain activities such as being on the phone (M. Niekel, 2023).

Research from Jones Lang LaSalle (2023) suggests that the period from 2022 to 2025 represents a crucial window of opportunity for organizations to adapt to rapid changes. As hybrid working has become the norm, organizations should offer it as a possible work arrangement. This way organizations can attract and retain talent. In addition, hybrid working also means a need for the renewal of the office. The quality of space is becoming more important and of greater priority than expanding the total footprint of an organization. Employees are demanding higher office space requirements, closer to amenities and strong network connections (JLL, 2023).



Figure 3.1.2: Overview on important trends (Source: own image)

Figure 3.1.2 provides an overview of the important trends that are discussed in the text. The first trend is that the future of work is hybrid. Most organizations are hereby contributing to

the focus on hybrid working, due to hybrid working becoming the new norm. Organizations are trying to improve the workforce resilience by enhancing health and wellbeing of employees. In addition, it is discussed that future offices should enhance employee collaboration, productivity and well-being. Other trends concerning the hybrid office environment include phone booths for improved acoustics, workplace management systems and more organizations are finding the importance of involving the end users in the creation of the new office space (co-creation). Lastly, the focus of the office is shifting towards prioritizing quality of the office space over the amount of office space, meaning the total footprint.

3.2 Employee

In this research the employee has a central part, with this there are a couple of terms that can be looked at and have a correlation with each other. Starting off with job satisfaction, this is a complex area that managers face while managing their employees. Job satisfaction has an impact on the motivation of employees, meanwhile motivation has an impact on productivity (Aziri, 2011). Productivity also has an impact on the performance of an organization. In short, job satisfaction of employees has an impact on the productivity and performance of an organization (Aziri, 2011). The health and wellbeing of employees has an impact on job satisfaction and job performance (Wright et al., 2000; Miller, 2016). Productivity and satisfaction are closely related. When a company can achieve employee satisfaction, worker efficiency and productivity will increase (Tarigan et al., 2022).

Alves et al. (2007) say that the workplace performance of employees is related to a couple of aspects that affect a workers' health, habits, employees' well-being and quality of work life (QWL). Whereby the QWL is associated with job satisfaction, productivity, motivation, health, job security and safety and well being. Improving the QWL of employees will also improve the productivity of an organization and the other way around (Alves et al., 2019). Organizations care for high performers and their retention to the company (Kondalkar, 2007).

As mentioned above the terms satisfaction, wellbeing and productivity are all related to each other in some way. Therefore they are difficult to see as completely separate terms. Hence, a short description on employee productivity, satisfaction and wellbeing. Understanding the terms used in this research helps to develop a mutual interpretation in the research. However, the main focus in this research lies upon employee productivity. Productivity will have the main focus due to the focus organizations lay on productivity as well as employees lay value on productivity (Alves et al., 2019).

Productivity

Productivity is an important factor for every organization, as profit and loss largely depend on labor productivity or how productive employees work (Maarleveld & de Been, 2011). Effective productivity is crucial for companies as they must ensure that employees work

towards their goals in order to survive. According to Jensen & Voordt (2020), individual labor productivity and the productivity on different organizational levels such as teams, departments and the company should be distinguished. This is because certain innovations to increase knowledge sharing result in a decrease in the perceived individual productivity. However, it results in an increase of the organizational productivity at the same time. This shows that it is relevant to collect information on productivity from employees and managers on different organizational levels (Jensen & Voordt., 2020). Tarigan et al. (2022) also mention that efficiency and employee productivity are key concerns for organizations as higher productivity leads to a more profitable company as well as economic growth.

At an individual level of work, productivity is the ability of an employee to generate services and products needed to achieve the goals of an organization (Yunus & Ernawati, 2018). Which means that an organization's performance is improved by a high work productivity. Looking at the sole definition of productivity, it is generally defined as the relation between output and input. The output hereby means the produced goods as to the input meaning the consumed resources (Tangen, 2002). The overall ideal productivity improvement can be defined as: a form to increase the output and decrease the input (Palvalin et al., 2017). This can be done by working smarter by increasing the output with the same input or to establish better efficiency by decreasing input by having the same output. The focus hereby lies on quantity, however the quality is important as well (Palvalin et al., 2017).

Productivity can be separated into individual, team and organizational productivity (Maarleveld & de Been, 2011). Whereby individual productivity is affected by the work environment, whereas team and organizational productivity are less affected by this. In this research the output is the completed amount of work from an organization whereas the input is the employees.

Satisfaction

Employee satisfaction can be measured with different factors such as employees engagement with the organization, personal experience, employee performance but also well-being. Thus, employee satisfaction is important for job performance and employee productivity. Therefore, it is of importance to keep the employee satisfaction in mind while changing the office space. Satisfied employees are twice as productive, remain at their job five times longer, are three times more creative and use 10 times fewer sick days (Davidson et al., 2015). Employee performance is a moderating factor of the satisfaction of an employee. Satisfied employees will perform better than dissatisfied employees.

Herzberg (1959) highlights a few job satisfaction factors. It is called the two factor theory, hygiene factors are hereby extrinsic factors that bring dissatisfaction and motivators are factors that bring intrinsic motivation to employees. The motivation factors have a strong correlation to job satisfaction and must be improved to achieve job satisfaction. The hygiene factors or demotivators are variables that if they are present they lead to the prevention of job dissatisfaction. The hygiene factors do not directly influence the

motivation and satisfaction of the employee, but the factors reduce the level of job dissatisfaction. The motivators are achievement, recognition, the work itself, responsibility, advancement and growth. The demotivators or hygiene factors are bureaucracy (for example: corporate policies or supervision), relationships, work conditions, status, salary and job security. However these motivators and demotivators vary per person. Meaning that different motivators might have a higher value for one person than the other.

Continuing, the office space is a hygiene factor. The office space gives people a feeling of belonging and a form of emotional attachment to the identity of an organization. This cannot fully be fulfilled by working from home. Where the office itself serves as a symbol of status towards customers and within the employees of the organization itself. The satisfaction with status symbols in an office setting has an impressive amount of impact on the job satisfaction of employees and perceived performance (Naor et al., 2022). Research also shows that satisfaction with the organization and job satisfaction have a positive correlation with perceived support of productivity (Groen et al., 2019).

Wellbeing

Health, wellbeing, work-life balance, corporate responsibility and having a purpose are becoming more important factors at work than just the financial compensation. The implementation of new strategies are crucial to meet the employee expectation. Employees desire flexibility in their office hours and want to achieve the right work-life balance (Rishi et al., 2021). Rishi et al. (2021) also state that wellbeing has become more important for employees, due to more awareness surrounding the topic. People have become more aware of the impact of health and well-being on the quality of their life and the risk of health complaints. Wellbeing shows to be linked to labor productivity. However, productivity growth is hereby also linked to wellbeing. Therefore, wellbeing can also become more important for organizations. In addition, research mentions that every euro that is invested into wellbeing has an investment return of 5.7 euros (Van der Voordt & Jensen., 2021).

Furthermore, having control over the physical work environment is proven to have an effect on the physical and psychological wellbeing of office workers (Colenberg et al., 2019). There is a positive relationship between having a sense of control in the workspace and wellbeing of the office workers. In the sense of being able to adjust the conditions of said workspace and also being able to personalize the workstation (Colenberg et al., 2019).

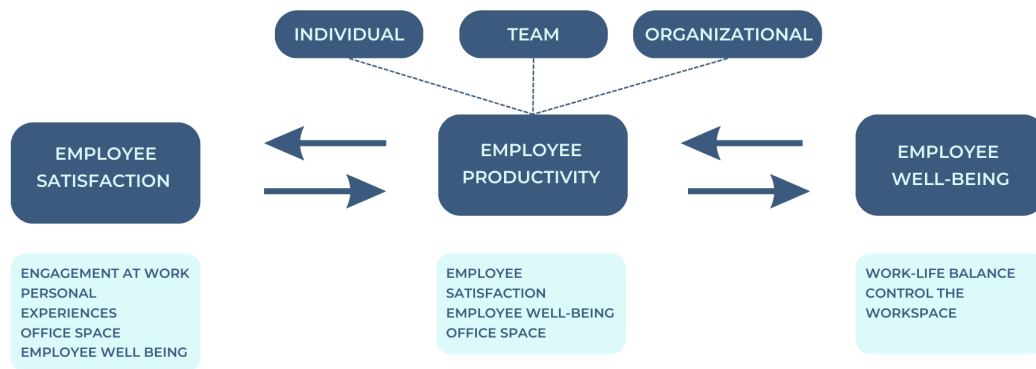


Figure 3.2.1: relation between employee satisfaction, productivity and well-being (source: own image)

The focus of this research is on perceived employee productivity, but this is influenced by many factors. Figure 3.2.1 shows the relation between employee productivity with satisfaction and well-being. In the figure, the factors that have an influence on the employee satisfaction, productivity, and well-being are shown in light blue. Employees who are satisfied with their jobs tend to work harder, which has a positive effect on an organization's performance. In addition, employee well-being contributes to employee satisfaction, performance and productivity. All three aspects are influenced by the office space, as will be discussed in more detail below. However, the focus here is on employee productivity as this is the research focus.

3.3 Correlation between productivity and space

As mentioned before, office design has an influence on productivity. In this part the correlation between space and productivity is discussed. As people spend 80 to 90 percent of their lives indoors, it is not surprising that people affect and are affected by their environment (Appel-Meulenbroek et al., 2021). Looking at the quality of the workplace, including the office environment, it is said that they have a significant impact on human performance (JLL, 2020). Ahmad et al. (2020) states that in order to improve employee productivity the workplace quality needs to be improved (Ahmad et al., 2020). With this quality of the workplace also comes the sophistication of the workplace. The sophistication hereby entails the availability of spaces, the wider the range of available spaces, the higher the Human Performance Indicator (HPI). High performers are good at flex working, however they are also fond of the office (JLL, 2020).

Productivity is influenced by many moderators. Looking at the office design, privacy and collaboration both are great contributors to productivity. However, the impact of privacy on productivity differs per generation (Yunus & Ernawati, 2018). In addition, the feeling of inequality in the work environment has a negative influence on productivity (Harvard Business Review et al., 2022). It increases the chances of a burnout, decreases employees stay at an organization and reduces collaboration. The inequality described here concerns the distribution of flexibility. When companies began experimenting with flexible work approaches, it was mostly done on an ad hoc basis. Causing different departments and

teams being given a different flexibility/freedom approach. Many employees have different time- and place-dependent jobs making the hybrid arrangement difficult to generalize. Causing the employees to feel mistreated (Harvard Business Review et al., 2022).

According to Yunus and Ernawati (2018) it has been acknowledged since the 1930s that there is a relationship between office design and work productivity. It is found that office design is one of the aspects that directly impacts work productivity. Alterations of an office, or office design, may impact employee satisfaction and productivity. Open offices may consume less space and cut costs, however in these settings employees can get distracted, experience noise and feel less privacy. The opportunity to choose the desk the employee prefers might boost satisfaction (Yunus & Ernawati, 2018). In addition, it is suggested by the research of Haapakangas et al. (2018) that increased workplace switching was associated with higher productivity. However, having to spend an increased amount of time on searching for a workspace was associated with lower productivity and well-being (Van der Voordt & Jensen, 2021). The open floor plan of these open offices is also not embraced by every generation. There is a difference between privacy preferences and productivity between the younger and the senior generation. Different generations might have different needs and requirements (Yunus & Ernawati, 2018).

The acknowledgment of the relationship between space and productivity further develops. People choose a workplace that correlates with their personality according to the theory of Holland (1966). However, the theory of work adjustment suggests that there is no such thing as the perfect fit between a person and its environment. This results in behavior adjustment, in order to satisfy their work abilities and values (Van Vianen, 2018). Van Vianen (2018) mentions that to ensure an efficient and effective workplace design, different personalities and behaviors must be balanced out. This is to ensure maximum creativity and productivity. The person and environment fit (P-E fit) is to create an egalitarian workplace, all workers of all levels enjoying the same workplace benefits and organizational status, that can offer collaboration and flexibility. The lack of person and environment fit can cause a reduction in wellbeing of employees due to stress and unhappiness, satisfaction and a potential decrease in employee productivity and performance (Appel-Meulenbroek et al., 2021).

Activity-based flexible (A-FO's) workplace designs can have positive effects on mental and physical health issues as well as a boost in performance and productivity (Appel-Meulenbroek et al., 2021). These workplace designs encourage movement and collaboration by sharing knowledge as well as task efficiency. In a workplace research on A-FO employees mentioned a positive work experience, because of the availability and the variety of work settings. This turned into a higher business performance and profit. In addition A-FO's encourage employees to select a workspace hub that is best fit for their activity and needs. However some contradictory research found that A-FO's are associated with a decrease in person and environment fit. The most common associations are reduced performance and productivity due to presenteeism. The disadvantages of A-FO's show a negative perception of the functional workspace and the indoor climate. Organizations lose

86 minutes of employee productivity due to concentration problems in A-FO's. In addition, A-FO's are used to derive costs, to monitor employee performance and organization productivity instead of ensuring a fit between the person and their work environment. Open-plan offices can increase the feeling of crowding and a low sense of privacy, which leads to emotional exhaustion and lower job satisfaction of employees (Appel-Meulenbroek, et al., 2021).

Certain lay out mechanisms have an impact on knowledge sharing among employees according to Appel-Meulenbroek (2014). Knowledge sharing is seen as innovative stimulating behavior which is important for the innovative strength of an organization. The mechanisms that stood out to have an impact are accessibility, the position in the building, proximity, visibility and co-presence shown to have a correlation between knowledge sharing. In addition there are a couple of environmental variables seen as having an effect on productivity as seen by office workers. These are advanced technology, adequate filing space, quiet offices, having the possibility to personalize one's workspace and personal control on the internal climate (Groen et al., 2019). Looking at the overall findings on important workplace factors that support employee productivity, there is a summarizing Figure 3.3.1 shown below by Palvalin et al. (2017). With these characteristics productivity can be approached with different perspectives. Quantitative team productivity is for example increased by providing more space for collaboration and the quantitative output of employees is increased by adding more concentration spaces (Palvalin et al., 2017).

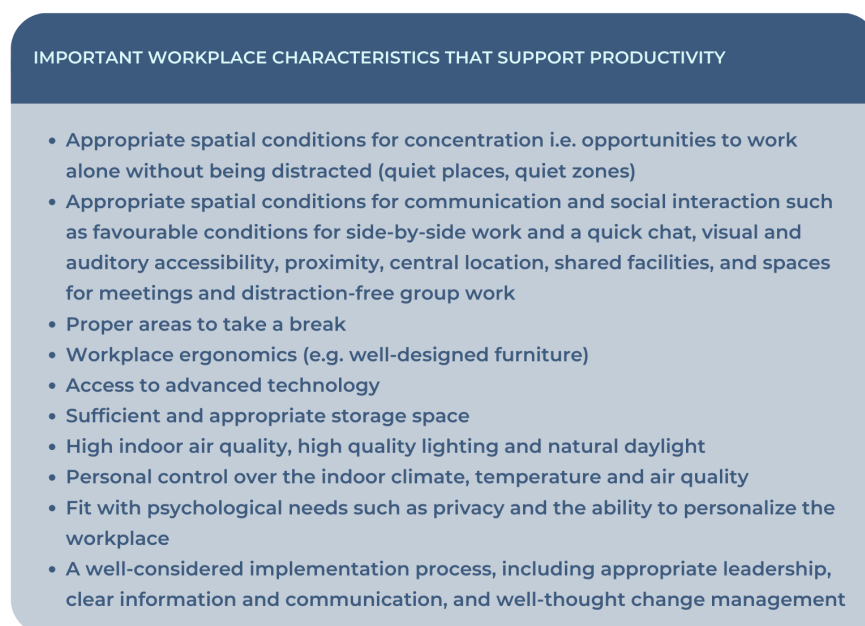


Figure 3.3.1: Important workplace characteristics that support productivity (source: adapted from Palvalin et al., 2017).

Figure 3.3.1 shows the important workplace characteristics that support productivity. Productivity is influenced by many factors as discussed before. Having a diverse amount of spaces, offering privacy, collaboration spaces all contribute to productivity in the

workplace. The office layout and other environmental variables contribute to knowledge sharing and overall productivity. To create an efficient and effective workplace different personalities and behaviors need to be balanced and taken into consideration to be able to foster creativity, collaboration, well-being and productivity. As mentioned in future trends, end user involvement or co-creation can help with implementing changes in the office the way the employees truly use the office space. End user involvement can be done via surveys and/or utilization studies. This data gives insight into the various personalities and behaviors of the employees.

Influence of different generations on the relation between office space and productivity

Organization is a term used often in this research, this is defined as a group that works together for a shared purpose, objectives and goals (Abdul Rashid et al., 2003). It is an entity which in this research is a company. Every organization develops their own culture, organizational culture is important in order to understand the policies, practices and regional differences of an organization. This culture can also influence employee productivity. The culture of an organization contributes to the profitability and contributes to the influence of the success of an organization (Abdul Rashid et al., 2003). According to Earle (2003), large corporations have a more complex relation between organizational culture and office layout and interior and the people who work in the office buildings. Organizations that understand this relationship achieve a higher level of employee productivity and satisfaction. Research by Maarleveld & de Been (2011) showed that on the matter of organizational productivity, the greatest impact is the satisfaction of employees with the organization itself.

The different generations within an organization have been briefly mentioned before. The different generations have different work experiences. There are some differences to be observed concerning the hybrid way of working. For example, gen Z wants to work fewer hybrid days than older generations. Younger generations are mentioning that they feel less productive at home. Negative associations with hybrid working have to do with less networking opportunities, fewer career development opportunities and reduced visibility (Bucknall et al., 2021). Different generations also have different work values, gen Y for example values job security, interesting work, convenient hours of work, continuous learning and work-life balance. Whereas gen Z values interesting work, having an organization which they can be proud of, having work they are passionate about, having the right information to do their job and continuous learning. Gen Z is driven by passion and seeks mental health support and Gen Y values education, training and career support. Work values can change by the career, the stage of life and working experience. The three most common influential job motivators for employees in general are the environment, salary and job characteristics (Pataki-Bittó et al., 2021).

As every generation has different values, they also have different experiences (Mohanty, 2023). These different employee experiences relate to employee engagement. Employee

experience is based on the concept of customer experience. Employees are hereby seen as the consumers of the workplace. The employer is expected to have the same focus on the employees as the focus lies on a customer. The employees expectations should be met. There are 6 dimensions to employee experience, these are: cohesiveness, vigor, well-being, achievement, inclusiveness and the physical environment (Mohanty, 2023).

Individuals have different types of behavioral needs, for example the need to express themselves, their identity and or their personality by modifying their workplace environment. By having a non-territorial office or adopting a flexible work pattern where employees have temporary workplaces employees cannot call a particular area their own. This causes suppression of territorial behavior patterns (Haynes et al., 2010). Wells (2000) mentioned that organizations that allow or are more lenient towards the personalisation of the workspace report higher levels of organizational well-being.

3.4 Change management

This research discusses office reduction, which is in its way a change that is implemented by an organization. Heyvaert and Perrin (2023) mention that when an organization is in need of change concerning real estate, the decisions are made based on the available data. The data shows the occupancy of the real estate, which can indicate a need for change. After implementing a new office concept, feedback needs to be asked to employees for both qualitative and quantitative data. Looking at the occupancy of an office gives an indication on how efficiently the real estate is used. If there are only a few people in the office the real estate should be more efficiently used. Right-sizing the office can create a more vibrant office, which generates energy for employees through employees being able to meet with their team and colleagues (Heyvaert, J. & Perrin, X., 2023). For a change project to be successful, organizations might be in need of change management and implementing a change management plan as change might be a disruption to an organization and its employees.

Change management helps to systematically deal with a transition or transformation of an organization's goals, processes or technologies (Lawton & Pratt, 2022). Whereby the purpose of the change management is to implement strategies for effecting change, helping people to adapt to change and controlling change (Lawton & Pratt, 2022).

Organizations are in need of successful management of change in order to survive and succeed in the competitive and ever changing business environment. Change management can be defined as a process that is continuously changing/renewing the direction of an organization, the structure and the capabilities that serve the changing needs of internal and external customers (By, 2005). Change or the concept of change is the transition from one state to another given a different set of conditions. Both on the operational and strategic level of an organization change is a feature that is always present. Having this always present in an organization means that organizations should be able to identify where it needs to be in the future and how to manage the changes necessary to get there. Organizational change and organizational strategy can therefore not be seen as two

separate terms (By, 2005). Change management consists of two main constructs, implementing change and the readiness for change (Oakland & Tanner, 2007). In this research, when change is discussed the meaning is: the changes made in the office and office environment. When talking about organizational change, we talk about: the change in the office or office environment and what that does to the productivity of employees.

Change curve

According to the theory of Lewin there are two forms of forces of change as shown in Figure 3.4.1. Forces that push for change, these are accelerating forces, and forces that oppose change which are retarding forces (Lauer, T. 2021).

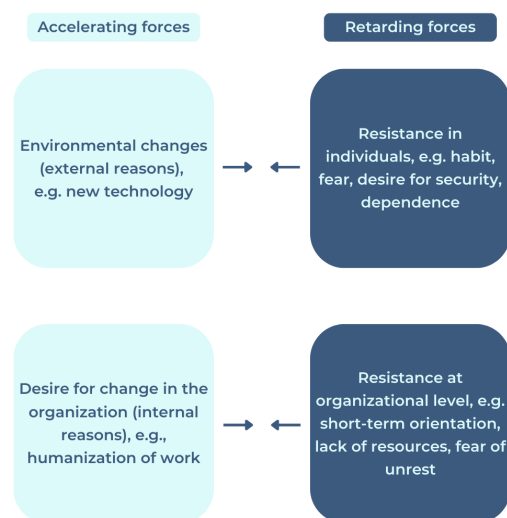


Figure 3.4.1: Field theory of Kurt Lewin (source: image adapted from Lauer, T. 2021)

In order for an organization to survive in the long run, a balance must be established between the two forces (Lauer, T. 2021). In the course of change processes, there is often first a decline in performance. This is due to resistance that might occur, however an organization that is in the middle of the change process needs resources for the reorganization. This might cause a temporary lack of resources for productive purposes. In addition to this new procedures, processes, forms of organization or technologies need time to fully develop. This phenomenon can be seen in the experience curve effect in Figure 3.4.2 (Lauer, T. 2021).

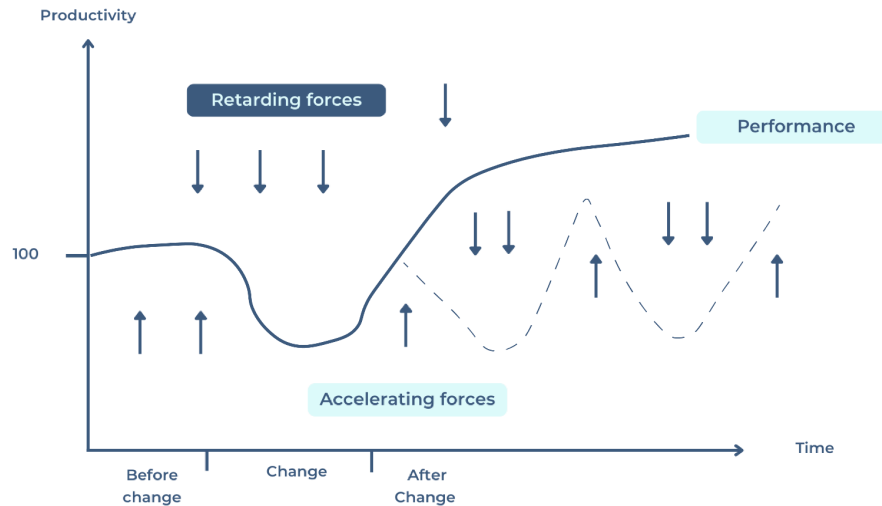


Figure 3.4.2: Typical performance curve in processes of excessive change (source: image adapted from Lauer, T. 2021)

The solid line in this graph shows that a higher performance rate can be permanently achieved after change is incorporated and after the performance dip has been overcome. On the other hand the dotted lines show what happens if accelerating forces dominate and permanent change takes place within an organization. This would follow in a performance dip after which a performance dent will take place (Lauer, T. 2021).

Lewin's theory also discusses three phases of change processes shown in Figure 3.4.3 (Lauer, T. 2021). The first phase described by this theory is called unfreezing. In this phase the goal is to initiate motivation for change. The second phase in this model entails the actual change of work, this phase is called moving. This phase requires for the process in the first phase to establish the constructive and active participation of the members of an organization. The last phase in the change process is called freezing, in this step the change must be 'freezed', that means that a new balance of retarding and accelerating forces must be regained. This will enable the use of the now increased performance potential. Something to look out for is that after 9 to 12 months after the start of the change project there can be a relapse into old habits that counteracts the 'freezing'. This can be by performing refresher activities (Lauer, T. 2021).

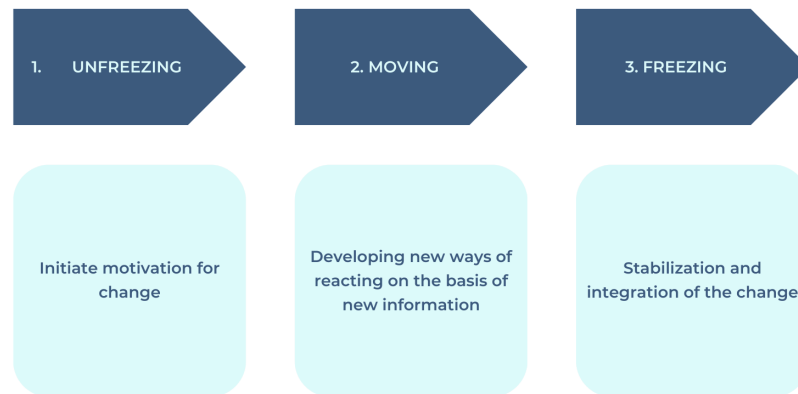


Figure 3.4.3: Three phase model of change according to Lewin (source: image adapted from Lauer, T. 2021)

Reaction to change (implementing successful change)

The section above talked about change management and the importance of change for an organization. When talking about change in this part we talk about the reduction of office space. This section talks about how employees react to change.

Stavros et al. (2016) talk about how organizations continuously face critical challenges that are imposed by the external environment. The need to evolve within an organization is of importance. This evolution in this research means the need to change the office and reduce the office space. However, implementing changes within an organization can be difficult, it can not be clear how employees will react to certain changes. Every change is expected to meet reactions, it does not matter how beneficial it might be for the respective organization and for employees. Employees will react to changes that they believe will disrupt the working environment (Stavros et al., 2016). As a reaction to change triggers emotional and cognitive processes which affect a behavioral response of an individual. The employees might not accept the change (Khaw et al., 2022). Therefore, the employees might pose a challenge with organizational change.

The reason organizational changes might fail is that employees are resisting the changes, due to the feeling that the status quo of their work environment is being challenged (Stavros et al., 2016). The resistance to change is one of the most important factors that contribute to the failure of strategic change programs. This resistance to change can take two forms, the first being active resistance, for example when employees are open about questioning the change and lack support for the changes. The second being passive change, this is when employees support the changes but once they start to be implemented they resist them. According to Stavros et al. (2016), there are several factors that contribute to the resistance to change: management emphasizing cost savings over productivity and employee satisfaction, previous failures of change projects, the fear of job cutbacks, poor training to address changes in the working environment and different messages sent by the change management team. In addition, reasons for the resistance can be: a lack of coordination between managers and the change team or among managers, a lack of

training in implementing the change for the change team and deficient leadership by change managers (Stavros et al., 2016).

While talking about the resistance and failure of adapting change we can also look at what it takes to successfully implement change. A successful implementation of change takes effective communication and employee support (Men et al., 2020). Employee commitment is one of the important factors that influences employee support for change initiatives. Effective communication can reduce the perception of uncertainty and establish and maintain trust. In addition, Heyvaert and Perrin (2023) mention that making agreements about office use helps employees to adapt to the change and get used to the new office concept. The agreements can include which teams are coming on which days or it can be a reservation system. After some time has passed the company can slowly move away from those policies to get employees to embrace them naturally. In order to get more employees to the office it helps to get employees who are higher up in the organizational chain to come to the office. In return, these employees get more information about their colleagues naturally and can get energy out of conversations and contact with newer and younger employees (Heyvaert, J. & Perrin, X., 2023).

Symmetrical communication is an important factor for employee organizational engagement (Men et al., 2020). Symmetrical communication hereby stands for communication where employees and managers are in an ongoing dialogue where they reach for a mutual understanding, listen to each other and build relationships. Employees should not only be provided with the information they need about a certain change, but managers should also listen to employee feedback with understanding, patience, sensitivity and care. Therefore symmetrical communication is an important contributing factor to change, a positive employee reaction to change and the outcomes of change. In the long run it also helps to build an engaged workforce. Organizations should be aware of the potential challenges of negative reactions to change from disengaged employees (Men, et al. 2020). According to Khaw (2022) leadership contributes 71% of the success of change amongst employees. The openness of the leader increases positive reactions to change. In addition it is important for leadership to show that they are supportive of the change, in order to reduce resistance to change (Khaw et al., 2022). The last phase of implementing change is to sustain the change. In this last phase the change should be built to last and should help realize the intended goals (Rousseau & Have, 2022).

Chapter 4

Empirical study

4. Empirical study

In this chapter the empirical study is introduced. The preparation of this study is explained first, after which the case analysis is explained. This is done by document analysis and semi-structured interviews. The document analysis gives insight into the context and background of the project, such as the organizational context and the building changes or change gap. These interviews can give more insight into the decision-making process, challenges and solutions during the reduction process of the case.

4.1 Preparation

To be able to perform this research there must be selection of case studies. Furthermore to get more insight into the case studies some semi-structured interviews are conducted. The selection of the participants of the research is described below.

Case study selection

In this research three case studies have been selected. The selection process has been done within the network of Jones Lang LaSalle. The criteria the cases must include are described below:

Criteria:

1. It is a global pharmaceutical company
2. It has been through an office reduction
3. Another office reduction will take place either within the same location or with a different location
4. The project is situated in the Netherlands

Participant selection

In this research semi-structured interviews are conducted. In order to give the interview some structure an interview guide is being followed (appendix A & B). This interview guide has been checked by a consultant of one of the case studies of the graduation company JLL to make sure the wording of the questions were clear and would not give difficult or sensitive situations. The participants of the interviews are selected based on their involvement in the case studies and their function. These functions are: facility manager, consultant of the case study project, workplace experience manager, program manager, project manager and real estate manager. The text below describes who are interviewed in which case and how they are described in the case analysis.

Case 1:

- Consultant = Interviewee_A1_C
- Facility manager = Interviewee_A2_FM
- Consultant = Interviewee_A3_C
- Consultant = Interviewee_A4_C
- Real estate manager = Interviewee_A5_RM

- Real estate manager = Interviewee_A6_RM

Case 2:

- Consultant = Interviewee_B1_C
- Facility manager = Interviewee_B2_FM
- Program manager = Interviewee_B3_PM
- Consultant = Interviewee_B4_C

Case 3:

- Workplace experience manager = Interviewee_C1_WM
- Consultant = Interviewee_C2_C
- Consultant = Interviewee_C3_C
- Project manager/ architect/ accountant = Interviewee_C4_PJM

4.2 Case 1: Global pharmaceutical company_01

Project Context

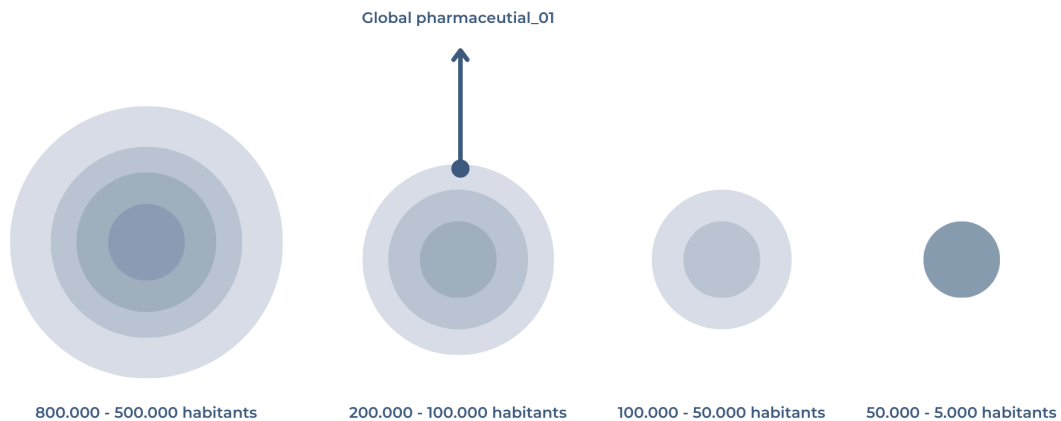


Figure 4.2.1: City size of case 1 (Source: own image)

The company is situated in around 70 countries worldwide, 40 of which are in Europe, the Middle East and Africa, according to the corporate website. The company has a site in the Netherlands. The case study project is located in a city in the Netherlands with approximately 130,000 inhabitants, see Figure 4.2.1 (Centraal Bureau voor de Statistiek, z.d.). Globally, the company employs about 20,000 people, according to the corporate website. Figure 4.2.2 shows that of the global number of employees, 600 office employees are located in the Dutch office described in this case study.

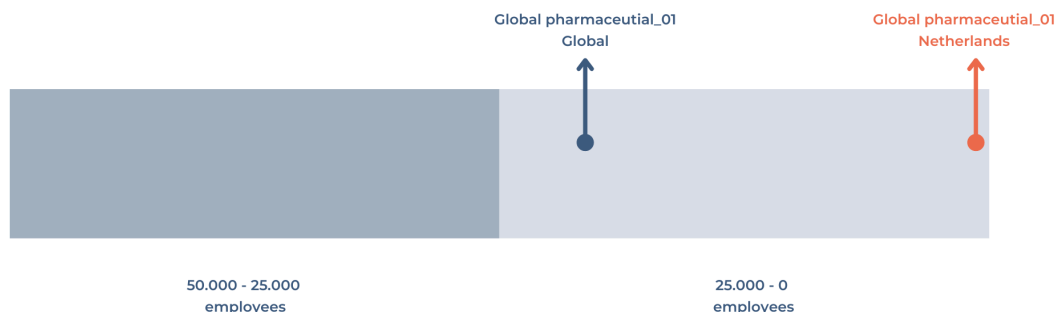


Figure 4.2.2: Amount of employees of global pharmaceutical company_01 (source: own image)

According to the business case report of the case study, the office described has a total floor area of 8,795 m², of which 7,719 m² is office space and the rest is archive space and the common areas. By moving to two floors, they went from a one-to-one desk allocation for the employees to one-third of the space. They subleased 5,122 m² and kept 2,597 m². Therefore they now have a desk sharing ratio of 0.33, meaning they have 1 desk for every 3 employees. However, this takes each employee into account and not the expected number of employees coming into to the office (Interviewee_A1_C & Interviewee_A4_C).

Global company culture

The company was founded in the early 2000's, as mentioned on their corporate website. It is a Japanese company, the Japanese leadership team is a bit more reserved, not entirely

transparent and not easy to gauge (Interviewee_A5_RM). This is reflected in the company's policies (Interviewee_A2_FM). The company does not want to impose a policy on the employees. Therefore, there is no policy on the office use and regulations on how many days the employees must be present in the office. However, the Dutch employees have asked for guidelines to get more clarity on the office use and on what is expected of them (Interviewee_A1_C & Interviewee_A2_FM). It is a global pharmaceutical company where the focus is more on individual productivity with a very quiet office culture (Interviewee_A1_C). Being a global pharmaceutical company means that a lot of meetings are to be held online. In the case study project this is even more present as it is a global hub, which means that the teams working in the office all have a global function. This results in an office where people have to work individually (Interviewee_A5_RM & Interviewee_A6_RM).

Change gap

In Figure 4.2.3 an overview of the project context and change gap is shown.

Project context & change gap Case 1			
	Previous situation	Current situation	Future situation
Office evolution	Owned the office building with 6 office floors	Sold the building and half leased back 6 floors, case study done with working on only 3 floors	Leasing 2 office floors, subleasing four office floors
Workplace type	Open floor plan with some activity based working	Open floor plan with activity based working and a few adjustments from the first situation	Adjusting the office floor plan according to the employee needs
Office workforce	600	600	600
City	Same city	Same city	Same city
SQM office space	8,795 m2	3898 m2	2,597 m2

Figure 4.2.3: Project context & change gap (source: own image)

Before the pandemic, employees came to the office five days a week. Now there is no policy regarding the number of office days, so many employees come to the office one day a week. However, there is a desire among employees to have a policy regarding the use of the office. This is because they want to see the other colleagues in the office and want to have more contact with colleagues (Interviewee_A1_C & Interviewee_A2_FM).

Interviewee_A1_C explained that in 2013 the office building was designed specifically for the company, the building can be divided into two parts, the laboratory part on one side and the office part on the other. The office part already had activity-based workplaces. In

2020, the decision was made to do a sale-leaseback, due to the company's decision to move the R&D department to America. This resulted in an unused lab, so the lab side of the building was subleased. In 2022, the Covid-19 pandemic hit, resulting in a change in workplace requirements and an underutilized office space. As a result, the company conducted a pilot study in which they would use only three office floors instead of six. The pilot study is conducted by Jones Lang LaSalle, a utilization study is conducted, interviews are conducted, and the way the office is used is studied (Interviewee_A1_C). During the pilot study, the office workplaces remained the same except for a few adjustments to the workspace (Interviewee_A3_C). The pilot study and the utilization study showed that the company would only need two office floors. This means that they could sublease four of their six office floors. In the future, the company plans to change the office space by looking at the utilization study and how the office space is being used. Change the office space according to the employee needs (Interviewee_A5_RM & Interviewee_A6_RM).

Productivity

For Interviewee_A1_C, productivity means being able to perform your work as efficiently and effectively as possible. To achieve this, different types of rooms are needed in the office, such as focus rooms. It is also important for Interviewee_A1_C to be able to communicate and collaborate easily with colleagues.

While Interviewee_A1_C mentioned that in this case project productivity is more individually focussed due to the global focus of the office. Where the employees mentioned several times that they require more focus rooms.

Interviewee_A1_C, Interviewee_A2_FM and Interviewee_A5_RM all mentioned that the downsizing has had a positive effect on productivity due to the easier communication and collaboration between people in the office. Interviewee_A2_FM mentioned that people are used to working from home due to the pandemic and they see the benefits of working from home and they are productive at home. However, the office provides a social part to keep in touch with colleagues. The office has a more social function, where each office should be tailored to the office occupation and employee needs from surveys (Interviewee_A2_FM). According to Interviewee_A3_C, productivity equates to the success of a company and indirectly to turnover. The aim of an organization should be to ensure that its employees are as productive, effective and satisfied as possible within the organization (Interviewee_A3_C).

For Interviewee_A6_RM, productivity in the work environment means that employees can come into the office and make sure that everything is working the way it should so that they are not delayed. Interviewee_A6_RM also mentioned that a lot of people are more productive at home than in the office because of socializing with colleagues and interruptions that take up time. Especially if you are not in the office everyday and have a lot to catch up on. And it takes longer to set up a workstation in the office because there are more different people using it. However, it was mentioned that communication and making connections is easier in the office (Interviewee_A6_RM).

Decision-making process

Interviewee_A2_FM & Interviewee_A3_C explained that the company had changed needs due to the reorganization of the company. Therefore, the R&D department moved to another country. In addition, there were some uncertainties concerning the company's cash flow due to the expiry of some patents (Interviewee_A2_FM & Interviewee_A3_C). Furthermore, the company is not a real estate company but a pharmaceutical company (Interviewee_A2_FM & Interviewee_A5_RM). Therefore, they decided that they didn't want to own the building anymore and that the laboratory part of the building was no longer needed. The company did a sale and leaseback of the building and only leased back the 6 office floors of the building (Interviewee_A1_C, Interviewee_A2_FM & Interviewee_A3_C).

Interviewee_A1_C explained that because of Covid, the employees discovered that they could also work from home as easily as they did from the office. This was also due to the fact that it is a global company and therefore many employees are often on online calls (Interviewee_A1_C). In addition, the office in the Netherlands is a global hub, which increases the amount of global calls (Interviewee_A5_RM & Interviewee_A6_RM). Interviewee_A1_C further explained that these calls could be easily done from home. Looking at the office after Covid many office floors were almost empty. Therefore, the company was advised that they would only need two floors. However, due to the emotional sensitivity of the employees to the office building, they started with a pilot study on three floors. According to this pilot study and the occupancy study researched by JLL, they would only need two floors in the future (Interviewee_A1_C). However, many employees have been with the company for many years and remember the way the office used to be. As a result, employees have developed an emotional attachment to the office. Therefore, there are some difficult and sensitive situations regarding the employees and the office changes (Interviewee_A2_FM & Interviewee_A6_RM).

Interviewee_A5_RM explained that the initial reason for looking at a possible downsizing of the office after Covid was that the office was not being occupied and used efficiently. The company therefore saw an opportunity for a business case to reduce the office's financial costs by removing the excess office floors. This was done through the pilot study which showed how many office floors were needed based on the study carried out by JLL (Interviewee_A5_RM). Interviewee_A1_C explained that as a part of the study, a focus group and leadership interviews were conducted to find out how many square meters were needed for the employees. In addition, employees were asked to complete a survey on how they felt about the changes made to the office floors, whether it was an improvement and whether they saw other colleagues more often. Looking at the quantitative data, the occupancy study and the finances, it was clear that 1.5 floors would sustain. However, when looking at the qualitative data, they want more people to come into the office (Interviewee_A1_C). Interviewee_A6_RM explained that decisions about the structure of the company are made years before they are implemented, the real estate department only finds out when the strategy is implemented. The real estate has to adapt to the business decisions (Interviewee_A6_RM). The main reason why the company did not move its office to a new building was because the lease contract does not expire until 2030

(Interviewee_A5_RM & Interviewee_A6_RM). The second reason is due to the employees' emotional attachment to the office building (Interviewee_A5_RM & Interviewee_A6_RM).

Potential barriers

Because of the sale and leaseback of the office building, they weren't the only company in the building anymore. They had to share facilities such as the restaurant. Employees who were used to the old situation found this development uncomfortable. They could not discuss sensitive information wherever they wanted, which was possible in the previous situation (Interviewee_A2_FM). However, when discussing this issue with Interviewee_A5_RM who has a more global focus, this was not an issue. Discussions with Interviewee_A2_FM, who has a more local focus, and Interviewee_A5_RM revealed that there are differences between the focus points of the local and global teams. Interviewee_A5_RM sees real estate more as an asset in terms of the company's business and Interviewee_A2_FM has a more local view and sees the real estate in terms of how it should work for the employees. These different views may not always coincide.

Confidentiality is a challenge in itself within the company, explains Interviewee_A1_C. When you reduce space and move to a more activity-based workplace, this confidentiality is a value that needs to be taken into account. They work in neighborhoods that are difficult to change. This is because colleagues in the same team want to work next to each other. However, the teams cannot be too mixed up because of confidentiality issues between the different teams (Interviewee_A1_C). It is therefore difficult to fit the different teams into a reduced office space, due to their preferred seating arrangements. This could result in employees feeling less productive if they are not working next to their colleagues within their team. Interviewee_A1_C further explained that during the pilot study where the office space was reduced to three floors, the employees found it pleasant that they bumped into each other more often due to the reduced space. This was because, in the previous situation the separate office floors were almost empty due to the excessive amount of office space (Interviewee_A1_C). According to Interviewee_A1_C, having a reduced office space where people meet each other more often, could increase perceived productivity through knowledge sharing, which is easier in an environment where people meet each other (Interviewee_A1_C). Employees felt that the reduction in office space also meant a reduction in staff. This was not being communicated in the right way (Interviewee_A1_C & Interviewee_A6_RM). Interviewee_A1_C further explained that this feeling was reinforced by the fact that certain activities, such as town halls with leadership from around the world, were no longer held at the office. As a result, employees felt that the office was getting smaller and smaller and would eventually be moved (Interviewee_A1_C).

People are stuck in their old ways, wanting to sit with their team in the same place they have always sat. If the office is busier than usual, it is perceived as being completely full, when only half of the office that is occupied. People do not look for workstations on different floors, so they think there is no space available (Interviewee_A1_C). In addition, people often occupy more than one space because they claim a desk for themselves at the

beginning of the day and then spend most of the day in meetings. This means that they occupy two workstations at the same time. This type of behavior requires some changes in office behavior (Interviewee_A3_C & Interviewee_A5_RM).

Interviewee_A6_RM explained that it is difficult to determine how productive employees are in the office because not everyone has the same job. Interviewee_A6_RM also mentioned that working from home is perceived as more productive for concentration work. The office provides the opportunity for socializing and collaboration, but presents challenges regarding time lost in setting up the workstation, commuting to the office and searching for a workplace (Interviewee_A6_RM). This analysis is supported by the analysis of surveys and interviews conducted with the employees. The report with the results of the study shows that the employees come to the office for networking, social interaction and collaborative work. However, employees are discouraged from commuting to the office because of the time it takes, having flexible working hours and the perception that they are more productive at home. When asked what activities are best done at home, employees cite: virtual calls, administrative work and deep-focus work.

Potential solutions

Interviewee_A1_C and Interviewee_A2_FM both mention that involving the employees more in the process could help them feel more involved and remove some uncertainty. After implementing the office reduction of going to two floors, they could benefit from changing the layout of the office floor according to the employee needs (Interviewee_A1_C, Interviewee_A3&A4_C). Interviewee_A5_RM mentioned that customizing a workspace for employees has an impact on perceived employee productivity and that it is important to incorporate employee needs into the office design. In addition, Interviewee_A6_RM mentioned that having the right technology and working technology is very important for employee productivity. It should be clear how to use the equipment and software and it should work in the right way (Interviewee_A6_RM).

Employees indicated that they have a need for some policies, regulations or guidelines. This is because they want more clarity. They want to know when to come into the office and what to expect when they are in the office in terms of their team being in the office (Interviewee_A1_C & Interviewee_A2_FM).

Interviewee_A5_RM mentioned that change is always difficult to implement. They do a post satisfaction survey 100 days after the completion of a project, it takes 100 days to get used to a change. This survey is done to see if further changes are needed. The office has to support the employees (Interviewee_A5_RM). However, at the beginning of the change process there were some communication problems with the employees. These issues could be resolved if the company worked with a change management program, especially the implementation of change management activities could help (Interviewee_A1_C). Interviewee_A6_RM also identified this challenge, especially in relation to employees' emotional attachment of the employees to the office building, where change management

could help with the change process. In addition, Interviewee_A6_RM mentioned that successful projects in the eyes of employees depend on communication.

“I have to say what makes it successful in the eyes of an employee is communication, knowing what's happening, why it's happening, what does it mean to me?”

(Interviewee_A6_RM, 2023)

Conclusion Case 1

In this case, they considered their evolving and changing needs when evaluating their real estate. Due to the reorganization of the company, the expiration of the patent and the associated uncertainties, they preferred not to own the entire building. To further reduce the size of the office, they considered the impact of the pandemic, which showed that people could as easily work from home. Especially in a global company where online meetings are more common. This led to the underutilization of office space. As a result, the company's global team identified a business case for reducing the size of the office, resulting in cost savings. However, further reducing the office space caused some difficulties concerning the employee's emotional attachment to the office. Furthermore, the employees are stuck in their old ways. This makes it difficult to change the office.

Some other challenges that are related to office reduction and perceived employee productivity are related to balancing the need for confidentiality, communication, employee preferences and behavior changes. Sharing office facilities with other companies can hinder employee productivity by preventing knowledge sharing due to confidentiality. This issue of confidentiality is also a challenge within the workplace, where certain teams cannot be placed next to each other. Changing the office is also a challenge due to the emotional attachment and the resistance to change of employees.

Possible solutions to these barriers could be to involve employees more in the process of the office reduction. Creating clear policies and guidelines could help to address the uncertainty felt by employees. Implementing change management activities and getting the project team to relate to the employees could help employees adapt more easily to the changing work environment, which may improve employees' perceived employee productivity. In addition, adapting office layouts to meet employees' needs could help improve employee productivity.

4.3 Case 2: Global pharmaceutical company_02

Project Context

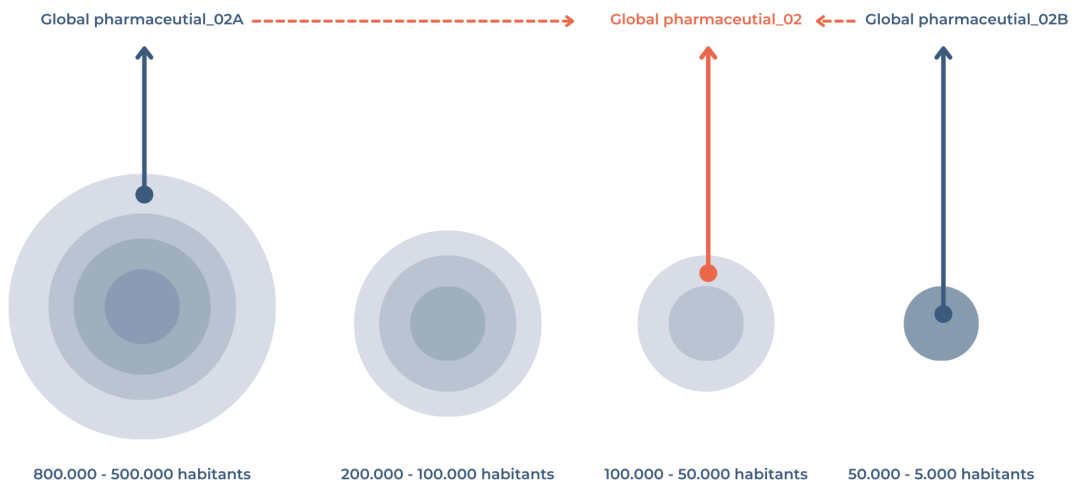


Figure 4.3.1: City size of case 2 (Source: own image)

According to the corporate website the company is present in approximately 80 countries divided into the following regions: North America, Latin America, Europe, Middle East, Africa, Asia and the Pacific. Their offices in the Netherlands initially had two separate locations, where one of which was in a city of around 800,000 inhabitants (Centraal Bureau voor de Statistiek, z.d.). The other office was located in a much smaller town of about 20,000 inhabitants as shown in Figure 4.3.1. These offices were merged into one office, which chose a separate location with a population of 80,000 inhabitants (Centraal Bureau voor de Statistiek, z.d.). According to the corporate website, the company has around 100,000 employees worldwide as seen in Figure 4.3.2, with the largest number of employees are based in the Europe, Middle East and the Africa region with 45,000 employees. Of the 45,000 in the EMEA region, 23,000 are based in Germany, and of the global and EMEA region numbers, 500 employees are based in the new Netherlands office. Of this number, 300 employees were originally located in the global pharmaceutical_02B location shown in Figure 4.3.2.

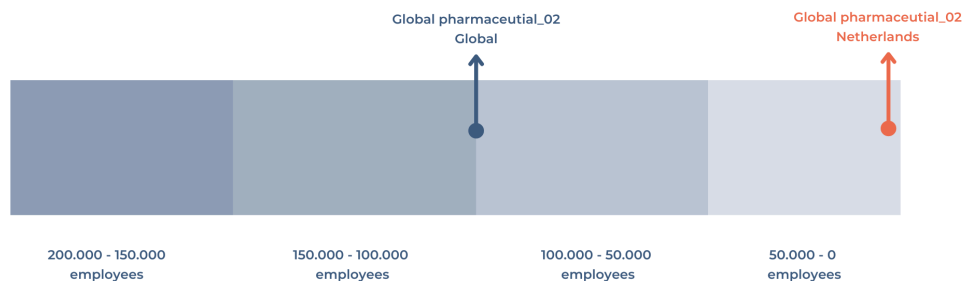


Figure 4.3.2: Amount of employees of global pharmaceutical company_02 (source: own image)

Pharmaceutical_02B was a more traditional office with cellular office spaces. This office had a space consumption of 5,800 m², with a total of 2.2 number of seats per person (including

workstations, meeting rooms, informal and collaboration seats). The other 200 employees were located in the office as described in Figure 4.3.1 as global pharmaceutical_02A, which was already a fairly modern office with activity-based workplaces. This office had a space consumption of 2,745 m², each employee had 3.5 seats per person (including workstations, meeting rooms, informal and collaboration seats). When they moved to the new location, they moved into an office with a total area of 2,730 m² and a desk sharing ratio of 0.55. This means they have approximately 1 desk for every 2 employees.

Global company culture

According to the corporate website, the company was founded in Germany around the middle of the nineteenth century in Germany. Interviewee_B3_PM explains that the company is very conservative, the company always works with three layers, the global team, the regional cluster which is the middle layer and the local organization. In 2018, the company bought an American company (pharmaceutical_02A), the company wanted to strengthen some branches of the company. However, pharmaceutical_02A was much more progressive than the German company (Interviewee_B3_PM). In the Netherlands, this was also reflected in the construction of its offices, pharmaceutical_02A employed younger international employees in an office with activity-based workplaces and in a large city in the Netherlands (Interviewee_B2_FM). In contrast, the Dutch office of the original German company (pharmaceutical_02B), had an older workforce and mostly Dutch employees in a very traditional office building (Interviewee_B1_C & Interviewee_B2_FM). They had to reconcile and merge the different values of the different organizations (Interviewee_B3_PM). According to interviewee_B1_C, the company is quite hierarchical, which could be seen in the last office building where people had their own office. The new office concept has an open floor plan and activity-based workplaces, which is supposed to reduce the hierarchical feeling in the office and encourage interaction and socialization. There is more openness and transparency in the new office. There is no policy on the amount of office days managed by the global team, but local managers can give a guideline to their employees (Interviewee_B1_C). However, the general guideline is two days in the office, one team day and one other day and three days at home (Interviewee_B2_FM).

Change Gap

In Figure 4.3.3 an overview is shown of the project context and the change gap.

Project context & change gap Case 2	Previous situation	Current situation	Future situation
Office evolution	Two separate office locations with two different departments	Leasing 2 to 3 floors of one new office building combining the offices	Implementing the new office concept globally
Workplace type	Dedicated desks, cellular offices in one office building. Activity based working in the other office.	Activity based workplace	-
Workforce	O2A: 200 O2B: 300	500	
City	Two different cities	One central location and public transport possibilities	
SQM office space	O2A: 5.800 m2 O2B: 2.745 m2	2.730 m2	

Figure 4.3.3: Project context & change gap (source: own image)

Interviewee_B2_FM and Interviewee_B1_C both explained that the office of pharmaceutical_02B was a very old office building owned by the company. They described the office as having small office compartments with dedicated desks, long halls with small cubicles and a very old school. In this old office, everyone had their own private office or shared an office with only one or two other people. However, everyone had their own desk. In addition to the building being outdated, the location was difficult to reach, especially with public transportation (Interviewee_B1_C & Interviewee_B2_FM). The office had been the headquarters of the Netherlands since the 60s and many employees worked and lived in the same city as the office (interviewee_B2_FM). Interviewee_B2_FM explains that the other office location had employees who were formally from pharmaceutical_02A, the company had younger employees in the Netherlands office with an average age of 33. Their office had already adopted some of the newer ways of working with activity-based workplaces. The office building had only existed for 6 years, so there was less emotional attachment to the office and to having a personal workspace (Interviewee_B2_FM).

These two locations were merged into one location, which included merging together the different departments and colleagues of the separate locations. These locations were consolidated into a leased multi-tenant office building, where they lease two to three floors (Interviewee_B4_C). They went from 950 workstations to 350 workstations. By renting two to three floors, the amount of storage space and the amount of parking space also

decreased significantly. The regulation for the number of office days is three days in the office, before Covid it was five office days (Interviewee_B1_C).

Productivity

Interviewee_B1_C mentioned that productivity is being able to perform your work activities efficiently and effectively with the right accompanying spaces and tools, which can be a focus room, being able to adjust your workstation and/or technology. The office should offer high quality technology and it should be easy to use and the office should have uniform systems. In addition, acoustics, temperature, light, especially daylight and indoor climate are important for productivity (Interviewee_B1_C). Interviewee_B2_FM mentioned that the layout of the office is important for productivity, due to the different types of work activities that employees have. In addition, the new office used good quality materials for acoustic measures. Interviewee_B2_FM mentioned being more productive at home than in the office due to being disturbed more often in the office. It was also mentioned that commuting to the office takes valuable time out of the day (Interviewee_B2_FM). Interviewee_B3_PM also mentioned the importance of layout design for productivity, where the high-traffic zones are at the beginning and have more collaboration areas and this area is more dynamic. Then at the end of the floor plan are the quiet areas where there is less traffic present and people can concentrate. It was mentioned that when people want to collaborate they know where to go and vice versa when they want to concentrate it will be quiet. Interviewee_B3_FM also mentioned that productivity in the workplace is about being able to do your job properly, which means having areas that allow for concentration work for example and areas for collaborative work and having access to the right setup with a desk, meeting rooms. Productivity is needed to bring in more revenue and having an increase in revenue is productivity for the organization. Finally, it was mentioned that if you reduce the space within the same quality you reduce the productivity (Interviewee_B3_PM).

Decision-making process

As briefly mentioned above, the company bought pharmaceutical_02A and the two separate companies had to be merged. Interviewee_B3_PM explains that this provided an opportunity to re-evaluate the real estate portfolio and reduce costs. In addition, the company is a pharmaceutical company not a real estate company, so it no longer made sense to own real estate. Furthermore, the office (pharmaceutical_02B) was a traditional office and took up a lot of space. Because of Covid, fewer people came to the office, which resulted in an even less efficient use of office space (Interviewee_B3_PM). The company was already re-evaluating its real estate portfolio and trying to reduce costs. The pandemic made it possible to implement the new office concept. This was a concept that supported the hybrid way of working and was a good opportunity to reduce the real estate footprint (Interviewee_B3_PM). With the new office environment there were a few key points that needed to be taken into consideration, Interviewee_B1_C explained these points. These points were: An office that facilitates collaboration, the meeting rooms were something that the employees found very important. More specifically, the ability to facilitate hybrid work. The meeting rooms must facilitate collaboration and therefore also have the right

technology to communicate properly with people who join online. Facilitating the collaboration was important in this case because it was bringing together two separate locations. Having an office that allows for informal collaboration, places to brainstorm, and the ability to work together in creative ways. Coincidental encounters and collaborations are encouraged. Finally, having a project in the middle of Covid put a spotlight on health and well-being (Interviewee_B1_C).

There were some risks that the company took in merging two separate sites into one new site. Interviewee_B3_PM explains that the risks that were taken into consideration were moving to a third space and getting rid of two spaces. Moving a department that is dependent on the timing of sales. However, the business case turned out to be positive (interviewee_B3_PM). Decisions are initially made from a global perspective and it is important that these decisions are communicated in the right way so that the local team can understand the decisions. However, if a certain decision will hurt the local business, either in terms of their employees or the business itself, the local team will present arguments against the business case (Interviewee_B3_PM).

Interviewee_B1_C mentioned that when a company has the opportunity to move away from a certain project, they want to improve the previous situation. In this case, pharmaceutical_02B had very poor air quality and temperature control in the old situation, so the new situation has more focus on this aspect as well (Interviewee_B1_C).

Potential barriers

Interviewee_B3_PM explains that in a global organization, there are three layers: local, regional and global teams. Each layer has a different perspective and different interests, therefore the different layers do not always agree. This can result in one layer implementing a decision that another layer does not agree with (Interviewee_B3_PM). This is reflected in the example of Interviewee_B1_C, where it was mentioned that the local project teams want to keep their square meters as large as possible. In terms of, the office space, storage space, desks themselves and parking spaces as well. However, the global teams want to minimize everything, this is also to minimize costs (Interviewee_B1_C). The local team did not agree with the reduction of the office space, Interviewee_B1_C explains that this can be because people have difficulty with imagining how changes will work out in real life. Especially if it is a significant change. In this project there were a lot of changes that were being implemented. A change of city, a workplace change, new colleagues in the same place and a downsizing (Interviewee_B1_C). Therefore, employees had to adapt to a lot of different changes (Interviewee_B2_FM).

Interviewee_B2_FM explained that there were some challenges in communicating the move and the timeframe of the move. Due to the many changes in the date of the move, many employees were on vacation at the beginning of the move. As a result, the new office concept and the new office use policies were not adopted by everyone as they should have been (Interviewee_B2_FM). In addition, the transition from the old office to the new office

concept proved to be difficult for some employees. This is due to the open workplaces where they are more easily disturbed by colleagues. As a result, some employees occupied a focus room throughout the day. The acoustics of the office were also an area of focus, but this remains a challenge. Some parts of the office were perceived as being louder than they were, resulting in a nuisance (Interviewee_B2_FM). Acoustics and the proximity of quiet zones and social zones were challenges identified in the post-occupancy evaluation report. In addition, the report mentioned that noise management should be improved, as well as control over the level of privacy in the workspace. The report also mentioned that the relocation of the site created some difficulties. For some employees the commute to the office became longer. The decrease in parking spaces also had a negative effect, discouraging employees from coming to the office.

In order to have better perceptive productivity in the office, Interviewee_B1_C mentioned that the company wanted to have a workplace management system. This is to avoid employees having to walk around the office to find a workstation (Interviewee_B1_C). However, Interviewee_B3_PM mentions that the tool was more of a change management tool to ensure that the employees' worries about not finding a workstation were taken away. What they see now is that the system is not being used as much as it used to be, some find it is more efficient not to book a workstation and leave when someone arrives who has booked the workstation (Interviewee_B3_PM).

"I always say that if you reduce the space with the same quality, then you reduce the productivity and you reduce the satisfaction. But if you reduce the space, meaning getting rid of space, you invest in quality acoustics and design and maybe workplace services as well. Then you at least get a higher satisfaction, it might be an indication of higher productivity, but not necessarily. So, space reduction is very, very useful in some situations. So it's specifically where people want to collaborate, when people want to collaborate, reducing the space is better because it brings them together, it lets them find each other quickly. It lets them collaborate ad hoc with each other." (Interviewee_B3_PM, 2023)

Potential solutions

To overcome the barrier of different levels of the global organization, Interviewee_B3_PM explains that local teams understand the decision of global teams and vice versa if local teams indicate that a change will disrupt their work ethic (Interviewee_B3_PM). Interviewee_B1_C explains the importance of involving employees in the change process. It was mentioned that conducting change management activities helps to involve employees and make them understand the process. This was done by asking them what they wanted in the future office space through a survey. In addition, the leadership team also conducted a focus group session and a vision session with employees as well (Interviewee_B1_C). Interviewee_B1_C also explains that to ensure that the new office concept is implemented and used in the right way, there should be a number of change management activities. These can include a town hall where the information on how to use the office is explained, a workshop or a manual, ambassadors, but most importantly of all repeating the information is important (Interviewee_B1_C). After some time, the office etiquette needs to be refreshed,

as mentioned by Interviewee_B2_FM and Interviewee_B1_C. Interviewee_B2_FM explains that it takes time to get used to a new way of working and to a new office concept. Therefore, it is important that the policies and regulations are refreshed after some time (Interviewee_B2_FM).

Interviewee_B1_C and Interviewee_B2_FM both mention the importance of having the right technology in the office for employee productivity. Interviewee_B1_C explains that in order to have an office that supports hybrid working, the office needs to be aligned with the needs of the employees and according to those needs, the different activity-based workspaces need to be implemented. In addition, the right technology needs to be in place to support the hybrid way of working. This means having the same workstation everywhere with the same second screens, working wifi, headset, docking station, etc. The same for the meeting rooms, it needs to support the hybrid way of working, with a big screen for the people online, you need to be able to see and hear the people who are joining online and vice versa. Having the right equipment in the office has a positive impact on perceived employee productivity. In addition, privacy and acoustic issues can be addressed by implementing rooms that meet employees' needs, such as focus rooms where employees can conduct their video calls privately (Interviewee_B1_C).

“Key points in increasing productivity in a reduced office are the acoustic quality, the design quality of the office and maybe less prioritized items would be workplace services.”
(Interviewee_B3_PM, 2023)

Conclusion Case 2

In this case the real estate portfolio was initially evaluated due to the merger of two separate companies. The portfolio was reviewed to assess the opportunities to reduce real estate costs. The pandemic provided an opportunity to reduce even further and to create a new office concept that could be positively communicated to the employees.

This new office environment, which facilitates collaboration, technology and hybrid working, also has some challenges. In the initial concept for the office change, there were some conflicting interests between global teams wanting to minimize costs and square meter. Contradictory to the local teams that prefer more square meters for office space, storage room, desks and parking spots. Balancing these can be challenging.

It is often difficult for employees to visualize the new concept, which can lead to resistance to change. An open office environment can be difficult to adapt to, as acoustic issues can be difficult to manage and can interfere with employees' productivity. Commute times and parking availability are also a challenge when relocating. A longer commute reduced employees' willingness to come into the office.

Involving employees in the change process can help overcome the resistance to change and increase understanding of the change. This can be done through change management activities as well as gathering employee preferences through surveys for example. It should

be recognized that it takes time to adapt to new ways of working. Therefore, refreshing activities for the policies and regulations of the office concept may help. When reducing an office space it is important that the office supports hybrid working, in terms of different types of workstations and having the right technology. In addition, the acoustic quality and design quality of the office should be key points when downsizing an office.

4.4 Case 3: Global pharmaceutical company_03

Project Context

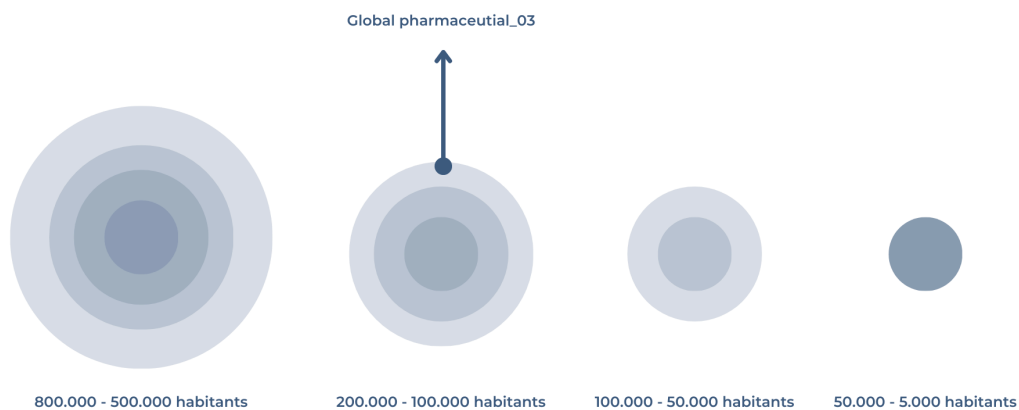


Figure 4.4.1: City size of case 3 (Source: own image)

According to the corporate website, the company is present in approximately 100 countries, including the Netherlands. The case study project is located in the Netherlands in a city of approximately 130,000 inhabitants (Centraal Bureau voor de Statistiek, z.d.). According to the corporate website, the company in this case study employs approximately 140,000 people worldwide, as shown in Figure 4.4.1. Interviewee_C1_WM describes that in this project they initially had 400 employees spread across the four separate locations. In the new office building, more employees will be distributed in the building. They are relocating about 800 of their employees in the Netherlands. Of these 800 employees, 200 are for the laboratory part and 600 are for the office part. Their new office remains in the same city as described in the text above and shown in Figure 4.4.1. However, there are four locations that will be consolidated into one new office building.

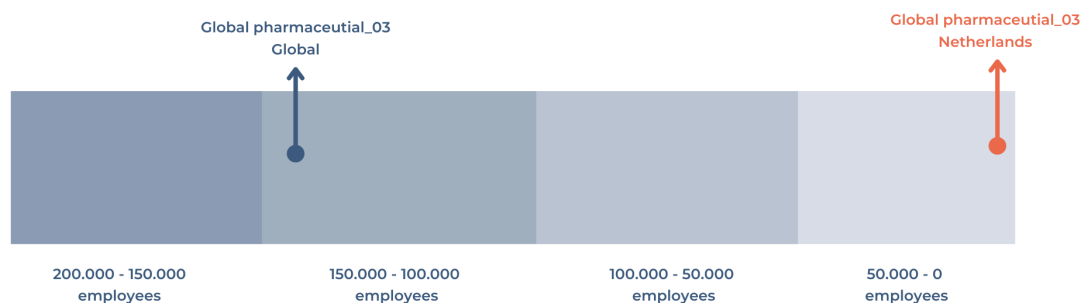


Figure 4.4.2: Amount of employees of global pharmaceutical company_03 (source: own image)

In the old situation, they had a combined amount of office space of 8,000 m², in the old situation, the desks were assigned so that the desk sharing ratio was one to one. The total amount of square meters in the new building is 11,000 m², where 65 percent is allocated for office space and 35 percent is allocated for laboratory space. In the new situation, there is an office space of 7,000 square meters of office space, with a desk-sharing ratio of 1 desk per 1.5 people. The office space has been reduced by 10 percent, but the number of employees in the office space has been increased (Interviewee_C1_WM).

Global company culture

According to the corporate website, the company was founded in America in the late nineteenth century, making it an American company. Interviewee_C1_WM explained that because of the global nature of the company, working from home was already in place before covid. The company has a mix of cultures, not only because it is a global company, but also because there is a mix of cultures in the different local offices (Interviewee_C1_WM). Interviewee_C3_C mentioned that the people working in the company are very well educated and able to think very strategically. In addition, the employees have high standards and therefore have high standards for the office workplace (Interviewee_C3_C). In addition, Interviewee_C2_C mentioned that the employees are very hard working and are very dedicated in their field of expertise. The company is a hierarchical organization with senior management and other applications, but there is an open work culture with accessible/ approachable interactions (Interviewee_C2_C). Interviewee_C2_C further explained that when the company plans to implement a new workplace strategy and a new office concept, the company assembles a core team. This core team consists of end-user representatives from various disciplines. In this project, the core team made decisions on behalf of the employees in their discipline (Interviewee_C2_C).

Change gap

Figure 4.4.3 shows an overview of the project context and change gap of case 3.

Project context & change gap Case 3	<i>Previous situation</i>	<i>Current situation</i>	<i>Future situation</i>
<i>Office evolution</i>	four separate offices, some leased some owned	Moving away from old offices into new location	One new flagship office building, made for them but leased
<i>Workplace type</i>	Dedicated desks, cellular offices	Preparing employees for new workplace	Activity based workplaces enhanced employee experience
<i>Workforce</i>	400		600
<i>City</i>	Same city	Same city	Same city
<i>SQM office space</i>	8.000 m2		7.000 m2

Figure 4.4.3: Project context & change gap (source: own image)

Interviewee_C1_WM explained that in the old situation, the company occupied four different locations. These offices consisted of cellular offices, where each person had their own desk. Due to covid, the different office buildings were underutilized and used very inefficiently. As the leases on certain locations were coming to an end, there was an opportunity to re-evaluate the locations. This was done with the various locations, including looking at the locations with the workplace innovation policy. This, along with the employee satisfaction study, showed that the sites were underperforming and change was needed (Interviewee_C1_WM). This resulted in the consolidation of the various locations into a new flagship office building (Interviewee_C2_C). Interviewee_C1_WM explained that by consolidating the locations, the square meters were reduced by half or two-thirds. This was made possible by the implementation of activity-based working. The new office building also focuses on the employee experience with amenities such as coffee corners, fitness areas, a restaurant etc. The new office building is divided into two zones, on one side there is the administrative side, which is the office part, and the other zone is the laboratory part (Interviewee_C1_WM). The location of the office has not changed. The company is now preparing to move to the new office building (Interviewee_C1_WM & Interviewee_C2_C).

Productivity

Interviewee_C1_WM mentioned that some collaborative meetings can now be held online, but some collaborations are easier to hold on site. Where onsite workshops or meetings can be beneficial to a team. Where it was mentioned that the only thing Interviewee_C1_WM needs to be productive is a laptop and an available space to have a call (Interviewee_C1_WM). Interviewee_C2_C mentioned that feeling connected to the office and connecting with colleagues, feeling inspired, and having easier ways to collaborate in

the office contribute to productivity (Interviewee_C2_C).

Interviewee_C4_PJM mentioned that different disciplines within an organization can learn from each other and that the layout of the office floor plan can help improve collaboration opportunities, which increases productivity (Interviewee_C4_PJM). Interviewee_C3_C mentioned that the perceived productivity of employees is always lower when they are in the office. This is because more time is spent in the office working collaboratively, networking, and socializing, and one is disturbed more often (Interviewee_C3_C).

Decision-making process

Interviewee_C1_WM explained that a lease expiration creates an opportunity for real estate optimization. This is done by doing a stay versus go evaluation where they look at what the most efficient option is. Stay and invest more in the building or move to a ready to go space. In this case, the most efficient option was to move and end leases or sell the office buildings. This choice can be explained by the fact that the company has no interest in owning or leasing inefficient real estate because it is not a real estate company but a pharmaceutical company (Interviewee_C1_WM). Interviewee_C1_WM further explained that the first and biggest driver of real estate decisions is cost. The second driver in the workplace strategy is employee satisfaction (Interviewee_C1_WM). In addition, Interviewee_C4_PJM explains that other drivers to change the real estate portfolio are the role of talent to attract and retain talent, which means that the real estate should provide for the employees. Furthermore, sustainability is a driver in terms of the global footprint of the company where the company has the intention to reduce the total global footprint this was also mentioned by Interviewee_C1_WM. The impact of Covid is another driver, meaning the impact of the new way of working and the real estate should facilitate the hybrid way of working. The last driver Interviewee_C4_PJM mentioned for this project was to consolidate the different assets to one location, so having all of the different business lines under one roof (Interviewee_C4_PJM).

Interviewee_C1_WM explains that, like many companies, the real estate portfolio is being looked at to improve efficiency and perceived productivity. Reduce the company's footprint and optimize the utilization. In addition, to provide a better environment for employees so that they are willing to come to the office more often, and be more productive, and be able to meet with their team (Interviewee_C1_WM).

Interviewee_C1_WM explained that 10 years ago a workplace innovation policy was developed to transform the offices globally. This global workplace experience program is very employee focused and wants to provide the best workplace for their employees. Because of covid, it was easier to implement these changes and reduce more aggressively (Interviewee_C1_WM). In addition, Interviewee_C2_C is in agreement with Interviewee_C1_WM. Interviewee_C2_C mentioned that the new workplace program that has been developed is employee focused and is designed to provide the best workplace for employees (Interviewee_C2_C).

The new office building has a lot of facilities to enable employee satisfaction. Every year or yearly an employee satisfaction survey is conducted by the company, conducting this study shows how a building is performing and what the employees think about it. Some sites of the four different locations were really underutilized, which is a red flag for the building and a need for change (Interviewee_C2_C & Interviewee_C1_WM).

Potential barriers

Interviewee_C1_WM mentioned that the transformation plan takes years to create and implement. It is difficult to make a future-proof plan because you have to guess what the future will look like (Interviewee_C1_WM). Interviewee_C1_WM also explained that people are concerned when change happens. Five to ten percent are haters and five to ten percent are lovers, the focus should be on the other eighty percent (Interviewee_C1_WM).

Interviewee_C2_C mentioned that it is sometimes difficult and challenging to get people on board when a plan is already fairly set in stone. In addition, it was challenging to design an office concept because of the mix of certain teams with certain preferences and confidences (Interviewee_C2_C). Having employees who are highly educated and have a high standard of living and a high standard of office can be challenging. This means that they have high expectations of an office space. In addition, communicating change to employees can be difficult because they may question it and the wording of the communication needs to be more thoughtful (Interviewee_C3_C).

Interviewee_C4_PJM mentioned that the employees came from an outdated, very traditional environment, where people had their own office and were not disturbed. Therefore, the perceived individual productivity might decrease at first, but the employees will accept the new office environment and learn how to cope with it. After a while, the perceived productivity might even increase, due to the efficiency of the different office workspaces that support the employees in the new way of working (Interviewee_C4_PJM). In addition, Interviewee_C4_PJM mentioned that the office space has been reduced, but the functionality of the space has improved. In the new office, there is much more interdisciplinarity, which means the different business lines have been combined in the new building. Therefore, they have created the possibility for more collaboration, which can increase the perceived team productivity (Interviewee_C4_PJM). Regarding the impact of the reduction of office space on perceived employee productivity, Interviewee_C4_PJM mentioned that the reduction of office space had a positive impact on the perceived employee productivity. This is because the reduction was accompanied by an improvement. By implementing a new office building and a new concept, the reduction would not be noticeable to employees. In contrast, if a reduction is implemented in an existing building, then the impact on the perceived employee productivity would be much higher because employees know what they had before compared to what they are getting in a reduced space (Interviewee_C4_PJM).

Potential solutions

Interviewee_C1_WM explained that for a project to be successful, stakeholders must support the new workplace strategy. This is key. They need to show their support during the change management communication (Interviewee_C1_WM).

Interviewee_C1_WM explained that due to the many changes there was a huge change management required, the acceptance of the changes was made easier by covid. Change management activities are key for the employees to understand and accept the office changes. This should be done properly and thoroughly to ensure that the majority of employees are satisfied with the changes (Interviewee_C1_WM). In addition, Interviewee_C1_WM explained that it is important to minimize employees' concerns, which takes time. Involving the employees in the process helps. The changes in office space should be clear to the employees and they should be well informed about it. Learning from examples of other locations can be beneficial when implementing office changes with other locations. Inviting change ambassadors from other locations could be helpful to explain the struggles they experienced with their location's office changes. They can explain how their office space works and help redesign it in the best way possible for new locations (Interviewee_C1_WM). Interviewee_C4_PJM explains that creating a local identity can help ensure that employees still feel that the office building is theirs. It can also make employees feel at home. There is no specific global corporate branding. However, the company is open to creating a local identity for the office buildings. In this project, the city of where the office is located was analyzed and used as a theme for the different office floors (Interviewee_C4_PJM).

In addition, Interviewee_C4_PJM explains that when implementing an open office environment such as with this project, the acoustic measures are very important. This is due to the fact that employees are placed closer together. The measures in this project include hardware measures, such as acoustic measures on the ceilings and floors, and visual measures, such as fabric partitions (Interviewee_C4_PJM).

Interviewee_C1_WM explained that the company has been using the same office concept for more than ten years. After each project, a lessons learned session is conducted with a satisfaction survey. This survey includes some utilization questions to understand how the new office space is being used and if people are satisfied with the different work environments. This feedback can be used to create a lessons learned document and sharpen the guidelines for other projects. It may be helpful to involve ambassadors from teams similar to those of the employees who are not enthusiastic about the changes being implemented and how they are coping with the changes from another project. However, it should be made clear to the employees that the project and the office will also be tailored to them and their needs (Interviewee_C1_WM).

Conclusion Case 3

The expiration of a lease on an office building can be an opportunity to re-evaluate the real

estate portfolio. In doing so, the real estate could be optimized, driven by the desire to provide employees with a better work environment while also reducing costs. The underutilization of the office buildings raised some red flags and signaled a need for change. Other drivers for an office transformation can include attracting and retaining talent, sustainability to reduce the company's carbon footprint, and providing the right office layout for the new ways of working.

Transforming an office is difficult in itself because you cannot predict the future. That is, the business may change or employees' preferences for how they work may change. This makes it difficult to create a future-proof plan. A common barrier is the resistance to change, there are always haters and lovers of change. The key is to focus on and address the majority of the employees who may have mixed feelings or concerns. It can also be a challenge to get people on board when a plan is already in place. This is especially difficult when employees have high expectations and a high standard of office space. It is important to communicate effectively and address employee questions and concerns. It can also be challenging to balance different employee preferences and confidentiality. This requires thoughtful planning that takes employee preferences into account.

Engaging key stakeholders who support a new workplace strategy is critical to the success of the project. They can help with change management and communication to help employees to understand and accept the changes. Learning from other projects within the same company that have gone through a similar change can be helpful. Change ambassadors from other locations can help explain the challenges they faced and how they solved them. This can help to make the office transformation more effective. Implementing a local identity for the office can help employees feel at home in the office. Acoustic measures are also important when implementing an open office environment.

4.5 Cross case analysis

This section compares the cases and conclusions are drawn from the comparative analysis.

Project context all case studies

Two out of the three case studies are located in a city of about 130,000 inhabitants as shown in Figure 4.5.1. The second case study is located in a city with approximately 80,000 inhabitants; this case study is the only case study that relocated its office to another city. However, only pharmaceutical_01 has stayed in the same office building. Pharmaceutical_02 has consolidated two different office buildings into one office building in another city. While pharmaceutical_03 consolidated four different office locations in the same city into one new office building in the same city. According to Interviewee_C4_PJM, in a new office, the impact of a reduction on perceived employee productivity is less than in a reduction in an existing building because the reduction is accompanied by an improvement. Therefore, the reduction is barely noticeable, whereas the impact of a reduction in an existing building is greater. Because of the comparison that employees can make with the previous situation (Interviewee_C4_PJM).

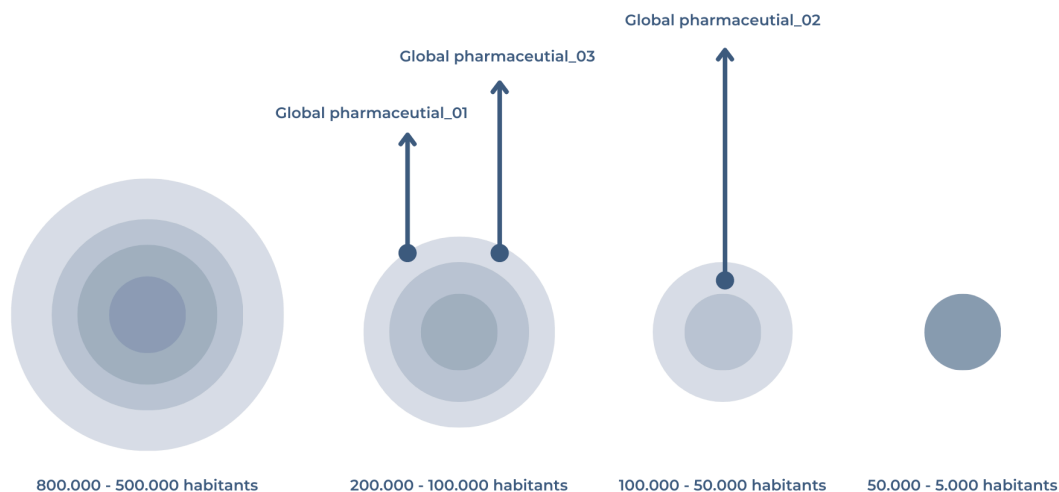


Figure 4.5.1: Cross case analysis of office location, city size (source: own image)

The different case studies vary in the number of employees, as can be seen in Figure 4.5.2. Pharmaceutical_01 has the smallest number of employees, with 20,000 and is the youngest company. Pharmaceutical_02 is in the middle with 100,000 employees worldwide, but the company was founded in the mid-nineteenth century, making it the oldest company of the three. Pharmaceutical_03 has the highest number of employees with 140,000 and is in the middle of the three, having been founded in the late nineteenth century. Pharmaceutical_2 and Pharmaceutical_03 have the most employees and were founded around the same time. It was mentioned that these two companies are quite hierarchical and traditional. However, they have changed to a new office concept in the Netherlands and are both implementing it globally. They both want to promote socialization, collaboration and more transparency by implementing the new office concept.

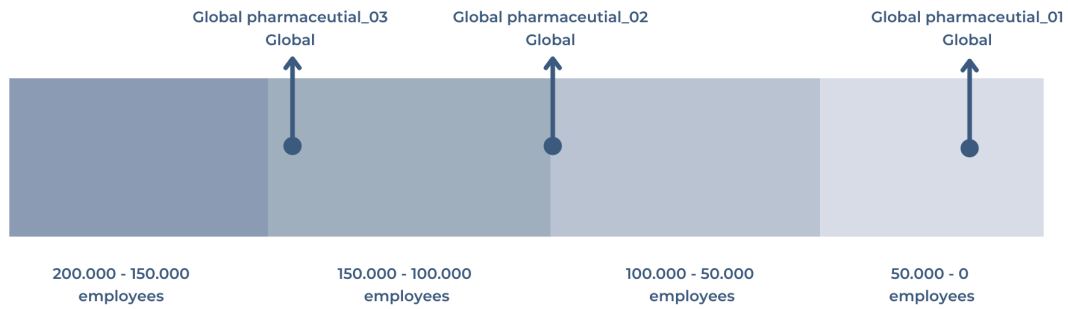


Figure 4.5.2: Comparison amount of employees per company globally (source: own image)

Figure 4.5.3 shows the difference in the number of employees in the Netherlands. Pharmaceutical_03 has the highest number of employees in the Netherlands with 800 employees, of which 600 are office employees. Pharmaceutical_03 has the highest number of employees worldwide and the highest number of employees in the Netherlands. Pharmaceutical_01 has the same number of office employees as Pharmaceutical_03, 600 office employees. In addition, the Netherlands office of Pharmaceutical_01 is a global hub office. Pharmaceutical_02 has the lowest number of employees in the Netherlands compared to the other cases, with 500 office employees.

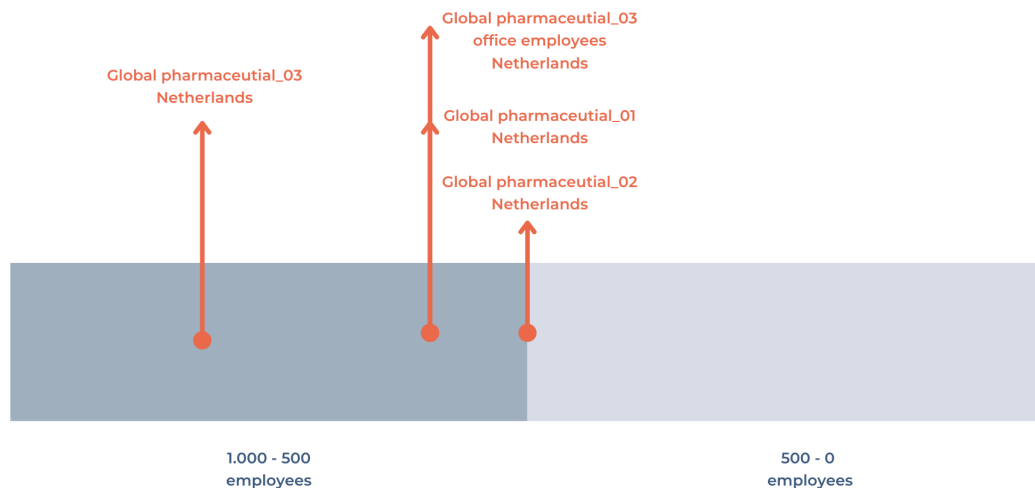


Figure 4.5.3: Comparison amount of employees per company in the Netherlands (source: own image)

Change gap

In Figure 4.5.4 an overview is shown of all the case studies compared to each other, the smaller squares in image 4.5.4 indicate the old situation on the left and the new reduced situation on the right.

Cross case analysis	Case 1 global pharmaceutical_01		Case 2 global pharmaceutical_02		Case 3 global pharmaceutical_03	
Office evolution	Same office building through time more sqm were disposed of		Two separate owned locations to one leased combined office		From four owned offices to one new flagship office building, made for them but leased	
Workplace type	Activity based working		From two offices with one traditional office to one office with activity based workplaces		From four traditional offices to one office with activity based working	
Workforce	600		500		400 office	600 office 800 total
City	Same city		from 2 locations to 1 central location		Same city	
SQM office space	8,795 m2	2,597 m2	8,545 m2	2,730 m2	8,000 m2	7,000 m2

Figure 4.5.4: Cross case analysis table (source: own image)

The different companies can be compared in terms of their change gap. All three case studies went through an office reduction, but Pharmaceutical_01 is the only project that stayed in the same office building. Interviewee_C4_PJM mentioned that in a new office concept the feeling of reduction is less present than in a reduction that takes place in an existing building (Interviewee_C4_PJM). Interviewee_A6_RM explains that employees who have been with the company for a long time are resistant to change and see the reduction that is being implemented negatively, and they feel forgotten and pushed out (Interviewee_A6_RM). Pharmaceutical_02 and Pharmaceutical_03 have both merged several locations that are coming from a traditional office with dedicated desks into one new office location. The new office locations of both case studies adopted a new way of working for employees with activity-based workplaces in the new office. Interviewee_B1_C and Interviewee_B2_FM both mention that the employees had to get used to the new office layout and the new way of working (Interviewee_B1_C & Interviewee_B2_FM). However, the employees got used to it and have recovered from the implemented changes and have shown progress (Interviewee_C2_FM). Interviewee_C4_PJM expects the same for the employees of Case 3, Interviewee_C4_PJM explained that the perceived employee productivity of the employees will be higher compared to the old situation due to the activity-based workplaces. It is hereby expected that the change will be a parabola curve, where the employees will first have to adapt to the new situation (Interviewee_C4_PJM).

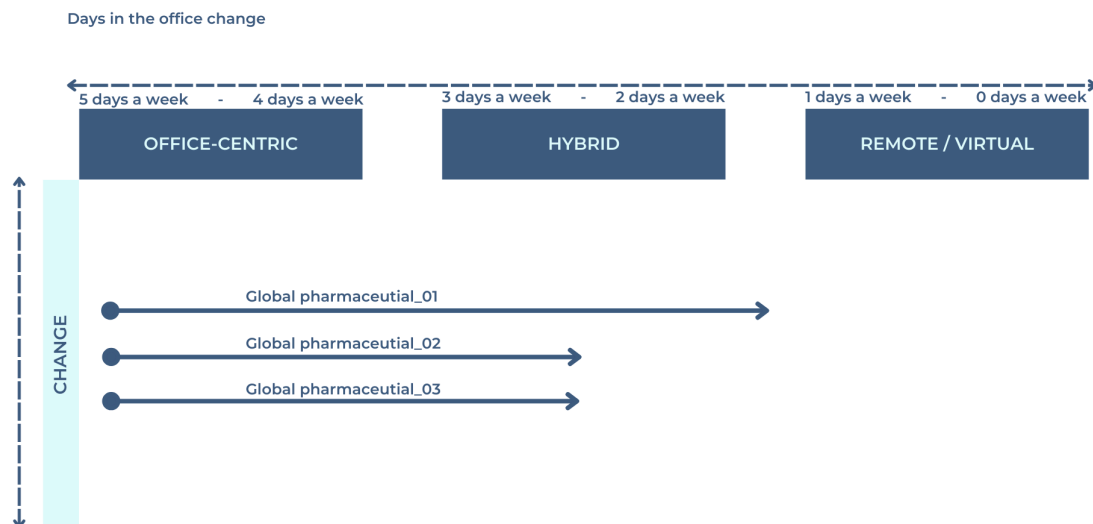


Figure 4.5.5: Cross case analysis office days per case (source:own image)

Looking at the difference in the number of office days per week, all companies started with the employees coming in 5 days per week before Covid, which can be seen in Figure 4.5.5. Then, after the change in the way of working after Covid and the reduction of office space due to the underutilization, all companies experienced a shift in the number of office days. Pharmaceutical_02 has no policy regarding the number of office days, but the local managers can manage this. In the Dutch office, the regulation regarding the amount of office days is three days. Most employees come to the office two or three days a week (Interviewee_B1_C). In Pharmaceutical_03, employees are expected to be in the office three days a week; this is a global policy. Pharmaceutical_01 does not have a policy or regulation on the number of office days, but the employees do gave a policy to get more clarity on the use of the office and what is expected of them (Interviewee_A1_C & Interviewee_A2_FM). As a result, employees of the Dutch office come in one day a week. The overview of the number of office days shows the shift in the office use, where it is clear that the office is not being used in the same way as before the pandemic. Furthermore, due to the local teams of Pharmaceutical_02 and Pharmaceutical_03 implementing policies for team days in the office, shows that the employees come in more often than Pharmaceutical_01 where the employees come in only one day a week.

Global pharmaceutical company

All companies are global pharmaceutical companies, which means that all companies have multiple nationalities working for the company. In addition, all of the companies work globally and have global teams, which means that employees have video calls during the work day. The first case study is the youngest company with the least number of global employees and is from Japan. To make the company culture a bit more reserved, the office in the Netherlands has a more quiet work culture and there are no policies and guidelines regarding the amount of office days (Interviewee_A2_FM & Interviewee_A5_RM). The second company is the oldest company out of the three case studies and is from Germany, where most of the employees are based. This company is described as conservative with a

hierarchical structure (Interviewee_B3_PM). The third and last company from the case studies was founded a little later than the second company. The last company is an American company and has the most employees worldwide of the three cases. The company is described as a hierarchical organization with highly educated employees (Interviewee_C2_C). The second and third companies are both described as being hierarchical organizations, reinforced by the traditional office layout. However, both companies had the intention to reduce the hierarchical levels with the new office layout by creating more transparency, openness and socialization supported by an open floor plan.

Productivity

The case study interviews revealed that the physical workspace design, individual preferences, environmental factors, and collaboration methods all contribute to productivity. To increase productivity, flexibility, thoughtful workspace design and a balance between remote and in-office work are needed. The office needs to facilitate hybrid work, so the office technology must be of high quality and easy to use and the office should have a uniformity of systems in all areas and the office should accommodate the different work activities of employees. There should be a variety of workspaces, such as enclosed video call rooms and small to medium-sized meeting rooms. A fully equipped desk means that the desk is adjustable in height, with an extra monitor for all flexible workstations.

Decision-making

In the interviews with all three companies, it was mentioned that the company is a pharmaceutical company and not a real estate company, so in all three cases they did not want to own real estate anymore. The companies have different reasons for re-evaluating their real estate portfolios. However, all companies saw the opportunity to reduce costs by reducing their real estate footprint. The pandemic made it possible to reduce more aggressively. As a result of the pandemic, hybrid working became more common in the offices in the Netherlands, so offices were underutilized. Interviewee_A3_C explained that an office can be reduced if the market is being looked at as well as the inefficient use of the office (Interviewee_A3_C). In the interviews with the different companies, when asked whether the companies conduct productivity measurement studies, it was discussed that this is almost impossible to measure. Therefore, all companies use satisfaction and occupancy studies to look at the performance of their real estate. These studies are conducted using both quantitative and qualitative data. These studies are based on satisfaction surveys, interviews about how satisfied they are with the space and how it is being used, as well as looking at occupancy through batch data or looking at the occupancy through the booking tool. By looking at the various data points, companies gain insight into how well their real estate is performing and whether changes need to be made. Underutilization and unhappy employees are a red flag and an indication that real estate needs to change. However, for most global pharmaceutical companies, the biggest and primary driver is cost. In addition, global pharmaceutical companies are interested in reducing their global footprint, also with sustainability in mind. In addition, keeping and retaining talent is another driver, which means that the real estate should provide for the

employees, which in this case also means facilitating the hybrid way of working. In summary, there are a few decisions drivers for the global pharmaceutical companies and these are: the first and biggest driver is cost, employee satisfaction, real estate utilization, sustainability and looking at reducing the overall global footprint, retaining and attracting talent, having an effective and efficient office where people can work efficiently and collaborate easily.

Barriers

The research looks at global pharmaceutical companies, all three of which have the same basic framework. This framework has three layers, global, regional and local. Throughout the case study interviews, it was discussed that these different layers are not always aligned. When discussing the reduction of the office space, several participants mentioned that global teams want to reduce as much as possible, while the local team wants to keep as much office space as possible. Interviewee_A3_C and Interviewee_C4_PJM mentioned that there is a constant balance between how far an organization can go with reducing the amount of square meters while maintaining or increasing the perceived productivity, as shown in Figure 4.5.6 (Interviewee_A3_C & Interviewee_C4_PJM).

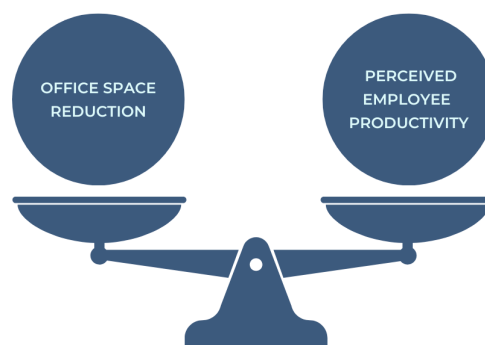


Figure 4.5.6: Balancing office reduction and perceived employee productivity (source: own image)

After Covid, the desk sharing ratios have been increased further, where you have to be careful that the workplaces don't become too dense. There is a constant battle between the global team wanting fewer workplaces and maintaining the quality for the end users and finding the balance between what is necessary and what is an added luxury (Interviewee_C4_PJM). Interviewee_A5_Rm explains that the different layers do not always agree with each other because of the different focus of the layers. The local team is more focused on what the local employees want and need and the global team has a more broader view and focuses on what is best for the business (Interviewee_A5_RM).

It was mentioned that it is a challenge to fit different teams that may work with confidential material and teams that want to work together in the office all the time into a reduced space. It is difficult to fit employees with different job descriptions, needs, and activities into the same office space. In addition, all companies are working with a more open work environment where employees are disturbed more often than in a traditional office. Acoustics also seem to be a challenge for all companies.

For all of the companies, providing more opportunities for collaboration and socialization was key to changing the office. However, several respondents mentioned that it is now unimaginable not to have video calling in the office. This needs to be addressed. In addition, the office needs to support team productivity as well as individual productivity. People come to the office not only to collaborate, but also to concentrate.

In general, in all the case studies, it was found that change is always difficult in terms of employee reactions. There are always people who will resist change and people who accept it. In addition, it takes time for employees to adapt to a change, which can initially lead to a drop in perceived employee productivity at first.

Solutions

The first challenge that was mentioned above was the different levels of the organization that do not always agree with each other. Communication is a key point for this challenge, it is important that the employees understand why a change is happening and what it means for them. When employees understand the change, they are more likely to accept it. Stakeholder involvement is important here, they need to show their support for the workplace strategy and communicate this. Improving and having the right communication can be done through a change management process or program. Conducting change management activities such as town halls, workshops, handbooks or presentations all help to inform employees about the change. This will help employees understand the change and what the new office design will look like and how it will be used. Change ambassadors are another example of a change management program used in the various case studies. Ambassadors are usually employees from another location who have been through a similar change, or employees who have been briefed on the change and can explain what will happen and how the new office space will look and be used. In addition, ambassadors can be used to explain challenges that they have experienced in another location so that a new office space can be redesigned in the best possible way.

When reducing office space, it is important that employees receive something in return. It is important that the employees do not feel that something is being taken away from them, but that they are receiving quality in return. If employees feel they are getting something in return, they will be more likely to accept the change. Therefore, the perceived productivity of employees will improve in a reduced office space where the quality is improved compared to their old situation. Involving employees in the process of the office change or implementing changes through co-creation can help the employees understand the process and ensure that the office supports employees. Implement changes according to employees' activities and needs. In addition, creating a local identity for the office can help employees identify with the office and make them feel at home.

Once a change has been implemented and used for a while, employees may revert to their old ways and the office may not be used as efficiently as it should be. After some time has

passed, policies and regulations should be repeated. This will ensure that the office is being used as it should be and in the most efficient and effective manner. In addition, post satisfaction surveys can give an indication on how the real estate is performing and whether it is supporting the needs of the employees. Based on the results of the survey, the office can be improved and/or modified.

Implementing policies and regulations gives employees clarity on how to use the office space and what is to be expected of them in the office. In addition, the employees not only know what is expected of them, but also have expectations of the office and the other employees. This is reflected in Case 1, where there is no policy, while the employees do have some guidelines.

Finally, it is important for the perceived productivity of the employees that the hybrid way of working is supported both in the office and at home. This is because this is the new way of working for employees. The office should be equipped with the right technology. This means technology that is easy and ready to use, for example: having working wifi in the office, docking stations, second screens and meeting rooms with audio and visual facilities to engage colleagues online and offline. The office should consist of the right workspaces, such as a meeting room, workstations and focus rooms. Having different rooms for different activities helps with noise transmission and confidentiality issues due to closed rooms. For acoustic measures, it can help to implement quiet areas. The number and types of workstations should depend on the activities of the employees. When an office implements an open floor plan, office acoustics become more important. Because employees experience more noise nuisance in an open floor plan. Therefore, acoustic measures such as fabric partitions should be taken.

Conclusion

In conclusion, the interviews with the three pharmaceutical companies revealed a common goal of reducing costs by reducing real estate. The pandemic allowed for a more aggressive approach as offices were underutilized due to the shift to hybrid working. In addition, employee productivity is a driver for global pharmaceutical companies, but not a top priority. However, measuring productivity is challenging, so companies use satisfaction and occupancy studies to assess whether real estate is supporting the employee productivity. The qualitative and quantitative data is used by the company to assess the performance of the real estate portfolio and identify areas of improvement. Key decision drivers for the various companies include cost reduction, employee productivity through employee satisfaction, real estate utilization, sustainability, talent retention, and creating effective and efficient office spaces that encourage collaboration. The reaction of employees to a change project cannot be predicted. However, it is helpful to perform some change management activities to inform employees about the change. Keeping employees informed and understanding the change will help them to accept the change.

Global pharmaceutical companies often face challenges in their office space and workplace strategies. It is complex to balance the preferences of global and local teams that have different office space objectives. Therefore, the different layers within a global organization should understand the decisions that are made by the other layer. When the global team implements a reduction, it helps the acceptance process if the local team understands the decision. The COVID-19 pandemic has accelerated the adoption of desk sharing, requiring caution to avoid overcrowding. The need for collaboration, video calling capabilities, and support for team and individual productivity is critical. Effective communication, stakeholder involvement, and change management processes facilitate successful workplace changes. Providing employees with quality alternative spaces and involving them in decision-making increases employee engagement. Regular policies, regulations, and satisfaction surveys ensure efficient use of office space. Guidelines and acoustic measures address the challenges of open office layouts.

4.6 Validation

Preparation

The experts that are selected for the expert panel must contain a couple of criteria. These criteria are listed in the following text.

Expert panel criteria:

1. Has experience in office changes
2. Has experienced an office reduction
3. Has experience with managing employees during an office change

Four experts have been selected that are qualified with the criteria. Three out of four experts are work dynamics consultants, the other expert is an expert on the future of work. Before the expert panel, the expert received an email which included a short summary of the research, consisting of the research questions, problem statement and output of the research. Furthermore, the email contained the statements to be discussed and the intention of the expert panel. Therefore, the experts are able to properly prepare for the discussion. On the day of the expert panel the statements are presented one by one followed by a discussion.

Expert 1, consultant work dynamics: EP1_CWD

Expert 2, consultant work dynamics: EP2_CWD

Expert 3, consultant work dynamics: EP3_CWD

Expert 4, consultant future of work: EP4_CFW

Expert panel

Statement 1: A successful and productive office space should support employees in their work. To create a successful office, employee input and feedback should be incorporated into the office design.

The experts all agreed with the first statement, assuming that the office in question is a knowledge-based, back-office type of office. While EP4_CFW mentioned that supporting employees in their work is a no brainer, it is only one element. Where the experience of the employees is there to facilitate the work, because you're more productive when you're happy and feel fulfilled and connected. So it is broader than just supporting the work that people need to do (EP4_CFW).

EP1_CWD mentioned that there is nothing to disagree with in the statement, but there is much more to what creates a successful office than just facilitating work. There are several performance drivers. An increase in one can create benefits in the other. An increase in experience can generate benefits in productivity and can show tangible results in show up rate. If more people show up together more often, they can be more productive as a group (EP1_CWD).

EP2_CWD and EP3_CWD mentioned that it is good to have the input and feedback from employees, but not to involve them in the decision-making. Employees are more concerned with their personal preferences than with the bigger picture (EP2_CWD & EP3_CWD). In addition, employees find it difficult to imagine the future way of working for themselves and always look at their current office and how it works (EP2_CWD).

Statement 2: A successful change project requires preparing employees for the transition through change management activities and managing expectations through policies and regulations. Stakeholder involvement, effective communication and change management activities are crucial to achieving acceptance of the change project among employees and various levels of an organization.

Discussion on the second statement began with EP1_CWD partially agreeing with the statement but finding the statement incomplete. This was due to the importance of staying with an organization after the change has been implemented and looking for room for improvement. Where EP1_CWD mentioned that during the implementation of a change there are aspects that need further attention. It should be tracked what is working and what is not, where a new set of activities may be required that were not previously identified (EP1_CWD).

The discussion developed further into the difference between when effective communication is needed and when a change program is needed. Where EP2_CWD mentioned that when a new way of working is implemented, a change program is needed, but when everything stays the same and just an office reduction is implemented, more effective communication is needed. Where EP2_CWD mentioned that the intensity of the change program varies between different change projects (EP2_CWD).

Statement 3: A variety of spaces should be provided in the office to avoid noise and privacy issues. Including focus rooms for confidential conversations that require privacy. In addition, companies should focus on improving acoustics and take accompanying measures.

The third statement included a discussion on privacy, where confidential conversations require more acoustic measures so that conversations are not overheard. To add to the statement, it was mentioned by the participants that the routing and layout of the office is important to avoid disturbances and acoustic problems.

EP1_CWD mentioned that when you densify, noise is a situation that needs to be controlled. However, confidentiality isn't necessarily about privacy, it's more about privacy of information. Also, the layout of the office floor plan is just as important as the availability of space. Where routing can steer people away from areas where you want more focus and concentration (EP1_CWD). EP2_CWD added to the last statement that in Case 2, the quiet zones were deliberately placed at the outer end of the floor plan to ensure that no one would have to cross that area (EP2_CWD). Confidential work may require a separate room if no one is allowed to see your screen. However, confidential work is not necessarily related to noise, whereas confidential conversations are related to noise and privacy issues

(EP2_CWD).

Statement 4: The implementation of an activity-based workplace can lead to a decrease in the person and environment fit in the office. Creating a local office could help people to feel at home and identify with the office.

The fourth statement generated a bit more discussion, where they disagreed with creating a local office identity. They mentioned that the statement should be replaced with creating an organizational identity in the office that employees can identify with.

EP1_CWD mentioned that an activity-based workplace can lead to a decrease in person and environment fit, but this is not always the case if you design and control for it. For example, creating personal lockers or boards that celebrate people's birthdays. Creating areas where people can express themselves and individual and team expressions can create a different kind of identity. Creating a local office identity can also go wrong if there is too much focus on a local office identity, where people are not able to express themselves in an office (EP1_CWD).

EP1_CWD mentioned that the goal should not be to identify with an office, but it should be to identify with an organization, to identify with the brand, and that an organization should strive for its employees to have pride in where they work. Pride in the team, in the company, where the office can help to achieve the organizational connection or pride within a team (EP1_CWD). Where all participants agreed identification with an organization is more important than identification with an office. Where working in neighborhoods within an office can help to identify yourself with a team. Where people struggle is when the concept of neighborhoods and teams is taken away and there is a full activity-based working in place.

Statement 5: When reducing an office, moving to a new office location is better accepted by employees than reducing in an existing building.

The last statement was only discussed with EP2_CWD due to the time constraints and other experts having other commitments. EP2_CWD agreed with the statement where an example was given of a case where the floors were reduced and completely renovated to the point where it was unrecognizable. Where it was mentioned that when staying in the same building, the office should be unrecognizable so that employees are not able to compare with the previous situation. In addition, when reducing quantity in terms of office space, quality should be given in return. When staying in the same office building, a heavier change management program is needed to show employees that the change project will be successful and how it will work (EP2_CWD).

Summary of the expert panel

Overall, the experts agreed with the statements, but found some statements incomplete and wanted to add on to the statements. Many examples from practice were explained to support the statements or to back up the additions or changes made to the statements.

The experts agree with Statement 1 that a successful and productive office space should support people in their work. However, they also emphasize that supporting employees goes beyond simply facilitating their work. It is about creating an environment where employees are happy, fulfilled, and connected. This, in turn, leads to higher productivity. While the experts agree with incorporating employee input and feedback into the office design, they do add that the employees should not be involved in the decision-making. This is because employees focus more on personal preferences than on the bigger picture.

Statement 2 emphasizes that a successful change project requires preparing employees and managing expectations through change management activities. Effective communication and stakeholder involvement are critical for acceptance. However, there is disagreement about the need for ongoing evaluation and adjustment of the change program and the intensity of change management activities depending on the nature of the project. Clear communication is essential, especially when change is primarily a communication issue rather than a major process change. The intensity of the change program may vary from project to project.

To prevent noise and privacy issues for confidential conversations in the third statement, the experts agree that implementing different spaces in the office is important. Improving acoustics and taking accompanying measures are also emphasized. The discussions highlighted the importance of considering both privacy and noise control. While confidential conversations require acoustic measures to prevent overhearing, confidential work may require separate rooms if screen visibility is an issue. In addition, the layout and routing of the office plays a critical role in preventing disturbances and acoustic problems.

The fourth statement is that implementing an activity-based workplace may reduce the person-environment fit. Instead of creating a local office identity, experts suggest focusing on creating an organizational identity in the office. This helps employees feel at home and identify with the organization. Careful design and management can mitigate the decline in fit. Providing spaces for personal and team expression is important. Priority should be given to identifying with the organization rather than the office. Working in neighborhoods within the office promotes team identification. However, a fully activity-based environment without neighborhoods may pose challenges for employees in terms of team identification.

EP2_CWD agrees with Statement 5, stating that when office space is reduced, moving to a new location is better accepted by employees. It is important to make the office unrecognizable and offer quality in return. If staying in the same building, a strong change management program is necessary to ensure employee acceptance and to demonstrate the success of the change project.

Chapter 5

Discussion & Limitations

5. Discussion & Limitations

In this chapter the discussion will be presented, where the literature will be compared to the findings. After which the limitations of the research will be discussed.

5.1 Discussion

Decision-making

In theory it is mentioned that productivity is an important factor for any organization, as profit and loss depend on the productivity of the employees (Maarleveld & de Been, 2011). In addition, it is mentioned that efficiency and productivity of employees is a key concern for organizations, as a higher productivity can lead to a more profitable company as well as economic growth (Tarigan et al., 2022). Furthermore, the theory explains that employee satisfaction has a correlation with employee productivity. It is mentioned that satisfied employees are twice as productive, stay in their jobs longer, are more creative, have fewer sick days and will perform better at work (Davidson et al., 2015 & Groen et al., 2019). Office space is a contributing factor to employee satisfaction and can create a sense of belonging and emotional attachment to an organization that cannot be fully met by working from home (Groen et al., 2019). Finally, employee wellbeing is another contributing factor to employee productivity as mentioned in the theory (Van der Voordt & Jensen., 2021).

Heyvaert and Perrin (2023) mention that real estate decisions are made based on the available data. The data provides an indication of the need for change. After implementing a new office concept, employees should be asked for feedback for both qualitative and quantitative data. If there are only a few people in the office, the real estate should be used more efficiently. Where rightsizing an office can create a more energetic and vibrant office because people can meet with each other more easily, which can create more opportunities for collaboration (Heyvaert, J. & Perrin, X., 2023).

The three case study companies value productivity, but it is not a key decision driver due to the fact that productivity is difficult to measure. Instead, the companies conduct satisfaction and occupancy studies to look at the performance of their real estate. Looking at the data from these studies gives the companies insight into how their real estate is performing and whether it is being used efficiently and effectively. Underutilization and employee dissatisfaction indicate a need for change and provide insight into how the real estate is not supporting the needs of the employees. However, employee satisfaction is not the primary driver for decision makers. Cost is the biggest driver for the companies in the case studies. Where the underutilization of offices provided an opportunity to reduce the footprint of the company and to reduce costs.

Barriers

In theory, it is mentioned that office design has an impact on productivity (Appel-Meulenbroek et al., 2021). It is mentioned that the quality of the workplace has an impact on human performance and it is stated that in order to improve employee

productivity, the quality of the workplace needs to be improved (Ahmad et al., 2020). The availability of space and a wider range of available space are hereby included in the quality of the workplace (JLL, 2020). However, productivity is influenced by many moderators, where privacy and collaboration are major contributors. In addition, it is mentioned that changes in the office design are one of the aspects that directly influence work productivity. Increasing the number of workplace switching increases productivity, as well as the choice of desk increases satisfaction (Yunus & Ernawati, 2018). However, having to spend more time searching for a workplace decreases productivity (Van der Voordt & Jensen, 2021). Furthermore, an open floor plan can lead to distractions, noise complaints, and employees having a reduced sense of privacy. To ensure an efficient and effective workplace design, different personalities and behaviors must be balanced out. The different generations must also be taken into consideration, as different generations have different work experiences and values (Appel-Meulenbroek et al., 2021). End-user involvement or co-creation can help create a balanced office that supports employees in the way they work. Data collection can be done through surveys and/or utilization studies (M. Niel, 2023). Involving end users in office design helps to create an effective workplace design that balances the different personalities and behaviors. Appel-Meulenbroek (2021) describes that having a lack of person-environment fit can lead to a reduction in well-being due to stress and dissatisfaction. In addition, Employee satisfaction and productivity can decrease (Appel-Meulenbroek et al., 2021).

Every organization has its own culture, the culture can also influence employee productivity (Abdul Rashid et al., 2003). In addition, organizational changes may fail due to employee resistance to changes. The resistance of change is one of the important factors that contributing to the failure of strategic change programs (Stavros et al., 2016).

In the three case studies, it was evident that it is challenging to fit different teams with different job descriptions, needs and activities into a reduced office space. It was mentioned that employees are more disturbed in a more open work environment and the acoustics in the office layout seemed to be a challenge. In addition, the primary reason for most employees to come to the office is to collaborate and socialize. However, the office should support both team and individual productivity, as people come to the office not only to collaborate, but must also do concentration work. It takes time to adapt to change, which can initially lead to a drop in perceived employee productivity. When implementing change, it is always a challenge to align the beliefs of different layers in a global organization. When downsizing occurs, you will find that local teams want to keep as much space as possible and the global teams want to reduce as much as possible.

Solutions

In theory, it is mentioned when a change occurs in an organization, there is often an initial drop in productivity. This can be caused by employee resistance, but after the change is incorporated and the performance dip is overcome, a higher performance rate can be achieved (Lauer, T. 2021). Successful implementation of change requires effective

communication and employee support. Where symmetric communication is an important factor for a successful change project. This means that employees should not only be provided with information, but managers should listen to their feedback with understanding and care (Men et al., 2020). Openness of leadership is another contributing factor, where it is important for leadership to show that they support the change (Khaw et al., 2022).

In addition, Heyvaert and Perrin (2023) mention that making agreements about office use helps to adapt to the changed environment. The agreements or policies can include, agreements on which teams come on which days or a reservation system. The policies can get employees to get used to the new office concept. After some time, the company can slowly move away from these policies to get employees to adopt them naturally. To get more employees into the office, it helps to get employees who are higher up in the organizational chain to come into the office. In return, these employees naturally get more information about their colleagues naturally and can get energy from conversations and contact with newer and younger employees (Heyvaert, J. & Perrin, X., 2023).

According to the case studies, when various layers do not agree, communication is mentioned as the key point for the challenge. It is important that the employees understand the reasons for the change and what it means for them. Stakeholder involvement is key to the success of the project; they need to show and communicate their support for the change. In addition, change management activities can help to make the employees understand the change and help them understand the new office concept and what it means for them. Creating a local office identity also helps with making employees feel at home and helps them to identify with the office.

Implementing policies and regulations gives employees clarity on how to use the office space and clarifies what is expected of them. After a period of time, employees may revert to their old habits, resulting in inefficient use of the office. Therefore, policies and guidelines should be repeated and refreshed after some time has passed. Finally, the hybrid way of working should be supported both in the office and at home to maintain the perceived productivity of employees. The office should be equipped with the right technology and different workstations. The different workplaces should be based on the activities of the employees. In addition, the acoustics in the office are important, where acoustic measures can help to minimize noise nuisance. When designing an office layout, it is important that the floor plan supports the needs and activities of the employees. Therefore, the input, involvement, or co-creation of the new office layout can help ensure it is properly adapted.

5.2 Limitations

This research has some limitations. Since the limitations in the research could affect the outcome of the conclusion, they should be mentioned and be taken into consideration.

The participants in this research can cause particular limitations, this is because the perception and certain views of topics are asked from the participants. This can cause a number of biases. The first bias is caused by the fact that participants are asked for information about the past. This can cause recall bias, which is a type of information bias and occurs when research participants, in this case interviewees, are asked to recall past events (Spencer et al., 2017). The second bias that could occur is a researcher bias. This bias could occur when the researcher's beliefs or expectations influence the research design or data collection process (Blaikie & Priest., 2019). The researcher must take a neutral position within the research, where only the data presented is analyzed. The conclusions should only be based on this data.

The focus of this study is on perceived productivity. However, as mentioned in the literature review, there is a correlation between productivity, satisfaction, and well-being. The other terms are not as present further in this research. This is a limitation of this research, limiting the research to have a main focus on perceived productivity is due to framing the research in order to make it more feasible.

The reason for having a main focus on perceived productivity has to do with the limitation of the timeframe of the research. The time frame of the research is also a limitation. This also led to the selection of only three case studies. The research could be more in-depth if more case studies were researched. In addition, the research could benefit from adding quantitative data to the research. The research is limited to the perceptions of the research participants. Adding quantitative data to the research could provide more insight into which specific aspects or activities are affected by a reduced office space, including how different teams are affected by reduced office space. The research is based on qualitative data, which is limited data from the interviews that may contain bias.

Due to the time frame, the research has a broader and more general approach to pharmaceutical companies. If the research was not limited, further research could have been done on specific teams within a multinational pharmaceutical company. The research could have focused more on how specific teams were affected by downsizing and how those responses differed from each other.

Chapter 6

Conclusion & Recommendations

6. Conclusion & recommendations

In this chapter, the conclusions of the research will be presented. First, the sub questions are answered after which the main research question is answered. After the conclusion, the recommendations of the research will be presented.

6.1 Conclusion

Sub question 1: How has the office environment changed over the years?

The evolution of the workplace and the office environment has gone through several phases. From rows of desks to landscape offices, cube farms, combi offices, and now activity-based workplaces that support hybrid work. Each of these phases is characterized by a different output, ranging from a sole focus on productivity to an emphasis on collaboration to a more flexible office. These changes in the office environment include a change in the amount of total office space in square meters as well as office space per employee. The decrease in office space is due to a more efficient use of office space in terms of office layout. The changes have been driven by trends or other factors, such as the “New ways of working” in 2010, which led to the first activity-based spaces. In addition, the pandemic accelerated the acceptance of hybrid working, which has caused organizations to re-evaluate their real estate portfolio, while at the same time ensuring the well-being of employees. In conclusion, office space has decreased over time. The output of the office now lies in the office supporting the employees in their way of working.

Sub question 2: What trends can be identified concerning office use?

This research has identified a number of trends, the first of which is that the future of work is hybrid. Most organizations are contributing to the focus on hybrid work as to hybrid work becomes the new norm. Organizations are trying to improve the resilience of the workforce by improving the health and well-being of employees. Other trends related to the hybrid office environment include phone booths to improve acoustics, workplace management systems, and more organizations are realizing the importance of involving the end users in the design process of the new office space (co-creation). Finally, the focus of the office is shifting to prioritizing the quality of the office space over the quantity of office space, meaning the total footprint.

Sub question 3: What do global pharmaceutical companies take into consideration while reducing the office space and how is this received?

When looking at what global pharmaceutical companies consider when reducing office space, it is clear that cost is usually the first driver of office strategy. Perceived productivity is considered in the decision-making process, but it is not the primary driver. Because productivity is difficult to measure, companies rely on satisfaction and utilization studies to assess the real estate performance. These studies provide insight into whether real estate is supporting the needs of employees and whether the real estate is being used efficiently. However, cost is for most organizations, cost is the primary driver in the decision-making process. Where underutilization of the real estate is a cue for companies to reduce their

office space, with a focus on cost reduction rather than prioritizing employee satisfaction or perceived employee productivity.

Employee responses cannot always be predicted. However, in the case studies it can be seen that the reaction of the employees to the reduction in Case 1 was more negative than the reaction to the other reduction. The first case was the only office space reduction where the office layout did not change. In a new office, the impact of an office reduction on perceived productivity is less than in a reduction in an existing building. This is because employees can compare to the old situation. In a new building, on the other hand, the reduction is often accompanied by an improvement. In conclusion, global pharmaceutical companies consider perceived employee productivity in the decision-making process, even if it is not the first priority. When downsizing an office, moving to a new office location is better accepted by employees than reducing in an existing building.

Sub question 4: What do global pharmaceutical companies perceive as potential barriers between office reduction and perceived employee productivity?

When reducing the size of an office, there are some potential barriers to perceived employee productivity that can be considered. An effective workplace must balance the different needs and activities of employees. However, accommodating diverse teams with different needs and activities in a reduced space is challenging. Open work environments can be disruptive to employees, it can cause distractions, noise complaints and a reduced sense of privacy. Companies are placing more emphasis on collaboration and socialization in the office, but employees also perform concentration work in the office.

According to Lewis theory and Case 3, it is expected that employees will need time to adjust to the change. The adjustment period causes a performance dip, which can later lead to a higher performance rate than before the change. Implementing change in global organizations faces issues of alignment between local and global teams in terms of office space. Different layers of the organization do not always agree, which creates challenges in aligning different teams. However, it helps when the decisions made by one layer are understood by the other layer. When reducing an office space, employees should not feel that something is being taken away from them, this can be achieved by giving back office quality. When employees feel they are getting something in return, they are more likely to accept the change. Therefore, when an office is changed or reduced the quality of the office should be improved in order to maintain or improve the perceived productivity of the employees.

In conclusion, the potential barriers between office reduction and perceived employee productivity are:

- Balancing the needs and activities of different employees.
- Disruptions in a reduced open work environment.
- Too much focus on collaboration in the office when focused work is still being done in the office.

- Employees need time to adjust to changes in the office environment.
- Alignment issues across the organizational layers of global pharmaceutical companies.
- When office space is reduced, it should be accompanied by an improved office quality to maintain or increase perceived employee productivity.

Sub question 5: What can be seen as potential solutions for these barriers?

In order to balance out the different employees for an effective workplace, the office should support the different needs and activities. Input, involvement or co-creation can help to achieve a balanced workplace. Employee input also defines how much concentration work and teamwork is done in the office and clarifies what spaces are needed in the office. Creating focus rooms or quiet areas, rooms where employees can concentrate or work with confidential matters, helps improve employees' sense of privacy and helps limit the transmission of sound. In an open floor plan, the acoustics are a challenge that should be a focus point for companies to improve and take accompanying measures on. When implementing an open floor plan the layout and routing of the office design is important and can help prevent disruptions and acoustic problems. In addition, the right technology must be in place for the office to support hybrid work. This means technology that is easy and ready to use, for example: having working wifi in the office, docking stations, second screens and in meeting rooms with audio and visual facilities to engage colleagues online and offline. Implementing an activity-based workspace can decrease the person and environment fit because employees no longer have their own workstation. A decrease in the person environment fit can lead to a reduced performance and perceived employee productivity. Creating a local office identity can help to maintain the person and environment fit, because a local office identity makes employees feel at home in the office and identify with the office.

For the employees to support the change, it is necessary for the stakeholders of the change project to be involved and to demonstrate and communicate their support. In addition, change management activities can help to inform the employees and help them understand the change and what it means for them. Implementing policies and regulations can help to give employees clarity on how to use the new office space and clarify what is expected of them. After a while, employees are expected to return to their old ways, so the policies and regulations should be repeated after a period of time.

In addition, post-satisfaction surveys can provide an indication of how the real estate is performing and whether it is supporting the employee needs. Based on the results of the survey, the office can be improved and/or modified.

In conclusion the solutions to the potential barriers between are:

- Supporting diverse employee needs and activities in the workplace can be achieved through employee input or involvement.

- Acoustic challenges in open floor plans hinder perceived employee productivity. Therefore, companies should focus on improving acoustics and take accompanying measures such as hardware measures, such as acoustic measures on the ceilings and floors, and visual measures, such as fabric partitions. In addition to acoustic measures, the office layout must be well thought out. It is important to consider the routing of traffic as well as where certain work activities take place.
- To support the hybrid way of working the office should be equipped with the right technology, such as: wifi, docking stations, computer screens and meeting room facilities.
- Creating a local office identity or an organizational identity within an office can help with the person environment fit. It makes employees feel more at home and helps employees them to take pride in the organization they work for.
- Employee resistance to change is a challenge, it helps to get stakeholder involvement and have effective communication towards the employees. As well as conducting change management activities to inform the employees and get them to understand the change.
- Policies and regulations can help employees to adapt to the change. Policies and regulations inform employees about what is expected of them and what to expect in the office. Policies and regulations should be repeated over time, because employees may revert to old habits.

Main research question:

'How can global pharmaceutical companies reduce their office space in the Netherlands while still maintaining perceived employee productivity?'

In order for global pharmaceutical companies to reduce their office space in the Netherlands while still maintaining perceived employee productivity, they should consider perceived employee productivity when making the decision to reduce real estate. Employee reaction to change cannot always be predicted. However, if employees understand why a change is taking place, they will be more likely to accept it. In addition, giving something in return, such as office quality, rather than just taking something away, will help employees accept the reduction. In addition, there are some barriers you need to consider. These barriers are:

- The different layers of an organization do not always agree.
- Employees need time to adjust to change, which can cause a dip in the perceived employee productivity at the beginning of a change project.
- Creating an effective workplace for different employees and job descriptions.
- Employees are closer together in a more open and reduced floor plan. This can lead to noise pollution and a reduced sense of privacy.

However, there are some possible solutions to these barriers. These are:

- When different layers within the organization are not in agreement, it helps to make them understand each other by explaining the reasons behind the decisions.

- Helping employees adapt to and understand the change can be done through change management activities, stakeholder involvement, and effective communication. Change management activities can include: town halls, workshops, explanatory manuals and change ambassadors.
- Policies and regulations can help employees to gain more clarity on what is expected of them in the office and what to expect in the office.
- To balance out the different employees for an effective workplace, it helps to create an office that supports their different needs and activities. This can be done by involving the employees, getting their input and feedback through surveys.
- In order to avoid noise nuisance and privacy issues, different spaces should be implemented in the office. Where the office design should include rooms such as focus rooms where employees can perform confidential work activities or have confidential conversations and not be disturbed and have privacy. In addition, the office layout must be well thought out. It is important to consider the routing of traffic as well as where certain work activities take place.

In conclusion, in order for global pharmaceutical companies to reduce their office space while still maintaining perceived employee productivity, they must consider perceived employee productivity as well as the various barriers mentioned. These barriers may be addressed by the solutions presented above.

6.2 Recommendations

In order for global pharmaceutical companies to implement a successful office reduction while maintaining perceived employee productivity, there are a number of recommendations that can be considered. These recommendations are based on the findings of the literature review combined with the findings of the empirical study. The recommendations are not limited to global pharmaceutical companies, but can be applied to organizations that are reducing office space. However, the recommendations are based on research done on knowledge-based, back-office type of offices.

Help employees understand the change

In order to have a successful change project, where the change is accepted by the employees, they should understand why the change is happening. Employees want to know what the change means for them. Symmetrical communication should be strived for, where managers and employees are in an ongoing dialogue where they reach a mutual understanding.

Stakeholder Involvement

Stakeholders should be involved in the change project and should demonstrate and communicate their support. Leadership's openness to employees about the change projects contributes to the success of the change project among employees.

Change Management Activities

Conducting change management activities, such as town halls, workshops, manuals or presentations, all help to inform employees with information about the change. This will help employees to understand the change and what the new office concept will look like and how it should be used. A full change program is most often required when an office reduction is accompanied by a new way of working.

Implement policies and guidelines

Implementing policies and guidelines can help employees to adapt the change. It can help the employees by clarifying what is expected of them in the workspace and what to expect when they are in the office. After some time has passed the company can move away from the policies and employees can naturally adopt them.

When reducing office space, improve in office quality

To get employees to accept a reduced office space, it helps if the office space is improved. The perceived productivity of employees is improved when the quality of the office space is improved. It helps if the office is in a new space because employees cannot compare it to the old situation. If employees stay in the same place where only a reduction takes place, they know what they had before, which makes it harder to accept the reduction.

Implement employees needs and their input when changing the office layout

The office should support the way people work. Therefore, it helps to implement changes

according to their needs, activities and their input. Ensuring that employee feedback and input of the employees is implemented and heard will result in a positive employee reaction to the change, and in the long run, create an engaged workforce. In addition, getting input from employees helps to ensure that the office supports their work activities, which can improve perceived employee productivity. Gathering feedback or input from employees can be done through interviews, focus groups or surveys.

Implement acoustic measures in a reduced space

Office reductions are often coupled with the implementing of an activity-based workplace and a more open floor plan in order to make the reduction possible. As a result, employees are distracted and exposed to noise more often than in a traditional office layout. Therefore, acoustic measures are important in order to avoid employee complaints. In addition to acoustic measures, the office layout must be well thought out. It is important to consider the routing of traffic as well as where certain work activities take place.

Implement the right technology

Adapting the office to support the hybrid way working, this includes implementing the right technology. This means technology that is easy and ready to use, for example: having working wifi in the office, docking stations, second screens and in meeting rooms with audio and visual facilities to engage colleagues online and offline.

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Appendix

Appendix

Appendix A.1: Interview guide real estate managers

Appendix A.2: Interview guide consultants

Appendix A.3: Guide interview mail

Appendix B.1: Expert panel guide

Appendix B.2: Expert panel mail

Appendix A.1

Interview guide

Interview is conducted by: Bente Elders

Interview: *Date:* Date interview *Time:* Time interview

Interviewee: *Name:* Name interviewee *Function in the company:* Real estate manager

This is an interview guide of the interview that will be conducted. This guide contains several different parts. We will start with an introduction to the interview, this will consist of an introduction to the interviewer as well as to the research topic. The last part of the introduction will be asking permission to record the interview. Then we will ask an introduction of the interviewee. Moving on to the actual interview this will start with questions about the decision-making process, then questions about productivity and lastly questions about after the implementation of the new workplace strategy. After the interview it will be made clear what will happen with the interview regarding the recording and the interviewee will be thanked for his or her contribution to the research.

1. Introduction to the interview

Hello, thank you for taking part in this research. I will first introduce myself after which I will elaborate the research topic. I am a student at the Technical University of Delft and I am following the master track Management in the Built Environment. This research is for my graduation thesis and this will be the last part of my masters.

The research focuses on the influence of office space reduction on perceived employee productivity and how this weighs out in the decision-making process of office space reduction of global pharmaceutical companies. Hereby also looking at what is taken into consideration while doing an office reduction and what the potential barriers are between office reduction and perceived employee productivity. For this research it is important to know what decisions were made regarding the changes of the office and how productivity was taken into consideration. In the interview when workplace strategy is mentioned it means the whole project of the office changes. However the design phase, the renovation and the logistics surrounding this phase are not taken into account. The focus lies on the decision-making phase as well as the implementation itself. In addition the focus lies with how the office changes in terms of the workplace itself, but also in terms of sqm.

This was it for the introduction, I would like to ask you if you would agree to a recording of this interview? I will repeat this question once the recording has started.

Start recording

I would like to ask you if you would agree to a recording of this interview?

1. Introduction interviewee

- Could you give a short introduction to your function within the company and what your function entails?

- How would you describe the culture of the company and of the culture of the [Company] [City] office?

2. The interview

Decision-making

- What are the reasons for the changes (goal and aims) in the real estate portfolio?
- Does this involve a reduction in sqm of the real estate? If so, why?
- How did the development for the [Company] [City] office strategy go, what were the different steps to reach the decision of the office reduction and what was taken into consideration?
- In the decision-making for the [Company] [City] new workplace strategy (in specific the reduction of space), was productivity of the employees a value that was considered during this process?
- What kind of risks were considered during the decision-making process of [Company] [City] and how did these get weighed out?
- Were there any challenges you encountered regarding the creation of the [Company] [City] workplace strategy/transformation process?
- At what point in the process were the employees informed about the changes that were to be implemented?
- How is it determined how many desks were needed for the new office?
 - How many desks per employee are there now compared to the old situation?
- What do your employees think about the fact that they no longer all have their own/personal desk?

Productivity

- How do you view productivity, what does this entail to you?
- What does productivity mean to the company, where does the focus lie?
 - Is that on team productivity or more on individual productivity, please elaborate on how this is shown?
 - Is this the same globally or is it specific for the Netherlands?
- How is individual or team productivity supported within the floor plan?
 - What are measures that are taken to improve productivity of employees, are there rooms/resources offered?
 - If yes, did these rooms/resources change with the workplace transformation, are there now less rooms/ workspaces available for concentration work or meetings?
- Do you think the workplace strategy had an impact on employee productivity? If yes, how/ in what way is this shown?
- Do you think the actual reduction of sqm had an impact on the employee productivity? If yes, how is this shown?

- Do you think your productivity has changed due to the new workplace strategy of [client] [city]?

After the implementation of the new workplace strategy

- Were the pre-set goals and aims for the workplace strategy [Company] [City] achieved?
- What was the level of acceptance by the employees of the new workplace?
- How did employees react to the changes in their workplace/to the office?
- Which changes regarding the office (will) have the biggest impact on the employees?
- Did the productivity of employees change compared to the previous situation? If yes, how did this change?
 - Was this measured, if so how?
- What are the plans of the company concerning the future of the office?
- What are the lessons learned from the workplace transformation, and how will you/the company use these in the future?
- What are uncertainties concerning the decision for another reduction and how will those be dealt with?

3. The end

We have come to the end of the interview. Is there anything you would like to add or something important you forgot to mention?

4. After the interview

Thank you so much for your participation in my research and in this interview. I will now end the recording. The interview will be transcribed and will be anonymized.

Appendix A.2

Interview guide

Interview is conducted by: Bente Elders

Interview: *Date:* Date interview *Time:* Time interview

Interviewee: *Name:* Name interviewee *Position:* Consultant

This is an interview guide of the interview that will be conducted. This guide contains several different parts. We will start with an introduction to the interview, this will consist of an introduction to the interviewer as well as to the research topic. The last part of the introduction will be asking permission to record the interview. Then we will ask an introduction of the interviewee. Moving on to the actual interview this will start with questions about the decision-making process, then questions about productivity and lastly questions about after the implementation of the new workplace strategy. After the interview it will be made clear what will happen with the interview regarding the recording and the interviewee will be thanked for his or her contribution to the research.

1. Introduction to the interview

Hello, thank you for taking part in this research. I will first introduce myself after which I will elaborate the research topic. I am a student at the Technical University of Delft and I am following the master track Management in the Built Environment. This research is for my graduation thesis and this will be the last part of my masters.

The research focuses on the influence of office space reduction on perceived employee productivity and how this weighs out in the decision-making process of office space reduction of global pharmaceutical companies. Hereby also looking at what is taken into consideration while doing an office reduction and what the potential barriers are between office reduction and perceived employee productivity. For this research it is important to know what decisions were made regarding the changes of the office and how productivity was taken into consideration. In the interview when workplace strategy is mentioned it means the whole project of the office changes. However the design phase, the renovation and the logistics surrounding this phase are not taken into account. The focus lies on the decision-making phase as well as the implementation itself. In addition the focus lies with how the office changes in terms of the workplace itself, but also in terms of sqm.

This was it for the introduction, I would like to ask you if you would agree to a recording of this interview? I will repeat this question once the recording has started.

Start recording

I would like to ask you if you would agree to a recording of this interview?

1. Introduction interviewee

- Could you give a short introduction to your function and what your function entails?
- Could you explain what your role with the office reduction of [Company] [City] was?

2. The interview

Decision-making

- What was the change gap for [Company] [City]?
- Why do you think [Company] [City] wanted to reduce their office?
- What was the reduction process of [Company] [City], how did this go? What kind of steps were taken during this process?
- While working with [Company] [City] what were key points that they found important to incorporate into the workplace?
- What were their goals and aims for the office reduction, what did they find important to incorporate into their [City] office?
- Was this project of [Company] [City] considered a success? If so, did you implement certain aspects of this project of [Company] [City] into other similar projects of [Company]?
- Was the success of previous similar projects of the same company used for this project? If so, how? How did you ensure success with the other projects and how with this project?

Productivity

- How do you view productivity, what does this entail to you?
- What do you think it means to [Company] [City]?
 - Does their focus lie more on team or individual productivity?
- How did they ensure that the environment of the office supports individual productivity and or team productivity?
- Were the employees involved in the reduction process? If so, how were they involved? Were they aware that it was happening and how were they informed?

Barriers / challenges & solutions

- Did you encounter any challenges with the reduction process of [Company] [City]? If so, what were these challenges and what was the most difficult one to overcome?
 - Seeing the difficulties of [Company] [City], how do you revolve around those problems?
- What do you perceive as possible solutions to these problems?
- Were there any values that did not correspond with each other in the project? If so, what were these, was this a problem and was this solved?

3. The end

We have come to the end of the interview. Is there anything you would like to add or something important you forgot to mention? Are there any more factors you would like to add that might have an influence on productivity?

1. After the interview

Thank you so much for your participation in my research and in this interview. I will now end the recording. The interview will be transcribed and will be anonymized, only your position within the company will be mentioned. The company and city of the project will also be anonymised.

Appendix A.3

Guide interview mail

Dear *name interviewee*,

Hope you are doing well.

Date and time of interview, we have planned an online interview for my graduation thesis.

Interview questions

The purpose of the interview will be to gain an understanding of the organization. In addition, in this interview is important to find out what decisions were made regarding the changes of the office and how productivity was taken into consideration.

The topics of the interview are: The decision-making process, productivity (how this relates to the decision-making and how this is taken into consideration) and challenges, barriers, and enablers within the project process.

Recording the interview

The interview will be transcribed with your permission. This transcription will be anonymised and only your position in the company will be mentioned. The company name and city of the project will also not be mentioned. To ensure that I am able to create an accurate transcription, **I would like to ask you whether you agree upon recording the interview.** The recording will not be used for any other purpose than for being able to accurately make an anonymised transcription.

Looking forward to our interview on Teams!

Kind regards,
Bente

Appendix B.1

Expert panel

Research: Office of the future: a study on Office Reduction and Perceived Employee Productivity of Global Pharmaceutical companies in the Netherlands

Interviewer: Bente Elders

Date: 14-12-2023

Expert panel program

13.00 - Introduction

13.15 - Start discussion statements

14.00 - The end

Statements to discuss

Statement 1: A successful and productive office space should support employees in their work. To create a successful office, employee input and feedback should be incorporated into the office design.

Statement 2: A successful change project requires preparing employees for the transition through change management activities and managing expectations through policies and regulations. Stakeholder involvement, effective communication and change management activities are crucial to achieving acceptance of the change project among employees and various levels of an organization.

Statement 3: A variety of spaces should be provided in the office to avoid noise and privacy issues. Including focus rooms for confidential conversations that require privacy. In addition, companies should focus on improving acoustics and take accompanying measures.

Statement 4: The implementation of an activity-based workplace can lead to a decrease in the person and environment fit in the office. Creating a local office could help people to feel at home and identify with the office.

Statement 5: When reducing an office, moving to a new office location is better accepted by employees than reducing in an existing building.

Summary of the research

Problem statement

Organizations are downsizing their office spaces, mainly influenced by the success of hybrid working. While reducing office space is cost efficient for an organization, it poses challenges regarding perceived employee productivity and satisfaction. By downsizing offices it becomes denser, leading to employee discomfort, noise distractions and reduced attention and creativity. These issues are often related to open office layouts and negatively impact employee wellbeing and perceived employee productivity. As global pharmaceutical

companies are reducing their office space, this research aims to understand how these companies are performing the office reduction while considering and addressing these challenges or other significant challenges. The study focuses on how global pharmaceutical companies in the Netherlands factor in perceived employee productivity during office reductions, identifying barriers they face and strategies they employ to mitigate these challenges.

Research questions and approach

Main research question:

‘How can global pharmaceutical companies reduce their office space in the Netherlands while still maintaining employee productivity?’

In order to provide an answer to the main research question, 5 sub questions have been formulated. The sub questions are:

- Sub question 1: How has the office environment changed over the years?
- Sub question 2: What trends can be identified concerning office use?
- Sub question 3: What do global pharmaceutical companies take into consideration while reducing the office space and how is this received?
- Sub question 4: What do global pharmaceutical companies perceive as potential barriers between office reduction and perceived employee productivity?
- Sub question 5: What can be seen as potential solutions for these barriers?

The research questions are answered by a literature study in combination with an empirical study. The empirical study focuses on three case studies of global pharmaceutical companies, excluding lab spaces, and examines how these companies consider employee productivity in their decision-making process for office reduction. Additionally, the research explores the potential barriers encountered during the office reduction process and the strategies employed to overcome these barriers.

Output of the research

The research aims to examine the barriers and solutions concerning perceived employee productivity in relation to office space reduction. Drawing on theoretical frameworks and case studies, the study highlights the correlation between employee satisfaction, productivity, and workplace quality. The research also identifies barriers to effective office design, including the need to balance privacy and collaboration, accommodate different generations and work styles, and ensure a good fit between individuals and their work environment. Additionally, the study explores the challenges faced by organizations in implementing office reductions and proposes solutions such as effective communication, stakeholder involvement, and the use of policies and regulations to support the transition. The findings provide practical insights for organizations seeking to optimize office design in combination with employee productivity, and successfully manage an office space reduction.

Appendix B.2

Dear expert panel participant,

Thank you for your participation in this research on office reduction and perceived employee productivity of global pharmaceutical companies in the Netherlands. The research thesis is the final part for the MSc track Management in the Built Environment at the University of Technology in Delft.

The aim of this research is to examine how global pharmaceutical companies reduce their office space, while taking perceived employee productivity into consideration. The findings of the research provide practical insights for organizations seeking to reduce their office space. As professionals in the future of work and work dynamics, you possess expert knowledge of working (advising) with the implementation of hybrid working and office changes.

During this meeting, I will share the findings of my research and present them to you as statements. I will elaborate on these statements, and then we will openly discuss them. The purpose of this discussion is to provide me with practical insights into my findings and help structure my recommendations for real-world practitioners.

Furthermore, the meeting will be held **online**. **With your permission, I would like to record and transcribe the panel.** This transcription will be made anonymous, and only your expertise will be mentioned. To ensure an accurate transcription, I kindly ask for your consent to record the panel. The recording will not be used for any other purpose than creating an anonymized transcript.

If you have any questions before the panel, please do not hesitate to contact me. The agenda, statements, and a brief summary of the research are attached to this email.

Kind regards,
Bente Elders

